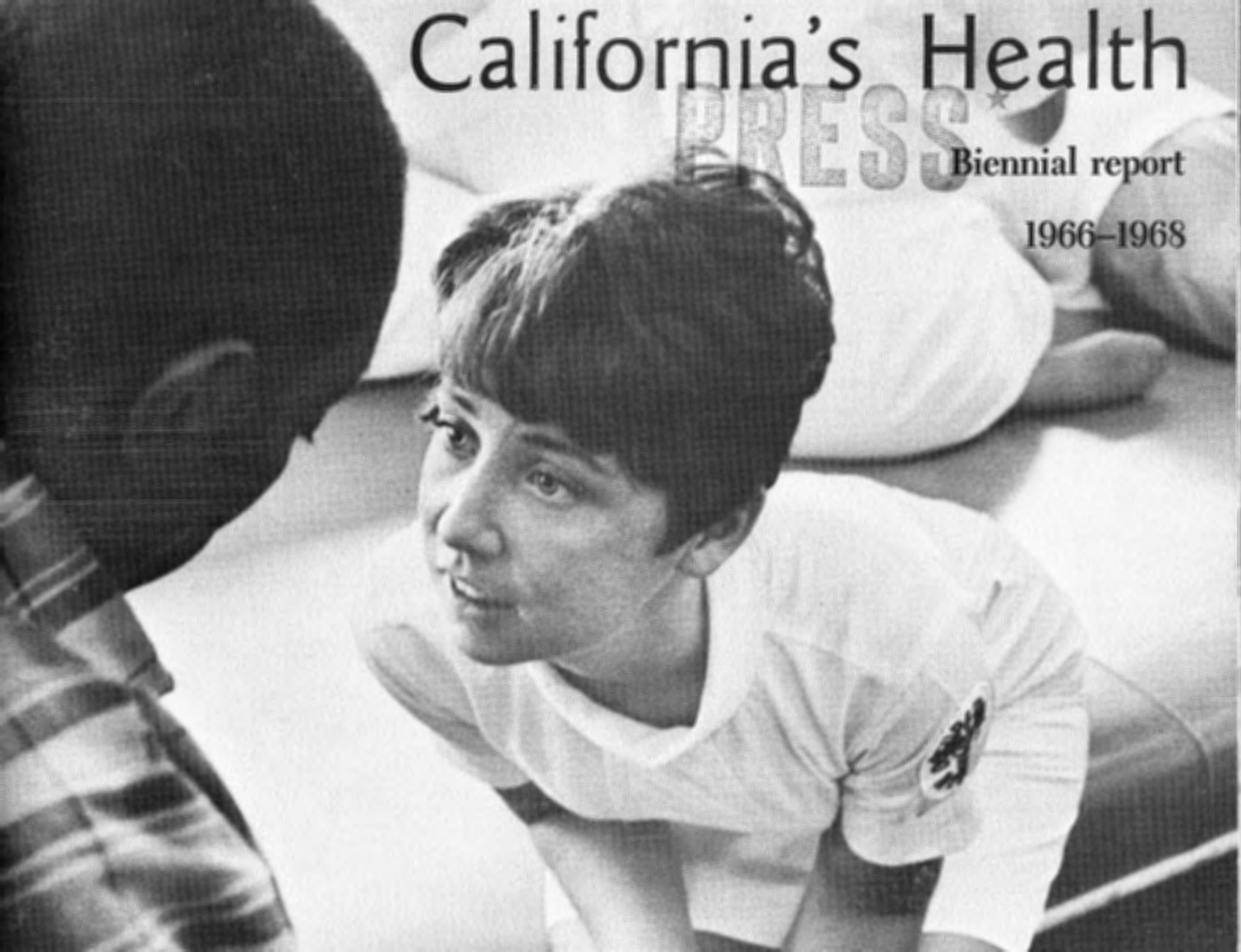
California's Health

Biennial report

1966–1968



President Egeberg, 1965–68

STATE OF CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

STATE OF CALIFORNIA
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HUMAN RELATIONS AGENCY
SPENCER WILLIAMS,
Secretary

"The State Board of Public Health consists of the Director of Public Health and nine other members. The board shall advise the director in the performance of his duties and formulate general policies affecting public health. It shall have power to adopt, promulgate, repeal and amend rules and regulations consistent with law for the protection of the public health.

"It shall issue licenses and permits as prescribed by law and by rules and regulations of the board. It may hold hearings and subpena witnesses and documents pursuant to Article 2 of Chapter 2, Part 1, Division 3, Title 2 of the Government Code. The board shall have no administrative or executive functions other than those set forth in this code." —Health and Safety Code

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Organization chart photo by V. D. Sutcher.

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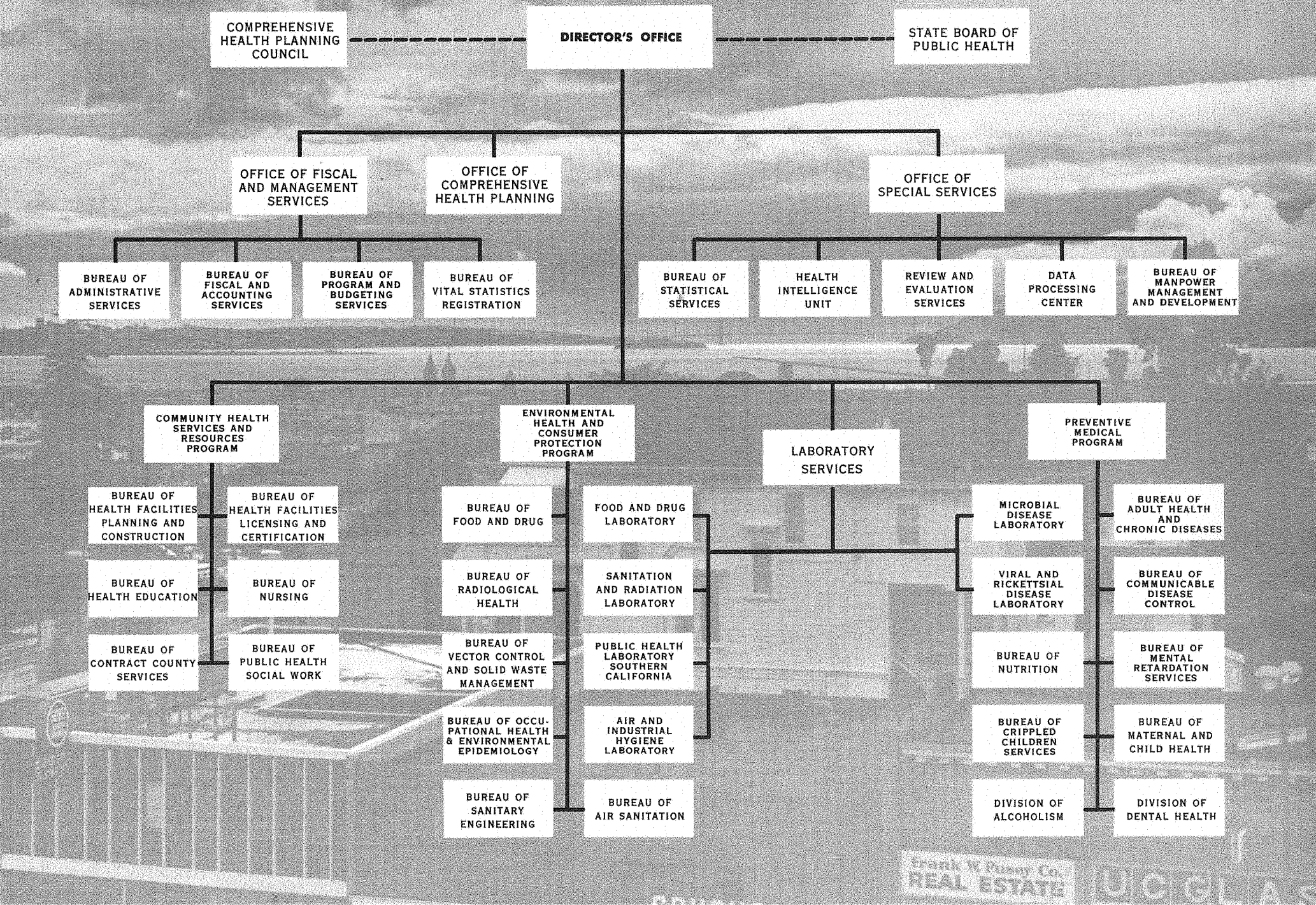
STATE OF CALIFORNIA DEPARTMENT OF PUBLIC HEALTH



"To die young—but as late as possible"

Twenty million people now live in California, clustered or scattered over much of the state's 158,000 square miles. Some areas are so sparsely settled that the nearest neighbor is a mile distant; in some cities people are packed and stacked by the million.

Each individual interacts with his environment, with his neighbor, and his community. How these interactions occur, and under what circumstances, determines to a large extent the quality of life he enjoys, and the life style he shares with others.

It has been said that man's aim should be "To die young, but as late as possible."

Health is no longer narrowly defined as only the absence of disease. Our goal in public health is to provide the means to robust good living, for all the years possible to the individual. This ideal is modified by the quality of the environment and the availability and application of health protection and medical care.

Today Californians of all generations are moving into the mainstream of health and medical care under the Federal Medicare and State Medi-Cal programs. Millions who less than a decade ago had expected to go through life without ever seeing a physician except in dire emergency, are now receiving the regular preventive medical attention that will measurably lengthen their life spans and make living more zestful.

Good physical and mental health are sustained by a healthful environment. Public health workers are committed to maintaining—or regaining—the highest standards possible throughout our complex, many-layered human ecology. State, county and city health departments are pledged to help provide our people with clean air; safe, good-tasting water; practical but not unsightly disposal methods for solid wastes; protection from the din of man-made noises; fewer occupational hazards in fields and factories, and much more.

These health objectives, many of them closely interlaced, are broad and long-range. Fortunately, California has a well-established, broad-based mechanism for solving statewide health problems and reaching goals for better living—the California Conference of Local Health Officers. The State Department of Public Health assists and cooperates with the leaders of local health departments in our 58 counties. This "grass roots" fabric, woven from the threads of State-local understanding and shared responsibilities, is perhaps unique in the Nation.

Many of California's public health programs—and problems—are described in the following pages of this Report. Wherever possible we have attempted to give the reader a glimpse of people helping people, which basically is what public health is all about.

Louis F. Saylor

LOUIS F. SAYLOR, M.D.
Director

DAGGETT

Protecting the consumers

A healthful environment in a modern society is one in which the individual citizen can buy, with reasonable assurance, foods that are wholesome, drugs that are effective, cosmetics that are safe, and household aids that are properly labeled.

The Department's Food and Drug Program was established to protect the consumer against tainted or adulterated products, unsafe manufacturing or handling practices, misuse through mislabeling, and fraud. This, in turn, benefits the honest, conscientious businessman.

Through its staff of technically trained field personnel, the Department annually surveys more than 3,200 food and drug manufacturing firms; issues 1,000 new licenses; supervises the destruction or reconditioning of nearly 4 million pounds of food exposed to fires, floods, or unsound conditions; maintains daily inspection of 135 licensed canneries producing 66 million cases of canned goods; removes $200,000 worth of defective drugs and 3,800 tons of tainted fish from the market; causes nearly 1,800 corrective actions to be taken and suggests another 3,000 voluntary compliances; and investigates more than 100 fraud cases, about a quarter of which end up in court.

For example, when a Southern California drug plant manager was caught substituting vitamin pills for quinidine tablets so that he could sell the valuable heart drug on the black market, Department inspectors had to sift through the firm's entire quinidine supply to insure its efficacy.

Recent inspections have turned up food labeled safe for diabetics which contained over 30 percent sugar . . . misused pesticide in processed frozen vegetables . . . a "hair restoring" compound which did not, as claimed, cure baldness . . . and repackaged sample drugs diverted from normal channels and sold after the word "complimentary" was erased from each capsule.

The Department's Food & Drug Laboratory in Berkeley and the Branch Public Health Laboratory in Southern California provide the essential analytical assistance to carry out these activities.

The laboratory chemists have also assembled data and conducted toxicological studies upon which a nationwide tolerance level for DDT-pesticides in milk and dairy products was established. And they continue to work with other arms of the State Health Department, such as the Bureau of Vector Control, for which they recently developed a pesticide spraying pattern that would control encephalitis-carrying mosquitoes without causing dangerous chemical build-up.

Salvage for consumers?

