

Prevention of fatigue may be attained by:

- | | |
|-----------------------------------|-------------------|
| (a) Health examination and advice | (c) Proper rest |
| (b) Regular exercise | (d) Balanced diet |

Deficiencies of Play

With the increased complexities and tensions of life, a properly balanced program of play has become a health necessity, not a luxury.

Deficiency of Play

The deficiency of play in childhood interferes definitely with the normal development of the minds and personality. In adult life, a lack of time and ability to play may lead to serious nervous and sometimes mental disorders. Habits of play are of equal importance with habits of eating and sleeping.

Deficiencies and Excesses of Rest

The normal human being can stand considerable of the stresses and strains of modern life if he has learned the art of resting. This rest may take the form of change or actual sleep.

The results of deficient rest express themselves in every organ and system in the body. Inadequate rest may disturb the digestion, cause loss of weight, mental irritability, and lay the foundation for actual organic disease.

No defensive hygiene program could possibly protect the health which did not include sufficient rest both in quantity and quality.

References: Storey----Defensive Hygiene, chaps. 7-13
Williams--Personal Hygiene Applied, chaps. 6-11
Meredith--Hygiene, chaps. 27-31, 33, 35, 42.

DISCUSSION QUESTIONS:

1. Outline a personal hygiene program which would automatically take care of the excesses and deficiencies of modern life.
2. Describe how you would determine for yourself whether your program of excretion was deficient or excessive.
3. What guides would you use in judging whether your program of rest was adequate?
4. How would you safeguard yourself against excessive exercise in competition?

Stanford University

School of Hygiene and Physical

Education

INFORMATIONAL HYGIENE

REFERENCE LIST FOR INFORMATIONAL HYGIENE COURSES 150, 151, 152, 153 and 154.

Note: The following references will usually be found in the Reserve Room of the University Library unless otherwise indicated. References marked thus (*) are to be found in the stacks. References marked thus (#) are to be found in the Document Room. A few references will be reserved only at the time certain courses are offered. If not found on reserve, consult catalog.

The plan of this classification follows in general the outlines of the courses in the order given above.

VITAL STATISTICS

- Dublin, L. I., Health and Wealth
- Fisher, I., Report on National Vitality
- Kirkpatrick & Huettner, Fundamentals of Health
- Moore, H. H., Public Health in the United States
- Pearl, R., Alcohol and Longevity
- Rosenau, M. J., Preventive Medicine and Hygiene
- Whipple, G. C., Vital Statistics (Method)
- # U. S. Census Bureau, Annual Mortality Statistics
- # U. S. Public Health Service, Public Health Reports (Annual summaries)

GENETICS AND EUGENICS

Bossard, J. H. S., Problems of Social Well-being
Carr-Saunders, A. M., Eugenics
Conklin, E. G., Heredity and Environment
Cowdry, E. V., Human Biology and Facial Welfare
Gosney & Popenoe, Sterilization for Human Betterment
Guyer, M. F., Being Well-born
Jennings, H. S., Biological Basis of Human Nature
Popenoe, P., The Child's Heredity
Popenoe & Johnson, Applied Eugenics
Stockard, C. R., Physical Basis of Personality
Storey, T. A., Principles of Hygiene
Walter, H. E., Genetics

CELL STRUCTURE AND ANATOMY

Kirkpatrick & Huettnner, Fundamentals of Health
McMurrich, J. P., Development of Human Body
Storey, T. A., Principles of Hygiene
* Wilson, E. B., The Cell in Development and Heredity (3d Ed.)

GENERAL PHYSIOLOGY

Burton-Opitz, Textbook of Physiology
Cannon, W. B., Bodily Changes in Hunger, Fear & c
Cannon, W. B., The Wisdom of the Body
Hough & Sedgwick, The Human Mechanism
Howell, W. H., Textbook of Physiology
Kirkpatrick & Huettner, Fundamentals of Health
McMurrich, J. P., Development of Human Body
Martin, H. N. & E. G., Human Body
Martin & Weymouth, Elements of Physiology (In Biology Library)
Meredith, F. L., Hygiene
MacLeod, J. J. R., Physiology and Biochemistry in Medicine
Parsons, T. S., The Materials of Life
Parsons, T. S., Fundamentals of Biochemistry
Storey, T. A., Principles of Hygiene

NUTRITION AND FOODS

Bogert, L. J., Nutrition and Physical Fitness
Bradley, A. V., Tables of Food Values
Callow, A. B., Food and Health
Eddy, W. H., Nutrition
Emerson, W. R. P., Diagnosis of Health
Friedenwald & Ruhrah, Diet in Health and Disease
Gillett, L. H., Food for Health's Sake
Locke, E. A., Food Values
McCollum & Simmonds, Food, Nutrition and Health
McCollum & Simmonds, Newer Knowledge of Nutrition
Rose, M. S., Feeding the Family
Rose, M. S., Foundations of Nutrition
Sansum, W. D., The Normal Diet
Sherman, H. C., Chemistry of Food and Nutrition
* Sherman and Smith, The Vitamins
Stiles, P. G., Nutritional Physiology
Storey, T. A., Principles of Hygiene

