History of Medicine in Hawaii
As a health care professional, you know the importance of working together. We also believe in teamwork at HMSA, and it's what our 750,000 members have come to expect.

Most physicians in Hawaii have teamed with us, by joining our participating provider program. Your patients benefit: they know in advance what their out-of-pocket costs will be and that we are working together to keep those costs down.

Your practice also benefits since you receive payment directly and promptly from HMSA, helping cash flow and avoiding administrative problems. And our staff is always available to provide courteous and professional service to you and your patients.

It all adds up to a winning effort. Because it's amazing what we accomplish when we work together.
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Celebrating 100 Years of Community Service

During the early part of the century, Palama Settlement met the health needs of the people of Honolulu with public health nurses and a network of dispensaries, including this Punchbowl location which served the Portuguese community.

The Journal gratefully acknowledges Jacqueline J. Rath who provided the photographs in this issue. She established and runs the Palama Settlement archives.

HAWAII MEDICAL JOURNAL, VOL 54, NOVEMBER 1995 787
Imagine the sleekest, fastest, most agile of polo ponies. One bred for endurance and intelligence. You now have some idea of what awaits you when you test-drive the incomparable 1995 Mercedes-Benz SL500. After all, it's from a bloodline respected around the world. © Mercedes-Benz
Editorial

Norman Goldstein MD
History of Medicine in Hawaii

This month’s special issue was a labor of love for its guest editors, Alfred Morris MD and John Breinich MS. The editors not only chose a panel of experienced clinicians, writers, and historians, they also made contact to get advertisers to pay for the extra pages in this issue. Without our financial supporters, we just cannot publish special issues. Each of our past special issues has become a sought-after collectors’ edition — classics in medicine, and as you read and reread this issue, you will agree it is a classic.

Al Morris, internist and cardiologist, retired from The Honolulu Medical Group but could not stay retired. He now runs the Hansen’s disease program at Hale Mohalu and Kalaupapa. He also runs marathons: eight of them, and two 50-mile runs! Al worked with Jack Scaff MD to establish the Honolulu Marathon Clinic where Jack was often heard to say, “the reason Al Morris never gets injured is he runs so slow, he heals up faster than he breaks down.” Fortunately, Al worked full speed with John Breinich on this issue. His big goal for retirement is to write a history of medicine in Hawaii. This issue has served as an impetus toward attaining that goal.

John Breinich, Executive Director of the Hawaii Medical Library since 1975, earned a BA in psychology and MS in library science. As a member of the Board of Governors, and President for several years, I have seen John perform many juggling acts dealing with physicians, nurses, students, school administrators, politicians, hospital administrators, library staff, computers, and more computers.

John also has been active in libraries throughout the People’s Republic of China, having lectured on library science in all of the major cities there. He has established a true China Connection between libraries in China and Hawaii. Because of his interest in the history of medicine, he helped establish the Hawaii Society for the History of Medicine and Public Health in 1993. The Society meets at the Medical Library monthly. He also serves on our Editorial Board.

Thanks to Al and John, their authors and advertising sponsors, for making this a historic issue.

HMA President’s Message

Carl W. Lehman MD
President’s Acceptance Speech

Tonight is very special and exciting for me. I am honored that you are here to help me celebrate this auspicious occasion, and I am looking forward to an exciting and productive year as President of the Hawaii Medical Association.

I would like to express my sincere appreciation to Fred Holschuh for his devotion and dedication to HMA this past year. He has left big footsteps for me to follow. Fred has regularly devoted two days of his time each week to HMA activities, traveling to Honolulu and attending meetings. That means that his wife, Diane, was at home without Fred at least 29% of the time this past year, and on behalf of all of us at HMA, I thank her for her support and generosity in sharing her husband with us.

I’d also like to acknowledge the leadership of the AMA, who are strong supporters of our organization. AMA President Lonnie Bristow MD joined us last July at our managed care conference.

I have attended a number of AMA annual or interim sessions during the past four years, and I was impressed by another AMA leader, Dr Daniel “Stormy” Johnson, Jr, who served as Speaker of the House. I first met him at Dr Bristow’s inauguration reception. When he learned of my new role with HMA, his parting words to me were, “If I can ever be of help to you, please call on me.” As you can see by his presence tonight, those were not idle words. I called. He came. And I am honored to be installed by such a great leader.

HMA’s success is based on the efforts of those seated on the stage and other past presidents who could not be here tonight. My special heartfelt thanks goes to Dr Russell Stodd for his stellar performance as our emcee this evening. Finally I extend my warmest congratulations to Cherlita Gutteling as the incoming President of the HMA Alliance.

• A pessimist curses the wind.
• An optimist thinks the winds will change.
• A realist adjusts the sails.

As HMA members, we have these three options before us. We can be pessimistic — cursing the winds that blow laws and legislation toward the medical system with hurricane force.

We can curse the adversarial legal system and the threat of lawsuits that force us to practice costly defensive medicine.

We can strike out against insurance and governmental third-parties that burden us with paperwork and regulations that add to the cost and inefficiency of practicing medicine.

If we were optimists, we would expect that the winds of change would suddenly sweep across our country, causing legislators to develop laws that make a priority of protecting the doctor-patient relationship.

We’d be certain that society would be caught up in the breeze and would work each day to eliminate the social and economic ills that plague us all.

And we’d know, without a doubt, that even our patients would allow these winds to turn them in the direction of habits and lifestyles that would lead them to healthier lives.

As realists, however, we need to face the truth.

We need to set our sails to weather the sea of change before us — and there will be many changes.

We need to set our course toward the new century of medical practice — an uncharted course that lies before us.

And we need to prepare for that journey now. It will not be an easy course to navigate.

Doctors today are expected to provide a wide range of services, recommend the finest of treatments, and improve patients’ quality of life. On the other hand, we are also expected to keep expenses to a minimum, limit the use of services, increase efficiency, shorten the time spent with each patient, and use specialists sparingly.

The days of the simple doctor-patient relationship are gone. As the business of medicine becomes the focus, the professional relationship between the patient and the physician is in danger of being ignored.

It is one of the missions of the HMA to protect that relationship and we will address all the issues necessary to keep that commitment.

We will intensify our efforts this year to increase the membership of HMA and AMA and look to you to help us. If each of you in our audience tonight, physicians and Alliance, encouraged just one other physician to join us, we would be able to double our voice in
the political and community arenas where we must be strong to be heard. The HMA officers are committed to managing the organization within our budget. To do this, we are exploring ways to supplement our income from sources other than membership dues.

One of the options being reviewed is a centralized verification of credentials. Who is more qualified to collate and verify the credentials of physicians than the HMA? This would be done as a valuable service to various medical facilities, for a fee, and this could add to the HMA coffers.

One of HMA’s goals has always been to have a solid and strong political coalition representing us at the State Legislature. With Dr. Thomas Au at the helm of our Legislative Committee, coordinating the physicians who testify and deliver our opinions to the legislators, and with Dr. Leonard Howard as our full-time lobbyist, along with members of our staff dedicated to sharing that work load, I believe we will be a strong force to be reckoned with during the 1996 Legislative session.

To reconnect with the communities we serve, we will encourage each member of the organization to become a voice in his or her own field of expertise, to begin to make a difference in helping us to correct the underlying problems that contribute to the ill health of the people here in Hawaii.

It has been estimated that 50% to 70% of the cost of medicine could be eliminated by abolishing preventable diseases. Eliminating use of tobacco products would cause a marked decline in cancers, lung and heart diseases. Education could help prevent domestic violence and the spread of AIDS. The focus on information and perhaps, more importantly, on personal responsibility to self, and community, could help to make our population and society a much healthier one. We need to take the lead as medical professionals to make this happen.

Many doctors do not realize the role that HMA plays in their careers. HMA continues to be the voice for the medical profession in this state. We have met with Governor Cayetano to discuss his attempt to bring outside medical groups to Hawaii. We have discussed with the governor and lieutenant governor the importance of maintaining an active Medical Claims Conciliation Panel.

As a partner in Vision 2000, we have helped to create the nongovernmental Hawaii Health Council.

And this is just the beginning.

I am very impressed with the hardworking core of members who seem to bear the burden of making things happen within the HMA, and I want to thank all those members who have demonstrated their commitment by devoting countless hours. I look forward to seeing that commitment shared by more of us in the coming year.

I have called a meeting of the leadership for Sunday morning, October 29. We will discuss the current status of HMA, but more importantly, our immediate priority will be to set our goals for the coming year. This meeting will give all committee leaders an opportunity to intermingle and make plans.

In the words of anthropologist Margaret Mead, “Never doubt that a small group of thoughtful, committed citizens can change the world—indeed, it is the only thing that has.”

As your captain, I am ready to set the sails and begin our voyage. Please join me as we begin our journey—it might not always be smooth sailing, but the destination—a healthy future for our state and HMA—will be worth the trip.

Thank you for electing me your President. It is both an honor and a challenge. I love challenges!
Dr. Frederick C. Holschuh, Past President of the Hawaii Medical Association.
You had a great year!
Mahalo nui loa for your support of Hawaii's medical professionals.
We also thank your wife Diane for her understanding, patience, and help during your term.
About the Authors

The Antiquarians
O.A. Bushnell

O.A. Bushnell is emeritus professor of medical microbiology and medical history of the John A. Burns School of Medicine, University of Hawaii. He was born and raised in Honolulu, received his BS in science from the University of Hawaii, and his PhD in microbiology from the University of Wisconsin. He is the author of numerous historical novels about Hawaii and co-author of three histories about Hawaii. It is fair to say that as a founding member of the Hillebrand Society, he is the medical antiquarian of record for Hawaii.

Thoughts on the Relevance of Medical History
David M. Morens MD

David M. Morens never liked history in school. After receiving an AB in psychology from the University of Michigan (1969), without setting foot in a history class, he went on to receive an MD (Michigan, 1973), with board certification in pediatrics (1978), preventive medicine (1980), and specialty training in pediatric infectious diseases. In seven years at the U.S. Centers for Disease Control (CDC), he was chief of the branch that dealt with exotic viral diseases, and a member of the initial research team investigating a new disease later known as AIDS. Two of those CDC years were spent in a west African jungle outpost studying Lassa fever; the rest were spent in frequent disease investigations in the Middle East, the Caribbean, Africa, Asia, and the Pacific. Noting that flying from one culture to another has much in common with travel through time, Morens credits globe-trotting with his delayed interest in history. A professor of tropical medicine at the John A. Burns School of Medicine since 1982, Morens has authored more than 200 scientific articles and textbook chapters, including a growing number of historical explorations. He has been the prime mover in establishing the Society for the History of Medicine and Public Health, the current revival of the Hillebrand Society.

Medical Progress in a Remote Archipelago
Robert C. Schmitt

Robert C. Schmitt was born in Cincinnati, Ohio, in 1922. He received both a BA and MA in sociology from the University of Cincinnati. At the University of Michigan, he undertook additional graduate studies, specializing in statistics and demography. Brought to Hawaii in 1947 to serve as research statistician for the Public Health Committee of the Chamber of Commerce of Honolulu, he was designated State Statistician in 1963 by Governor John A. Burns and continued in that position until his retirement in 1992. He is the author or co-author of four books, more than 200 articles, and numerous unsigned government reports. Seventeen of his articles have appeared in the Hawaii Medical Journal, the first in 1949 and the most recent in 1986. He is noted for his firsts in Hawaii and his present article explores just how long it took for technologic discoveries to arrive in Hawaii.

Palama Settlement: 100 Years of Serving a Neighborhood’s Needs
Paula Rath

Paula Rath is the granddaughter of the founder of Palama Settlement, James Arthur Rath. She is the wife of Gerald Mayfield MD, chief of Orthopedic Surgery of Straub Clinic & Hospital. In addition, she has worked in communications in the medical field for more than 20 years, including positions with the Blood Bank of Hawaii, Straub Clinic & Hospital, HMSA and the Hawaii Ophthalmological Society. Paula’s father, Robert H. Rath, Sr., continues the family legacy at Palama Settlement as an emeritus Board Member who spends a great deal of his time and expertise raising money for the Settlement. He also served as president of the Health Facilities Planning Council from 1964 to 1966. Her mother, Jacqueline Jacobs Rath, has spent the last three years developing an archive for Palama. Paula currently serves on the Board of Palama Settlement, chairing the Centennial committee.

Medical Society in the Early 1900s
Ann B. Catts MD

Ann B. Catts decided at age six that she would become a doctor, more specifically, a general practitioner. The best laid plans, of course, fell by the wayside when, during her internship year at Queen’s Hospital, Dr Harold Civin, a pathologist and teacher, proved a powerful influence on her career. This experience lead her to take a residency in pathology and spend a long professional career in the pathology department of the Queen’s Medical Center. Her interest in history has run parallel with her interest in medicine and science, and she contributes much time and effort to projects at the Hawaii Medical Library. Her article in this issue was generated by one of those projects. She is a past president of the Honolulu County Medical Society and the Hawaii Medical Association, and is now retired from practice.
The Epidemic That Never Was: Yellow Fever in Hawaii
Alfred D. Morris MD

Alfred D. Morris was born and raised in the Appalachian mountains in the coal mining country of western Virginia close to the Kentucky state line. He received his undergraduate degree in psychology and his MD degree at the University of Virginia (1955). He spent 12 years in the U.S. Army receiving his training in internal medicine at Tripler Army Hospital, and in cardiology at Letterman General Hospital, San Francisco. After tours at Fort Ord, California, Korea, Armed Forces Institute of Pathology and Fitzsimmons General Hospital, he and his family returned to Honolulu (1967). Morris retired from the Honolulu Medical Group after 17 years, but continued in private practice until 1992. Before retiring from the Army Reserve, he was the Commander of the Tripler USAR Augmentation Hospital. He has held many positions at Queen’s Hospital and with the Hawaii Heart Association, and is now clinical associate professor of medicine at the John A. Burns School of Medicine, University of Hawaii. He is currently acting medical director of the Hansen’s disease program at Kalaupapa and Hale Mohalu Hospital. His present interest in the history of medicine he attributes to his wife who is a senior librarian at the University of Hawaii, Hamilton Library, and she holds a PhD in history.

Plantation Medicine in Hawaii 1840-1964: A Patient’s Perspective
Lela M. Goodell

Lela Goodell was born and raised on an Iowa farm and grew up with nine brothers and sisters. After receiving a BA degree from Morningside College, Sioux City, Iowa, she taught elementary school for a brief time. She arrived in Hawaii in 1949 with her husband who had taken a position at the University of Hawaii. She lived for seven years on Kauai while her husband was the county agriculture agent and later ranch manager for Kekaha Sugar Company. It is this period that she describes so well in this issue’s article about plantation medicine from a patient’s perspective. Lela received her master of library studies degree in 1975 from the University of Hawaii. She worked 28 years as cataloging librarian at the Mission Houses Museum. In 1989 she inventoried and indexed the archives of the Polynesian Voyaging Society housed at Kamehameha Schools. After a few years of retirement she accepted a contract from Bishop Estate/Kamehameha Schools to sort and arrange the extensive papers of the late Frank E. Midkiff, president and trustee of the estate for nearly 50 years. Lela is a charter member of the Women’s Campus Club hikers. She has hiked New Zealand, Australia, Japan, Germany, France, England, Grand Canyon and most of all, Hawaii.