STAFF PHOTO

A California family spends nearly a quarter of its income on food, drugs, medical devices, cosmetics and household chemicals. Behind this housewife's confidence in the products she is buying lies the work of State food and drug inspectors, like the agent above, seen field testing maraschino cherries—teamed with laboratory chemists like those below, reviewing an inspector's report before analyzing suspect drug compounds.

NO, NO, a thousand times NO . . . and NO_2, and O_3, and hydrocarbons and lead . . .

Smog. An ugly, choking, eye-stinging pall hanging over our freeways, drifting in foul wisps among the buildings of our cities, blotting out our scenery and turning our suburban gardens brown.

Californians have become increasingly familiar with this spreading blight. It has cost us dearly in agricultural loss and ill health. It frays our tempers and dirties our collars. New evidence suggests it may contribute to auto accidents, cause harmful substances to accumulate in our bodies and, most importantly, directly shorten our lives.

Since 1954, the Department has been at work to learn more about air pollution and how to combat it. Giant strides have been made. Based on Department research, California has adopted the world's first air quality standards to define the limits at which alien substances in the atmosphere become a significant threat. Motor vehicle emission standards have been enacted to muffle the flow of contaminants from this major source. New techniques have been developed to analyze the contents of polluted air, and to find out what effects the pollutants have on the lungs and bodies of people who must breathe them.

But step outside, and you'll see that it's only a beginning.

The Bureau of Air Sanitation was established in 1955 to bring the resources of State government to bear on this growing problem. The Bureau administers a 16-city Statewide Cooperative Air Monitoring Network (SCAN), and collects and analyzes data—some 2 million readings yearly—from 60 locations at which continuous measurement of air quality is being conducted. Expansion of the network into unmonitored areas for truly thorough coverage is now underway.

During the past two years the Department has aided 18 rural counties where lumber and pulp mills, alfalfa dryers, dust, odors and toxic exhausts have presented serious problems. Cheaper and more efficient ways to burn wood wastes have been developed in cooperation with the lumber industry, and local agencies have been assisted to define and control air pollution in their communities.

Under contract with the State Air Resources Board, the Department has begun a massive inventory of pollutant emission sources in each of California's 11 air basins.

The Department has continued to update motor vehicle emission and air quality standards. Recently, exhaust standards for hydrocarbons — hydrocarbons interacting with oxides of nitrogen (NO and NO_2) in sunlight are the cause of smog—were redefined on a weight basis, making the standards more equitable for small cars.

A report on lead pumped into the atmosphere from auto exhaust was compiled in 1967, work which may result in a standard for this potentially dangerous pollutant, and limits on its use as a gasoline additive.

It's bad when you not only have to breathe it, but see it as well

The Department is currently working with California education officials to design courses which will acquaint students with the air pollution problem, and with their duty as good citizens to aid in its prevention.

The Air and Industrial Hygiene Laboratory analyzes the air Californians breathe, both in their communities and in specialized industrial situations, to determine whether it is polluted, how it is polluted, and what effect the contaminants may have on the health and welfare of the people.

. . . make life nasty and,

To accomplish this mission, the laboratory must often develop new air sampling and analysis techniques, and must undertake research into the relatively uncharted fields of air chemistry and biological effects of airborne contaminants.

During the past two years, the laboratory's chemists have studied—and gained pioneering insights into—the impact of inhaled nitrogen dioxide and ozone (O_3) (two major ingredients of photochemical smog) on lung tissues. They have found that animals exposed to these pollutants show changes in the lung similar to those produced by aging.

They have also developed new methods for examining damaged cells in the breathing passages, and for detecting the presence of inhaled lead in the body.

At the same time, the laboratory has worked on techniques to measure a variety of subtle air pollutants found in California's industrial and community atmosphere: nitric oxides, mercury vapor, tetraethyllead vapors, hydrocarbons, organic carbonyl compounds, organic sulfur compounds, tiny irritating and light-dimming particles called aerosols.

This work has, for example, enabled the Department to close an industrial waste dump in which lead fumes caused a health hazard to workers and nearby residents, and has provided a means to gauge objectively—and thus limit—the foul odors in communities where paper-producing wood pulp mills operate.

Continued →

. . . maybe, short

STAFF PHOTO

Structural lung fibers exposed to nitrogen dioxide begin to unravel—a phenomenon scientists believe is important in the origin of lung disorders like emphysema. The lung collagen fiber at lower right is still healthy. The two at center are starting to unwind. The fiber at left is almost completely disintegrated. The process is shown at great magnification under a Department electron microscope.

A major weapon in the Department's attack on air pollution has been epidemiologic research—the study of how pollutants affect the health of the broad population. Although among the most difficult of sciences—it may, for example, require more than 20 years' data to detect a rise in chronic emphysema rates, and only then can researchers begin to analyze possible causes—epidemiologists in the Department's Environmental Hazards Evaluation Unit have been pacesetters in defining the health effects of contaminated air, and in devising statistical methods for health surveillance of large population groups.

Currently the Department is studying daily deaths reported by Los Angeles and other metropolitan county health departments—a way to determine the impact of smog. This augments research on the 1967 daily workload of the Los Angeles County Coroner's Office, and nearly 14 years' data on deaths and hospitalizations of elderly Los Angeles nursing home residents.

Since chronic lung diseases are particularly likely to be affected by atmospheric pollutants, they have been an object of special concern to Department epidemiologists. Studies show that emphysema is now among the 10 major killers of mature people in the State, and one of the most rapidly increasing causes of death in the past 10 years. The causative role of cigarette smoking is becoming clear. The contribution of other types of contaminated air is under scrutiny.

Recently, Department statisticians have invented new "temporo-spatial" strategies to compare events in several locations over long periods of time. These have been used to analyze, for example, the association between Los Angeles smog levels and traffic accidents, and the relationship between carbon monoxide in the air and heart attack deaths.

Because of its experience, the Department has prepared a report for the U.S. Public Health Service from which national air quality standards for ozone and oxidants may be derived. A preliminary report has been completed on carbon monoxide, and the Department has participated in compiling reports on sulfur oxides and airborne dusts. These publications, widely discussed by scientists, are the basis on which control programs will ultimately be designed.

The information, techniques and expertise gained in the assault on air pollution are now being applied to other environmental hazards facing the people of California: drinking water polluted with dangerous inorganic substances like arsenic and nitrates; the mountains of solid waste produced by our urban society; housing and planning for comprehensive health care; and the growing abuse of dangerous drugs throughout the population.

Night after night . . .

worse at night . . .

day and night . . .

Ear pollution . . .

Noise. We can't see it, but we can feel it. We are becoming immersed in unwanted sound which pollutes our environment as effectively as smog, garbage or bacteria. Ear pollution is becoming a major public health problem in California. On-the-job exposure to excessive noise can result in permanent hearing loss. Noise below the damaging level we consider a nuisance, to be tolerated as an accepted fact of modern life. Yet it exerts many overt and subtle side effects which are both unpleasant and unnecessary. The Department is committed to the reduction of noise from all sources to comfortable levels as a component of environmental health. Shown here are three kinds of ear pollution the average city dweller cannot avoid. The fourth we can escape if we wish, but the drummer can't.

Eight to four . . .

70 million tons of solid wastes a year . . .

During the next 35 years Californians will throw away—somewhere—nearly 2½ billion tons of solid waste. If, in one of those dramatic gestures beloved to statisticians, it were all to be gathered into a 100-foot wide strip . . . then beer cans, no-return bottles, boxes, rusted fenders, left shoes and the like would stretch from the Oregon border to Mexico, to a depth of 30 feet. Cost in present terms to collect and dispose of all that waste: $35 billion.

What are we going to do?

Every year California produces at least 70 million tons of solid wastes. The 58 square miles of land in today's disposal sites are being used up rapidly. Land which might be suitable for new sites is dwindling, swallowed up for other, more economically and esthetically attractive, purposes.

What are we going to do?

Of the 716 major disposal sites now in active use, 75 percent are creating problems of flies, rats, odors, smoke and unsightliness. The 500 supplemental sites are all open dumps.

What are we going to do?

During the past two years, the Department's Bureau of Vector Control and Solid Waste Management has undertaken comprehensive studies of this—quite literally—mounting problem. In June, 1968, a research project conducted in collaboration with the Aerojet General Corporation was completed, using systems analysis to delineate the complexities of regional solid waste management. The information obtained and the techniques developed will provide valuable tools in accomplishing eventual regional solutions.

Recently, the initial phase of another study covering the entire State was completed. Some 15,000 pages of basic data were compiled. The information will be used to develop a recommended program plan for statewide solid waste management, to be published in 1969.

Basically, the Department is working to shift public attitudes toward the view that solid wastes are a potential resource, subject to salvage and conversion. Disposal is a negative approach, offering no ultimate solution. Improvements are also needed in refuse storage and collection. Even a covered garbage can may be a "fly factory". Something better must be done.

STAFF PHOTO

. . . and vectors to spread disease

WEBER

Fleas, mosquitoes, midges, domestic flies, gnats, cockroaches, mites, lice, ticks, wasps, snails, venomous snakes, spiders, scorpions, rats, mice, wild rodents . . . some 1,100 species of insects, reptiles and mammals which transmit disease or discomfort to the public in California are known as vectors. Their bites and stings can be dangerous. Combatting this pestilent host is the job of the Department's Bureau of Vector Control and Solid Waste Management.

In 1966, the largest outbreak of bubonic plague since the 1940's reached its peak in California. The Department found evidence that wood rats had suffered heavily from the disease. Some 58 rodent specimens and pools of fleas were found to be positive for plague. (In 1965 a human plague case occurred in Shasta County.) More than 400 campgrounds and sites were treated to destroy disease-bearing fleas, with the result that nearby animal populations often remained abundant, while rodents in untreated areas suffered heavy mortality. Recently the State Legislature revised laws for agricultural rodent control and tightened those regulating commercial trapping.

In 1967, the Department's early-warning surveillance program detected signs of imminent threat from encephalitis. A Statewide alert brought emergency action by local mosquito abatement agencies. The result was a substantial reduction in mosquito populations, and a below-normal encephalitis case rate for the season.

Mosquito resistance to insecticides, however, is becoming an acute problem. Thus the Department maintains an intensive resistance surveillance program to aid local agencies to avoid operational failures. The Department also works to perfect new spraying techniques. Currently, it is participating in an investigation of airborne insecticide application being conducted by local, industry, university and armed forces experts. If this method—a very low volume of chemicals dispensed at very high altitudes—can be perfected for general use, it will be one of the most important advances in vector control to occur in recent years.

For many rural and wilderness vectors control means are still limited. Recently, experimental tests for yellowjacket control were conducted on Catalina Island. A study of scorpions, using ultraviolet light which causes them to fluoresce in the dark, is underway to find out what species occur in California, and where. A type whose sting can be fatal was discovered in San Bernardino County. Field and laboratory observations of the brown recluse spider are being made to determine its public health importance.

And vector control specialists, in cooperation with other biologists and limnologists, are at work to develop water management procedures which will rid our lakes and streams of insect nuisances without conflict to California's agricultural or conservational interests.

X-rays, isotopes, chemistry . . . and water that's pure

When a nuclear bomb is tested in China —or an underground blast rattles Nevada —the Department intensifies its careful watch of our own environment. During the past two years, some 30,000 tests for the presence of radioactive contaminants were run on 13,000 samples of California air, rain, snow, water, sewage, soil, milk and foods collected by 105 cooperating public and volunteer private organizations. Fortunately, overall contamination levels remain very low.

But watching for fallout and its effects is only a fraction of the Department's Radiological Health Program, established in 1960 to guard Californians against the multiplying sources of potentially hazardous ionizing radiation.

STAFF PHOTO

Today, more than 25,000 medical, dental and industrial X-ray units are registered with the Department, and receive periodic safety inspections. Operators are given assistance in proper use of the equipment.

About 1,200 facilities—industrial as well as medical—are licensed by the Department to possess radioactive materials. Before anyone can acquire radioisotopes, his proposed use, personnel, equipment, and procedures are carefully screened by the Department.

Sites for nuclear power reactors and radioactive waste disposal procedures are evaluated carefully. And the Department conducts a vigorous information and education program.

During the past two years, nearly 300 radiation emergencies were investigated by the Department. These ranged from finding tiny—but lethal—radium needles which disappeared in shipment, to aiding a manufacturer in the recall of radiation-leaking tubes in color television sets.

The Department's Sanitation and Radiation Laboratory supports the Bureaus of Sanitary Engineering and Radiological Health by analyzing water to determine its quality, and monitoring the environment to detect excess radioactivity. In Southern California, the Department's sanitation testing services are provided by the Branch Public Health Laboratory.