EXERCISE AND MUSCLE PHYSIOLOGY

- Bainbridge, F. A., Physiology of Muscular Exercise
* Fulton, J. F., Muscular Contraction
* Gould and Dye, Exercise and Its Physiology
* Hill, A. V., Muscular Activity
McCurdy & McKenzie, Physiology of Exercise
* McKenzie, R. T., Exercise in Education and Medicine
U. S. Public Health Service, Reprint No. 465, Present Status of Our Knowledge
of Fatigue Products
Storey, T. A., Principles of Hygiene

REST

- Laird & Muller, Sleep
Storey, T. A., Principles of Hygiene

NERVOUS SYSTEM AND MENTAL HYGIENE

- Adler, A., Understanding Human Nature
Burnham, W. H., The Normal Mind
Burnham, W. H., Wholesome Personality
* Burnham, W. H., Great Teachers and Mental Health
Calverton & Schmalhausen, Sex in Civilization
Cannon, W. B., Bodily Changes in Fear, Hunger & c
Dodge and Kahn, The Craving for Superiority
Dorsey, G. A., Why We Behave Like Human Beings
Fishbein & White, Why Men Fail
Groves, E. R., Personality & Social Adjustment
Groves and Blanchard, Introduction to Mental Hygiene
Gulick, L. H., A Philosophy of Play
Kitson, H. D., How to Use Your Mind
Lee, J., Play in Education
McDougall, W., Character and Conduct of Life
Meninger, K., The Human Mind
Meredith, F. L., Hygiene
O'Shea, M. V., The Child: His Nature and His Needs
O'Shea, M. V., Tobacco and Mental Efficiency
Overstreet, H. A., About Ourselves
Pratt, G. K., Your Mind and You
Thom, D. A., Normal Youth and Its Everyday Problems
U. S. Public Health Service, Bulletin No. 148, Mental Hygiene
White, W. A., Mental Hygiene of Childhood
White, W. A., Principles of Mental Hygiene
Williams, F. E., Adolescence
* Zachary, C. B., Personality and Adjustment of School Children

MEDICINE, GENERAL AND HISTORICAL

- American Medical Association, Hygeia (Monthly, in Periodical Room)
Davis, M. M., Clinics, Hospitals and Health Centers
DeKruif, P., Microbe Hunters
DeKruif, P., Men Against Death
Fishbein, M., Medical Follies
Fishbein, M., The New Medical Follies
Macfie, R. C., Romance of Medicine
Moore, H. H., American Medicine & The People's Health

Newsholme, A., Evolution of Preventive Medicine
Newsholme, A., Story of Modern Preventive Medicine
Ravenel, M. P., Half Century of Public Health
Vallery-Radot, R., Life of Pasteur
Vedder, E. B., Medicine: Its Contribution to Civilization

DISEASE AND BACTERIOLOGY

Barker & Sprunt, The Degenerative Diseases
Broadhurst, J., How We Resist Disease
Chandler, A. C., Animal Parasites and Human Disease
Chapin, C. V., Sources and Modes of Infection
Cecil, R. L., Colds: Cause, Treatment & Prevention
DeKruif, P., Microbe Hunters
Hamilton, A. E., This Smoking World
Love & Davenport, Defects Found in Drafted Men (War Department?)
McLaughlin, A. J., Communicable Diseases
Park & Williams, Who's Who Among the Microbes
Rice, T. B., Conquest of Disease
Rosenau, M. J., Preventive Medicine & Hygiene
Steel and White, Hygiene of Community, School and Home
Storey, T. A., Principles of Hygiene
* Terry and Pellens, The Opium Problem
* Vaughan, V. C., Epidemiology and the Public Health

PERSONAL HYGIENE, GENERAL

Emerson, W. R. P., Diagnosis of Health
Fisher & Fiske, How to Live
Fiske, E. L., Health Building and Life Extension
Groves, E. R., Personality & Social Adjustment
Hoffmann, R. H., The Struggle for Health
Kirkpatrick & Huettnner, Fundamentals of Health
Luckiesh & Pacini, Light and Health
Meredith, F. L., Hygiene
O'Shea, M. V., Tobacco and Mental Efficiency
von Gruber, M., Hygiene of Sex
Williams, J. F., Personal Hygiene Applied

SOCIAL PROBLEMS, GENERAL

Bossard, J. H. S., Problems of Social Well-being
Bogardus, E. S., Introduction to Sociology
Binder, R. M., Health and Social Progress
Blackmar & Gillin, Outlines of Sociology
Calverton & Schmalhausen, Sex in Civilization
Cowdry, E. V., Human Biology and Racial Welfare
Dublin, L. I., Health and Wealth
Fairchild, H. P., Foundations of Social Life
Huntington, E., Civilization and Climate
Huntington & Whitney, Builders of America
March, N. H., Towards Racial Health
Rice, T. B., Racial Hygiene