Plantation Doctor
Rodman Miller MD

Rodman B. Miller, born November 27, 1924, in Orangeburg, South Carolina, grew up in Baton Rouge, Louisiana, adjacent to the LSU campus where he later received his undergraduate degree. World War II and duty overseas in the field artillery intervened but he graduated in June, 1950, from the Louisiana State University Medical School in New Orleans. Following internship at Shreveport Charity Hospital, he again saw active duty, for two years, with the Army Medical Corps as Regimental Surgeon, 82nd Airborne. After a year of surgical residency at Colorado State Hospital, he entered a rural practice in that state. The move to Hawaii in 1961 and his practice as plantation physician is affectionately told in this issue. He and his family continue to serve and be an integral part of the Haleiwa community. In 1973 Dr Miller was certified in family practice and all recertifications are current. Numerous interests include gardening, windsurfing, glider flying, photography, and jogging. But his biggest interest is providing quality community service through a successful family practice clinic.

How Open Heart Surgery Came to Hawaii
Scott C. Brainard MD

Scott C. Brainard was born on January 15, 1922, in the old Kauikeolani Hospital on Kuakini Street to the sound of the gun salutes as the royal cortège accompanied the body of Prince Kuhio up Nuanau Avenue to the Royal Mausoleum. He graduated from Punahou in 1939; Green Mountain Junior College, Puotlney, Vermont, in 1941; and the University of Virginia in 1943. That year, before entering the Medical College of Virginia, he read a book titled Consultation Room about the wonders of delivering babies. He was convinced that obstetrics was his calling. Graduating in 1946, he returned to Hawaii to start his internship at Queen’s Hospital but after his first night on OB he concluded that he was just an unneeded appendage to the process and changed to a surgical rotation. His payback time for the Army was completed on the surgical service of Murphy General Hospital, Waltham, Massachusetts, and surgical residency at Yale New Haven Hospital followed. After a year of general surgery practice at the Honolulu Medical Group, he took two years of thoracic surgical training at the University of Oregon, including heart and vascular surgery. The Oregon Heart Association awarded him a grant to study the feasibility of cross donor circulation. He returned to Hawaii just at the time Dr DeWall used the first bubble oxygenator. How heart surgery came to Hawaii is his personal story. Dr Brainard is now retired from medicine and lives in Ontario, Oregon.
Emma Nae'a Rooke Kaleonalani was born on January 2, 1836. It was through her vision and efforts, with the support of her husband King Kamehameha IV, that The Queen’s Hospital was established in 1859 for all of the people of Hawaii.

Today, The Queen’s Medical Center represents the continuing fulfillment of Queen Emma’s Vision. Quality Healthcare, has and will always be the major focus of the Queen’s Mission. Queen’s continues to be the leading medical referral treatment center in Hawaii and the Pacific Basin.

THE QUEEN’S MEDICAL CENTER
Serving Six Generations of Island Families
The Antiquarians

O.A. Bushnell PhD

Historians and other sorts of antiquarians in Hawaii have been meeting to discuss the history of medicine since 1932 when the History of Medicine Society was formed. The Society was not long lived, but another group was established in 1964 called the Hillebrand Society which continued until 1972. History repeats itself and in 1992 the Hawaii Society for the History of Medicine and Public Health was founded.

Historian and other sorts of antiquarians are a necessary if curious breed. Usually the older members in a community, they serve as keepers of information that, without them, would be lost to younger folk, who are unaware of matters belonging to the past. This is a natural consequence of “the generation warp,” as Dr D.M. Morens calls it in his latest report on the activities of the Hawaii Society for the History of Medicine and Public Health (long may it flourish!) For pertinent illustration about the need for antiquarians, most members of HSHMPH did not know until recently that their society has been preceded by at least two similar organizations, right here in Honolulu.

The first of those, bravely named The History of Medicine Society, was formally founded in March 1932. According to Mrs Nancy Nickell Fennel, who was there that evening, the organizing meeting was held at the home of Dr Hastings H. Walker, at that time on the staff of Leahi Hospital. Dr Henry L. Sigerist, the famous historian of medicine, had visited Hawaii in February. Dr Eric A. Fennel, Nancy’s husband, and the pathologist at the Straub Clinic, took Dr Sigerist to see the Leper Settlement at Kalaupapa. On their return to Honolulu, Dr Sigerist confessed to Mrs Fennel that he had been scared to death by the terrors of the mule trail leading from topside Molokai to the Settlement far below.

Obviously, during his stay in Honolulu, Dr Sigerist stirred up some interest in the history of medicine among local physicians. In a reminiscing and undated letter she wrote many years later (to an unknown recipient), Nancy Fennel named the distinguished physicians who gathered at Dr Walker’s home in Manoa Valley on that evening in March 1932:

N.E. Wayson, USPHS, stationed at the Kalihi Receiving Station (sometimes referred to as the Leprosy Investigation Station in Kalihi); Robert Perlstein, an associate of Dr Walker at Leahi Hospital; Harry L. Arnold, Sr, and Eric A. Fennel of the Straub Clinic; Nils P. Larsen and Francis Halford of the Medical Group; and Frank L. Pleadwell, Captain USN (Ret). During the evening, Bob Perlstein gave a talk on Robert Koch.

Alas for the iniquity of oblivion, as Sir Thomas Browne lamented, in distress for famous men of all times. Who among us today remembers even the names of those potent doctors in Hawaii’s medical history or their contributions to our progress? They were virtually the daimyo, the great names, in the haole medical establishment of their time.

Apparently that first History of Medicine Society did not continue for long; nothing more is known about further meetings or later speakers. Without Nancy Fennel’s gossipy letter, probably written to Dr Charles S. Judd, Jr, or to Dr John Stephenson, we today would not know that it had led the way along which we follow. We need not wonder why that society did not endure. Those great men were too busy, professionally and socially, to spend many evenings listening to someone talk about the dead or dying past.

Yet, as is the way with all emerging generations, the need to think about the past persists in a few younger people. In the early 1960s, two energetic young physicians, able to look backward as well as forward, decided to create another society to consider the history of medicine: Dr John Stephenson, a pediatrician with the Straub Clinic, and Dr Charles S. Judd, Jr, a surgeon in private practice. With a fine sense of local history, they called it the Hillebrand Society.

Hillebrand you ask? Who was he to be so honored? Now nearly forgotten, Dr William Hillebrand (1821-1886) was one of Hawaii’s most remarkable physicians and citizens during the 19th century. Trained in Germany, he arrived in Honolulu about 1851, accompanied by his wife and two young sons. After establishing a thriving practice here, he was chosen to be the first medical director of The Queen’s Hospital when it was founded in 1859. His observations on patients seen both in the hospital and in his chambers caused him to warn the kingdom’s Board of Health about the increasing numbers of lepers among native Hawaiians. This warning, of course, led to the Act to Prevent the Spread of Leprosy passed by the Legislature in 1865. In consequence, beginning in 1866, all persons suffering from Hansen’s disease were segregated at the Leper Settlement on Molokai.

A botanist too, Hillebrand collected and classified most of the plants, both native and introduced, growing in Hawaii at that time. From this prodigious collection he prepared the manuscript for Flora of the Hawaiian Islands. Published posthumously in 1888, it was the best general authority on Hawaii’s flora for more than 60 years.

In the mid 1860s, as the kingdom’s roving commissioner for immigration traveling in Asia, Dr Hillebrand arranged for the importation of contract laborers to work on Hawaii’s sugarcane plantations: More Chinese workers arrived in 1865 (the first group had come in 1852), and the first Japanese contract laborers, the celebrated Gannen Mono, arrived in 1868. Moreover, during his travels in Asia he sent back to Honolulu an assortment of interesting plants and birds to adorn his estate here. Many of the plants still grow just where he planted them in the preserve now known as the Foster Botanical Garden, because Mary E. Foster bought the property after Hillebrand and his family left the islands, about 1880. They settled in Montreux, Switzerland, where he completed the manuscript for his Flora of the Hawaiian Islands. Even there he continued to help Hawaii: he was the intermediary who advised Walter Murray Gibson, then president of the Board of Health, to invite Dr Eduard Arning, one of Europe’s first physicians to be trained in the new discipline of bacteriology, to come to Hawaii in order to “study the problem of leprosy.”

In short, because of his significant influence on the medical, the
social, and the natural history of Hawaii, Dr Hillebrand seemed to be a man deserving of honor by successors who shared his many interests.

And yet, unhappily, he is all but unknown today. No street is named for him, no building, no memorial of any kind, certainly not the society that bore his name, not even the botanical garden that he established around his home. Hillebrand’s Glen, somewhere in Nuuanu Valley, was named for him, but now no one knows where to look for it.

The Hillebrand Society held its first official meeting on December 16, 1964 “in the corner of the main reference room of the [new] Hawaii Medical Library.” (Naturally, obligatory refreshments were served.) Dr Stephenson presided, Dr Judd served as scribe. His minutes reported that “Dr Ilza Veith, Professor of the History of Medicine at the University of California [Berkeley] was present, and gave some excellent counsel on the organization of the society.” In a fated preview of this belated rebirth, “Prof O.A. Bushnell presented an interesting biographical sketch of Dr William Hillebrand, physician and botanist, one of the great early doctors of Hawaii.”

In 1966, following the example of his great-grandfather, Dr Gerrit P. Judd (who came to Hawaii as a medical missionary in 1828), Charlie Judd went with his family to Western Samoa for a two-year period of service. John Stephenson happily reported that in 1967 the Hillebrand Society had 42 charter members. Then, in the fall of 1968, most untimely and much too young, Stephenson died. Upon his return from Samoa in that same year, Charlie Judd became the society’s acting president.

And, at that time, Dr Windsor Cutting, dean of the University of Hawaii’s newly founded medical school and a member of the Hillebrand Society, appointed Dr Judd the school’s first professor of medical history, as well as a clinical professor of surgery.

Inevitably, some of those 42 charter members died or moved away. Most of the steadfast rest, predictably, having “a grand memory for forgetting,” as Robert Louis Stevenson wrote, did not bother to attend the meetings that diligent Dr Judd arranged for them. In 1972 he sensibly gave up the struggle to keep the Hillebrand Society alive.

Among the present generation of people who are interested in medical history few remembered that the Hillebrand Society had ever existed. Even sadder: No one knows whether or not comparable societies exist that are concerned with Hawaiian, Chinese, and Japanese medical history in these islands—or elsewhere.

Even so, as always, history does repeat. In 1992, a small group of hopeful folk founded the Hawaii Society for the History of Medicine and Public Health. Long may it flourish.
These five executives believe that success is being in the right place at the right time: (left to right) First Hawaiian Bank Chairman & CEO, WALTER DOOD; HMSA President, BOB HIAM; Bank of Hawaii Chairman & CEO, LARRY JOHNSON; Allstate's Senior Market Claim Manager, JANET LAISON; Consolidated Amusement President, PHIL SHIMMIN.

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Campbell Square, which is already home to 23 businesses, is an impressive component of a city that will eventually include more than 7 million square feet of prime office and retail space - remarkably similar in size to downtown Honolulu.
Thoughts on the Relevance of Medical History

David M. Morens MD

Clinicians are, by their very nature, historians—a question remains as to whether and how the history of medicine should be studied as a subject. In recent years medical educators have increasingly answered this question by deleting medical history from the curriculum. But this may be a mistake: among other things of value, medical history provides a much-needed perspective of medical knowledge, and a pigeon hole into which essential new facts—basic, clinical, whatever—can be filed without getting lost. But linear learning, the piling-on of facts, is more likely to bring exhaustion than comprehension.

In learning how ontogeny recapitulates phylogeny, every medical student is exposed—consciously or not—to nature’s historical sense. Tiny nucleic acids predict and define our descendants’ descendents, ontogenizing and phylogenizing each of them. Contemporary molecular history lessons, spanning millions of years, are carried in every cell of our body. But our day-to-day lives are lived in, and sometimes for, the moment; even as scientists we may escape historical awareness. Nor is the future readily appreciated when the past, which will produce it, is not remembered. This very human phenomenon may have particular relevance for physicians and the things physicians do. Or so physician-historian Iza Veith MD apparently thought in noting nearly 30 years ago that “the science of medicine... sometimes appears to think of itself as having been generated spontaneously and as being without a history.”

But it can be argued that physicians are, and must be, historians if we successfully practice the art, that we may have more of a historical sense than we realize. For example, one of our most basic skills is taking a medical history. In doing so we investigate not one patient, but 100 patients from the past. We write: “Mr Kane, a WDNS 32-year-old Hawaiian male...”, but also discover Mr Kane, the 22-year-old man who tore a knee ligament in the BYU football game; Joe Kane, the 16-year-old boy who stuck that first cigarette in his mouth after class; Joey Kane, the five-year-old boy who got his last tetanus shot after stepping on a pop top; Joseph Kalani Kane, the day-old infant with the reaction to silver nitrate. Nor does the physical examination escape the subsumption of history: a scar that betrays a prior operation; a word written in a tattoo; a nicotine stain on the first and second fingers, right hand; a hard liver edge; actinic keratoses. Each represents the physician’s discovery of the past; acceptance of the truth that to care for the patient today, the patient of the past must be examined too.

Our patients’ historical experiences become our own historical lessons. In practicing medicine over a span of time we develop and organize an encyclopedia of these lessons, and draw on them repeatedly. Most of us have even unconsciously archetyped particular patients who have made some impression; patients who have come to symbolize lessons that must be recalled and reused. We may remember, for example, the obviously well infant on whom we did the spinal tap (anyway), and our amazement at finding all those white blood cells under the microscope. We are now more likely to tap the next patient if meningitis seems even remotely possible. We also find that lessons from our most recent patients disproportionately influence clinical decisions. Mrs Morinaga was unexpectedly found to have papilledema on routine examination last week. This week, you will look particularly carefully at everyones’ eye grounds.

Such actions characterize our awareness of history in clinical practice: yesterday’s experiences suggest what could happen tomorrow. History lessons become part of every physician’s professional encyclopedia.

Physicians conceptualize not only clinical experiences, but also the lives of patients and of diseases along time lines. The time line, usually drawn as a horizontal arrow pointing to the right, is a device used in logic to demonstrate temporal associations between distinct events. In the case of a human life, the line might begin at the left, with birth, and end at an arrow tip on the right, with death. The arrow moves, from left to right, as time moves. In between, on the arrow itself, we mark off events of importance, such as an operation, an illness, a mammogram, low blood sugar. We arrange the relevant personal and health events of individual patients along this time line, and we perceive the manner in which the progress of time connects and separates these events. We also learn the natural history of every disease: all of the hard facts in Cecil & Loeb, ordered and arranged by time’s evolutionary unfoldings. We examine association and causation along this line: Mr Kane started his pack-a-day habit at age 16; today he has severe bronchitis. Even if we examine the patient at only one point in time, we seek to investigate, imagine, and understand what came before and what is likely to follow. We must do so if we are to diagnose, prognosticate, inform and counsel patients, select treatments, and recommend preventive measures.

We adopt other historical perspectives as well. We attempt to understand human diseases of complex etiology. We go beyond the one-dimensional limitations of the time line in learning how diseases result from the interactions of agent, host, and environment (traditionally depicted in textbooks by an isosceles triangle, with each of the three disease-producing factors occupying one of the apices). We thus understand that diseases do not result merely from linear processes, but from complex webs of causation that cannot be conceptualized one-dimensionally. What caused Mr Kane’s myocardial infarction? Cigarettes? Obesity? A sedentary life-style? Hypertension? Job stress? Marital stress? High LDL? High LDL:HDL ratio? Too many beers? Chronic hyperglycemia? Family history? We may decide that while it is all of those things, it is not any one of them alone. It is such a causal web that we refer to in saying that a condition is of multifactorial etiology. Similarly, in arriving at a diagnosis we mix and assemble, shuffle and remix facts into a coherent picture. Hawaii medical philosopher Kenneth Kipnis has called this decision process the recognition of patterns, to
distinguish it from decision making by algorithm. It, too, is part of our historical sensibility.