Recent activities of these units have included studies of waters with high mineral content (the only kind available in some communities) to determine composition and consumer acceptability; identification of oil pollutants in the State's waterways to pinpoint the source and aid in prevention; and identification of the pesticides which increasingly foul water in agricultural areas (demanding new analytical techniques as new forms of pesticide proliferate).

Recently, Department chemists have developed sensitive new methods to detect methane and silver in water . . . and a rapid technique for measuring nitrate ions in drinking water . . . and a special detector for use in organic pesticide analysis.

Additionally, the Department conducts a statewide program of evaluation and ap-

proval to assure the reliability of some 243 local water analysis laboratories.

Water is a precious commodity in California. We use it to quench our thirst, cook our food, boat and swim in, harvest our famous fish and shellfish, nourish our crops —and receive our wastes and sewage. Properly controlled, these are not incompatible uses. Maintaining control is the aim of the Department's Water Sanitation Program.

Because "fresh" water is precious, every drop must be stretched. New techniques allow waste water to be reclaimed quickly and put to direct use for irrigation and recreation. The Department recently developed pioneering sewage reclamation standards which safeguard the public while allowing us to enjoy the benefits of properly reclaimed water. The standards are the first of their scope in the Nation.

Activities continue in other areas: controlling the purity of all the State's water supplies; assuring the safe disposal of our sewage to prevent fouling of mountain streams, lakes and reservoirs; regulating water treatment processes; specifying how wells are to be constructed and abandoned; and protecting the beds in which shellfish are grown.

The Department must also keep pace with advancing technology. As the result of changes in design, swimming pool regulations have been newly revised. New water treatment methods are under study. A comprehensive look was taken at the 13-county San Francisco Bay-Sacramento River Delta area, resulting in the first overall prospectus for waste water reuse in that rapidly growing section of the State. And in Orange County, the Department is maintaining public health regulation of experimental methods for controlling sea-water intrusion by pumping reclaimed water into the ground.

Raw sewage

Treating sewage

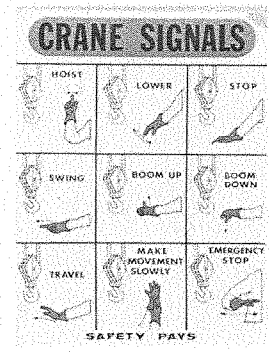
Plastics, pesticides, pressure

Nearly every industrial advance has the potential of creating new problems, often in the field of health. California's 7.5 million workers face a complex of old and new occupational health hazards which the Department, through its Bureau of Occupational Health staff continually works to control or eliminate.

These range from such "classic" hazards as lead and mercury poisoning, silicosis, industrial solvents which produce skin or systemic diseases, to permanent hearing loss from excessive noise, degenerative diseases from vibration exposure, and the bad effects of working in heat.

Then there are new health problems such as those associated with inert gas welding, lasers, working with exotic metals or with plastic materials which, in fabricating processes, can be inhaled with permanent lung damage, pesticides, and hosts of other hazards, some of them subtle enough to go undetected for years.

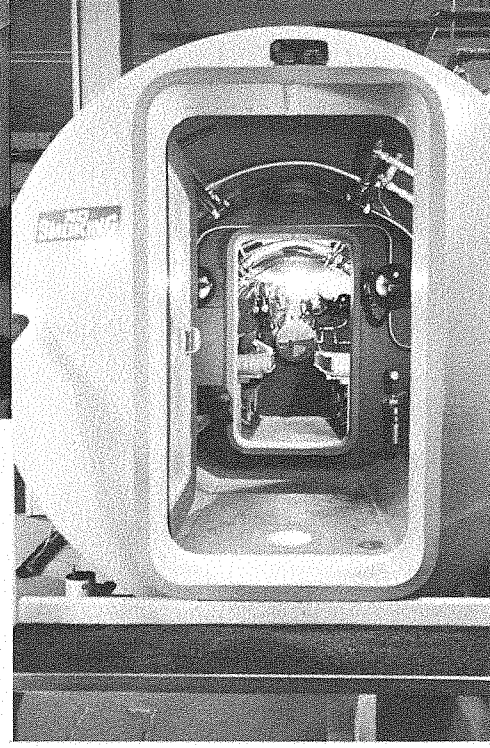
Despite an estimated increase of 20 percent in the use of pesticides in California over the last two years, there was little or no increase in morbidity and mortality among workers using these materials—a reflection of the impact of the Department's educational program and cooperative efforts of other agencies and the private sector in the safe use of pesticides. Particularly hazardous have been spills of toxic pesticides during transportation, in storage, and in fires. These events have a potential for producing unexpected group-poisoning, as well as harmful contamination of the environment. Accordingly, special educational effort was directed to the prevention of spills. This included the instruction of highway transportation, law-enforcement and fire-fighting personnel in the proper handling of spills and fires and the resulting contamination of persons, materials, and the environment. Physicians were warned to suspect, recognize and treat poisonings, and to insure maintenance of adequate supplies of appropriate antidotes in all emergency hospitals.



Increases in mercury prices which began in 1963 resulted in greatly increased production from California mines. Many mines were reopened, some of which had been closed for 50 years; and properties were opened which had never been worked before. Coincidentally a marked increase in mercury poisoning cases in both mine and mill personnel was noted. Department personnel immediately worked to control this serious occupational disease. Environmental studies were conducted at 20 mine and mill operations to identify sources of mercury exposure and to develop control measures.

A technical bulletin outlining procedures and methods for control of mercury exposure in both mine and mill operations was developed and distributed to all known producers of mercury. It is still being sent to newly-opened properties. The medical staff also issued a bulletin on the medical supervision of employees engaged in mercury-producing operations. Surveillance of this expanding industry is continuing.

The Department supported educational efforts to the local health departments obligated by law to provide services in occupational health. Technical counsel, advice and assistance were continued to national, state and local agencies, professional groups and individuals, and others concerned with occupational health.



Decompression for sandhogs

R.E.A.

R.E.A.

REDWOOD EMPIRE ASSN.

California's "playground" counties

Sewage treatment plant at Lake County resort. Clear Lake can be seen in background.

The Department's Bureau of Public Health Contract Services provides basic public health services to 15 counties, each with a population of less than 40,000: Alpine, Amador, Calaveras, Glenn, Lake, Lassen, Mariposa, Modoc, Mono, Nevada, Sierra, Siskiyou, Tehama, Trinity and Tuolumne. In July 1967 this was a total of 220,400, or less than 2 percent of the total State population. These 220,400 people live in an area that is equivalent to 22 percent of California's land area—a very important 22 percent because it meets year-round recreational and "second home" needs of a majority in the State.

Services in environmental sanitation, communicable disease control, school health, maternal and child health, health education, laboratory, and statistics, are supplied by professional field staffs in nursing and sanitation, working with the counties on a contractual basis. This concept of contract health services for rural counties, born in 1953, allows supervisors in counties with populations of less than 40,000 to contract with the State Department of Public Health to provide local health services, with the stipulation that the local government financially support the program by a sum not less than 55 cents per capita per annum. In lieu of cash payments to the State, most counties agree to furnish the services of a part-time health officer and a clerk plus office and clinic space and supplies and equipment.

This unique State-local partnership has functioned smoothly since its inception. In 1967, the Department was asked to report to the State Legislature on alternative plans for financing public health services in the rural counties. The report presented seven different plans with their respective advantages and disadvantages, and advocated the continuation of the contract services arrangement under Section 1157 of the Health and Safety Code.

During the past biennium these trends in rural health programs have emerged: The development and expansion of second-home subdivisions have brought the need for determining basic minimal water supply and sewage disposal facilities. Home health agencies have developed in most of the 15 counties since the advent of Medicare. Since 1966 a central tuberculosis registry has been organized with federal funds. Other accomplishments in this accelerated control program have been initiation of additional chest clinics, consultation and assistance to field nurses, improved followup, more skin testing programs, all in an effort to eradicate tuberculosis from the contracting counties.

In addition, field workers continue to cope with health problems as basic as water and sewage, rabies control, incomplete reporting of communicable diseases, handicapped children, maternal and child health, family planning, chronic diseases, mental health and the vast gap that exists between these problems and the lack of community resources for dealing with them.

197,000 beds

Existing health care facilities and available manpower are insufficient to provide California's 20 million people the services which they require. More facilities and services are needed to accommodate the annual population growth of some 600,000. Many of the older institutions are becoming inadequate and should be modernized or replaced, at an estimated cost of two-thirds of a billion dollars.

High standards for health facilities are necessary to protect the health of all citizens and to assure that safe and adequate care is available without discrimination. Public and private health care plans and programs register increasing demands for more high quality specialized services at reasonable cost. Standards for facilities and services must be continually reviewed and periodically updated to recognize and accommodate advances in health care technology.

Trained manpower in adequate supply is needed if facilities and services are to be available and effective. The health service industry is the nation's third largest. Shortages of adequately trained professional and technical personnel already exist, and in the absence of careful planning it does not appear that the situation will improve.

These needs and problems are among the major concerns of the Department's Program for Community Health Services and Resources. The Health Resources Unit within this program gives direction, coordination and consultation to assist health facilities in providing the best resources and services to meet community needs, and work out solutions to changing requirements.

The Bureau of Health Facilities Planning and Construction within the unit develops state plans for health facilities and administers the grant-in-aid program for facility construction and modernization. This program has assisted in the construction of 431 facilities within the State over the past two decades.

During the 1966–68 Fiscal Years, 96 projects were approved for financial assistance: 26 general hospitals, 11 public health centers, 11 long-term care facilities, 13 diagnostic and treatment centers, 9 rehabilitation centers, 12 facilities for the mentally retarded and 14 community mental health centers.

The Bureau of Licensing and Certification sets and maintains standards for some 2,100 health care facilities. More than 162,000 beds in hospitals, nursing homes, clinics, and establishments for handicapped persons are licensed. Home Health Agencies, a more recent health service facility, are also licensed. State mental hospitals including 197,000 beds are also certified to participate in the Federal Medicare and the State Medi-Cal programs. Assistance is provided as needed in examining and evaluating staffing patterns, and in providing professional consultations including medical, hospital administration, nursing, nutrition, social services, physical and occupational therapy.

STAFF PHOTO

CAYTON

No communicable disease has been conquered

Acute infectious diseases affect almost every Californian each year. They are a major cause of lost time from work, school and enjoyment of life. While about 190,000 cases of notifiable diseases are reported annually, these are only a fraction of the total illness. Substantial under-reporting occurs, despite legal requirements, and also most infectious diseases are not usually reported by individuals. Deaths due to infections number over 9,000 a year.

The primary need is to reduce the incidence of infectious diseases in the population and hold disability and death from these infections to the lowest possible minimum. No infectious disease of man has as yet been eradicated. In some, a significant reduction has been achieved (poliomyelitis, measles); in others the incidence is steadily rising.

In addition to person-to-person disease transmittal, man shares a large number of infections with the animal kingdom: salmonellosis, psittacosis, rabies, Q fever and brucellosis can cause illness from mild disability to death in man.

The Department's Bureau of Communicable Diseases attempts to maintain or erect a barrier between the individual with infectious disease and his contacts. Communicable disease controls begin with continuous surveillance of illness and death from all significant infectious diseases. Methods range from the use of immunizations in appropriate age groups, to rapid case finding and treatment of infected persons and contacts, and manipulation of the environment to minimize spread of infectious disease agents.

A majority of infections are of the respiratory and gastrointestinal tracts, for which effective control measures don't yet exist. Other uncontrolled diseases are German measles, chicken pox, and a number of fungal diseases. Here our objectives are limited to surveillance of occurrence and further definition of causes and ways they spread. When effective control becomes possible the information now being gathered will help apply and then evaluate control techniques. Better diagnostic methods and new immunizing agents are needed before a decrease in diseases not now controlled can be expected. Poliomyelitis, diphtheria, whooping cough, tetanus, measles and smallpox are under control, and here the aim is to maintain the gains, particularly among newborns and in-migrants. Tuberculosis, syphilis and gonorrhea are only partly controlled and the objective is to direct control measures to the groups most at risk.

A variety of methods are used to reduce the incidence of infectious diseases, of which nearly 40 kinds are reportable. The approach depends on the illness, its epidemiologic characteristics and whether or not universally applicable means are available to reduce its incidence.