PROBLEMS OF HOME AND FAMILY

- Abel, M. W., Successful Family Life on the Moderate Income
- * American Child Health Association, Influence of Socio-Economic Factors on Health
 - Balderstons, L. R., Housewifery
 - Broadhurst, J., Home and Community Hygiene
 - Calverton & Schmalhausen, Sex in Civilization
 - Child Study Association of America, Concerning Parenthood
 - Galloway, T., Love and Marriage
 - Goodsell, W., Problems of the Family
 - Groves & Ogburn, American Marriage and Family Relationships
 - Groves, E. R., The Marriage Crisis
 - Groves, E. R., Wholesome Marriage
 - Groves, E. R., Social Problems of the Family
 - Groves, E. R., The Drifting Home
 - Popenoe, P., Conservation of the Family
 - Popenoe, P., Modern Marriage
 - * Reports of Heller Committee for Social Research, University of California
 - Reuter & Runner, The Family
 - Rich, M. E., Family Life Today
 - Richardson, F., Parenthood and the Newer Psychology
 - Rose, M. S., Feeding the Family
 - Spencer, A., The Family and Its Members
 - Steel & White, Hygiene of Community, School & Home
 - Taber, C. W., The Business of the Household
 - * White House Conference on Child Health & Protection (Full Series - See Catalog)
 - Wile & Winn, Marriage in the Modern Manner

CHILD CARE

- * American Child Health Association, Public Health Aspects of Dental Decay
- * American Child Health Association, Influence of Socio-Economic Factors on Health
- Baker, J., Child Hygiene
- Keene, C. H., Physical Welfare of the School Child
- Lucas, W. P., Health of the Runabout Child
- O'Shea, M. V., The Child: His Nature and His Needs
- Terman & Almack, Hygiene of the School Child
- * White House Conference on Child Health & Protection (Full Series - See catalog)

SCHOOL HYGIENE

- * American Child Health Association, Health Education Tests
- Keene, C. H., Physical Welfare of the School Child
- Kerr, J., Fundamentals of School Health
- * Newmayer, S. W., Medical and Sanitary Inspection of Schools
- Rosenau, M. J., Preventive Medicine & Hygiene
- Steel & White, Hygiene of Community, School & Home
- Terman & Almack, Hygiene of the School Child
- * White House Conference on Child Health & Protection (Full Series - See Catalog)
- Wood & Rowell, Health Supervision & Medical Inspection in Schools

INDUSTRIAL HYGIENE

- Clark, J. H., Lighting in Relation to Public Health
- Clark, W. I., Health Service in Industry
- Kober & Hayhurst, Industrial Health
- Rosenau, M. J., Preventive Medicine and Hygiene

COMMUNITY HYGIENE (PUBLIC HEALTH)

- American Child Health Association, Health Survey of 86 Cities
American Public Health Association, Appraisal Form for City Health Work
American Public Health Association, Appraisal Form for Rural Health Work
Brainard, A. M., Organization of Public Health Nursing
Chapin, C. V., Sources and Modes of Infection
Clark, J. H., Lighting in Relation to Public Health
Commonwealth Fund, Community Health Organization
Hemenway, H. B., Legal Principles of Public Health Administration
Leigh, R. D., Federal Health Administration
Luckiesh & Pacini, Light and Health
McCombs, C. E., City Health Administration
Moore, H. H., Public Health in the U. S.
Newsholme, A., Evolution of Preventive Medicine
Newsholme, A., Story of Modern Preventive Medicine
Overton & Denno, The Health Officer
Park, W. H., Public Health and Hygiene
Phelps, E. B., Public Health Engineering
Ravenel, M., Half Century of Public Health
Rice, T. B., Racial Hygiene
Rosenau, M. J., Preventive Medicine & Hygiene
Sedgwick, Principles of Sanitary Science
Smiley & Gould, Community Hygiene
Steel & White, Hygiene of Community, School & Home
Tobey, J. A., Public Health Law
U. S. Public Health Service, Bulletin No. 56, Milk & Its Relation to Public Health
* White House Conference on Child Health & Protection (See full list in catalog)

EDUCATION (GENERAL AND PHYSICAL)

- Brace, D. K., Measuring Motor Ability
* Curtis, H. S., Education Through Play
Garrett, Statistics in Psychology and Education
Gulick, L. H., A Philosophy of Play
* Hetherington, C. W., Program in Physical Education
Lee, J., Play in Education
McCall, W. A., How to Measure in Education

- * Nash, J. B., Mind and Body Relationships
- * Nash, J. B., Administration of Physical Education
- Payne & Schroeder, Health & Safety in the New Curriculum
- Playground & Recreation Association of America, The Normal Course in Play
- Rogers, F. R., Physical Capacity Tests
- Ruch & Stoddard, Tests & Measurements in High School Instruction
- Ruch, G. M., The Objective or New Type Examination
- Rugg, H. O., Statistical Methods Applied to Education
- * Williams, J. F., Administration of Physical Education
- Williams, J. F., Principles of Physical Education
- * Williams & Brambaugh, Methods in Physical Education
- Williams & Hughes, Athletics in Education