This historical orientation of ours allows us to think clinically because it is about the integration of facts. Physicians must ultimately decide and act, which means we must be able to sort and prioritize facts and provisional conclusions, run scenarios and algorithms inside our heads, test our conclusions, repudiate, reconfigure, hypothesize, retest, look for consistencies and inconsistencies, update our idiosyncratic data bases, and rerun our programs over and over again. This is how clinical decision making proceeds. Our historical orientation involves systematic approaches and broad experience. It deals not with superficialities, but generalized detective skills applicable to clinical medicine. Is it coincidence that medical historians have for centuries been among the greatest clinicians, eg, Thomas Sydenham, Robert Willan, Sir William Osler, Harvey Cushing, and the greatest medical thinkers, eg, Kurt Sprengel, John Snow?

The fuller our historical perspectives, the easier it becomes to learn, retain, and apply the everchanging knowledge that keeps our clinical art current. There is a prevalent illusion that if we can only chase the minutiae down one more alley we may at last arrive at a clinician’s nirvana of total knowledge. This illusion is especially seductive when burgeoning technical advances provide a continual supply of new facts to find.

Facts may not stick unless they have something to stick to. Try learning a foreign language by memorizing successive words in a dictionary. Imagine this task without knowledge of the parts of speech. Richard Armour’s hackneyed example of memorizing without comprehending is instructive. It was comparatively easy for Armour to learn that in 14 hundred and 92, Columbus sailed the ocean blue, until he began to suspect that maybe in 14 hundred and 93, Columbus sailed the deep blue sea. (And what about Leif Erickson?) What we know and learn, in a complex and ever-moving field, is determined by the architecture and organization of the bases of our knowledge, much as the roots of a tree determine whether branches will branch off, and how fully leaves will grow. As one physician put it: history is not the accumulation of facts, but rather is the way that those facts relate to each other. Or another: the emphasis is on a web of connection rather than on discrete entities—on the meaning of facts in relation to historical patterns, configurations, and processes, not as absolutes in themselves. Medical history can still serve as an organizing matrix, a foundation upon which comprehensive medical knowledge and skills are built.

Finally, we might ask what part and place remains for medical history in Hawaii? Living in the state with the briefest human habituation, it might be wrongly assumed that our history—including our medical history—should be the least relevant. That this may not be the case is apparent to anyone who reads the newspapers. As residents of Hawaii, we live in a present directly connected to the past, and demanding that the future evolve logically from it. We are continually reminded how, within the span of roughly 200 years Hawaii nei went from a collection of tribal states, to a kingdom, to a U.S. territory, to a state. Not only are the facts of this history still disputed, but even those facts accepted are presented in evidence of opposing conclusions that seem to mandate opposite actions. Hawaii is a state, a sovereign nation, or an abstract concept, depending on your reading of history. Its people are victims or rescuers, liberators or oppressors, visitors or trespassers, depending on your historical perspective. A better example of the fluid relevance of history, the continuum of past, present, and future, would be hard to find.

Hawaii’s general history might appear irrelevant to medicine, but the climate of historical examination should at least encourage us to search our medical past for lessons obscured by dust and distance. What of leprosy? Does the history of stigmatization tell us anything about HIV infection today? What of the many health problems of Hawaii’s native peoples? Of recent immigrants? Do they reveal weaknesses in our health care system? In our values? Do they provide litmus tests for the successfullness of the health care we provide? Why does retired microbiologist Ozzy Bushnell turn the pages of medical history to track the diseases that killed Hawaii’s people 150 years ago? Why does Laurence Stuppy, a California surgeon, return to pick up the threads of a Honolulu epidemic he investigated 52 years ago? Why do Hawaii’s libraries expand to shelve books by authors long deceased, on subjects since altered and updated? Why do scholars and physicians and students unsettle the dust on these old books? Some of these questions will hopefully be answered in the pages of this volume.

As Osler viewed it, and as modern historians view it still, medical history moves and changes inexorably as a living, breathing, dynamic and rambunctious process. It must not be an antiquarian product to be served up with crumpet cakes and tea; nor the sludge of decomposing medical knowledge; nor a dustbin for discarded ideas. Rather, medical history is a black bag containing the instruments of the past, present, and future; a dimension within which medical knowledge serves the art. As physicians each of us can, and probably should from time to time, re-explore some of its useful and fascinating lessons.

When we uncover history, we discover ourselves. Who we are, what we have achieved, where we are going. Where we must go.

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References
Medical Progress in a Remote Archipelago

Robert C. Schmitt

Just how long has the lag been in local acceptance of medical progress? Five major innovations are examined: vaccination, anesthesia, antiseptic and aseptic surgery, x-rays, and antibiotics. Hawaii has not always been in the forefront of medical progress, but generally has been quick to adopt new treatments and technologies.

Mainland observers, and even some island residents, have sometimes assumed that Hawaii has been slow to adopt innovations originating elsewhere. Late 19th century writers, for example, often expressed surprise on finding Honolulu to be a modern metropolis with telephone service and electric lights. Hollywood films of the 1920s and 1930s typically portrayed modern Hawaii as a backward land of thatched huts, happy plantation workers, and compliant sarong-clad Polynesian maidens. More recently, local economists have argued over the duration of time lags between national business cycles and their Island echoes. And a 1994 Congressional candidate peevishly blasted Hawaii’s voters for being out of step with Mainland political trends. Such assumed laggadly tendencies have usually been attributed to geographic remoteness, compounded by a lotus-eating Polynesian paralysis and cultural insularity.

Given these stereotypes, medical historians might conceivably ask: Have medical advances been similarly slow to reach Island practitioners? Just how long has the lag been in local acceptance of medical progress?

In an effort to answer these questions, five major innovations are considered: vaccination, anesthesia, antiseptic and aseptic surgery, x-rays, and the antibiotics and other miracle drugs. All five of these developments, of course, are now more than 50 years old, and thus offer little insight into Hawaii’s current adaptability to medical progress. A different selection of examples, moreover, might lead to somewhat different conclusions. Even so, the following analysis might tell modern medical people something about their predecessors’ willingness to accept advances in their own time.

Vaccination

Vaccination with cowpox matter in order to induce immunity to smallpox was first tried by English physician Edward Jenner in 1796. Direct inoculation with the disease, or variolation, had been in use for the same purpose for centuries, but had proven to be extremely risky. Jenner published his results in June 1798. Vaccination grew in popularity both in Europe and the United States throughout the 19th century, but smallpox remained a major cause of death for many years, especially in underdeveloped areas.

In Hawaii, the earliest known vaccination attempts were those made by Dr Abraham Blatchely, a physician who served with the Sandwich Islands Mission from April 1823 to November 1826. According to Halford:

Dr Blatchley found no smallpox in Hawaii, yet his wonder and relief were tinged by fear of the devastation inevitable when the scourge should come from one of the innumerable infected ports. Apparently he had requested the Boston Board to forward a stock of vaccine to him at Honolulu as soon as it could be obtained from London’s inoculation hospital, sole source of the world’s supply. It consisted of Woodville’s arm-to-arm achievement of a complex vaccine fairly free from ulcerative termination.

Results were disappointing to Dr Blatchely, and he wrote to the Boston Board: “I regret that the vaccine injection sent by Capt Gardiner of Nantucket was too old—by the date of it about 18 months old before he sailed...It was good for nothing.”

Notwithstanding this initial failure, vaccination appears to have become an established procedure by 1839, when the next known historical reference to it occurred. In early June of that year, Richard Brinsley Hinds, the surgeon of the visiting British ship Sulphur, observed crowds of Hawaiians—“the old and the young, the chiefs of rank and the humble kanaka”—regularly assembled at the door of Dr T.C.B. Rooke to be vaccinated following a smallpox scare.

“Eight or ten thousand have been vaccinated at Honolulu,” reported Hinds. “This was apparently Hawaii’s first mass immunization effort.

Vaccination efforts continued sporadically throughout the 1840s, although their effect was seemingly limited. Physicians involved in these efforts included Judd in 1841, Baldwin in 1842, and Lathrop and Wetmore in 1849, 1850. When the inevitable epidemic finally struck, however—the first case was reported May 13, 1853, and the last January 14, 1854—fully 11,081 cases and 5,947 deaths occurred on Oahu alone, with another 887 cases and 448 deaths on the Neighbor Islands. As noted by Greer, “the widespread incidence of smallpox in 1853 proves either that immunization figures were grossly exaggerated, or that the process was ineffective for one reason or another, or both.”

In this example at least, medical progress was indeed slow to reach Hawaii: at least a quarter of a century elapsed between Jenner’s 1798 report and Blatchley’s ill-fated effort to secure vaccine, and more than 40 years between Jenner’s announcement and the 1839 immunization push by Dr Rooke and his colleagues. Even so, it should be remembered that no trained foreign doctor lived in the Islands before 1811; any earlier adoption of vaccination would thus have been extremely unlikely.

Anesthesia

Anesthesia was first used in surgery in the early and middle 1840s. In January 1842, William E. Clarke, a chemistry student of Rochester, New York, administered ether to a young woman for extraction of a tooth by a dentist, but failed to follow-up on the procedure. Two months later, on March 30, 1842, Crawford W. Long, a practitioner in Jefferson, Georgia, first used ether as a general...
anesthetic for surgery, and repeated his experiment four or five times during the next four years; but he did not publicize this until 1849. Horace Wells, a dentist in Hartford, Connecticut, had one of his own teeth extracted under nitrous oxide, and after further trials gave a demonstration (deemed a failure) at Massachusetts General Hospital in January 1845. Finally, on October 16, 1846, William T.G Morton, another dentist, demonstrated the application of ether as a general anesthetic for excising a tumor of the neck in an operation performed by Dr John C. Warren at the same hospital. Singer and Underwood conclude that “for practical purposes he [Morton] must be considered the discoverer of anaesthesia.”13 Add Bordley and Harvey: “Within a few months of this highly successful and thoroughly convincing demonstration, Morton’s method was being used throughout the Western world to make possible surgical and obstetrical procedures which previously could not have been undertaken.”14

The news of this breakthrough reached Honolulu late in August 1847 and promptly appeared as brief undated items in two local papers. Quoting the Boston Journal, The Friend said “Dr Morton, Dentist, No 19, Tremont Row, at the invitation of Dr Haywood, visited the McLean Hospital and administered his preparation to produce sleep, to a person about to undergo the operation of the extraction of a tumor from the neck.” An almost identical note was carried two days later by The Polynesian.15-16

Ether was not unknown in Hawaii at this time. In 1845, James Smith, the Mission’s doctor at Koloa, Kauai since 1842, complained of the poor condition of the medicines he had received, noting that “a bottle of Either [sic] was poorly corked and its contents lost.” Dr Smith might have intended using the ether to treat pulmonary tuberculosis, as was commonly done at the time.18

The earliest known reference to the use of general anesthesia in Hawaii did not enter the record until February 16, 1850, when Dr Charles H. Wetmore, the Mission physician in Hilo, administered ether to his wife, Lucy, as she was giving birth to their first child. Dr Wetmore’s subsequent account of this delivery was addressed to Dr Dwight Baldwin on Maui, establishing the date of this notable introduction to Island medicine. His casual reference to the anesthetic moreover suggests that its use was already known in Hawaii by that time.19

No similarly early record has come to light regarding the use of anesthetics in dental surgery in the kingdom. The first such reference seems to have been Isabella Lyman’s 1866 journal entry reporting the extraction of a tooth: “He [the doctor] used the ether spray and they say I fainted after it.” Since this event likewise occurred in Hilo, the doctor referred to was probably again Dr Wetmore.20 Most likely, dental anesthesia was already common in the Islands by 1868, and earlier usage simply went unrecorded.

Given the slowness of transpacific communication in the middle of the 19th century, the first reported instance of anesthesia in Hawaii’s medical history, more than three years after Morton’s demonstration in Boston, does not seem unduly delayed.

Antiseptic and Aseptic Surgery

Antiseptic surgery had its origins in the work of Gordon, Semmelweis, Pasteur and Lister in the late 18th and mid 19th centuries. Alexander Gordon, an Aberdeen physician writing in 1795, contended that purpural infection “was carried from an infected to an uninfected woman by the agency of the midwife or the doctor,” and could be avoided by careful cleansing of the operator’s hands and arms. A half-century later, in 1846, Ignaz Semmelweis, a Hungarian surgeon working at the General Hospital of Vienna, reduced purpural fever deaths from 10%-30% to 1% of the preg
The first institution in Hawaii with an x-ray machine was the Honolulu Sanitarium, opened at 1082 South King Street in July 1896. An account published in 1899 noted that “A fine S[t]atic electrical machine, with an x-ray attachment, is in operation, and is for the use of physicians, and for giving special electrical treatment.” The Honolulu Sanitarium, a branch of the fashionable Battle Creek Sanitarium headed by J.H. Kellogg MD was meant to serve “tourists and others wishing an invigorating or tonic treatment” and “curable patients who need special or ordinary care.”

Acceptance of the new technique among the more established hospitals in Honolulu was reached more slowly. The earliest known reference to x-rays in the surgical records of The Queen’s Medical Center describes a radiograph of the fractured leg of G.W. Kircaldy, admitted September 6, 1904 and attended by Dr Hoffmann. Not until 1911, however, did The Queen’s Hospital install its own x-ray apparatus. Leahi Home, the hospital for tuberculosis patients founded in 1900, purchased its first x-ray equipment in 1916.43-45

Antibiotics

The first of the major antibiotics was penicillin, identified by Sir Alexander Fleming in August or September 1928 and described by him in a paper published in 1929. Demonstrated in 1940 to have therapeutic powers, it received its first clinical trials in February 1941. Production remained inadequate until 1944, however.46-47

Sulfanilamide, while not actually an antibiotic, was viewed as the first of the so-called miracle drugs. Discovered (as a dye) in 1908, it was found in 1932 to have useful medical properties. Beginning in 1935, it became an extremely popular drug, often applied indiscriminately and sometimes recklessly for a wide variety of conditions.48-50

Sulfanilamide was first used locally in 1937 by Board of Health, Queen’s Hospital, and Navy physicians, primarily in the treatment of gonorrhea. Four years later, on December 7, 1941, many U.S. service personnel seriously wounded in Japan’s attack on Pearl Harbor were reportedly saved by sulfanilamide in what was described as its “first big wartime test.”51-55

Penicillin reached Hawaii in 1943 but was initially restricted to military personnel. The first Island use of this antibiotic appears to have been at Aiea Naval Hospital, where it was applied with great success in the treatment of gonorrhea, beginning in July 1943. Early in October, officials decided to undertake the production of penicillin locally at the HSPA Experiment Station on Keeaumoku Street. Soon the HSPA technicians developed a new method which produced penicillin solution in quantity in half the time required by the complex 10-day process used for preparing pure penicillin. This output went largely to the plantation hospitals.56-60

Penicillin was first made generally available for civilian use in June 1944, with designation of The Queen’s Hospital as the distributing center of the drug for civilian purposes throughout the territory. A few months later, Dr Nils Larsen described the treatment of some local cases. Between July 1944 and March 15, 1945, 1,049 patients received 774.8 million units under this program.61-66

Streptomycin was first isolated in 1943 and announced in medical journals early in 1946. Although limited supplies of the drug began to reach Hawaii soon afterward, the first large commercial shipment was not received until November 1946. In December, physicians at Leahi Hospital began using streptomycin on tuberculosis patients.67-70

Are We Laggards?