Continued →

Techniques include universal or selected immunizations, rapid case finding and treatment of cases and contacts, and prevention and limitation of spread once outbreaks have occurred. The creation of a healthful and sanitary environment as it relates to animal reservoirs, vector control and items which affect every person, such as food, milk and water, further reduces avenues of spread. To control infectious diseases, it is imperative to know their causes. The control program depends on the work of the State's Microbial Diseases and Viral and Rickettsial Disease Laboratories, as well as on all Public Health Laboratories of local health jurisdictions.

Information on disease occurrence is exchanged with other states and federal health authorities so that control efforts can be initiated rapidly and the spread of dangerous diseases prevented.

Rapid investigation into the circumstances surrounding epidemics is required for effective control. Many local health departments, especially the smaller ones, require immediate help from State epidemiologists to plan, direct and carry out the investigation so that appropriate steps can be taken to prevent spread. Epidemics are by their nature unpredictable and staff members have to be prepared to move rapidly at any time. Laboratory support for investigation of individual cases and outbreak situations is required throughout.

Consultation is provided to local health departments, individual physicians, hospitals or institutions throughout the year on questions of diagnosis and management of infectious diseases and their contacts. Plague or botulism, for instance, which are seen only rarely by practicing physicians, require expert assistance and the availability of special laboratory facilities for diagnosis and control.

The information received from the various sources is brought together, evaluated, analyzed and interpreted. The picture thus obtained is summarized and distributed at appropriate intervals to local health departments, other agencies, the medical community and the public. This objective also extends to the very important function of training local health department and other professional personnel immediately involved in infectious disease control.

Society must create special learning situations

Mental retardation is the outward manifestation of inadequately developed intelligence due to a wide variety of causes. Children and adults with mental retardation are significantly impaired in their ability to learn and to adapt to the demands of society. To cope with this problem a society must create special learning situations, modify its demands on the individual and provide services directed at ameliorating the effects of the condition. There are about 200,000 individuals in California who need this special attention. The number increases at a rate of 0.8% of the annual net population increase.

The needs of the retarded and their families are as varied as those of any family group and can be usually met by the same methods as the non-retarded. The Regional Center program was established in 1965 by the Legislature to assist families who have special needs because of a retarded family member. It is one of several programs directed to this group which includes care in State hospitals, community placement and protective social services, special education programs, vocational training, and others.

The Department's Bureau of Mental Retardation Services contracts with local agencies for the establishment of a network of Regional Centers, which will make assistance available throughout the State. During the biennium contracts were negotiated with Childrens Hospital of Los Angeles to serve residents of that county, and Aid to Retarded Children of San Francisco, Inc., to serve residents of Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties.

A Regional Center can provide families with diagnosis, evaluation and counseling, and purchases community services for the retarded when such services will prevent hospitalization. The counselors are stationed throughout the areas and are readily available to the retarded and their families.

When a family contacts a Center, they are immediately referred to a counselor who discusses the problem and outlines the services available. If Center services appear to be appropriate, an interview is scheduled. Often the initial interview reveals that the family does not need Center services but can be assisted by another agency. These are called "information and inquiry" cases. Approximately two such cases are assisted for every one that becomes an "active" case.

After evaluation, an active case is again reviewed by the staff, a plan for the individual developed, and responsibility for continuing care assigned.

Special services can be purchased if they are needed by the individual. Two-thirds of the Regional Center budget currently is used to provide such items as general and specialized medical and dental treatment, appliances, drugs, psychological services,

physical, occupational and speech therapy, day and nursery school care, 24-hour residential care, respite care, preschool training, nutritional services, workshop and activity programs, and others.

If no services are required or if another agency assumes primary responsibility, the case is inactivated, but if at any time the individual needs further services, his case is reactivated.

From March 1966, when the Regional Center began operation, until June 30, 1968, approximately 2000 mentally retarded persons and families have been provided Regional Center assistance. Of these 1,003 have been provided diagnosis, evaluation, and counseling service. Of these 690 have been assisted in receiving specialized medical and dental care, day care, 24-hour residential care, and home care services.

No one who is referred to or requests services from the Centers is turned away. Everyone is provided counselor assistance, which may take considerably more time than that provided a client who is on the active caseload.

The counselors continue also to interpret the Center program to the community, and participate with local planning bodies to upgrade, expand and develop services, inform providers of care about the program, and assist facility staffs in upgrading services and programs.

We emphasize that this is a report of the developmental period. One of the Centers did not complete staffing until the end of 1966 and the other has not yet completed staffing. It is sometimes a matter of two or three months before a counselor reaches an optimum caseload. Therefore, the statistics during this period are lower than they will be in subsequent years.

STATE DEPT. MENTAL HYGIENE

Family planning for all who wish it

Family planning was made a required program in local health departments during 1966–1968. Clinic services are now available in virtually all of the more populous areas. The Department's Bureau of Maternal and Child Health jointly with the University of California studied the safety and effectiveness of the Intrauterine Contraceptive Device; and, with the Inter-agency Council on Family Planning, started a statewide plan for extended family planning services to all women who wish them. It is estimated that 750,000 women now obtain family planning assistance from all sources.

A study was undertaken to develop a standard testing procedure of hearing in newborn infants, to provide early referral for those children needing care. The 1955 Department statement on the use of oxygen for premature infants was amended and medical and health offices notified. The Department has also supported medical demonstration projects for intrauterine transfusions to prevent Rh iso-immunization, and in neutralizing the effects of Rh blood incompatibility on new mothers.

Comprehensive health programs for mothers and infants, and for children and youth in urban poverty areas were supported, bringing full range of health care services to many families not otherwise able to obtain them.

Continued →

A new Therapeutic Abortion Law was passed in 1967, and the Department was asked to make an annual statistical report to the Legislature on the number of abortions performed, and the reasons. During the first two-month period 439 therapeutic abortions were performed under the new law. The next annual report will cover the first year's experience.

Results of a study of deaths from hemolytic disease of the newborn were published in *California Medicine*. Findings indicate a need for earlier and more comprehensive use of warning signals, as well as a consistent reappraisal of current technology. The study results were widely circulated through professional channels.

The Department cooperating with the California Medical Association has continued to study maternal deaths related to childbirth. Each case is reviewed in depth by a committee of medical specialists. Findings are used to determine its cause and then to advise the individual physician and the medical profession of the committee's recommendations.

With the support of the Division of Indian Health, Public Health Service, a special demonstration project was begun in nine isolated rural Indian Reservation areas in California. The objective is to demonstrably improve the health status of the rural Indian populations in these nine areas through a program of health education carried out by indigenous community health aides. Although the project has been in existence for only a few months, it already has demonstrated the value of this approach to community understanding and support for local health programs.

During the biennium, the program for testing of newborn infants for phenylketonuria (PKU) was continued. A registry of 400 individuals so afflicted has been established. The program also provides followup for persons with confirmed PKU to determine that proper diets and adequate medical attention are provided. The feasibility of mass screening for other heritable, preventable disorders leading to mental retardation is under consideration.

Crippled children services

Each year 20,000 babies are born in California with congenital deformities serious enough to endanger life or result in lifelong disability. Other infants and children are severely burned, paralyzed or suffer other accidental injuries. Medical science can correct or help most of these handicaps.

CCS, through its standards and case management, promotes services of the highest quality; CCS assists families who cannot afford the full costs of private care.

In the 1966–67 period, 65,210 children were served by the CCS program, an increase of 3,809 cases over 1965–66. Combined CCS diagnostic, treatment, and therapy program funds totaling 17.9 million dollars provided full or partial service for 56,411 children. Of the 65,210 children, 12,725 were also beneficiaries under the Medi-Cal program. Medi-Cal funded 8,799 of the beneficiaries while both programs shared in the cost of the remaining 3,926.

The leading conditions in terms of number of children treated continued to be for congenital malformations (11,287), of which 7,422 were anomalies other than the heart and circulatory system, and 3,865 were heart and great vessel malformations; cerebral palsy (6,751); diseases of the eye (5,170); diseases of the bone and organs of movement (5,048); and accidental injuries (3,292). These conditions consumed 70 percent of $16,252,909 expended on diagnosis and treatment in 1966–67.

Certain accidental injuries (spinal cord injury, burns) represent the highest cost per case—not surprising because of prolonged and expensive rehabilitation services required.

Some congenital malformations require long-term—occasionally lifelong—attention, particularly children with spina bifida, hydrocephalus, cleft lip and palate, absence of or deformity of one or more limbs. Congenital heart disease, fortunately, is now amenable to complete correction, surgically. Some other types of heart disease are significantly benefited by modern surgical techniques.

The number of children with neoplasms that qualify for care under the program remains about the same as in the preceding biennium: 947 in 1963–64; 944 in 1966–67. The cost of care was $354,216 in 1963–64 and $559,686 in 1966–67, reflecting advances in treatment as well as increasing medical care costs.

Efforts continue to provide the medical services needed by each child to attain the maximum benefit possible. Increasing emphasis is being placed on case management services as the number of severely handicapped children in the program continues to grow.

Expert care is available, but often assistance to the family and to the family's physician is required if children are to obtain the benefits of these varied medical

65,000 important fu

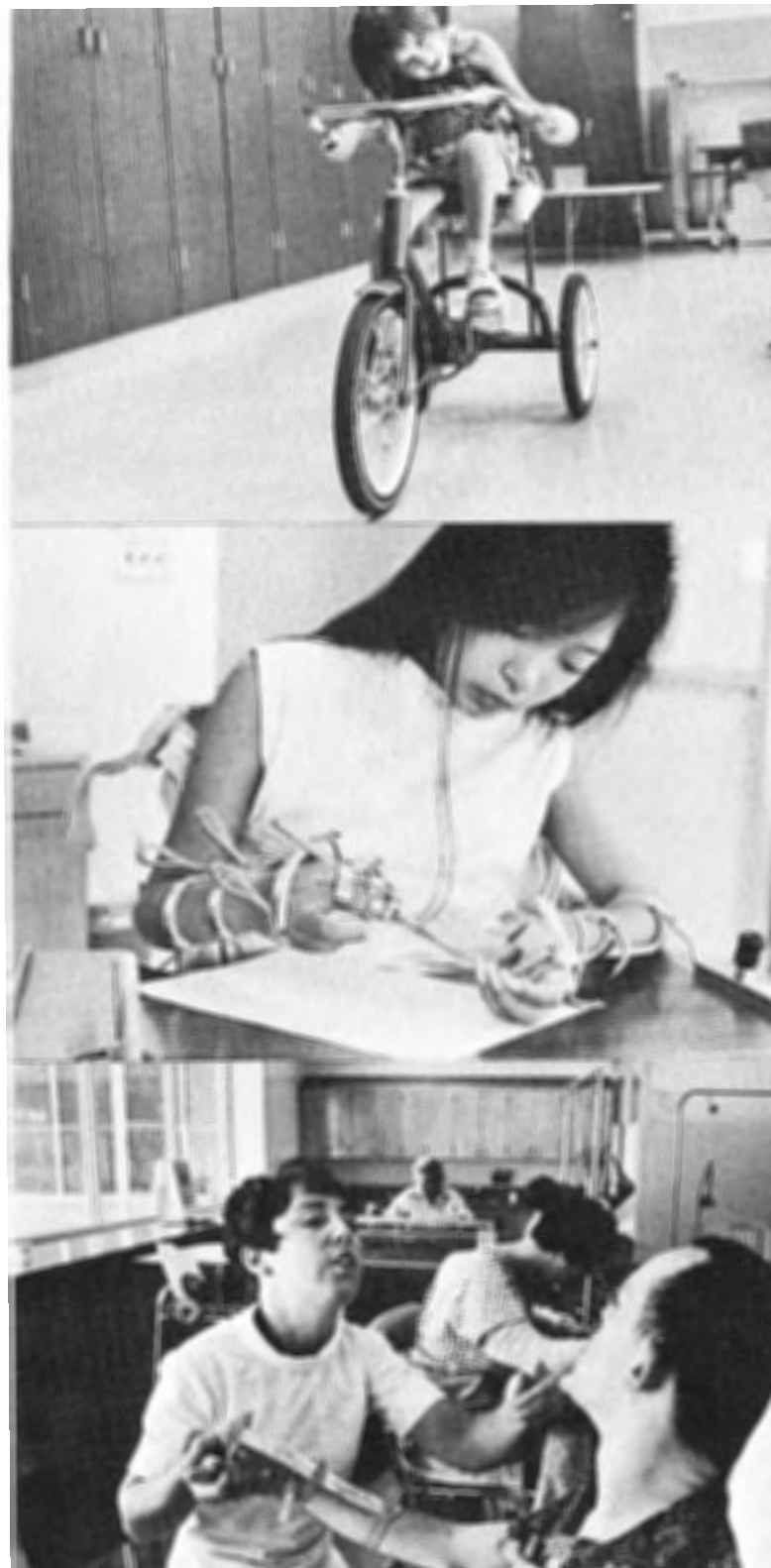
and related services. CCS tries to provide this much-needed assistance and followup.