SOCIETAL HYGIENE

Syllabus
for
Course 154

School of Hygiene and Physical Education for Men

STANFORD UNIVERSITY

1930

LIST OF BOOKS FOR SOCIETAL HYGIENE
Course 154

American Public Health Assn.	Appraisal Form for Rural Health Work	
American Public Health Assn.	Appraisal Form for City Health Work	
Baker, J.E.	Child Hygiene	
Barker and Sprunt	The Degenerative Diseases	
Bossard, J. W.	Problems of Social Well-being	
Bramard, A.M.	Organization of Public Health Nursing	
Broadhurst	Home and Community Hygiene	
Dublin, L. I.	Health and Wealth	
Hiscock, Ira	Community Health Organization	
Kerr, James	Fundamentals of School Health	371.7 K41
Leigh	Federal H. Administration in U.S.	
McCombs, C. E.	City Health Administration	
McLaughlin	Communicable Diseases	
Moore, H. H.	American Medicine and the People's Health	
Moore, H. H.	Public Health in the United States	
Newsholme Arthur (Sir)	The Evolution of Preventive Medicine	
Overton and Denno	The Health Officer	
Park, Wm. H.	Public Health and Hygiene	
Phelps	Principles of Sanitary Engineering	614.P539
Ravenal, M.	A Half Century of Public Health	
Research Division, American Child Health Association	Health Survey of 86 Cities, 1925	614.097a512
Rice	Conquest of Disease	
Rosenau, M. J.	Preventive Medicine and Hygiene (last ed.)	
Sedgwick	Principles of Sanitary Science and Public Health	
U. S. Hygiene Bulletin #56	Milk and Its Relation to Public Health	
Whipple, G. C.	Vital Statistics	

I. OBJECTIVE

The objective of this course is to prepare the individual for, and induce him to take an active intelligent part in, shaping the health policy and practices of his own community, state, and nation.

II. PLAN

In the brief time available for the course, our aim will be to:

1. Explore some of the sources and forms of our societal or community health practices.
2. Evaluate the soundness of these practices.
3. Estimate the adequacy of our present facilities for protecting the individual through the group.
4. Project the essentials of a public health program that promises the best results with our present knowledge of the principles of hygiene.

III. DEFINITION OF THE FIELD

For purposes of more accurate description, the field of hygiene has been classified under a number of distinct but inter-related divisions. These have been presented in former courses.

Societal or intergroup hygiene is defined by Storey as "the application of the scientific facts of general hygiene in and by the public for the health welfare of the public." It is frequently called community or public hygiene. It conceives the public as being made up of associated groups of humans dominated by common health interests and exposed to common health dangers and competent to enforce standards of hygiene through the various units of government and by force of community custom.

IV. BASIS OF SOCIETAL HYGIENE

A brief consideration of the bases of a societal or public hygiene program will be of value.

1. Economic Basis

- a. Values of reduced morbidity and mortality
- b. Values of increased efficiency
- c. Values ~~to~~ communities.

2. Scientific Basis

- a. Known causes and modes of transmission of disease.
- b. Known methods of cure and prevention of disease.
- c. Known methods of promotion of health.

3. Legal Basis

- a. Power to establish legal regulations
- b. Power to enforce regulations
- c. Power to appropriate money for health purposes.

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- References: Bossard, J. W.--Problems of Social Well-being, Chaps. 7 & 16
Dublin, L. I.--Health and Wealth, Chapter 1
Moore, H. H.--Modern Medicine and the Public Health
Goodnow--Constitutional Foundations of Public Health
U.S. Public Health Service Reprint 559 (Document Rm.)

V. SUBDIVISIONS OF SOCIETAL HYGIENE

For purposes of discussion, societal hygiene may be considered under several subdivisions.

1. Educational hygiene. The necessity for wider diffusion of hygienic facts makes educational hygiene one of the important functions of the department of health, and the whole educational system.
2. Informational hygiene. Modern life demands a continuous process of researches, surveys, and studies of new ways to protect and promote health. This service is a function of departments of health; scientific laboratories; research divisions of colleges and universities; and organizations of experts.
3. Constructive hygiene. Includes the intergroup provisions for securing and safeguarding the food supply; provision for play and recreation; and regulation of transportation of facilities.
4. Defensive hygiene. Community provision for defenses against health hazards involved in water supply, milk supply, waste disposal, communicable diseases, physical, mechanical, biological, and chemical causes of ill health.

VI. PRESENT STATUS OF HEALTH SERVICE IN UNITED STATES

A knowledge of what is now being done to meet the health service needs of our people is the first step in judging the adequacy of our public hygiene program. This can best be obtained by a brief review of the work of the official and voluntary agencies in the health field.

Governmental Agencies. The health work of the government should be considered under the head of federal, state, and local units.