Just how far behind the times has Island medicine lagged? The foregoing paragraphs have reviewed the evidence for five major advances: Vaccination, anesthesia, antiseptic and aseptic surgery, x-rays, and antibiotics.

The record is admittedly mixed. In vaccination against smallpox, Hawaii’s physicians proved themselves not only slow but ineffective: their best efforts could not prevent the catastrophic mortality recorded in the 1853 epidemic. Anesthesia, in contrast, reached Hawaii in a relatively short time, taking available transportation into account. Antiseptic surgery and the germ theory of disease were long resisted by the American medical establishment, and Island physicians and surgeons were probably more progressive in this area than many of their Mainland counterparts. X-ray technology, although demonstrated to Island residents within eight months of Roentgen’s announcement, was relatively slow to achieve widespread adoption. Penicillin, in contrast, was quickly accepted, with Hawaii well ahead of many Mainland areas—a result of both the Islands’ military importance and HSPA’s initiative.71

The advances traced here are but a limited sample of medical innovations over the years, and in any event all of those cited date back a half century or more. A fair accounting of Hawaii’s responses to progress, complete to the 1990s, would obviously require a full volume.

Hawaii in past years has not always been in the forefront of medical progress. But it has hardly deserved the intimations of medical backwardness sometimes expressed by out-of-state commentators.

One telling set of statistics: Before 1950, expectation of life at birth was lower in Hawaii than on the Mainland, but since 1950 it has exceeded the national average. Since 1970, moreover, it has been the highest of any of the 50 states.72-73

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> Continued on next Page
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Palama Settlement: 100 Years of Serving a Neighborhood’s Needs

Paula Rath

The founding of Palama Settlement brought to those who might not be able to afford it public health nurses for maternal care and nutrition, well-baby clinics, tuberculosis clinics, medical and dental clinics, and eventually major support of medical needs during and after the attack on Pearl Harbor. Palama Settlement celebrates its centennial year with many of its early functions assumed by state and private organizations, but it is prepared to enter the next 100 years of service to the community. Palama was founded by James Arthur Rath with the purpose of serving the community; many people today remember their childhood and Palama Settlement.

Settlement Movement—Palama Settlement

A settlement is established to identify and meet the needs of its community. The settlement movement began in England during the 1880s when Samuel Barnett, the vicar of Saint Jude’s Parish in London, invited university students to settle and share in the life of the people of a deprived area. The aim of the settlement program has remained the same for more than 100 years: to enable social workers, health care providers, and community leaders to gain an understanding of the conditions under which the people in a given geographical neighborhood lived—and to enlist the aid of the more fortunate to improve those conditions. One of the unique factors in the settlement approach to meeting human needs is that the social workers move into the area and live side by side with the people, enabling them to learn firsthand what the needs are.

Today in the United States there are only a handful of settlements still in existence; Honolulu is fortunate to have one of them—Palama Settlement. For 100 years Palama Settlement has served as an outstanding example of how a settlement can serve its community. Its programs are constantly growing and changing with the needs and conditions of the people in Kalihi-Palama. Throughout the years it has served all age groups, crossing lines of race, religion, national origin, and economic status.

Meeting the medical needs of this ever-changing neighborhood has often been a primary focus for Palama Settlement. On the eve of this centennial, it is appropriate to look back at just a few of the medical programs provided at this key community center during its first 100 years.

A Brief Overview

In a 1941 Journal of the American Medical Association, Philip S. Platt noted in an article titled “Honolulu’s Hull House,” that Palama Settlement pioneered numerous farsighted and important health programs in Hawaii, including:

- Public health nursing in Hawaii
- Prenatal clinics and child health examinations
- Day camps to teach health, hygiene, and stress management
- Milk stations
- Tuberculosis committees
- Branch dispensaries
- Courses in public health at the University of Hawaii

Platt wrote:

During the 45 years of its existence Palama Settlement has seen Honolulu grow from a sprawling village of 30,000 to a metropolis of 200,000. Untold thousands of citizens scattered through the city and its principal islands have spent their youth under the helpful guidance of Palama.7

Public Health Nursing

James Arthur Rath was a social worker who was born and raised in Hyderabad, India, the son of a British physician who was a civil servant. The YMCA of India sent him to Springfield College in Massachusetts, then a training institute for future YMCA workers. While there, he was recruited by Mr P.C. Jones of the Hawaii Evangelical Association to come to the island of Oahu to form a

Circa 1930, Palama Settlement Public Health nurses working in the community.
executive director (Rath) working under the Board of Directors.

Among the first needs identified by the community survey were health and hygiene. Palama had a serious tuberculosis problem, as well as venereal disease and unacceptable sanitation conditions in the tenements where the majority of Palama people lived. In addition there was a dearth of dental care, prenatal care, and a lack of education regarding health and hygiene.

Therefore, Rath, in 1906, worked with the Free Kindergarten Association of Hawaii (now KCCA, marking its 100th anniversary in 1995) to provide a public health nurse for home nursing among the poor. This was quickly followed by establishment of a milk depot at Palama to dispense free milk to needy infants. In 1908, an executive nurse and several more field nurses were added to the Palama Settlement staff on a full-time basis. By 1910 there were 10 nurses: two doing tuberculosis work and eight making weekly visits to each public school plus continuing their home visits and working at four free dispensaries where they provided first-aid and follow-up treatments. During these early years there were no physicians on the Settlement staff. The dispensaries were tents with wooden floors where nurses provided basic first-aid and a plethora of health education. From 1910, however, physicians generously volunteered their time at the dispensaries, screening and treating patients from many of Oahu’s poor neighborhoods.

In 1914, with guidance from Arthur F. Jackson MD and assistance from W. Dunn MD, Palama introduced a “Mother’s Rest Camp” at Kaipapau, near Waialua Beach, adjacent to the home of W.D. Baldwin MD. Here, exhausted mothers could come for a week or two of rest while a nurse taught them and their children nutrition, hygiene, laundry, and cooking. It was also in 1914 that Dr Jackson began to see patients in Palama’s outpatient clinic three days a week.

One of the most famous names affiliated with Palama Settlement is that of Mabel Smyth, who was Public Health head nurse from 1919 to 1928. A part-Hawaiian woman who grew up in Palama, Smyth’s strength, intelligence and abilities were recognized by Rath, who sent her to Boston for special training in public health nursing. While there she learned all the latest public health skills and techniques and brought them back with her to her Palama neighbors.

In 1923, under Smyth’s leadership, the nurses at Palama began child health work, first through well-baby clinics, followed by obstetrical clinics. Public health nursing was centered in Palama Settlement for more than 20 years, after which it came under the Board of Health.

**Outpatient Clinics Provided as a Gap Measure**

Each decade presented a new, unmet need for Palama Settlement. From 1910 to 1923 all of the city’s tuberculosis clinics were held there. In 1925, Palama’s clinics were available for needy neighborhoods throughout Oahu: Beretania, Kalihi, Kauluwela, Punchbowl, Kakaako, Castle Kindergarten, Moliiili, Waikiki, St Mark’s Mission, Iwilei and Palama.

In its Report to the Community in 1929, the Palama Settlement Board, chaired by John R. Galt, reported some remarkable health-related statistics. Among them:

- Palama physicians and nurses cared for 12,000 families (23,744 patients).
- 20 public health nurses cared for and taught mothers and children.
- An average of 50 patients were seen by two volunteer physicians each morning.
- Palama provided specialty clinics in cardiology, dermatology, orthopedics, obstetrics, eye, ear nose and throat, dental care and venereal disease (more than 11,000 outpatient visits for specialty care).
- 12 weekly baby and preschool conferences were held.
- Preventive dental care for 2,500 first graders was provided.


In July of 1947, the Honolulu Advertiser editorial page praised Palama’s role in providing decades of needed medical care to the people of the city and county on the eve of St Francis and Queen’s Hospitals opening their own outpatient clinics:

Palama has, over the years, served well the community in a field of activity never intended as its primary function...Palama is to be congratulated for having contributed so abundantly to a program of better medical care for the indigent sick of our county. Well done, Palama!1

**Palama Settlement Meets Medical Needs in Time of War**

Following the morning of December 7, 1941, Palama Settlement became a center of medical activity for the Honolulu County Medical Society. The society’s Emergency Medical Preparedness Committee trained about 100 people, recruited largely from among the Settlement employees. The first civilian casualties were received at the Settlement on that fateful day. Palama was also thrust into 24-hour-a-day action as headquarters for one of three Air Raid Warden Zones, with the Settlement’s director designated as the leader for the evacuation plans of the Mayor’s Disaster Council.

In this former haven of peace and social activity, the staff now handed out gas masks, conducted fingerprinting, and issued passes. In a continued medical role, they also immunized the neighborhood against typhoid and smallpox. Meanwhile, the Fresh Air Camp and the Palama Gymnasium were leased to the Army.4

**A Legacy of Caring**

During the past 50 years Palama Settlement has grown and changed to meet the needs of the Kalihi-Palama Neighborhood. While many of the tasks taken on in the 20s, 30s, and 40s were subsequently adopted by the city and state organizations or by private or public clinics and hospitals, Palama continues to keep its finger on the pulse of the people. Though many of Palama’s programs are currently in the areas of education and recreation, and socialization, the mauka Fresh Air Camp at Opauela is still there for those who need it. The Strong-Carter Dental Clinic, after 75 years of service, closed its doors in March 1995.

One thing seems certain. As long as people live in Kalihi-Palama, Palama Settlement will be there to meet their needs, whatever they may be: medical, social, recreational, or educational. With the continued generous assistance of the medical community, the Settlement can look forward to another 100 years of service.

**References**

Medical Society in the Early 1900s

Ann B. Catts MD

The Archives Section of the Hawaii Medical Library contains bound volumes of printed transactions of the Hawaii Territorial Medical Society Annual Meetings beginning in 1904, and minutes of the monthly meetings of the Society from December 2, 1905. During the monthly meetings, papers were read, cases presented, specimens shown, and business conducted. The latter often concerned problems or ideas that have continued to reappear and stimulate and/or frustrate members to this day.

In 1956 Dr Harry Arnold, Jr, wrote a comprehensive article in the Hawaii Medical Journal tracing the history of the medical society. There is a gap of 34 years between the granting of the charter for a medical society and its initial meetings, and a revival of the society in 1892 when records show Dr John S. McGrew became president. There is no available record to explain why the organization discontinued for a number of years or why it was revived. However, a letter written to the Society in 1913 by Dr Robert P. Myer does give a very brief personal account. He writes of a reorganizing meeting of "all the Doctors of the Islands" at the Board of Health offices, and of a conversation the prior evening with Dr Armitage. Dr Myers says he told Dr Armitage what he planned to do the next day and that "the minutes will show Dr McGrew elected President... Howard, and he was elected VP and 1, Sccy." The letter does not give a date for this meeting, but it was either 1892 when Dr McGrew is first listed as president, or in 1895 when the officers elected are recorded as Dr McGrew, President; Dr H.W. Howard, Vice President; and Dr R.P. Myers, Secretary.

The monthly meetings were held in a doctor's office, usually that of the president. This was not entirely satisfactory as some members apparently did not attend if the meeting was held in certain doctors' offices. In his President's Address at the 13th Annual Meeting in 1904, Dr W.L. Moore said "... it seems proper to suggest that permanent quarters for the Society in Honolulu with the nucleus of a library, with a reading room and rooms for discussion are necessary." In the December 7, 1907 minutes the Committee on Permanent Location reported "upon two locations and also on the whole question. It was moved and seconded that the house on Alakea Street be rented for $5 per month. At the January 4, 1908 meeting the question was again discussed. It was thought "the extra subscription necessary to pay $5 per month as rental... would be very difficult to collect from the members." It was decided to notify the membership of the intention to have a permanent location with Dr Humphris a committee of one to "lay before them the advantages of such action." Dr Humphris reported back at the March 7, 1908 meeting that "a circular letter was sent out and practically all replies were in favor of permanent location." The report was received and the committee discharged. The Committee on Permanent Housing reported progress in May of 1908. However, whatever progress was being made, the attempt to find permanent housing is not brought up again in the minutes for another six years. The meetings continued to be held in doctor's offices or in the offices of the Board of Health.

Later the University Club became the site of the meetings and was used in 1914 and 1915. However, in the minutes of December 4, 1914, Dr Cooper "considers that the Society should have some regular meeting place and not be dependent upon the generosity of the University Club and states that he believes that sufficient room can be obtained in the Bungalow which should also serve as a nucleus for the establishment of a library and a medical club." A committee was appointed to investigate the possibility of such an arrangement, and letters between the medical society, Governor Lucius E. Pinkham, and the superintendent of Public Works followed. The superintendent, Charles R. Forbes, wrote to Dr Cooper that he found the premises to be filthy and in bad repair. He directed that the "quarters, as selected by you, be cleaned, and I am asking for a figure for the repapering of two rooms and a hall." At the January 8, 1915 monthly meeting, Dr Cooper, as chair of the Housing Committee, reported he had been able to obtain two rooms in the Bungalow and that they were freshly painted and repapered. The February 5, 1915 meeting was held in the quarters of the Society, the Bungalow Building. Unfortunately, this did not prove to be a permanent location. There was a problem of setting up telephone communications for the Bungalow. In the December 3, 1915 meeting, Dr Sinclair brought up the matter of the United Service Medical Society having used the rooms for its meetings without asking permission. At the January 7, 1916 meeting at the University Club, it was learned that the acting superintendent of Public Works had given permission for the United Service Medical Society to meet in the rooms "on the assumption that the Territory had fitted up the rooms for the Medical Society." The House Committee was instructed to search for new quarters and it was suggested that they work in conjunction with the dental society. The following meeting (February 4, 1916) the House Committee reported that the superintendent of Queen's Hospital "had offered a room at the Hospital to the medical and dental societies for their library and meetings." It was agreed to accept the offer. The March 3, 1916 meeting was held in the Medical Society Room at the Queen's Hospital, and the Society continued to meet there at least into the 1920s.

Most of the monthly meetings were attended by 12 to 15 members in the early years of the century with a nucleus of about 10 members who attended most consistently. The difficulty of getting members to attend regularly was noted in several of the Presidents' Addresses at the Annual Meetings. In 1907, Dr A.G. Hodgins said, "It is surely not asking too much of any one of us to set aside just one evening a month for this Society as the greater number present, the more benefit we will receive from the excellent discussions which will ensue." Dr A.N. Sinclair, in 1908, said, "The meetings have been none too well attended... I am assured every member has the welfare of the Society at heart, but some are inclined to be apathetic, especially in regard to attending the monthly meetings. They rely upon others to make a good attendance. There is no greater mistake possible, if the Society is to prosper and succeed in its purposes."
Finally, in 1909 Dr J.R. Judd remarked, “It is a matter of regret that more members from the other islands do not find it possible to meet with us…”

The problem of Neighbor Island membership was addressed in June, 1911 when the following executive committee report is recorded:

The executive committee of the Society [has] considered the question of County Societies and constitution and bylaws for the same and beg to recommend as follows: That the Hawaii Territorial Medical Society be continued along lines similar to present ones but that the constitution thereof be amended or redrafted to allow the organization of county societies throughout the Territory, said county societies to be entitled to representation in the Territorial Medical Society.