Renal dialysis and kidney transplant were included as services available to children with kidney disease in the 1968–69 budget.

The therapy program for cerebral palsied and other orthopedically handicapped children continued its unique school-based program in the 65 therapy units. Medical supervision and therapy services were provided for 5,277 children in 1966–67.

The next biennium will see major changes as AB 2024 (Crown) passed by the 1968 Legislature goes into effect on July 1, 1969. These include State/county sharing of all medical care costs; an increase in the State share of matching funds from 2:1 to 3:1; establishment of a State contingency fund for emergency cases in small counties whose funds have been exhausted; placing of responsibility with the Director of Public Health for determining which handicapping conditions are to be included in the program; mandatory use of a statewide uniform standard for determining financial eligibility; and, development by the State agency of standards for local CCS administration.

Provision for uniform statewide standards for financial eligibility was a major accomplishment. It was done in cooperation with the counties and will ease some mutual problems in this area.



A million problem drinkers

Most adult Californians drink alcoholic beverages. The majority drink in moderation, but one of every 12 Californians over age 20 is an excessive drinker, facing serious physical, financial and other hazards, if dependence on alcohol continues. The number of teenagers who use alcohol to excess is increasing. About 250,000 people are ill enough at any given time to require immediate medical and related attention.

Who are the one million "alcoholics"?

Three out of four are men. Half attended or graduated from college and 37 percent from high school. Nearly half of the "alcoholics" are employed in a professional or managerial capacity. Thirty percent are blue collar workers and 25 percent white collar workers. Only 5 percent are on "Skid Row."

Most "alcoholics" are employed and function all around us in society.

Alcohol is the drug most seriously abused in California. In 1960, an estimated 800,000 Californians were problem drinkers. Now they number one million.

Alcoholism is the tenth leading cause of death here. One-third of the deaths occur in the "prime-of-life" age group—45 to 54 years. Direct and indirect costs to society are conservatively estimated at $1 billion a year in California.

After a ten-year preliminary program, California initiated a long-range plan for the prevention, treatment and control of alcoholism when the McAteer-Rumford-Marks Act was passed in 1965.

In July 1966 a $1.8 million legislative appropriation was allocated to health departments in Alameda, Contra Costa, Los Angeles, Monterey, Sacramento, San Diego, San Francisco, San Joaquin and Santa Clara counties, and the cities of Long Beach and Pasadena.

The law requires that 5 specific services be provided to individuals and 5 to the community. For the individual: casefinding; diagnosis, evaluation and referral; acute and continuing medical aid and counseling; psychiatric care as indicated, and vocational rehabilitation and employment. For the community: public information; training and consultation, and development, coordination and evaluation of alcoholism programs.

Under 1967 McAteer Act amendments, the Department and a new alcoholic rehabilitation section in the Department of Rehabilitation developed a cooperative program on alcoholism. Rehabilitation uses Federal vocational rehabilitation funds matched 3:1 with State funds to purchase required services for individuals from local McAteer Act programs.

The Department directly supports local program services to the community, but with minimal funding. During the biennium it is seeking more funds for local alcoholism services, through Comprehensive

Health Planning programs and other sources.

Although the statewide alcoholism rate is still rising, the increase was smaller in the seven counties which form the nucleus of the present program.

While the 1968 U.S. Supreme Court *Powell vs. Texas* decision upheld laws allowing conviction and punishment of chronic alcoholics for public drunkenness, the Department anticipates eventual transfer of major responsibility for care for public inebriates from penal to health institutions. Towards this end the Department is working to open up many additional resources, both public and private.

In January 1968, the Department offered the Legislature a plan which details specific mortality, morbidity, social and economic indexes, to measure progress in decreasing the incidence and prevalence of alcoholism.

A uniform reporting system has been developed in the 11 McAteer Act programs. It will provide two-year follow-up information on individuals treated, and indicate treatment success, with specific data on economic and social benefits to California resulting from treatment and rehabilitation of alcoholics. The Department is working toward installing a modified version of this system in other treatment settings, and also toward installing a uniform system of monitoring the major factors influencing the prevention and control of problem drinking.

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Drug abuse

The Department has long been concerned with and involved in California's drug abuse problems and is cooperating with the State Department of Education to study the attitudes, opinions, and knowledge of primary and secondary school students and their behavior regarding drug use.

Informational panels have been organized for county supervisors, schools, universities, law enforcement personnel, and voluntary agencies. A special issue of *California's Health* devoted to drug abuse was printed in 36,000 copies. Educational materials have been selected, and distributed to local health departments, and are available for other groups.

The Department cosponsored a film "festival" of movies useful in drug abuse education, and then a consultant screened 30 additional drug films. These reviews are now being published by the Department.

A task force was organized to review the Department's authorized activities in this area, and has made recommendations which include: epidemiologic studies of the problem and health effects of drug abuse; development of informational materials for professional and general distribution; evaluation of treatment and rehabilitation programs, and continuing analysis of legislation to insure that it is consistent with health goals. The State Board of Public Health has asked the Department to proceed with their implementation.

Poor diets—brain damage—shortened lives

Malnutrition has serious implications for Californians. It generates increased susceptibility to disease, decreased recuperative powers, higher absenteeism rates, lower productivity, greater medical care costs, and impaired morale. Early malnutrition results in retarded physical growth and development and is associated with an increase in infectious diseases and high infant mortality. Recent evidence indicates that it may also cause permanent brain damage, resulting in impaired learning and behavior. Obesity, the common form of overnutrition, is associated with a shortened life span and with an increased incidence of heart disease, high blood pressure, and diabetes mellitus.

The Department's Bureau of Public Health Nutrition has directed its efforts to those who are particularly vulnerable to the effects of poor food selection: such as those in group care, handicapped children, and the long-term care patient in health care facilities. For those at home it has focused on the pregnant woman, the preschool child, the obese person and the chronically ill and aged.

The Department holds workshops and institutional training programs to upgrade skills of food service personnel. It also furnishes public and voluntary agencies technical consultation. A plan to improve nutrition services for individuals and groups in California's communities also is in effect.

Preliminary planning has beeen underway to determine the extent of malnutrition and the factors contributing to its cause. It is anticipated that field studies will be in operation early in 1969.

Three million adults have lost their teeth

No tissues of the human body are more frequently or extensively ravaged by disease and destruction than those of man's teeth and jaws.

The average California child five years old has suffered decay in 20 percent of his teeth before he enters school. The average young person, by graduation from high school, has 12 permanent teeth affected by decay and already has lost at least two of his adult teeth. It is well-recognized the poor and the less educated among the public suffer more extensively from dental diseases than do those with better educations and higher incomes.

Periodontal disease (infection and resultant destruction of gums and supporting jaw bone) affects more than 60 percent of California's older youth and adults.

The annual occurrence of tooth decay and infection of tissue supporting teeth among both children and adults continues to increase with age, often causing loss of many teeth in early adulthood and loss of all natural teeth by midlife. More than three million California adults have lost all their teeth.

The oral health of 40 percent of our school-age children would be better protected and improved if interceptive orthodontic care were available and could be provided.

Death rates from oral cancer (buccal cavity, including lip but excluding skin beyond border of lip) have remained essentially constant since 1950. As California's population is increasing, so is the number of people dying from oral cancer.

The expense of providing less than complete dental care to California's population each year is approximately $500 million. An estimated $45 million of State and federal funds will be spent for incomplete dental care between July 1968, and June 1969. Incomplete care will do little to reduce the further neglect of the needy, the medically indigent, the aged, and those treated by local, State, or federal agencies and institutions in our State.

Dental diseases are increasing faster than California's present or projected collective financial and professional resources can either correct or control. We have reached a crisis in terms of protecting and promoting oral health among our population.

During 1967 and 1968, a considerable amount of attention was given to reassessing the relative role and responsibilities of the Department in preserving and protecting dental health among Californians.

With the introduction of Comprehensive Health Planning, (Public Law 89–749) much has been accomplished to assist the dental profession and their auxiliary personnel to become involved in planning for the improvement of dental health services, dental health manpower resources, and dental health facilities in our State.

Of special significance is the formation, with Departmental assistance, in 1968, of the Dental Health Council of California, a voluntary non-profit organization composed of interested citizens and representatives of other voluntary organizations incorporated to protect, promote and improve oral health.

During this biennium, the Department's dental health efforts have resulted in a notable increase in interest and action among the dental profession and related professional and voluntary organizations to assist and support both community and Statewide endeavors to expand and improve the effectiveness of preventive and restorative dental health services.

The bacillus is becoming drug-resistant

Almost twenty years ago drugs were discovered which made possible specific treatment for tuberculosis. Here and elsewhere there had been a rapid decline in the TB morbidity and mortality rates. Since much seemed to be accomplished by the use of these drugs, program efforts were relaxed because TB's conquest seemed imminent. Between 1953 and 1961, new cases declined about 5 percent annually. But between 1963 and 1967 the morbidity and mortality rates leveled off.

The number of new cases remained at some 5,000 each year with about 600 deaths annually—alarming evidence of a general breakdown in TB control programs. Statewide action, in the form of accelerated Tuberculosis Control projects, was initiated in 1963 to reduce its current incidence and prevalance. In 1967 there was a reduction of 8 percent in newly active cases and 15 percent in deaths under the impact of improved control over the past four years.

Factors contributing to the maintenance of tuberculosis as a public health problem:

Seventy-five to 80 percent of all newly active cases come from the already infected pool;

Reactivation of previously inactive or quiescent TB cases, especially old cases never treated or inadequately treated with antituberculosis drugs, long recognized as a lifetime threat;

The development of resistant strains of tubercle bacilli. About 7 percent of newly diagnosed and previously untreated cases have organisms resistant to at least one or more of the primary drugs. New cases developing from exposure to those with drug resistant tubercle bacilli will usually have resistant organisms also.

Results of accelerated control programs in areas having special projects for the past four years have been impressive. In some, it has been possible to identify needs of groups of patients and to meet their needs by establishing decentralized chest clinics.

Tuberculin skin testing in children entering first grade, those new to school and adolescents is increasing as a better way of detecting TB than the low yield mass X-ray surveys. Since the young child has relatively few close contacts, the source case can usually be found.

There already is evidence of new cases to be found among the older population group. In 1967, 47 percent of active, and 49 percent of inactive cases were in persons 65 or older. Indications are that larger proportions of older people, especially men, will develop active TB. Government medical care will pay for outpatient clinic services for those over 65 and persons under 65 who are medically indigent. It is anticipated that eradication can again be set as an attainable goal.

With the continued support of the Public Health Services and the Federal and State's Medicare programs, the incidence and prevalence of tuberculosis will once more wane in California and eradication can again be set as an attainable goal.

The tip of the iceberg

There were 72,000 reported cases of venereal disease in California in 1967 (61,000 gonorrhea; 11,000 syphilis). This is the tip of the iceberg. The venereal diseases are socially hidden. At least five times as many cases (250,000) occur in California each year. Half of the cases involve persons under 25. The rate increases each year and now has reached the level of a public health emergency. Effective, rapid cure for both syphilis and gonorrhea has been available for years, yet VD is the only medical condition which has a rising incidence in face of an effective cure.

Human suffering from venereal disease is inestimable; its cost to the California taxpayer is staggering. Last year more than $3 million was spent for institutionalization of syphilitics in state mental hospitals, plus an additional $600,000 in welfare for the syphilitic blind. Venereal disease can be controlled by reaching and treating the cases before further spread is possible. This has been difficult. Many private physicians have an understandable reluctance to "expose" their patients by reporting them to the appropriate health department. Yet the confidential interviews of patients and their contacts by public health VD controllers is the only way to assure that every known case is treated and the spreading stopped.

Still, much was accomplished. The special program directed against syphilis saw a consistent reduction in syphilis throughout California. During the biennium more than 16,000 interviews were held with reported cases of syphilis and gonorrhea to reach infection sources. Over 58,000 field investigations located previously unknown cases. More than 4,100 physicians, who saw many VD cases, were personally visited by VD controllers. Nearly 155,000 laboratory reports were reviewed from which 17,800 syphilis cases were identified.