1. Federal Health Agencies. The health work of the Federal government is not concentrated in a single department but is scattered through many bureaus. Only the most important will be considered.
 - a. U.S. Public Health Service. The most important Federal agencies. Administered as a Bureau in the Treasury Department. Originated (1798) as Marine Hospital Service to care for sick and disabled seamen. Powers and functions have been gradually broadened:
 - (1) Protection of U.S. from disease from without
 - (2) Prevention of interstate spread of disease
 - (3) Co-operation with State and local Boards of Health
 - (4) Investigation of causes of human disease
 - (5) Supervision of biological products
 - (6) Public health education.

Activities

- (1) Maritime quarantine - medical examination of immigrants.
- (2) Hygienic laboratory
- (3) Interstate quarantine
- (4) Public health reports and bulletins

b. Children's Bureau (Dept. of Labor) - Next to the U.S.P. Health Service, is the most important federal health agency.

Functions:

- (1) Investigation of causes of infant mortality and diseases of children
- (2) Administration of the Sheppard-Towner Maternity and Infancy Act.
- (3) Publications and educational activities.

c. Bureau of Census (Dept. of Commerce) Collects, tabulates, and analyzes vital statistics.

d. Bureau of Chemistry (Dept. of Agriculture) Administers the Pure Food and Drug Act.

e. Bureau of Education (Dept. of Interior) promotes school hygiene and health of Indians.

f. Bureau of Labor Statistics (Dept. of Labor) makes industrial hygiene studies.

g. Bureau of Animal Industry (Dept. of Agriculture). Supervises meat inspection and investigates animal diseases.

h. Bureau of Entomology (Dept. of Agriculture) Insect studies affecting the health of man.

i. Bureau of Biological Survey (Dept. of Agriculture). Eradication of rats and plague carrying ground squirrels.

j. States Relations Service (Dept. of Agriculture) health education in rural communities.

2. State Health Departments. The state is the source of power to control health conditions. The state health department is a later form of organization than the local units. There is less scattering of health functions in the state health agencies.

a. Evolution of State Departments of Health

- (1) Boards with a Secretary and having principally advisory powers. Oregon as a type.
- (2) Commissioner with Advisory Council. Advisory functions and enlarged executive powers. New York and California as types.

b. Advisory Functions

- (1) Investigation and research.
- (2) Advice to local boards of health

- (3) Laboratory service
- (4) Publicity and Exhibits

c. Executive Functions

- (1) Communicable disease control
- (2) Nuisances affecting more than one sanitary district
- (3) Registration of Vital Statistics
- (4) Food and Drug control
- (5) Standards for water supply and sewage disposal
- (6) Control of factories and tenement houses
- (7) Distribution of vaccines and serums.

d. Budgets. Range from 3 to 19¢ per capita.

3. Municipal Health Departments. The city health departments are the completest and most effective units in our public health service. In many of the larger cities, we now have complete programs. This is particularly true where partisan politics has been compelled to keep hands off and there is active co-operation of the educational system and the voluntary health and social agencies.

a. Powers always derived from legislature through a charter.

b. Survey of Field

- (1) Report on Municipal Health Dept. Practice
American P.H. Assn.
- (2) Survey of 86 Cities
American Child Health Assn.

c. Organization is dependent upon the form of municipal government.

- (1) Ex-officio boards. A single executive with some other body or board acting as a board of health.
- (2) Appointive boards. Health officer and separate board.
- (3) Independent executive working under commission or city manager.

d. Divisional Organization. In a city with a complete program this usually consists of:

- (1) Administration
- (2) Communicable diseases
- (3) Tuberculosis
- (4) Venereal diseases
- (5) Child hygiene
- (6) Industrial hygiene
- (7) Milk and food inspection
- (8) Sanitation
- (9) Laboratory service
- (10) Nursing
- (11) Vital statistics
- (12) Hospitals

e. Budgets. Range 11¢ to \$1.04 per capita. Average cities over 100,000-51.6¢ per capita.

4. Rural Health Departments. The weakest link in our health chain. The reasons for this are the nature of our rural social and political organization; the size of the allotment to health; and the administrative difficulties.

a. Survey of Field. Virtually all the rural health work now being done is the result of the co-operative efforts of local and state departments of health with the U.S. Public Health Service and the International Health Board (Rockefeller Foundation)

Only 19% in 1928 of rural population had local health service under the direction of a full time health officer.

b. Rural Sanitation Service of U.S. Public Health Service. Created by Acts of 1893 and 1912.

(1) Objectives

- (a) Improvement in sanitary devices
- (b) Co-operation with local health departments financially and functionally.

(2) Methods

- (a) Small subsidies
- (b) Demonstrations (Cape Cod District)

(3) Extent. 109 counties in 17 States. Such service needed for 60% of population. At present it is available for only 19%.