Although the changes were made as directed, it was a rather cumbersome arrangement and some years later, with advice from the AMA, the relationship of the county societies was better defined to conform with state societies on the Mainland.

The duties of the Society are mentioned in the minutes of December 1, 1906 in the form of the following motion: “that the annual dues of city members be $5 and those of members outside of Honolulu remain at $2 as heretofore.” One month’s notice has been given regarding this increase; the motion was carried unanimously.

From the earliest available minutes, it is evident that the Society was actively involved in introducing bills and monitoring legislation, usually through the Legislative Committee. In 1907 the Society had introduced a revision of the Laws...Relating to the Practice of Medicine and Surgery. A special meeting of the Society was held for the Legislative Committee to present the proposed bill to the members. A copy of the bill was sent to each member before the special meeting. The bill was introduced in the House by Representative Rawlins. Even then, however, it was not an automatic passage through the legislature, as evidenced by the remarks of A.G. Hodgins in his President’s Address of 1907:

When we endeavor to protect the public by better medical laws or by the prosecution of a quack, we are accused of selfish interests, but in the case of epidemics we have to bear the brunt of the battle in stamping out the disease and then we are humiliated beyond measure when we ask for any medical legislation...Our last Legislature took a different view of things when we presented a bill exactly like that of the state of California to regulate the practice of medicine.

In 1908 President A.N. Sinclair was moved to remark:

…I refer to the endeavors of this Society to perfect the laws regulating the practice of medicine in this Territory. In the past, our efforts in this direction have met with nothing but accusations of mercenary and other personal motives. The membership of the Society has been alluded to as The Medical Trust, and other terms...The legislature meets again this year. Let it be the aim of each one of us to accomplish the passage of the bill presented at the last session of the legislature.

Finally, in 1909 the chair of the Legislative Committee reported on the amendments to the medical law that had passed the Legislature, and he expressed satisfaction with the result.

The Society had an ongoing relationship with the Board of Health which varied in its strength depending on the president of the Board. The Board president was apparently invited to the monthly meetings but only Mssrs Pinkham and Mott-Smith were regular attendees and developed a good dialogue with Society members. It was advantageous for the Board of Health president to attend the meetings since discussions often involved public health issues. Mental health treatment and facilities engendered discussions that could come from today’s newspapers. For example, at the monthly meeting held on February 2, 1907, Dr Emerson presented a “schol-
November 1908 as an invited guest. At that time, he was proposed for membership and after credential review he was elected a member at the December 5, 1908 meeting. During the next meeting, Dr O'Day gave an "exceedingly interesting and much instructive paper on gastric ulcer" and engendered a lively discussion by the members. The difficulty arose in November 1909 and there followed many references to Dr O'Day over the next several years, often with little detail as to why he was expelled from the Society.

However, a complete summary is provided in a four-page letter to the Society by Dr A.N. Sinclair on April 2, 1920 after he had met with the secretary of the AMA about the case. The following excerpts are from that letter:

...in November 1909, Dr O'Day was responsible for a newspaper article in which it was charged that, in effect, property owners, particularly Hawaiians, were frequently railroaded to Molokai unjustifiably, as lepers, by the medical men of Hawaii, acting at the behest of the plantation interests, who thereby secured the property for their own use.

The matter was brought before the medical society in the form of charges in early 1910, and Dr O'Day was asked to appear before the Executive Committee to respond. He refused to do so. Dr O'Day was expelled from the Society on February 5, 1910 after refusing repeated opportunities to meet with the members.

Dr O'Day soon after went to Portland, Oregon still under the ban of expulsion from the Medical Society of Hawaii, and that he was there made a member of the Portland Society, in contravention of the laws regulating membership in such Societies, as laid down by the American Medical Association—and this although the Secretary of the AMA had been notified of the expulsion...

Dr O'Day returned to the islands in 1917 and applied for membership in the Society by transfer from the Portland Society. The transfer was refused on the grounds that his membership in the Portland Society was illegal. The Hawaii Medical Society maintained that Dr O'Day "...could only regain his membership...in one of two ways. First: By admitting the truth of the charges made against him in 1910, making a public retraction thereof...Second: By requesting a reopening of his case, and fighting the charges to their ultimate conclusion." Another problem—the minutes of the meeting when Dr O'Day was expelled were lost and the AMA advised Dr Sinclair to have an official amendment to the minutes passed in which the expulsion is clearly stated. This was done and sent to the Judicial Council of the AMA. The members of the Society said beyond the specific charges against Dr O'Day, the case was vital to the AMA and the constituent societies because of the action of the Portland Society in accepting Dr O'Day for membership when he had been expelled from the Hawaii Medical Society. A report back to the Medical Society regarding the decision of the Judicial Council has not been located. At the May 4, 1917 meeting a very heated discussion had occurred, as noted in the minutes, over the fact that Queen's Hospital had granted Dr O'Day privileges. The discussion included comments regarding the role of the hospital staff in approving members (no one from the hospital staff had been present at the Trustees' meeting). Some believed a physician needed to be a member of the medical society, as well as being licensed, before being considered for staff privileges. Others warned against insulting the Trustees of the hospital and also against making the complaint too personal.

A motion was made by Dr Judd that a suitable resolution be made expressing the sentiment of the Society on the matter and at the same time the Trustees be notified that a committee from the Society would be pleased to meet the Trustees at their pleasure.

A committee was then appointed. There is no immediate follow-up to this action found in the minutes.

The meetings were not all business; papers were read by members who were often assigned to do so at the previous meeting, clinical reports were given, including showing specimens from cases. There was an emphasis on communicable diseases, especially tuberculosis and leprosy, although surgical topics and other medical problems were also well-represented. At the meeting of August 3, 1907 Dr Brinkerhoff gave a "most interesting talk on 'The Statistics of Leprosy in the Hawaiian Islands.'" He stated that the records "dated back to 1866, since when there have been 5,385 cases segregated and sent to the settlement. The average number of cases apprehended seems to be about 100 a year, although it was as low as 27 in one year. The disease appears in the child and young adult, and was generally of about four years duration, before they were sent to Molokai..." One of the cases presented at the May 1, 1909 meeting was by Dr Moore who reported the case of a child "that had a swelling about McBurney's point." At surgery "about a pint of pus" was evacuated which was thought to come from the appendix; "Later noted curvature of spine and symptoms of Pot's disease." The social standards of the time are reflected in the report of a case by Dr Judd at the July 7, 1906 meeting: "He (Dr Judd) also showed an abdominal tumor which had been removed from a woman after a diagnosis of fibroid tumor, and hysterectomy performed." The following sentence was then crossed out: "The woman's husband had been dead 12 years, but the uterus tumor contained a foetus." The revised minutes continue: "The fibroid uterus contained a foetus of about the 10th week—the history of the case pointed to its having been there 12 years."

Physicians visitors from the Mainland were always asked to give a few remarks and occasionally were the main speakers. New techniques and equipment were presented when possible. Dr Lehman of San Francisco made some "interesting remarks on the therapeutic value of the x-rays" at the September 1, 1906 meeting. The minutes then describe in some length the use of x-rays for leukemia, skin diseases, and internal organs. During the meeting of July 11, 1908:

Dr Humphris read a paper on 'Blood Pressure' and gave demonstrations of the Riva-Rocci Sphygmomanometer [sphygmomanometer]. The value of estimating blood pressure in regard to diagnosis and prognosis in syphilis of the brain, eclampsia, cerebral haemorrhage, arteriosclerosis, etc., was brought out. As altered blood pressure may assist(?) if not be a cause of insanity, the importance of its estimation is apparent. By the use of the instrument the blood pressure may be regulated in a scientific way.

They then proceeded to demonstrate on some of the members with the following results: "Dr C.T. Rodgers showed a good pressure; Dr Hodgins normal; Dr Augur who showed the influence of a vegetarian diet; and Dr Straub who showed an excess." Whenever the members traveled they would report to the membership when they returned to the islands. The resulting talks were both medically oriented and also more personal in nature. In 1907 Dr Cofer journeyed to Central America and gave a relatively comprehensive report on the control of yellow fever, plague, and other quarantinable diseases. He reminded the Hawaii physicians that the islands had to stay alert for the possible introduction of these diseases by ships from those areas. "The quarantine and disinfection of ships from there may not be necessary for 30 times; but the thirty-first ship might introduce infection." He reported an interesting method of clearing a room of plague-infected fleas: "The best way to disinfect a plague room, is to turn a lot of clean guinea pigs into the room. The fleas will lodge on the guinea pigs, and the pigs are then chloro-
formed and burned.” The annual meeting transactions included some papers presented during the monthly meetings of that year and deemed by the members to be significant enough to warrant publishing for all the members.

The social standards of the time can be appreciated by the Resolutions of Condolence that were drawn up by specially appointed committees at the time of deaths of members or someone in their families. It can also be seen in the language used by Dr. Humphris in his letter of resignation as President of the Society:

It is with extreme regret that I beg to tender my resignation as President of the Society. Nothing but my absence from the Territory for a very extended period...would cause me to resign from the office to which, through the courtesy of the Society, I was so recently elected. My relations with the Society have ever been of so cordial a nature and my sense of gratification at the honor of the position I am now resigning so extreme that nothing but singleminded sorrow accompanies this resignation...

The overall impression of the members of the Hawaii Territorial Medical Society in the early years of this century is that of sincere, conscientious, and dedicated medical professionals who were well-educated and up-to-date. They enjoyed medical practice and a strong obligation to protect the lives of the citizens of the Territory. That they were not always as successful as they would have wished when dealing with the legislature and newspapers should reassure our contemporary members and officers that the present difficulties have been shared in principle, if not in substance, with those who have preceded them. It also should give a glimpse into the future for the next century: the subject of the problems may change, but the source of conflicts and frustrations will probably continue to be very similar.

The physicians practicing in the Territory in the early 1900s believed they were unique in some ways as expressed by Dr. W.L. Moore in his President’s Address of 1904:

Hawaii, situated in the midst of the great North Pacific Ocean, is not only the crossroads of the Pacific, but it constitutes the extreme frontier of Western civilization, and for this reason great responsibilities devolve upon us scarcely equalled, and not excelled, in any other locality.

The present members of the Hawaii Medical Association can be proud of the work of those early physicians and of the medical society they nurtured and supported.

References
Throughout history, doctors and patients have had a very special relationship of honesty, trust and caring...

It's nice to know some things never change.

St. Francis Medical Center
2230 Liliha Street • Honolulu, HI

St. Francis Medical Center has been contributing to quality health care for the people of Hawaii since 1927. Since that time, we have grown from a 50-bed hospital to a 308-bed premier medical center.

St. Francis continues to meet the ever-changing healthcare needs of Hawaii with two state-of-the-art medical centers on Oahu, renal services on four neighbor islands, Hawaii's oldest and largest Hospice program and an array of community services, including The Diabetes and Liver Centers at St. Francis, St. Francis Home Care, the Women's Addiction Treatment Center of Hawaii, Health Services for Senior Citizens and the Ko'olau Health Center.

With a new healthcare era underway, St. Francis will continue to build on the partnerships with physicians and other health care providers who have contributed to more than six decades of medical success.
The Epidemic that Never Was: Yellow Fever in Hawaii

Alfred D. Morris MD

The Kingdom of Hawaii suffered a disastrous series of epidemics starting from the first contact with Captain Cook’s crew and continuing to the present. Despite the huge volume of shipping to and through Hawaii, one plague failed to appear. Yellow Jack (yellow fever) engendered more fear in sailors of the 19th century than any other disease. By 1910 the details of transmission were well-known and Hawaii met all the requirements for an epidemic. On October 30, 1910, the first case of shipboard yellow fever arrived at Honolulu but quarantine averted the threat. On October 28, 1911, a Hawaiian man, employed as a quarantine guard, was reported to have yellow fever and efforts were initiated to control a possible epidemic. This was the only occurrence of yellow fever in Hawaii.

In 1911 Honolulu was a different place. The last decade of the 1800s had seen the overthrow of the monarchy, establishment of the Republic of Hawaii, and annexation of the Hawaiian Islands by the United States of America. Most everyone including the native Hawaiian population expected the Hawaiian race to disappear. At the same time the great powers of Europe and the U.S. were in an imperialistic mode spreading Western civilization, good and bad, around the globe. The changes in Hawaii were not sudden, of course, but had proceeded steadily for a century and a quarter. Despite the very large influence of the Europeans and Americans in the local political and business affairs of Hawaii, it was the push for control in the Pacific basin that made Hawaii a strategic prize important enough that the U.S. was willing to annex the territory of Hawaii. The U.S. had coveted and obtained the use of Pearl Harbor as a naval base a number of years before, but the Spanish-American war with its reach into the Philippines was the catalyst that finally brought the Hawaiian Islands into the American fold over considerable objection at home.

The Hawaii that Robert Louis Stevenson visited in 1893 (and complained about as being too modern) underwent a flood of changes before Jack London made his visit in 1915. Electricity, street cars, telephones, the transpacific cable, automobiles, the first airplane, production of movies, and dramatic economic activity following annexation highlighted the technological transformation of the islands. Thrum’s Annual lists 1910 as a year of exceptional prosperity with a cash balance instead of the usual debt. Perhaps the appearance of Halley’s Comet in that year had an influence, but 1911 was noted by Thrum’s Annual as another year of marked prosperity notwithstanding conditions threatening the public health.

From a public health standpoint, Honolulu for years had been a disaster of major proportions. Eminent medical historian O.A. Bushnell has said it well:

Honolulu in 1820 was an ugly, barren, hot, and feculent town, a straggle of grass huts and a very few stone or adobe houses. Its residents sweltered amid clouds of dust or skidded along in mud often ankle-deep...Foreigners might sweat and complain...but were] too impatient for an early escape from this dismal port to care about beauty, or comfort, or civic pride. Natives, knowing nothing about towns in other parts of the world, thought that this was how all seaports must be...From the beginning Honolulu’s residents seemed determined to earn for their town the name by which eventually it was known to sailors throughout the seven seas: The Cesspit of the Pacific.

The kingdom of Hawaii suffered a disastrous series of epidemics beginning with the first contact with Captain Cook’s crew and continuing to the present. The reduction of the Native Hawaiian population was so severe and arguably so psychologically devastating that all hope was lost for the future of the race. Concomitantly, the vacuum was filled by all sorts of mariners, professional and indentured labor, as well as by religious and entrepreneurial opportunists. These travelers brought diseases to which the natives had had no exposure and thus kanaka maoli suffered dramatically severe consequences. The epidemics that rolled over the Sandwich Islands had indeed produced great concern for public health, producing such draconian measures as forced isolation of lepers on Molokai and the setting of sanitary fires to control bubonic plague. Those fires, burning out of control, destroyed 35 acres of Chinatown at an estimated cost of over $3 million. Quarantine and strict control of port access were the usual but mostly futile attempts to solve health problems.

Honolulu pilots were authorized to inquire about the health of passengers and crews, especially as to smallpox, as early as 1836. Laws passed in 1839 provided for vital statistics and quarantine regulations. The next year, reporting of certain diseases was required within 24 hours. The first Hawaii Board of Health (1850) was appointed just two years after the beginning of the public health movement in London. The first sanitary commission was appointed in 1862 followed by legislation for isolation of lepers in 1885. Although animosity raged between ship’s crews and the missionary-influenced government over the availability of female companionship, it was not until 1892 that the Board of Health was placed in charge of prostitution.