Preventive educational programs enlisted nearly 1,000 school administrators; 80 courses and workshops for high school and college teachers were attended by 4,000 school teachers, nurses and administrators. Community and service clubs, PTA leaders and medical society members received literature, heard reports and held discussions on the burgeoning VD problem.

A special subcommittee on venereal diseases was organized by the California Medical Association, and a group of public health physicians who direct VD control programs organized themselves into the Venereal Disease Controllers Association, affiliated with the California Conference of Local Health Officers.

The State Legislature in November 1968 removed a legal stricture that prevented minors from being treated for VD without the consent of their parents.

It was a busy biennium for State and local venereal disease control staffs. California's (and the Nation's) VD epidemic threatens to continue until sufficient resources are mustered to mount a major attack fully supported by an informed public.

Indian Health

ROUCE

A new California Rural Indian Health Project is currently operating in 24 Indian communities in 9 counties. Following 6 months of preparation, the project began with a training session held the first two weeks in January 1968 for the community health workers. Upon returning to their respective areas the project staffs began acquainting the Indian community with the project goals, and determining existing health problems. They found that rural Indians were often prevented from receiving adequate health care because of cultural and geographic isolation, paucity of medical and dental care, and poor economic conditions. Many Indians have serious dental and other health problems. The majority of rural Indians are plagued by inadequate water and sewage disposal systems.

To deal with these and other health problems the 9 project staffs have sought out and received for the Indian people a great amount of volunteer medical and dental assistance. They have obtained services for eligible Indians from social agencies and have provided much needed transportation to those with no means to get to doctor appointments or to the hospital. Through home visits and community meetings the project staffs have carried out a program of health education. A detailed health survey is also being carried out so that a comprehensive assessment of California rural Indians' health needs can be made. The 9 health projects have been successful enough so that an extension of the project has been granted until June 30, 1969.

More nurses are always needed

STAFF PHOTO

Because of the crying need for more nurses, a program to reach inactive nurses and return them to practice has been developed by the Department's Bureau of Nursing, with assistance from the Departments of Employment and Education, the Board of Nursing Education and Nurse Registration, the California Western Hospital Association, and the California Nurses' Association.

The group sent letters to the 30,000 inactive nurses in California informing them of refresher courses in nursing.

Over 10 percent of the nurses contacted indicated interest in attending refresher courses. A Public Health Service grant supplied a full-time nurse to assist them in returning to their field. Nearly 1,000 nurses now have received refresher training. Figures are not complete yet on how many are working in local health facilities.

Because of the need for financial assistance at the Junior level of the Baccalaureate program for registered nurses preparing for leadership, 1967 scholarship legislation was modified to accept high potential applicants in the Junior year, and 15 scholarships were granted in the 1967–68 academic year. Of the 43 students who have received scholarship awards since 1964, 16 are now in the teaching field and 11 are in supervision or administration.

Children—reservoirs of epidemics

Pre-school children are particularly vulnerable to diseases of many kinds, and they often are the reservoirs from which epidemics may spread to other population groups.

The Department's Immunization Assistance Program assists local health departments to sustain Statewide maximum control over diphtheria, whooping cough, tetanus, polio and measles—all diseases which can be kept in check through vaccination. It is anticipated that new vaccines for mumps and rubella will be available soon for wide distribution.

The Department staff works with 30 local health jurisdictions and 15 contract county health units serving 80 percent of the State's population. In 1967 over 2.7 million immunizations were given, an increase of 57 percent over 1966.

The greatest accomplishment was in measles reduction. Traditionally this has been one of the most under-reported diseases. Whole groups of families would become stricken, recover and carry on, enduring measles as an almost inevitable nuisance. Even so, about 20,000 cases were reported annually in the 15 years before the introduction of measles vaccine in 1963. Since then, thanks to intensive work by private physicians, local health departments and the Department staff, it now is disappearing. The goal of no more than 1,000 cases Statewide by 1970 is well within reach.

Two major factors are now at work in measles control: a new State law requires that all children must be vaccinated or have had measles before school enrollment, and a birth certificate follow-up. Three to five mailings are sent to 80 percent of the parents of the State's 350,000 annual births. These not only motivate parents to have children vaccinated, but give local health departments opportunity to follow up, as indicated. Physicians in private practice of course provide major contributions to the immunization programs.

When mumps and rubella vaccines are available in quantity, it is estimated that 500,000 to 750,000 doses of each will be given pre-school age children annually. The Immunization Assistance Program has proven its capability to coordinate such massive projects in preventive medicine.

One drinking cup

Farm workers health service

When the citrus trees grow heavy with fruit and the field crops ripen in the summer sun, nearly 200,000 seasonal farm workers begin to arrive in California.

They come from all over the United States, attracted by relatively high—though still often meager—wages and the agricultural industry's urgent demand for their services.

With them come nearly a million dependents—wives, frequently pregnant; children, needing schooling; infants, requiring day care and good food for growth; aged parents and relatives, too old and often too sick to work. Many of them speak only the original language of California's founders. Today that is a handicap.

All of these people need decent housing and health care, social and legal services—usually far beyond the ability of their marginal incomes to provide. Because most are migrants, following the crops from home bases outside California, they are normally ineligible for county health and welfare services, and are excluded from the medical care benefits of the Federal poverty laws.

In 1961, the Department's Farm Workers Health Service Program was established to upgrade the living and working conditions of these neglected people. During the past two years, the emphasis has been on development of direct medical care services—primarily evening clinics at sites of greatest migratory worker populations. In a few instances where this is not feasible, a "fee-for-services" arrangement is made.

During the 1966–67 harvest season, some 14,000 individuals paid 34,000 visits to medical care clinics operated under the Department's program. The following year, some 20,000 people made 41,000 clinic visits. Emergency dental care was also provided. Fee-for-service visits numbered about 2,000 during 1967–68.

HABAWITZ

The clinics have attempted to incorporate both preventive and therapeutic medicine. As more people attend, some clinics have also added specialized maternal clinics on separate evenings.

Community health aides help the clinics reach deeper among the people. Public health nurses, whose services must frequently be spread over huge geographical areas, call on families as well as coordinating the clinic operations. Sanitarians in the local projects promote housing improvement and maintenance of potable water supply systems, and enforce compliance with the Food Crop Growing and Harvesting Sanitation Law. However, gross sanitation problems like common drinking cups and lack of toilet and handwashing facilities in the fields still exist.

Although new temporary housing units have been built in recent years, substandard living quarters remain an overwhelming problem to farm workers. Some families continue to camp in the orchards, and along sloughs and riverbanks. However, maintenance at farm labor centers has improved markedly, and permanent low-rent dwellings are being constructed to replace many dilapidated shacks.

While the Farm Workers Health Service Program has made inroads into the problems of migrants, the future is clouded. Many counties offer no medical services, and many migrants cannot reach those existing. Perhaps 90 percent are still untouched by the program.

Moreover, funds are drying up. Federal poverty aid was discontinued in 1968. Other Federal support to the program makes no provision for expansion or extension. The voices of migrant workers are seldom heard in regional health planning councils. The next two years, therefore, may be devoted to phasing out of the current program. Attempts will be made to mobilize whatever other resources are available, in order to assure some continuity of services.

Meanwhile, the workers themselves will be busy harvesting our desserts and salads.

Training the poor to help the poor

Each day brings new information on the mounting social health dilemma of the poor, the unemployed, the under-employed, the chronically sick and handicapped. Older health programs have demonstrably outlived their usefulness in today's societal terms. With a burgeoning population and rapid increases in numbers of patients requiring care, new health facilities and services are proliferating. Acute social crises are erupting across the State, many of them rooted in the frustrations of trying to make use of health services with built-in deficiencies that obstruct the needy and are irrelevant to current requirements.

Social services that forge basic links in the medical care system serving the chronically sick and the poor where continuity of care and comprehensive, quality, personal health services are critical, represent still unmet needs in more than 1200 California health institutions. Among these with social programming deficits are: health departments, extended care facilities, and nursing homes. Some programs are quite new: neighborhood health centers and Medicare, each requiring specialized social services aimed at bringing at-risk populations into practical health care solutions to the problems of dependency, unemployment and neglect.

Directly connected with meeting social health needs is the problem of health manpower shortages, a problem that exists side-by-side with a virtual unemployment crisis among poverty groups. These manpower shortages impair the effectiveness of all health services. The scarcity of social work personnel is impeding established health plans and seriously threatens the newer programs. But these lacks must constantly be viewed against the need to restructure current jobs to take advantage of economies in the use of paraprofessional and of professional personnel. Any action to fill manpower shortages with paraprofessionals must also protect the poor from second class services and the paraprofessionals themselves from dead-end jobs.

The objective of the Department's Public Health Social Work program element is to prevent, reduce or eliminate adverse social factors detrimental to the attainment and/or maintenance of an optimal level of health and a decent level of social functioning.

Thus, a primary task of the Bureau is to provide a statewide network of comprehensive social health services, working with federal, state, regional and local health and welfare and related agencies. It includes planning for the distributing, costing and evaluation of action programs.

Opportunities for attack on social health problems exist uniquely in the Department, where inputs from social work can be combined with other health skills and knowledges. The work also strives to make the

most of numerous community service inputs. Today fragmented social health care systems are being mobilized, coordinated and/or combined into a comprehensive pattern of service arrangements, for which the Department assists to set standards, conduct surveillance, program analysis and appraisal. This tends to correct service program defects and makes available, where it is most needed, decisive attention to the social forces affecting health.

To improve and increase health manpower throughout the health services delivery systems and to provide health industry new careers for the poor, a New Careers Unit in the Bureau was organized in 1966 and since then has worked with local community agencies, civil service systems and health institutions to assist in the identification of needs for new social health manpower, to define tasks and roles of new careerists and to describe the consequent new roles of professionals.

Technical assistance in program development, establishment of guidelines, standards and program models, assistance in obtaining funds, and program evaluation was given to organizations and agencies in Alameda, Contra Costa, Los Angeles, Santa Clara, and San Francisco Counties. Interorganizational steering committees for new careers development were begun in these and other areas. In 1968 arrangements were completed, a training plan was designed, and personnel secured for field training of new careerists in health agencies through Department of Labor funds. Liaison was maintained with the New York University New Careers Development Center, and Department staff participated in the first meeting of the National Council on New Careers in June 1968. Graduate social work and medical students were trainees in the New Careers Unit. Plans for the use of new careerists within the Department and for summer employment of youth as a part of the Governor's effort at new job creation in public service for the poor was assisted by the Bureau staff who also served as part of a statewide committee planning to implement new legislation related to use of subprofessionals and volunteers.

All of us are potential victims

Chronic diseases cause more than 75 percent of the deaths in California and more than 80 percent of the days of disability. With each advance in medical science and with the conquest of each cause of childhood deaths, a new group is added to the population with chronic disease or disability. Every man, woman and child is now a potential victim of chronic diseases.

To reduce their burden, the Department's Bureau of Chronic Diseases maintains current information on the magnitude of the problem and the effectiveness of control measures; identifies biological, physical and social conditions responsible for these diseases; offers advice on current preventive methods, early detection and treatment; and promotes the development of high quality comprehensive services and facilities to cope with chronic diseases. Among them are:

Chronic hemodialysis centers, funded by the State Departments of Public Health and Rehabilitation, were established in San Francisco and Los Angeles. Each provides treatment for approximately 30 center patients and 20 home patients. Whenever possible patients and a family member are trained so that home dialysis, less expensive and more convenient, is provided. Hopefully all suitable candidates will become recipients of a transplanted kidney.

With the cooperation of the California Heart, Hospital, Medical and Nurses Associations, the Department surveyed 312 hospitals with 50 or more acute general beds to determine the number of existing and planned Coronary Care Units. Guidelines were prepared and distributed to institutions concerned with training of physicians and nurses in the units.

A blood pressure survey of 2600 Alameda County residents was completed to determine the relationship between socio-environmental factors and blood pressure. Also, a fact book "Cardiovascular Diseases in California" was published as a guide for local health agencies establishing heart disease control programs. Vascular lesions of the central nervous system are the third leading cause of death, but little attention has been given to the study of their impact on the community. Data were collected and analysis begun for the Alameda County Stroke Mortality Study. A protocol was begun for a stroke morbidity study in the same area.

Multiphasic screening programs in local health departments were encouraged through workshops and conferences which placed emphasis on community preparation and followup. Heart sound screening programs were developed jointly with the California Heart Association to detect school children with previously unknown heart disease; approximately 10,000 were screened. Cost and yield of such early detection programs are under study.