(4) Cost (1928)

Federal funds	\$77,628.01
State and local funds	948,838.24
Private organizations	<u>91,489.53</u>
Total	\$1,117,955.78

References: Public Health Reports - Nov. 30, 1928
(Document Room and Magazine Room)
Contains excellent accounts of work of San Joaquin Health District.

c. International Health Board is one of the subsidiaries of the Rockefeller Foundation. One of the important activities has been their co-operation with federal and local health officials in promoting rural public health.

(1) Method. Through a co-operative agreement with State and Local government the I.H. Board gives financial support to local health projects until they have proven their worth and are taken over by the people.

d. North Carolina County Health Work. Dr. Watson Rankin, State Health Officer of North Carolina, has been one of the outstanding leaders in the rural health field.

(Reference: North Carolina Health Bulletin, Jan. 1920)

References: Leigh--Federal Health Administration in U.S.
McCombs, C.E.--City Health Administration
Moore, H. H.--Public Health in U.S.
Newsholme--The Evolution of Preventive Medicine
Ravenal, M.-- A Half Century of Public Health

VII. VOLUNTARY OR PRIVATE HEALTH AGENCIES

The evolution of the private health organizations has been one of the striking and vital factors in the development of health service in the United States.

These agencies may be grouped under the head of: (1) Organizations; (2) Foundations; (3) Commercial agencies; (4) Industrial agencies.

1. Organizations. We have great numbers of organizations of private individuals who are interested in special problems. Time and space will permit only a mention of those having a national scope.
 - a. National Tuberculosis Association (1904). A unique association with branches in all 48 states.
 - (1) Activities. Field service on tuberculosis; surveys; research standards for hospitals; educational programs.
 - (2) Support. Christmas seals.
 - b. American Social Hygiene Association
 - (1) Activities. Law enforcement; medical measures; educational activities; publications.
 - (2) Support. Memberships and contributions from individuals and foundations.
 - c. National Committee for Mental Hygiene (1917)
 - (1) Activities. Care of mentally diseased; clinics; teaching of psychiatry; surveys; prevention of delinquency
 - d. American Society for Control of Cancer (1913)
 - e. Association for Prevention of Heart Disease
 - f. American Public Health Association
 - g. National Organization of Public Health Nursing
2. Foundations. Have increased in size, number, and scope of their activities during the past 10 years.
 - a. Rockefeller Foundation. Began activities as a sanitary commission to control hook worm (1909) -- was broadened in Foundation in 1913 with fund of 100 million dollars.

Foundation consists of four divisions: International Health Board; China Medical Board; Division of Medical Education; Division of Studies.

International Health Board. This division is the health agency of the Foundation. Conducted on the policy that public health is essentially a governmental function and therefore they work only through the official health agency.

(1) Activities

- (a) Special campaigns (Yellow Fever
Hookworm
Malaria)
- (b) County or rural health work
- (c) Health administration
- (d) Fellowships
- (e) Special projects: League of Nations (Health Section)

b. Milbank Fund. A smaller foundation interested primarily in control of tuberculosis. Conducting intensive demonstrations in New York State. Also contributions to other health projects.

c. Commonwealth Fund. This fund is interested in child health demonstrations, mental hygiene, educational research, rural hospitals, educational research, and fellowships.

3. Commercial Agencies. This group of health agencies has undergone a rapid development during the past 25 years.

a. Metropolitan Life Insurance Company

- (1) Educational
- (2) Nursing Service
- (3) Industrial
- (4) Statistical

b. National Dairy Council. Local units and councils in all parts of United States.

c. Food Companies (Postum Cereal, etc.)

4. Industrial Agencies. The growth of health programs in industry has been one of the remarkable developments in health service. These plans range from mere first aid stations to complete health programs, including medical and health service for both employees and families. Some of the outstanding examples may be mentioned: Ford Motor Co.; International Harvester Co.; Endicott ~~Johnson~~ Shoe Co.; U.S. Steel Co.; Bell Telephone Co.

- References: Moore, H.H.--Public Health in United States, Chap. 11
 O'Neil, D.C.--Medical Service for Industrial Workers, Journal American Medical Association, Nov. 17, 1928 -- p.1516.
 Kober and Hansen--Industrial Hygiene, Chap. 8
 Reports of Rockefeller Foundation, Commonwealth Fund, (In general Library)
 Reports (annual) Surgeon General, U.S. Public Health Service (Document Room)

VIII. ORGANIZATION AND POWERS OF HEALTH AGENCIES

The legal principles underlying public health are based upon common law, statute law, and constitutional provisions.

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The fundamental idea at the base of governmental action for the preservation of the public health is that of nuisance. The powers which have been gradually placed in the hands of health officials are based upon court decisions. These decisions have established the right of the government to regulate the conduct of its citizens in such a way that their acts or omissions do not materially or unreasonably injure other citizens.

Sanitary powers are extraordinary and sweeping in character but must be justified and reasonable.

- (1) Arbitrary and summary power to deprive persons of liberty and property.
- (2) Check wholly or partly commercial operations.
- (3) Disturb civic life to any extent deemed necessary.