The Holocaust of 1900, the Chinatown fire, brought concern for public safety to a new level. Victoria Hospital was established in Kakaako for the destitute whose houses had burned in the fire. In 1901 the Tuberculosis Home opened (the next year it was renamed Honolulu Home for Incurables and later, Leahi Hospital). After annexation (1898) the U.S. Public Health and Marine Hospital Service was in charge of inspection, diagnosis and quarantine of vessels arriving in Hawaiian waters. The Territorial Board of Health was responsible for measures ashore, answering to the legislature and the Territorial governor who in turn answered to the U.S. Department of the Interior. Correspondence and reports of the chief sanitary inspector during the year 1911 reveal detailed and lengthy studies of the rat control program initiated some 10 years earlier because of an epidemic of plague that affected most of the islands. In fact Kalili Camp had been established for detention purposes...
during the plague epidemic of 1899 to 1900.

But the biggest contribution to a healthy Honolulu was a safe water supply, a sewage system and garbage disposal, all of which were completed in the first decade of the 1900s. The census of pure Hawaiians, however, dropped from 29,799 in 1900 to 26,011 in 1910 but also showed the beginning of an upsurge in part-Hawaiians. The Board of Health and physicians of Honolulu made little progress in educating the populace in proper health practices until some of Honolulu’s citizens joined in to convince the governor to appoint a Sanitary Commission, marking the acceptance by the Territorial government of responsibility for the public health. The sanitary campaign of 1911 included: enforcement of a law against bovine tuberculosis, introduction by the Dairymen’s Association of the electrical treatment of milk (Goucher system, first of its kind west of the Mississippi), tracing an outbreak of cholera to a taro patch in Manoa, and evaluation of a few cases of smallpox in Puerto Ricans. A mass meeting of citizens declared themselves for a clean city and supported a bill for a Board of Health emergency fund. Governor Frear appointed the Sanitary Commission with George R. Carter, former governor, as its head to investigate and advise on the health conditions of the city. Sunday, July 24 was a clean-up day. All public offices and places of business closed to permit everyone’s sharing in the work for the common good. The Sanitary Commission’s extensive report of 1912 marked the beginning of modern public health in Hawaii.

Despite the huge volume of shipping to and through Hawaii and the devastation by diseases from the outside world, one plague had failed to appear. Yellow Jack! Perhaps no pestilence engendered more fear in the sailors of the 19th century than the dreaded yellow fever, present in certain notorious tropical ports of the New World. Other diseases produced more deaths and more sudden epidemics on shipboard but some aspects of Yellow Jack were particularly awesome. First it was unpredictable—no one knew when or if it would attack. Direct contact with infected persons did not seem to be a prerequisite. Once it appeared on shipboard it struck sporadically and indiscriminately, occurring in individuals at random over periods of months at sea. The disease was highly lethal, with no procedures known that could control it.

Ports in the Caribbean, South America, and Central America were especially dangerous but, strangely, not so sometimes. Furthermore, American cities were not immune. In 1793 the city of Philadelphia, the most modern city in the U.S., was virtually wiped out. The epidemic of 1878 killed 5,000 people in Memphis, Tennessee; and 30,000 were driven out of the stricken city. That same year’s epidemic was estimated to have cost the country $100 million and New Orleans alone claimed a loss of $10 million. Despite the lack of evidence of effectiveness, the common practice was to burn any ship’s cargo where yellow fever was on board; burn bedding, clothing and anything contaminated with the black vomit or blood of the victims.

In contrast to the local perception that only Hawaiians were struck down by epidemic diseases, it was known that Yellow Jack cared not a whit if its prey were white, black, brown, or yellow. The victim’s only comfort was knowing that if he or she did survive he or she was immune for life. Thus the population of Hawaii, and anyone coming from the temperate zones of Europe, America, and Asia (which supplied the overwhelming mass of immigrants to Hawaii) were mostly susceptible to yellow fever.

As with all scientific progress, unraveling the mysteries of yellow fever was the work of many, building on the achievements of others. Although we think of Walter Reed of the U.S. Army as the one who conquered yellow fever, making possible the U.S. success in constructing the Panama Canal whereas the French had failed, it was Dr. Carlos Finley, a Cuban physician in Havana, who handed to the American commission, headed by Dr. Reed, a porcelain cup containing the eggs of Culex mosquitoes. Twenty years of work, unsubstantiated and mostly ignored, he bestowed on Reed on August 1, 1900. Finley, of course, was indebted to others who were pioneers in the fields of malarial and filarial parasites. The medical politics of the day was no less vicious than that surrounding the pursuit of the double helix and the discovery of the AIDS virus of more recent times. In spite of the congenial start, antagonism soon erupted over who should have the glory of discovery. To be fair, and perhaps romantic, we might call Finley the genius whose insight (guess?) came up with the correct answer, and he then passed on to Reed and Carrol the responsibility of supplying the proof and practical application of the new knowledge in control of yellow fever.

By 1910 the details of transmission of yellow fever, incubation in Aedes aegypti mosquitoes, and the potential for its establishment in a given locale were well-known. The modern view suggests that the organism was a native of West Africa and made its way to the New World after the advent of the slave trade. Nevertheless there was a delay in the appearance of yellow fever until the proper mosquito had been established in the Caribbean, Brazil, and Central America. The mosquito does not survive as a permanent resident unless the temperature remains above 72°F. It is domesticated in that it breeds only in artificial or protected containers such as water casks, cisterns, or perhaps pools trapped in leaves of plants. Hawaii met all the requirements including the presence of the Aedes aegypti mosquito, and it was prime territory for this Yellow Jack. Commercial trade routes brought many ships, U.S. and foreign, to Hawaii after having called in South America, the west coast of Central America and Mexico. The Panama Canal, opened August 15, 1915, exposed Hawaii to direct commerce from the Caribbean.

Dr. J.S.B. Pratt, member of the Territorial Board of Health, undertook a six month working vacation in 1910 to study yellow fever and mosquito elimination methods in South America, Panama, and Mexico. That same year, considerable effort and attention was documented by official telegrams requesting clarification of the dangers and procedures to be followed with regard to yellow fever when ships arrived from the west coast of Central and South America. The replies from Washington were reassuring, noting that the ports of Santa Clara and Manzanilla had instituted strict fumigation measures and no cases had been detected in the last year. In fact, officials in Honolulu were quite worried that quarantine procedures were about to be relaxed. Indeed, on October 30, 1910 the first case of shipboard yellow fever arrived at Honolulu but quarantine averted the threat to the city (Report of the Governor of Hawaii to the Secretary of the Interior, 1911).

On October 21, 1911 the Hong Kong Maru bound for Yokohama carrying cargo from South America by way of Manzanilla, Mexico, put in for coal and supplies at Honolulu with a sickness on board. The sick passage in steerage had boarded the vessel at Callao, Peru. The Japanese surgeon on board knew about the sick man but did not report it. The federal quarantine officer came upon the sick man during his inspection and called for help from more experienced doctors at the Quarantine Station. A diagnosis of yellow fever on shipboard was made, and oddly, it was aboard the same vessel that had brought the first case the year before. Quarantine guards were placed on board while the ship was thoroughly fumigated. Barges of coal were towed out to the ship and on return were also fumigated. The headline of the newspaper article that day asked: “NOW WILL CITIZENS MOVE? Beware of the Third Time Says Dr. Ramus—City Must Be Mosquito Proofed” (The Pacific Commercial Advertiser, October 21, 1911).

The next event was more startling. Newspaper articles and the
Chief Sanitary Inspector’s Report tell the story: A Hawaiian man was reported October 28, 1911 to have yellow fever. The diagnosis was made by Drs. Ramus, Marshall, Currie, Hobdy, Pratt and Major Kennesley, the only doctors in the islands known to have had experience with yellow fever. The infected man was one of the quarantine guards placed on board during the fumigation of the Hong Kong Maru. He had become ill and left the ship without notification to return to his home at Kalihi Camp which by that time was no longer in use as a detention station. What remained of the camp were 40 shacks in three irregular rows in an area of 9 acres. This area and the inhabitants were placed in quarantine October 28. The patient was thought to have been sick for three days, the period of illness when the biting mosquito can acquire the virus. The incubation period in mosquitoes is approximately 7 to 12 days before it becomes infective for others. Therefore, it was calculated that at least a three or four day window of safety existed. In a circle 100 yards outside the infected camp, all the trees and shrubs were cut (starting outside and working inward) in order to remove any shade for the *Siegomia calopus* (*Aedes aegypti*), a day mosquito which has a short flight distance of 100 to 200 yards. Next, everyone’s clothing was inspected in the sunlight and shaken to expel mosquitoes. Clothing, boxes, and containers were brushed and dusted. After this each person with his or her effects was passed through to a quarantine station to stay until he or she could find new living quarters. He or she could remain at the station if indigent. The station was established and the quarantine area was staffed by the U.S. Army as requested by the civilian committee, which was established to deal with the public during this crisis. It was believed that the military was the only organization capable of adequately performing this task. After depopulation all the trees were cut except for a few fruit trees which were completely trimmed of foliage, shrubbery, and weeds, working from outside to the center. Lean-tos and shacks were torn down, cremated to the beach and burned. Fumigation of all houses was done with sulfur dioxide. Three hundred fifty people were treated, 38 houses were fumigated (three times at least 8 hours apart) and, for an area of one mile outside, a vigorous mosquito extermination program was instituted (Report of the President of the Board of Health of the Territory of Hawaii for the 12 months ended June 30, 1912).

The patient recovered quickly and no other cases developed. The city did not recover quite so easily. A very moving editorial had appeared in *The Pacific Commercial Advertiser* the day the Hong Kong Maru arrived and the passenger with yellow fever was found. The editor praised the personnel of the United States Marine Hospital Service for protesting and resisting the relaxation of quarantine procedures for ships leaving Latin American ports. In the words of the editorial, “The enemy is at our door, more merciless than an army before a besieged city...It is a well-known fact that it sometimes takes a lot to arouse public opinion and the best and only way is to set before the people, who will have to take action some time—either cleaning up the mosquito or burying their dead—the seriousness of the situation...” It was pointed out in the accompanying articles that it was just plain good luck that the ship did not enter the harbor with the disease undetected, but it was bad luck that a southerly breeze was blowing onshore from the ship’s anchorage.

A week later when the diagnosis of yellow fever was made in the local man, a mass meeting of the citizens led to appointment of a commission for eradication of the mosquitoes that transmit the disease. Military cooperation was promised. A special session of the legislature was called and the whole community plunged into the task. Well, almost everyone. Another article in the paper dated November 1, says that every white man of prominence in the city was present at the citizens’ meeting but not one citizen of Hawaiian or part-Hawaiian blood was to be found. Dr. Currie of the U.S. Marine Hospital Service, who played a leading role in the New Orleans fight for self-preservation, was put in charge and something akin to martial law was established by the Board of Health. A list of 22 statements outlined what every citizen of Honolulu was to do to eliminate mosquitoes and their breeding places. It was thought that the only valuable plants that had to be destroyed were banana trees. Some people questioned the actions but, should the citizen not comply, then the authorities with the help of the National Guard would do the job for them. Deputy Sheriff Rose apparently resisted. He was given the choice of cutting his banana trees himself, using his firearm against the soldiers, or stepping aside and having the trees cut for him. In the latter cases he would end up in jail with the trees cut in any case and enduring the embarrassment of having broken the law he was sworn to uphold. The same treatment was to be met out to Harry T. Mills of Kaimuki or any others who might follow their example. (Various articles in *The Pacific Commercial Advertiser*, October 21 to November 5, 1911.)

The annual report of the Board of Health for the year ending June 30, 1912, listed a grand total of 508,877 inspections of gutters, cesspools, privies, tin cans, pools, holes in trees, rice plantations, etc. Larvae were found in 20,529 of these. Legal notices served, 625; nuisances abated, 532; ditches dug, 50 miles. The report detailed the difficulties encountered when occasionally a citizen refused. The Attorney General’s department was so crowded that prompt legal attention to these matters was not possible. The details of making a case were so subject to error that only a few came before the court, but in those cases a favorable decision was easily won. When citizens were served with a legal notice, they almost invariably corrected the matter complained of, but it appeared to be quite impossible to secure a uniform, automatic compliance with the law.

When the services of the military were no longer available, it became necessary to establish a permanent force of civilian inspectors. This was accomplished by February 1912. Eventually a force of 20 inspectors and 20 laborers was found to be sufficient for the entire city. The results were thought to be quite satisfactory. The day mosquito was reduced to negligible numbers and had disappeared completely in most parts of the city.

Some individuals sued for compensation for the loss of their property, mainly banana trees cut down.

From a distance in time of 90 years, it may be difficult to appreciate fully the fears of the Hawaiian community with regard to yellow fever. There were many *haiku* native Hawaiians and little *guy* provincials who perceived the threat as something big business, big government, and the haole were concerned with. But the governments of the Pacific Rim and the subcontinent of India at the turn of the century were not in this state of mind. They were intimately acquainted with the scourge of malaria, filariasis, cholera, plague and were nearly hysterical that yellow fever, never seen in their regions, would have a direct and free passage by way of the Panama Canal to the Pacific and Indian Oceans. The Rockefeller Foundation, organized in 1913 for “the well-being of mankind throughout the world,” created the International Health Commission of the Foundation with Wickliffe Rose as its director. That winter Mr. Rose went abroad to discuss with health officials a possible program for the newly created commission. He found great concern throughout the East regarding yellow fever. Dr. S.P. James of the Indian Medical Service called for a permanent quarantine force in Panama, Hong Kong, or Singapore to be maintained at the expense of the English colonies in the East. He recommended a systematic attack on the mosquitoes. Sanitarians recognized that once yellow fever was introduced into the Orient, with its dense population of nonimmunes, incalculable damage would accrue. The
Foundation sought and obtained the service of Major General William Crawford Gorgas, Surgeon General of the United States Army. He had effected the eradication of yellow fever from Havana and the Panama Canal Zone, and now was more than eager to extend his efforts as director of the Yellow Fever Commission of the Foundation.

To date no other occurrence of yellow fever in the Pacific beyond the coasts of Latin America has been found. By definition there was an epidemic of yellow fever in Hawaii in 1911. By skill, luck, and public concern, that epidemic consisted of only one case. Hawaii has much to be proud of in the management of the epidemic that never was.

References

Acknowledgement
Dr Robert Worth, former Chief of Communicable Disease Division, Hawaii Department of Health called my attention to the report of yellow fever in Hawaii.

Historical Notes
Physicians in Hawaii are a valuable resource for historians. Individual accounts of past activities or developments in medicine are of great value because only a small amount of history is preserved in published accounts or materials. We welcome such materials and will work with individuals or families to determine what materials would be appropriate for the Archives.

The Auxiliary of HMA created a rich biographical resource of past physicians called In Memoriam—Doctors of Hawaii which tried to have information on every physician who practiced in Hawaii. The project ended more than 10 years ago, but this historical resource is still heavily used. To make this unique resource more accessible, we are putting the data base on the Internet on our Home Page.