The California Tumor Registry recorded approximately 40,000 new cases bringing

the total to 315,000 with follow-up information obtained on 140,000 patients. Descriptive surveillance reports were prepared and distributed to hospitals participating in the registry. Site specific cancer studies and the relationship of social class to survival in cancer patients were studied and the results published. Data on 201,560 cases were submitted to the National Cancer Institutes End Results Group and assistance was given in the development of a new classification on extent of disease. A monograph presenting 1960–65 incidence data from the Alameda County Cancer Registry and a booklet, "Trends in Cancer Mortality, California, 1910–1965" were published.

Reports of three epidemiologic studies of lung cancer were published. The first showed that an excess of lung cancer in older women born in Mexico could be attributed mainly to cigarette smoking and that younger immigrant Mexican women had no excess risk of lung cancer and no unusual smoking habits. The second failed to demonstrate any effect of Los Angeles air pollution on incidence of lung cancer. The third found that workers handling asbestos have an excess of lung cancer.

Local health departments were encouraged to develop cervical cytology screening programs and were provided financial assistance insofar as possible.

Criminal action was brought against 19 individuals for cancer quackery with resultant convictions; two cases were dismissed due to prosecution error; warnings to cease and desist were obtained against nine individuals.

The Department collaborated with the California Medical Association in a study of professional and personal attitudes and habits of practicing physicians with respect to cigarette smoking.

In cooperation with the University of California San Francisco Medical Center and funded by the Public Health Service, the Northern California Epilepsy Program was started to provide comprehensive services, education and followup of patients with complicated or uncontrolled epilepsy.

Continued →

Military rejectees

The Health Referral Service Program interviewed 75,734 medical rejectees; 91 percent were disqualified for physical reasons. Of the latter, 27 percent presented documentation of recent care; however 26 percent were referred to local health agencies for care and followup. Through this program 7,007 medical rejectees received care with 47 percent considered "cured" or "improved".

The Human Population Laboratory continued its long range study of personal characteristics and behavior patterns as related to disease and disability. From these observations, three reports were published.

In 1965, the Legislature authorized a special Handicapped Persons Pilot Project to find ways to provide for the long-term residential care needs of severely physically handicapped persons of normal mentality. Pilot programs in Long Beach and Sacramento evaluated their total living needs and listed services required for each of 115 project clients. Results and findings were to be reported to the Legislature in January 1969 with recommendations for meeting their long-term care.

A major activity has been in home health services. Sixty-two agencies have been certified since July 1, 1966 bringing the total to 121. Consultation services are provided to developing and new agencies. Workshops and training programs are conducted for agency personnel. Liaison is maintained with the fiscal intermediaries, Social Security and other government agencies. Special training programs for nurses were given in the home management of chronic respiratory disease patients, heart disease patients, in home renal dialysis and rehabilitation nursing. The number of qualified home health aides has increased from less than 250 in June 1966 to over 5,000. Practical nurses and attendants were permitted to qualify as Home Health Aides in two examinations. After February 1967 all aides have had to complete approved training courses to qualify. Home health aides must be certified by the Department.

Homemaker services are so intimately tied up with home care they have become a major concern to home health agencies. Department staff and the State Department of Social Welfare have jointly developed a system which can serve as a model for the management of patients in need of any degree of personal care services.

Cardiac intensive care

Continued →

EHRLICH

renal dialysis

The little picture . . .

Eight laboratory units provide analytic and research support to the Department's various programs, as well as establishing statewide standards for laboratory procedure, performing individual tests, and consulting with and training laboratory staff for local health and clinical agencies.

The work of four of the Department's laboratories—Food and Drug, Sanitation and Radiation, Branch Public Health, and Air and Industrial Hygiene—is discussed in the sections treating the programs they serve.

Viral & Rickettsial Disease Laboratory

Some 150 distinct types of submicroscopic disease agents classified as viruses occur in California. They can cause acute respiratory ailments such as influenza, pneumonia and the common cold; infections of the central nervous system, such as meningitis and poliomyelitis; rash-type diseases such as German measles which, in pregnant mothers, may cause deformed babies; and various animal- and insect-borne infections of man such as encephalitis and Colorado tick fever. They are known to cause some cancers and are suspected in others. (Rickettsiae are slightly larger agents which resemble viruses in many ways, and cause such diseases as typhus, psittacosis and Q-fever.)

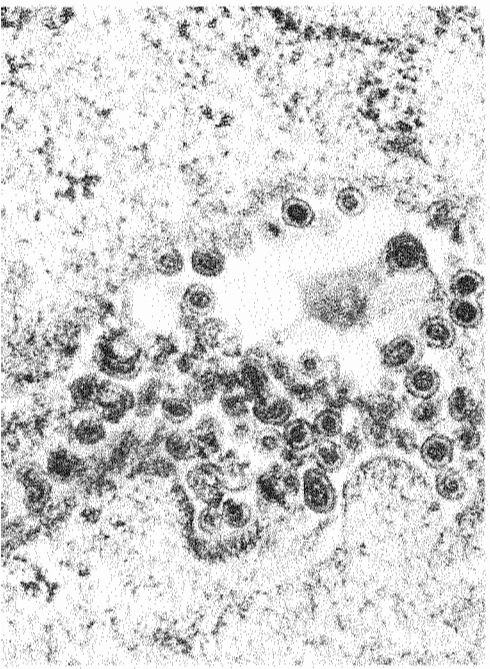
Providing laboratory facilities to diagnose, control, understand and combat these illnesses is the function of the Viral & Rickettsial Disease Laboratory.

In performing this function, the laboratory seeks to identify the causative agents in various diseases—for example, the particular type of influenza virus responsible for recent epidemics . . . or the types of cold-causing rhinoviruses such as the four new types discovered by the laboratory in the past two years . . . or the common measles virus that was discovered to be the agent of a slow, fatal kind of encephalitis whose cause was previously unknown . . . or the virus-carrying opossums which were found (after study of 473 other domestic and wild animals and more than 5,000 animal parasites) to be the source of a long-standing focus of typhus in Orange County.

Once an agent has been pinpointed, the laboratory may be able to devise a means to attack it—for example, as it did by developing an encephalitis vaccine for horses (which may later be developed for protection of man).

Laboratory investigative work often entails development and refinement of new methods to detect viral diseases. Among these have been an improved blood test to diagnose rubella (German measles) in expectant mothers . . . and a quicker and more sensitive way to diagnose a number of zoonotic (animal-transmitted) diseases . . . and a new test by which doctors can quickly tell smallpox from other viral diseases which resemble it.

The laboratory also seeks to gain better understanding of the nature of certain vi-



STAFF PHOTO

Rubella viruses

ruses in order to find out how they may cause disease. Thus it is conducting research into the growth patterns and effects of some tumor-producing DNA viruses, and the antibody responses of animals they infect (which could lead to a new blood test for diagnosis of cancer) . . . and examining the effects of leukemia viruses on the immunologic reactions of animals . . . and analyzing the way a certain tumorigenic virus can be altered genetically so that its offspring no longer cause tumors (which suggests that vaccines might someday be developed to protect against infection by tumor-causing viral strains).

Clinical Chemistry Laboratory

The Clinical Chemistry Laboratory was established in 1966 to provide technical capabilities in support of programs for early detection, diagnosis and treatment of diseases caused by disorders in the body's chemistry.

The laboratory has begun a broad program relating to the improvement of clinical laboratory services including methods, evaluation and improvement of quality control and proficiency testing procedures in the areas of clinical chemistry and hematology. This program has included examination of procedures for analyzing hyperbilirubinemia in newborn and other infants, comparisons of methods of analysis of serum iron, calcium, glucose, cholesterol and other serum constituents.

In addition, the laboratory has collaborated in a heart disease research study measuring the serum cholesterol levels in some 2,000 Los Angeles civil service employees; worked to develop a rapid and inexpensive method for screening infants to detect congenital adrenocortical hyperplasia, and evaluated new means to gauge concentrations of individual amino acids in blood and urine.

The laboratory performs regular proficiency testing and consultation services for some 170 local laboratories engaged in California's mandatory screening programs such as Phenylketonuria (to guard infants against the inherited disease causing mental defects).

Microbial Diseases Laboratory

Reported cases of gonorrhea in California increased by nearly 13,000 from 1966 to 1967, for a total of 61,000.

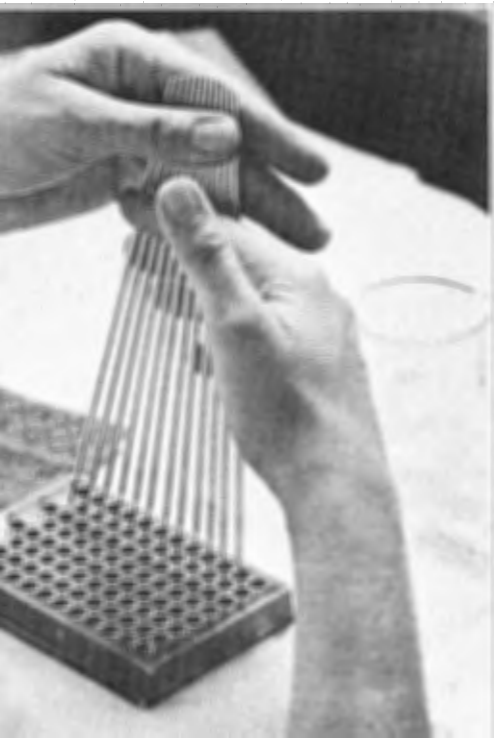
In 1965, only about 6 percent of tuberculosis patients showed infection by bacilli resistant to the standard treatment drugs. By 1967, nearly 13 percent had drug-resistant infections.

In 1964, there were only 16 reported cases of malaria in California. By 1967, with more and more servicemen returning from Southeast Asia, there were 266 cases.

Developing and improving methods to diagnose, prevent and control these familiar—but still dangerous—infections are the major functions of the Microbial Diseases Laboratory.

Continued →

. . . with microscope and test tube



In the attack on venereal disease, for example, the laboratory has investigated a new test for syphilis, the FTA-ABS test, and found it sensitive and reliable. Research has also been undertaken into the sequence of antibody development in rabbits experimentally infected by syphilis, and the effects of treatment on the early antibody response of humans. Results increase knowledge about the immunology of the disease and are helping in the interpretation of serologic (blood) tests.

The agents of tuberculosis, diphtheria and various kinds of food poisoning have become more difficult to recognize as new strains develop. (The laboratory has identified three new types of salmonellae, which taint food.) Malaria, a disease once almost eradicated in the United States, is on the rise—with consequent risk that cases may go undetected or be misdiagnosed because of unfamiliarity.

Thus a major thrust of the laboratory's efforts is aimed at improving the competence of local laboratories—in identifying disease bacteria and in adopting the most reliable and useful tests and procedures.

However, its main workload consists of reference and consultative services to clinical and public health laboratories as well as doctors in thinly populated areas of the state where public health laboratories are not available.

Laboratory Field Services

Laboratory Field Services is the Department's liaison with hospital, health department and clinical laboratories, blood banks, animal care facilities, tissue banks, and biologics producers. The Services act to maintain high levels of proficiency and operation in accordance with pertinent Federal and State laws.

Of some 1,500 licensed clinical laboratories in the State, about 600 have been approved for certification to serve Medicare patients. These account for more than 20 percent of all the approved laboratories in the nation. Some 300 of these were required to participate in regular Proficiency Testing Programs authorized by the Department.

Academic requirements for responsible laboratory personnel have been raised, and their practical training reviewed with greater frequency. A master's degree is now a licensure requirement for clinical laboratory bioanalysts.

Because viral hepatitis from donated blood is an increasing problem, blood bank methods for questioning prospective donors have been tightened. There is no known test to detect hepatitis carriers. Also Federal funds have been used to conduct workshops to keep technologists up-to-date in compatibility testing of blood donors and recipients.

Competent professionals . . . and an informed public

In the pages of a scholarly journal, a scientist reports his subtle new finding about the chemical behavior of a virus. Within months, other scientists use this clue to create a vaccine which may save thousands of lives.

Today, the time lag between medical discovery and widespread practical application is shorter than ever. But ancient diseases will yield to modern techniques only if the health professionals who serve the public keep pace with advancing knowledge.

The Training Office (Bureau of Manpower Management and Development) provides training support for all Departmental programs, and works to insure effective employee development and high morale. A continuing training program is conducted to meet specific needs, to update staff technical competence, and to provide a broad base for professional growth.