1. Sources of Power

- a. State. The sovereign power of the State as expressed through the legislature delegates sanitary functions to certain boards or individuals. The State reserves to itself any powers not delegated to local communities or to the Federal government.
- b. Local. Authority commonly vested in a local board of health or governing body. Frequently in cities through charter.
- c. Federal. Only such powers as have been granted by State to central government.

2. Application of Powers

These powers are applied through:

- a. State Statutes establishing state and local boards of health and special acts such as pure milk acts or laws for physical inspection of school children.
- b. Local Ordinances. These are made by local boards or council to make effective police powers to meet local condition.

3. Organization

The organization of the various official health agencies are based upon statutes or charter provisions creating them.

- a. Board - method of appointment, composition, term.
- b. Personnel - powers of appointment, qualifications, tenure
- c. Finances - legal method of securing funds.
- d. Powers - extent and character of powers.

References: Hemenway, H. B.--Legal Principles of Public Health Administration
Goodnow--Constitutional Foundations of Public Health
(U.S. Public Health Reports, Oct. 3, 1919, or Reprint 559)
Overton & Demno--The Health Officer, Chap. 1

IX. ESSENTIAL SERVICES IN A COMMUNITY HYGIENE PROGRAM

The student may never have to control a water supply; do milk or food inspections; wrestle with waste disposal; or quarantine communicable diseases. It is believed that he should understand the hygienic principles involved and the method of their application as a basis for estimating the adequacy of the health protection in his own community.

"Life is the continuous adjustment of internal to external relations," Spencer. Air, water, and food are primary requisites of animal life and constitute three great channels of communication between life and its environment.

1. Water Supply

a. Ownership of Supply

- (1) Public
- (2) Private

b. Amount of Supply

Based upon the requirements for physiologic uses of the individual and the amount needed for domestic and industrial purposes.

- (1) Individual. The average healthy man needs 1800 CC to 2100 CC in addition to the amount taken with food.
- (2) Domestic purposes, including cooking, bathing, dishwashing, laundry: 12-17 gals., a day per capita.
- (3) Per capita use. Abroad - 6-59 gallons
U.S. - - From 53 in Fall River to 250 in Pittsburg.

c. Sources of Supply

The source from which a community secures its supply of water is of great hygienic importance.

- (1) Rain or snow water. Often used in rural areas. Secured from run-off of roofs and stored in cisterns. Soft-mawkish taste. Pure if properly protected.
- (2) Surface waters. Rivers, creeks, lakes, and impounding reservoirs. Frequently dangerous--always under suspicion. Should always be purified.
 - (a) Rivers. The most common supply. Danger from drainage from inhabitants.
 - (b) Lakes and ponds. Admirable supplies when kept free from human and industrial wastes.
 - (c) Impounding reservoirs. Used for storage and for purification.
- (3) Ground waters. From wells and springs. Apt to be hard.
 - (a) Wells. Polluted most frequently from surface drainage.

d. Protection of Supply.

This is an economic as well as a health problem.

- (1) Water-shed. Guarded from pollution by exclusion of campers, etc.
- (2) Sanitary Analysis. Should be regular and complete.
 - (a) Physical properties
 - (b) Microscopic
 - (c) Chemical
 - (d) Bacteriological
- (3) Purification. Under modern conditions this is almost always a necessary precaution.
 - (a) Storage
 - (b) Filtration
 - (c) Chemical treatment

2. Milk Supply

Milk is our most valuable and most dangerous food because:

- (1) Bacteria grow readily in milk
- (2) It is difficult to transport
- (3) It is readily decomposable
- (4) It is the only animal food we use raw.

a. Control of Milk Supply

Under modern conditions it is essential to control the production, sale, and distribution of milk in order to protect the public health. This is being accomplished by means of:

- (1) Legal control through State laws and local ordinances.
 - (a) Milk standards are made an essential part of all milk regulations. They include:
 - Physical standards
 - Chemical standards
 - Bacteriological standards
 - Sanitary standards
 - (b) Grading of milk is one of the best devices for the control of milk supply.
 - (c) Pasteurization if properly carried out under supervision is invaluable.

b. System of Control

An adequate system of control for milk supply should include:

- (1) Good milk ordinance
- (2) Inspection of all raw milk supply
- (3) Chemical and bacteriological analysis
- (4) Supervision of milk plants
- (5) Publicity and education.

3. Food and Drug Supply

The supervision of the food and drug supply of the community should be one of the important services of a health department. This should protect the individual against adulteration of foods, as well as against the hazards of poisonous foods and infected food handlers. This involves the following activities:

- a. Licensing annually all food handling establishments.
- b. Regulations governing quality and methods of handling foods.
- c. Inspection and scoring these establishments.
- d. Food Handlers requirement for medical examination at regular intervals.

4. Waste Disposal

The disposal of wastes such as garbage, ashes, and trash are more engineering than health problems. They should be conducted by the Department of Public Works, and only be supervised by the health department where they directly affect health.

5. Sewage Disposal

This again is an engineering problem, but certain aspects of it should be under supervision of the health officer.