The Hawaii Medical Library might be more known for the latest journals and resources for clinical medicine, but we are also working to preserve our medical history. We welcome donations to the collection including photographs relating to medicine, historical medical instruments, rare books, personal papers or memoirs on history of medicine in Hawaii, or you might like to volunteer to help work on these collections. Call the Library Archives section if you have any questions about the history of medicine.
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The first contract laborers arrived from China in 1852, but little attention was paid to their medical needs. In 1886 a physician from Japan arrived to minister to the health and medical needs of the Japanese immigrants. After 1900 most physicians caring for immigrant plantation workers were Western trained from the Mainland. Many advances in medicine were started on plantations such as the second x-ray machine in Hawaii. The 1950s brought rapid changes in plantation medicine with the closing of plantation facilities on Oahu. The author describes her personal experience as a patient in the plantation medical system.

In high-rise-dominated, tourist-oriented Hawaii, it is sometimes hard to remember that only a little more than a generation ago these isles were dotted with more than 27 self-contained plantations with their own village life complete with housing, schools, stores, community centers, social workers, and medical facilities. The sugar plantations with related industry such as shipping dominated the economic life of the islands for nearly a hundred years. And from the blowing of the start-work whistle at 7 am to curfew at 9 pm, a person’s personal life was dominated by the plantation.

Sugarcane grew wild in Hawaii before European contact and the existence of isolated stone-grinding mills is evidence of the manufacture of sugar by Chinese immigrants as early as 1800. The first sugar plantation organized after Western contact was on Kauai in the 1830s. It did not make a profit. Operation as a profitable industry had to wait until after the passage of the Reciprocity Treaty with the United States in 1876. The disastrously declining native population made the importation of foreign labor of utmost importance to the planters and forced the monarchy government to establish policies and practices regarding the treatment of immigrant laborers including providing for their health and medical care.

The first contract laborers from China arrived in 1852 and were distributed among the planters. They were called coolies, and if any attention were paid to their medical needs, documentation of it could not be found. An indication of their value to the planters can be ascertained by reading the shipping and passenger lists of interisland ships of that time. Haole passengers were listed first, by name, followed by:

- 5 natives
- 3 cows
- 4 Chinamen
- 6 head of hogs

In the early days of immigrant labor, the health and well-being of the imported contract laborers was a matter for the Bureau of Immigration for the Kingdom and later the Territory of Hawaii. An early immigrant ship with arriving Japanese landed in 1868; these people, however, were not laborers and most of them either continued to California or returned to Japan. A pioneer band of 180 Portuguese laborers arrived in 1878. The first large shiploads of Japanese contract laborers arrived in 1885.

In 1886 a physician from Japan arrived to minister to the health and medical needs of the Japanese immigrants. Japanese physicians were supplied before the turn of the century. After 1900 they were largely replaced with Western-trained, English-speaking physicians from the Mainland and a few from Europe. According to the agreement with the Japanese government, the Bureau was required to inspect the plantations every six months as to the quality of housing, food, clothing, and medical attention. Individual complaints could be made at the time of inspection. Early on, one plantation tried to deduct medical costs, but the Bureau of Immigration forbade it ruling that full wages must be paid and sick leave must be granted. Testimony indicates this latter policy was often ignored.

The earliest direct quote about plantation medicine came from a Chinese laborer interviewed in 1882:

...In their little two room house, which was all they were permitted in the early days, 12 children were born without a doctor in attendance. The husband always helped at the births, and three days later went to the plantation doctor to report the birth and get a certificate. It was considered a great shame to have a doctor at the time of birth. Also the plantation doctor lived far away and never came to people’s homes...Conditions in general were much better for him in Hawaii than they would ever have been in China. He had never had regrets about moving here—most bosses were fair, and he doesn’t think there is any place in the world like Hawaii. It gave the children a better chance than they would have had in China.

Turn-of-the-century plantation physicians, quoted 50 years later, had vivid memories of the difficulties of rural practice to match any from the horse-and-buggy period. Dr Fred Irwin who came to Hawaii in 1903 described his experience in the early 1950s:

...The hospital situation during the first three years of my practice on Hawaii could very easily be described because there were no hospitals. The three plantations for which I was physician and surgeon had no hospital, the same being true of the three plantations on either side of my district. The same was true of every other plantation and political district on the island of Hawaii up to as far as I can remember, about 1910 when a hospital was built at Pepeekeo for three plantations, Honoulu, Pepeekeo and Onomea...

Dr L.L. Sexton reported from Hilo:

In 1909, fresh from an internship at Queen’s Hospital, and before I learned to speak or drink Scotch [most plantation managers on the Hamakua coast were Scotland born] this pioneering medicine was both an adventure and a challenge...My total lack of experience outside a hospital caused me no end of concern. Transportation was by horse and buggy over muddy, frequently impassable roads. The saddlebag filled with my total armamentarium was always ready in the buggy so that I could mount a mule for a trip into the foothills to see what? a delivery, ruptured appendix, strangulated hernia, extraction of an aching tooth. Operation a must. How? Easy. A five
Dingar of Puunene, Maui, received one as a gift from Mrs Martha Cooke Alexander, the widow of Samuel Alexander (1836-1904) who, along with Henry P. Baldwin (1842-1911), established the enduring plantation and business firm of Alexander & Baldwin. It wasn’t until two years later that Palama Settlement in Honolulu started to use x-rays, and in 1911 the practice was introduced at Queen’s Hospital.

Much of the background information for this essay was gleaned from the pages of the periodical publication *Plantation Health*, published by HSPA from July 1936 to April 1964. The first issue reported 29 doctors in plantation work, 18 plantation hospitals, seven smaller receiving hospitals, and three county or territorial facilities serving plantations.

The range of topics covered in *Plantation Health* is indeed vast, mentioning nearly every aspect of daily life for sugar workers from prenatal care to death. This publication was edited by Dr Nils Larsen and later by Dr Howard Liljestrand, with contributing editors from Maui, Kauai, Molokai, and the Big Island. In addition to technical articles on medical and surgery procedure, topics covered included rats, fleas, alcoholism, family planning, dental health, national meetings and conferences, travel, arsenic poisoning, and many others. A 1954 article was entitled, “Why Women become nervous.”

A 1940 article gives impressive statistics to illustrate the situation of the overworked plantation doctors. In 1951 one reported seeing 700 patients a month or 28 per working day. This, however, brought a rebuttal from a doctor at Olaa (Puna Sugar) who explained why he did not think having an assistant would improve medical services on his plantation. Although 90 patients a day were reported, he says: “…only about 40 are seen by the doctor, most are follow-up visits for injections or medications. Of the remaining 40 seen, about 30 will have colds or minor complaints…plus having a very efficient staff.” He finished by observing that if he needed anything in the way of assistance, it was a Filipino interpreter.

A 1951 article on alcoholism observes that it does not seem to be a problem among the workers, but one writer (unidentified) cites: “[...the] sad tragedy of 14 doctors gone completely to pieces on alcohol...some were plantation doctors.” My own observation would be that problems with alcohol were more of a concern with the managers than with the physicians or workers.

At Kekaha Drs Bert Wade and Marvin Brennecke took turns with the weekend duty so there was always one on-call. I remember attending a manager’s cocktail party where both were present and it explained, “Dr Wade can’t have anything [to drink] because he has the duty this weekend.”

Many plantation doctors had second houses on other parts of the islands for brief getaway relief. Dr Brennecke had a beach house at Poipu, halfway round the island, where he entertained frequently including annual Hawaiian Association of Plantation Physicians (HAPP) conferences. Although the house blew away in a hurricane, the area is still referred to as Brennecke Beach. As with all managers, doctors took a three or four month leave every three years when an intern or visiting doctor filled in. If a specialist was required and not available on a visiting basis, the patient was sent directly to Queen’s by plane with a plantation nurse in attendance, if needed.

No doubt daily life for plantation physicians was at times lonely and isolated, especially on the Neighbor Islands. Dr Brennecke, on Kauai, had an early type of recording machine he kept on the front passenger seat of his car. He subscribed to a service that mailed him periodic tapes on medical subjects he played while driving, explaining, “It’s the only way I can keep up.”

In addition to plantation duties, doctors were allowed private practice using the same facilities as appropriate and needed. Hospi-
tals were available to anyone in the vicinity. Some doctors saw private patients during certain hours or in the afternoon. A few paid for this privilege, but for most it was considered part of their retainers or salary as long as they did not neglect plantation duties. In the case of Kekaha, where the very existence of the town was built around the plantation, there were only a handful of people who lived there who were not dependent on or employed by the company: a branch bank manager from Waimea who rented a plantation house, a couple of post office workers (no mail delivery), a few public schoolteachers, and the nuns who operated an elementary school that was larger than the public school. All of them used plantation medical facilities and physicians. This was a typical company town situation.

An acquaintance who had no connection with the plantation remembers giving birth in a larger plantation hospital on Oahu with the company physician in attendance. She had a private room and thinks the doctor may have given his private patients preferred treatment.

In the vast majority of cases, plantation physicians were well-respected and even beloved members of these small autonomous communities. Some were virtual folk heros, as was the case with most country doctors of the day. The premature death of Dr W.D. Balfour (1898-1947) on Maui brought an outpouring of grief from every segment of the community. The next issue of Plantation Health was dedicated to his memory with lengthy memorial letters from citizens indicating his status as both a physician and community leader.

In assessing plantation health and medical care of the 1920s and 1930s, it would be hard to exaggerate the influence and leadership of Dr Niels P. Larsen (1890-1964) who arrived in the islands in 1922. In 1930 he became official medical advisor to the HSPA, a position he held for more than three decades. On his death the next issue of Plantation Health was dedicated to his memory and achievements. Significantly that was to be the last issue. Sometime later a writer observed that the idealism and leadership seemed to have died with him.

Even before he was appointed to his official position, Dr Larsen was concerned with maternal health and child care among families of immigrant laborers on Oahu plantations. He established the well-baby clinic in Ewa, known as the Queen’s-Ewa project. It opened health care centers in four of the plantation villages, called camps. Mothers were encouraged to bring their babies in daily where they were fed a balanced diet and the mothers were given instruction in care and feeding supervised by Dr Larsen and Martha Jones from Queen’s. Families bore half the cost of the food which was supplied by the plantation. Dr Larsen made dental health a particular interest as the cavity rate among island school children was about two and a half times that of the Mainland. It was not unusual to see elementary school children with an entire set of teeth rotted down to black stumps. With emphasis on diet, mainly through the clinics, he almost single-handedly turned this picture around in one generation.

With improved roads and communication, in 1940 this project was shifted to Aiea where it would be available to a larger plantation population. At this time the positive impact of the Queen’s-Ewa project was made by comparing the children who took part in it to the Aiea school children. The Aiea project was operated by HSPA and Queen’s Hospital with help from Castle Foundation and Atherton Trust funds.

Ewa plantation seems to have been a pioneer and a model in providing for the medical needs of employees and their families. This was probably because of its proximity to Queen’s Hospital, now The Queen’s Medical Center.

As an outgrowth of the Well-Baby Clinic, another early concern was contraception and family planning, referred to as proper spacing. Many articles were devoted to this topic. In 1937 and 1938, a survey was made of the effectiveness of two methods of contraception discussed: the foam method and the silver ring method.

During the 1930s even before the formal organization of the Territorial Association of Plantation Physicians (TAPP, later HAPP) in 1941, the physicians met annually in Honolulu for exchange of information and formation of policies. In addition the Big Island had its own organized meetings of plantation physicians.

In 1938 Dr Marvin Brennecce of Kauai gave a detailed clinical report of the method he practiced of sterilizing the mother one to four days postpartum.

After citing several case histories observed in practice, one plantation physician wrote: “Is it good medicine or protecting a woman’s health to let her have 11 children by age 32? Is it giving the children a good health chance? Are we practicing good preventive medicine when we force 11 children into a crowded cottage?”

In the 1938 gathering of plantation physicians, it was suggested that after the birth of the fourth child in plantation hospitals either of the parents be offered sterilization at the expense of the plantation. Results of a survey of plantation family planning methods and their effectiveness was given as an example of the need. In 1961 a plantation physician who attended a meeting of the National Industrial Medical Association in Puerto Rico observed that on sugar plantations in that territory this option was offered after the birth of the fifth child.

In 1955 it was reported that during the previous 13 years 1,045 sterilizations had been done in plantation hospitals with no deaths or complications. This figure included 295 salpingectomies and 269 vasectomies. These figures confirm my own observation that sterilizations were most often done on the mother even though it was major surgery, while the father’s surgery was only an outpatient operation.

In that same year there was nearly uniform agreement that this family planning program had dramatically lowered the maternal and infant mortality. A graph was given in evidence. Only one plantation doctor did not agree with the policy, he wrote: “...not up to us to decide on artificial means to alter the future of humanity when divine providence seems to have taken care of us for millions of years.” Two others thought it might have been “abused or used too often.”

Immediately after World War II the number of physicians serving the sugar and pineapple plantations increased to 48. Twenty of these had served in the armed forces and were probably lured by the prospect of life on a Pacific island.

The TAPP physicians were justly proud of their record. By 1949 they could boast:

• Mortality rates lower than other rural areas nationwide.
• TB rates lower than national average.
• All children vaccinated (100% claimed) against smallpox and diphtheria and TB tested.
• Most plantation hospitals met national standards, even one 60 miles from the nearest town.
• Better distribution of doctors and hospitals than any other rural state or territory.
• Lowered birth rate among Japanese and Filipino workers, while it had stayed the same in the countries of their origin.

At the International Conference on Planned Parenthood in Bombay, India in 1952, Hawaii was cited as an ideal, and the place that had done something about it. An Oahu physician who attended concluded that the birth rate is inversely proportional to knowledge.

After this conference the Plantation News reported: “...The health
story in Hawaii sparkles more clearly because it is a small, isolated place to which large groups of very different people have come relatively recently.

My own experience with plantation policies was perhaps typical of the changes taking place in plantation medical practice in the mid-1950s. In the plantation hospital that served four plantations on the west side of Kauai, I gave birth to healthy, full-term, fraternal twin boys weighing in respectively at 6 lb 10 oz and 6 lb. These were my third and fourth children and when asked if I wanted to be sterilized I agreed. However, on the third day when the doctor visited me, he informed me that because I was now both underweight and anemic and had developed a slight fever, I was considered a poor surgery risk. He advised that surgery be postponed until my weight and blood count returned to normal. I was sent home on the seventh day with a large supply of iron and vitamin pills at no cost to me.

It took more than a year for my health to return. In the meantime the new county hospital in Waimea was completed and the plantation physicians moved their practice to the much-larger and better-equipped facility. Our fondly remembered dispensary, as it was always called, closed completely.

When I finally visited the doctor in his shiny new office, he opened the consultation with, “Have you ever had appendicitis?” Surprised, I replied that I had experienced passing abdominal pain a few times, never lasting or serious enough to require treatment. He then explained that with the opening of the county hospital many changes in policy were expected but not yet formulated, plantation physicians could no longer expect to have the final word. Policy was to be set by a county hospital board consisting of five members, two of whom were Catholic. Their attitude toward established plantation policies of sterilization was not yet clear.

So, with my permission, he would remove my appendix for the record, while including the sterilization. A short time later he reported that the board had stated there was no intention of interfering with established policies of plantation doctors. If the 40-year-old medical records still exist (which I doubt), it might be interesting to know how the surgery was recorded in the statistics. Plantation doctors kept careful and detailed statistics that were reported in Plantation Health.

In the climate of the last two decades when so much emotional heat can be generated by the mention of the word abortion, it is revealing to read the clinical, matter-of-fact reporting of what is alternately referred to as termination of pregnancy, and therapeutic abortion, apparently performed routinely in plantation hospitals and said to be left to the good faith of the physician.