The training needs of local health departments and related agencies are also determined, and specific programs designed to serve their staffs. Additionally, the Department must analyze and develop overall Public Health Manpower programs to satisfy the growing demand for skilled professionals in California's total public health system.

During the past two years, 107,326 man-hours of training were offered to 7,170 California health personnel by the Department. In addition to those programs supported by State funds, many were made possible through Federal short-term training project funding.

A "wonder drug" would be of little value if only a handful of doctors knew it existed. Similarly, what is considered by highly trained professionals to be good health practice is of minimal usefulness unless it is translated into action by the individual citizen and the community.

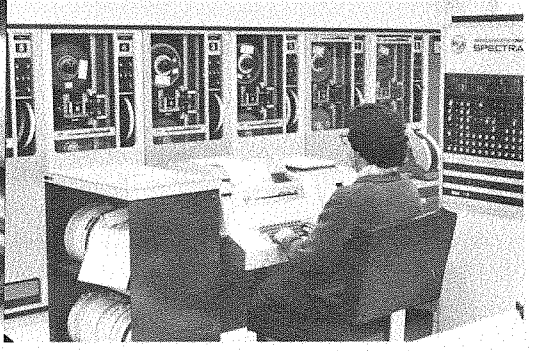
The necessary ingredient to promote such action is education. The objective of the Department's Bureau of Health Education is to incorporate effective teaching and communication methods into each health program conducted in California.

Health education helps Californians to use existing resources. It makes understandable to the population the nature of health agencies — official, voluntary and private—and the services they provide.

Education motivates, and its end product should be action. This may be a one-time thing, such as receiving an immunization or casting a vote for fluoridation. Or it may involve a drastic change in life-style, such as giving up smoking, or abandoning old dietary practices, or following the regimen a doctor has prescribed.

The public is continuously bombarded by false advertising and the claims of health quacks. Legislation alone cannot eliminate these costly frauds. Health education may provide the necessary armor of knowledge and motivation.

The Department's education activities fall within five major categories: operation of a communications center; design of educational components in State health programs; technical assistance to local agencies; setting of standards for health education practice; and promotion of interagency coordination and cooperation.



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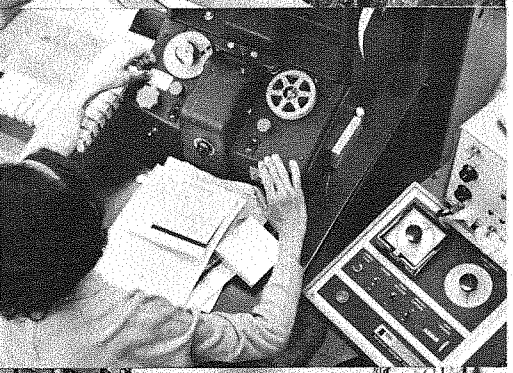


Record to read-out in record time

Computer circuits in the Data Processing Center of the Office of Special Services (formerly the Division of Research) hum 24 hours a day, recording, sorting and analyzing the mass of health information which flows through the Department from every corner of the State. Statisticians and behavioral scientists from this office are also available to offer technical expertise in the planning and interpretation of research projects.

Recent statistical consultation has ranged from preparation of a research proposal for the study of smoking among schoolchildren . . . to analysis of water potability as a function of dissolved mineral salts . . . to a review of methodology in blood pressure studies . . . to analysis of electron microscopic counting procedures.

Behavioral science consultations have included teaching and assistance in a training program for Indian community health aides, and help in drawing up a program to train ministers who must deal with the problems of alcoholics.

With the installation of a new, sophisticated computer in 1967, the Data Processing Center has significantly accelerated its information-handling capabilities. This, in turn, has lowered costs. The Center has also developed a do-it-yourself computer program which enables statisticians to tabulate data and edit their files in less than 24 hours—without the assistance of a programmer.

Under the Department's Epidemiology Research Training Project, supported by funds from the National Institutes of Health, 62 medical students received summer experience in methods for studying the occurrence of disease in the community. They were selected competitively from more than 600 applicants. Additionally, 18 physicians participated in a Public Health Residency Training Program in 1967 under which they received supervised experience in administration in local health departments.

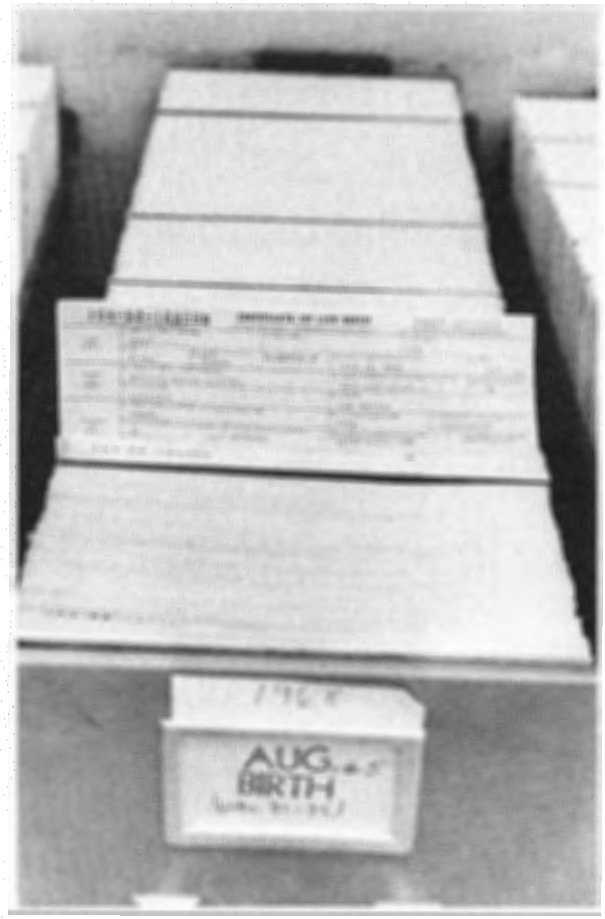
Keeping tabs

Registration of the State's vital statistics is a responsibility of the Department. It is a duty which, appropriately, can be summarized in statistics:

During 1966 and 1967, some 1,652,000 records of births, deaths, fetal deaths, marriages, divorces and annulments were registered. Another 102,000 ancillary records—adoptions, name changes, corrections and the like—were reviewed and accepted for registration. About 3 million certificates and verifications were supplied to individuals requesting them from the State and local offices. More than 500,000 records were analyzed by qualified investigators. And some 1.4 million vital events were reported to the National Center for Health Statistics for inclusion in national vital statistics.

The 20 million records now on file with the Department—reaching as far back as 1905—are utilized for a number of important health-related studies. Some of the most recent include:

- Analysis of death records from 1959 through 1961 in an attempt to find occupations carrying high risk of mortality.
- Analysis of records of twins born between 1905 and 1964 in search of possible genetic influences in heart disease and cancer.
- Compilation of a file of births and fetal deaths from 1950 to 1964 in which congenital malformations were reported.
- Matching of current infant death records with their birth records to permit quick follow-up studies.



WEBER

Under a new divorce reporting program established in 1966, California now has the most comprehensive basic vital statistics information on divorce in the United States. A 200-page description of social and demographic characteristics of those who seek divorce was published by the Department in 1967.

California 2000 A.D.

Between 36,000,000 and 41,000,000 people.

At least 226 for every square mile of mountain, valley, desert and shore.

Nearly as many as now live in Denmark, Norway, Sweden, Finland and Canada—combined.

That, according to State planners, is what the population of California will be by the year 2000.

The keys to the State's explosive growth are migration and fecundity. During the current five-year span, 1965–70, births are expected to fall off slightly from the 1.9 million recorded in California from 1960 to 1965. But then they will begin a dramatic — and apparently irreversible — acceleration: about 2.4 million new babies between 1970 and 1975; about 3.2 million between 1980 and 1985; about 4 million between 1995 and 2000.

If the influx of migrants lessens, and if the birth rate can be kept somewhat lower than this, it may mean a difference of as many as 5 million people by the turn of the century.

Nevertheless, even the lowest prediction calls for California to double its population within a scant 35 years. The growth rate will far exceed that of the rest of the Nation. By 2000, one of every seven Americans will live in California (about one in ten do now).

The estimates, of course, bar earthquake, deluge, revolution or major war. And they presume that our already crowded, noisy, polluted environment will still be worth living in.

Trying to insure this is what keeps the Department busy.

THE DEPARTMENT STAFF

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O'DELL

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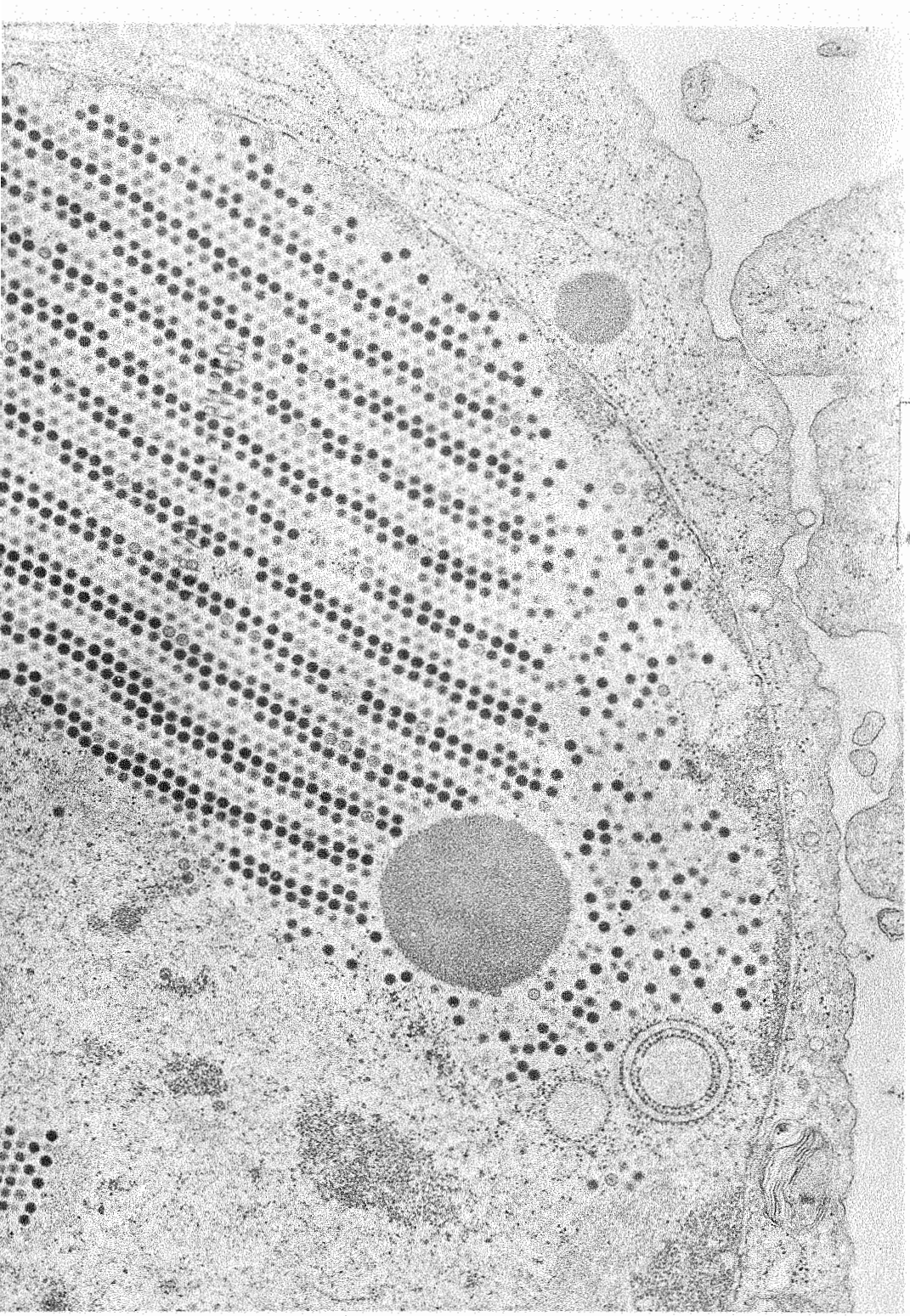

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GOVERNORS OFFICE
PRESS SECTY
STATE CAPITOL
SACRAMENTO, CALIF, 95814

25449

Thousands of animal tumor viruses line up in crystalline array inside the nucleus of a single infected cell. Having borrowed the cell's metabolism to reproduce, they will ultimately kill it. These adenoviruses are magnified 29,250 times under a Department electron microscope in cancer research.