The basic principles are to get rid of the sewage:

- (1) As rapidly as possible
- (2) With least damage to health and property
- (3) With least nuisance to fewest people
- (4) At smallest cost.

From the health standpoint, the objective is to see to it that human excrement is removed from the community promptly and properly. Should assure complete reversion of organic matter to inorganic and mineral form.

a. Systems of Disposal

- (1) Dry earth. Basis found in Mosaic Code. Rural areas and temporary camp.
- (2) Water carriage
 - (a) Sewage
 - (b) Combined: human and household wastes

b. Methods of Disposal

- (1) Dilution up to capacity for proper oxidation
- (2) Treatment

Fundamental Processes:

 - (a) Separation of suspended matter
 - (b) Destruction of putrescible organic matter
 - (c) Transformation of sludge to stable condition
 - (d) Destruction or removal of bacteria

Accomplished By:

- (a) Preparatory processes
- (b) Purification processes
- (c) Finishing processes
- (d) Sludge disposal.

References: McCombs--City Health Administration
Phelps--Principles of Sanitary Engineering
Rosenau--Preventive Medicine and Hygiene

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6. Control of Communicable Diseases

Historically, control of communicable diseases was the first activity of the health department.

a. Organization

In the larger departments, there is usually a bureau or division in which all of the work is centered, and in some cases a separate division for tuberculosis and venereal diseases. In smaller departments the work is organized under control of health officer or someone having other duties as well as control of communicable diseases.

(1) Field Force

- (a) Medical inspectors
- (b) Public health nurses
- (c) Quarantine officers

b. Procedure

- (1) Legal. Action based upon State regulations and local ordinances.
- (2) Notification by card or phone.
- (3) Investigation of cases (Epidemiology)
- (4) Quarantine and isolation.
- (5) Campaigns against specific diseases
 - (a) Tuberculosis
 - (b) Venereal diseases
 - (c) Typhoid
 - (d) Diphtheria

7. Child Hygiene

The modern conception of an adequate child hygiene program includes provision for pre-natal, and obstetrical care, infant welfare, pre-school and school hygiene.

By means of such a program we may hope to lessen stillbirth, increase the vitality of children born alive, safeguard them through the most dangerous periods of their lives, correct their disabling defects, and to pass the larger proportion of them on to the schools in good condition, and finally to graduate them from schools better able physically to carry on the business of living.

a. Pre-natal Service

The results reflected in our infant mortality rates indicate the need for adequate facilities for pre-natal care for all mothers, either by private physicians or clinics.

b. Maternity Service

The high maternal mortality in U.S. can only be reduced by improvement in quality and availability of good obstetrical service.

- (1) Mid-wives
- (2) Nurses
- (3) Clinics
- (4) Hospitals

c. Infant and Pre-school Service

During this period, the individual must meet all the strains and struggles of successfully establishing himself as an individual. Technical service plus educational guidance are necessary for parents.

- (1) Child health stations
- (2) Nursing service
- (3) Educational classes for parents.

d. School Health Service

At this period the child meets the dual responsibility of the public educational and public health authorities. The organization and administration of this service is often a subject of controversy. Which ever group is given the responsibility, there should be for the sake of the child, an active co-operation.

- (1) Control of environment
- (2) Control of communicable diseases
- (3) Physical examination and correction of defects
- (4) Health instruction and health training.

8. Public Health Nursing Service

Every modern community should have available for 100% of the population a well organized public health nursing service. Whether this service is maintained by the official health department or by a private health organization will depend upon local conditions.

- (1) Obstetrical and bedside care
- (2) Infant and pre-school
- (3) School nursing
- (4) Specialized nursing.

9. Statistical Service

The registration tabulation and study of the vital statistics of a community is fundamental to an intelligent health program. Where the health official is also the Registrar of Vital Statistics, the problem is simplified.

- (1) Registration of births, deaths, and marriages
- (2) Morbidity registration
- (3) Studies and reports

References: Baker--Child Hygiene
Kerr--Fundamentals of School Health
Hiscock, Ira--Community Health Organization
McLaughlin--Communicable Diseases
McCombs--City Health Administration
Overton and Denno--The Health Officer
Whipple, G.C.--Vital Statistics.

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X. EVALUATION OF HEALTH PROGRAMS

With the growth in the size and complexity of health programs, it has become increasingly important to have some definite standards of measurement of the health needs and evaluation of the health programs of communities.

1. Surveys
2. Appraisal forms. The work of the Committee on Health Department Practice of the American Public Health Association.

References: McCombs, C.E.--City Health Administration, Chaps. 8, 11, 12, 13
Rice, Thomas--The Conquest of Disease, Chaps. 24-27
McLaughlin, A.--Communicable Diseases, Chaps. 1-6
Overton and Denno--The Health Officer
American P.H. Assn.--Report of Committee on Municipal Health Practice, Public Health Bulletin #136
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American P.H. Assn.--Appraisal Form for Rural Health Work
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Hiscock, Ira--Community Health Organization