My own experience in relation to plantation medical practice was a privileged one because of my husband’s position, which can be illustrated by two situations. When my husband accepted the position at Kekaha Sugar Company, I inquired about medical services and was told “just go to the dispensary and check in.” A few months later I did just that by entering in a waiting room filled with a handful of laborers. I sat down among them to wait my turn. Shortly the nurse, who was a neighbor, opened the door and seeing me became apologetic. I was immediately ushered in ahead of the others. Shutting the office door, she instructed me to knock on the door and announce my arrival on future visits. Being new to the plantation hierarchy, I evidently had a lot to learn. Months later when I arrived at the dispensary in labor I was kept waiting for a short time then to my surprise was taken to what appeared to be a large private room. I was aware that there was only one private room and the harvesting superintendent’s wife had given birth the day before, so I expected to be put in a ward. I found out later that a four-bed ward had been emptied for me.

But how was it for the laborers, the so called rank and file? To test this on a small unscientific sample I asked two longtime friends who grew up in small plantation villages, one on Maui and one on Kauai, where their fathers were day laborers. The first one, who had grown up on a Kauai plantation, had only pleasant memories of the medical care received by her family. She recalled a serious illness when she spent three weeks in the plantation hospital as a young woman. She recalls excellent care and best of all, and perhaps more important, it cost her family nothing. The plantation she referred to was well-known as one of the most benevolent in the Islands. The second friend, who grew up on Maui, however, remembered a mother taking her son, who was suffering from stomach pains, to the plantation doctor. After a cursory examination, he advised the mother to take him home and give him an enema. A few days later he died of a ruptured appendix. “He was 14 years old and he was my uncle,” adding sadly, “and there was no recourse.”

The nursing shortage of a few years ago would not have been new to the plantation physicians. The turnover was high and an ongoing recruitment program attempted to lure nurses not only from the school at Queen’s, which supplied the majority, but also across the Mainland. In Minnesota a graduating nurse in the late 1940s responded to a bulletin board ad offering adventure and a job on the far Pacific island of Kauai. She was quickly hired and when her interisland plane landed at Lihue the plantation sent one of its recently hired single managers to escort her back to the nurses’ quarters. A few months later she married him and quit the nursing profession for home and family. She was my next-door neighbor. At about this same time another graduate nurse answered a similar ad at her nursing school in Des Moines, Iowa. Not long after arriving she married the recently divorced plantation manager and ended her nursing career. Very few women worked outside the home after marriage. I can remember only two managers’ wives who did so.

There were some exceptions. The head nurse in charge at Waimea was a single, dedicated Mainland haole who had been there for many years. Her take-charge manner was appreciated by the physicians who seemed to depend on her for administrative details of the daily operation of the dispensary. She moved to the new county hospital with them. Some plantation hospitals shared nursing services and nurses with the Territorial Board of Health from the start, usually in the more urban areas.

In 1954 a Kekaha resident, Mrs Ogasawara, whose husband was employed in the plantation shop, described the devoted care her husband received after an accident. Soon afterward she spent eight months in Chicago, during which she suffered a serious illness. When she returned home, she wrote an article that appeared in Plantation Health entitled “My Impressions on Hospitals.” She compared the frustration of trying to get medical attention in the city, with no previous experience dealing with bureaucratic medicine. She was shuffled from place to place by impersonal staff and she particularly resented the charges made for each aspect of the illness. She concludes relating the vast relief of returning home to “our little, old-fashioned, wooden plantation hospital,” with the devoted care of Drs Wade and Brennecke, the personal attention of the staff, and the great advantage of having everything in one building and no bills.

During the 1950s the union was increasingly demanding a voice, including a part in the hiring of the physician, traditionally at the discretion of the plantation manager. An outside physician consultant from the Mainland was hired by the union. Interviewed on landing, he said he had always wanted a trip to Hawaii and this was a way of getting here. He followed this by making conflicting recommendations to the TAPP and the union, thus irritating both sides. None of his recommendations were followed, to the satisfaction of TAPP.
One of the union's points was: "...despite the overwhelming predominance of Oriental groups on the plantation there are very few non-Caucasian plantation doctors." To refute this, TAPP published a list of the 48 plantation physicians—8 were Oriental—plus a statement that of each 10 applications received only one or two came from physicians of Oriental extraction.

By the time of statehood the days of the plantation hospital were numbered, the rise of the union being only one factor in their demise. Actually the building of company facilities reached a peak by 1920 and with a few notable exceptions, such as the plant at Ewa in 1936, declined and then ceased after World War II.

The impact of the changes brought about with the closing of plantation facilities in the 1950s was felt most strongly on Oahu where it was happening more rapidly than on Neighbor Islands. For some the adjustment was traumatic. In a 1950 article, "When a Plantation Hospital is Discontinued," Dr. P. Howard Liljestrand chronicled in part the change when Honolulu Plantation at Aiea closed:

On a few days notice, the medical service and hospital of the plantation at Aiea were closed. The sudden loss of livelihood affecting 3,500 people and the extreme uncertainty concerning the future resulted in a stunned community, paralyzed for a time by emotional tension. There was an immediate outcropping of functional complaints like stomach pains.

However, within a few weeks most of the workers had been absorbed by other industries and the community was going again, but under an entirely different routine of living.

As for the hospital itself, one minute after it was closed by the plantation it was reopened as a private enterprise...Gone were the plantation outpatient clinics, the field nurse with her follow-ups, health surveys, health education, and regular physical examinations. A third of the men went to work for the neighboring plantation and thus continued to come under plantation medicine.

For the remainder systematic medical care vanished overnight...That the general health service had disintegrated, however, was continually obvious. Diabetics would show up after a long period of no insulin or urinalysis.

Luetics failed to continue treatment because there was no camp nurse to remind them and check on them when they failed to show up for treatment. The use of tetanus antitoxin rather than tetanus toxoid gradually increased because fewer and fewer of the injured children could show any evidence of having had toxoid immunization, as all had under the plantation. Time and again patients were brought after illness had become serious with the apologetic explanation that since it was now necessary to pay for all visits to the doctor they were avoiding the doctor as much as possible...

All free and personal care was doomed, of course, and not only with the rise of the union. The decline of the sugar industry in favor of tourism was rapid after statehood in 1959. The increased specialization and centralization of medical facilities, the success of HMSA and alternate medical plans surely contributed. After moving to the city and being arbitrarily dropped from two medical plans over the years, I too remember with a pleasant nostalgia.

References
Plantation medical care played an important and integral part in the development of health care in Hawaii. By the turn of the century about 103,000 individuals, nearly one-third of the entire island population, were being cared for by plantation physicians. Plantation medicine helped to develop excellent medical care throughout Hawaii.

**Historical Overview**

Plantation medical care played an important and integral part in the development of health care in Hawaii. At one time plantation laborers numbered as high as 53,000. Including dependents there were about 103,000 individuals cared for by plantation physicians just after the turn of the century.

At first, provision of care to these people was probably philanthropic to a degree, but certainly its purpose was to maintain healthy productive workers. Significant concerns were malnutrition (with beriberi the predominant vitamin deficiency), tuberculosis, venereal disease, respiratory infections, maternal and child care (again, nutrition was most important), infant diarrhea, and immunization. Vaccines were given as they became available, including diphtheria and smallpox. Along with the above came better surgical and orthopedic care, hospitalization where needed, and diagnostics to discover disease. This included x-rays for tuberculosis and testing of infants for anemia which was done on a wide basis during the 1930s.

The economic development of the Islands certainly proceeded in parallel with the growth of sugar and pineapple production, and medical care went hand in hand. The 103,000 people constituted a little less than a third of the entire Island population of about 368,000. The availability of medical care graduated from sporadic coverage to full coverage by the individual plantations, and then to an industry-wide medical care system. Originally care was provided free, but some time after the labor unions came, costs were levied on the members. The charges were extremely low and did not represent the full expense to the plantations.

We don’t have much information before the 1880s. Early pioneers included missionary doctors such as Dr Gerrit P. Judd in the 1850 era. Judd cared for all comers, with repayment being the possible conversion of patients to Christianity.

In 1888 Dr Luis F. Alvarez served as the doctor in Waialua, Oahu covering plantation and non-plantation patients alike. His son, Walter, witnessed kitchen-table appendectomies and amputations. Dr Walter Alvarez subsequently became a consultant of national renown in the field of internal medicine. The site of his home was behind the present Waialua district gymnasium in Haleiwa.

Dr Charles Davis described medical care in an article in 1904. It appears that the art of medicine prevailed over the science. Dr Davis, who was then the Ewa Plantation physician, displayed much humanity for foreign laborers. He says, “I treated over 180 patients every day of the year.” His philosophy included removal of the "causae morbi." “I would let no man go from my office who thinks he is sick, empty-handed.” Also, “Pass not idly by the patient who thinks he is sick, for indeed he is.” For diarrhea he gave cathartics such as calomel and then sedation with tincture of opium. He comments that Ewa patients were young, healthy, robust men. This accounted, Davis said, for the “rapid healthy granulation of stumps and healing of wounds.” He notes, however, that abscesses took on “a rapid phagodenic action running halfway up the leg...in 24 hours...and freely opened such infections.”

He describes beriberi, at that time thought to be transmitted from one person to another. As treatment for severe beriberi cases he prescribed bismuth subnitrate with 1/15 grain of strychnine sulfate and Blaud’s pills and then he carefully regulated the diet. His treatment was successful. (Thank goodness for diet!)

Subsequent plantation physicians included Dr Fred Irwin and Dr L.D. Sexton, who, in the tradition of general practitioners at the time, traveled by buggy through muddy roads to do deliveries, appendectomies, etc, with instruments sterilized in the kitchen. Typhoid fever was a particular problem during 1906 to 1907. Hospitals were few at the turn of the century, but by the 1930s each plantation had its own or shared one with an adjacent plantation.

In 1930, the Hawaii Sugar Planters Association (HSPA) appointed Nils P. Larson MD as medical advisor, and with his help, strove to improve plantation workers’ health through a study of diet and use of supplements to the polished white-rice diet the workers and their families preferred. Other facets of health needs were also studied. The plantation bulletin, *Plantation Health*, disseminated information to physicians discussing and helping to solve common problems. Dr Charles Wilbar was the editor and Dr Larson was the plantation consultant for *Plantation Health*. An organization for plantation physicians was formed, and periodic meetings were held with speakers on pertinent topics.

Dr Wilbar headed the Ewa Experimental Health Center at Ewa Plantation. Through this program, plantation children were checked for anemia, parasites, and other possible illnesses. Formula for infants and supplements for children were supplied on that plantation (in conjunction with the Board of Health and Queen’s Hospital Research Department). Infant formula of evaporated milk and water plus a special run of cane syrup was distributed; cod liver oil, orange juice, guava juice which is high in vitamin C, brewer’s yeast, and so on were also provided to infants.

The Ewa Project planted vegetable gardens and developed a *fruit tree project*. These gardens were formulated to supplement the white rice diet, which was responsible in many instances for beriberi and other types of malnutrition. The garden and fruit projects were started at the other plantations as well and nutritional information was disseminated.

Dr Thomas Keay of Pepeekeo wrote in the 1930s that the sugar industry needed healthy workers. “Laborers are engaged to work, the men want to work. It’s the duty of the medical service to keep...”
he men in the field in good physical condition...the babies of today are the field workers of tomorrow.” He said that in 1922, when he began practice, there was a high infant mortality rate (66 per 1,000 live births), especially among Japanese and Filipino babies, which he believed was at least in part related to malnutrition. This figure decreased to 16 infant deaths per 1,000 by 1935, which Dr Keay thought was partially due to food education.³ Obstetric problems from home deliveries were frequently a problem. Later most deliveries were in hospital.

Positive serologies were found in 10% of one group of 9,000 Wasserman tests, which included prenatal and pre-employment exams, and family members of the workers. There was only a small percentage of clinical syphilis, however. Twelve-week cyclic injections of arsenicals and then bismuth were given. Leptospirosis was identified clinically and then verified through guinea pig inoculations.

Apparent was that, in those days, Filipino laborers were more susceptible to nutritional disease as a result of their three-year contracts. Since they expected to return shortly to the Philippines, they often were content with an almost exclusive white rice diet in order to save money. Subclinical prevalence of malnutrition detracted from general health and vigor. Even today, older Filipino patients refer to cardiac edemas as beriberi. Many of the Filipino laborers, after completing their contract, returned home to the Philippines. Then, having married and fathered a child, they came back to work for another number of years. Once it was discovered that lack of vitamin B₁ was the cause of beriberi, it was added to the diet in the 1930s.

Most people in the islands still take white rice in preference to the more nutritious brown rice. However, it seems that most of the people in my current practice, except possibly the Hawaiian group, have good quantities of vegetables in their diet.

Plantation physicians were required to be graduates of acceptable medical schools, to be competent in their fields, and to be dedicated and well-trained. Generally, only one doctor cared for the needs of each plantation—this included 8,000 to 10,000 people at times. In the 1930s a second physician was added. Surgery and obstetric skills, if not already learned, had to be acquired, often through a preceptor relationship. Access to specialty care was increased as the standards for medicine improved nationwide. The vast majority of accidents and illnesses were handled locally, though consultations were obtained when needed.

**Personal Observations**

When I was employed as a physician at Waialua Sugar Plantation, the sugar industry was of utmost importance in Hawaii and economically was second only to the military. My family and I left a rural practice in Colorado and arrived at the Waialua Plantation in 1961. I was given a tour of the plantation which was quite useful in that I understood where industrial accidents might occur and what health problems might be related to individual jobs.

The most impressive aspect of the plantation was the relative self-sufficiency of the organization. Many developments had occurred in the years since the founding of the plantation by Castle & Cooke in 1898. Irrigation (though now through disposable irrigation drip lines) still uses the original rock and mortar flumes that in turn disperse water over contoured fields. Also, an irrigation well, more than 100 feet deep with access by elevator, was built with plantation labor. A dam was constructed in 1902 of boulders and earth which formed a reservoir, Lake Wilson, for a water supply. Large siphons transported water across deep valleys. The mill, of course, had machine shops and multiple other integrated functions. All of these were under the administration of the manager and his supervisors.

One of HSPA’s primary purposes was to supply technical advice including recommendations of new varieties of cane, weed control, fertilization tables, and other technological support. In addition it supported the plantation physicians organization in its efforts to provide better health.

Waialua Clinic was part of the hospital and included a small emergency room, reception and chart area, pharmacy, and examination rooms. It was originally designed for one physician; my request for a better office was incorporated into other suggestions for the hospital. We were able to upgrade and renovate where needed and the manager, Harry Taylor, and the senior physician, Dr F.H. Hatlelid, were supportive of the improvements.

The hospital and clinic included x-ray which was the *kuleana* of a versatile Filipino man who was responsible for various tasks as well as x-ray, and he could do anything including settling disputes and being an interpreter. His knowledge and ambition helped family members to become medical and nursing professionals. The lab was run by a technician who lived on the grounds and was available at all times. Periodically she could be seen at night with a flashlight looking for *Bufos* for pregnancy testing a patient’s urine.

There were two wards and several private rooms. There was a delivery room and an OR. The RNS lived adjacent to the hospital, and practical nurses lived in the community. There was a hospital kitchen and a laundry. These functions were largely under the administration of the senior physician, Dr Hatlelid, and then later, me. Other administrative functions, such as salaries and cost control, were under the purview of the comptroller’s office and his staff.

Physicians were expected to do the bulk of all care including orthopedics, dermatology, internal medicine, pediatrics, obstetrics and gynecology, and surgery within our capabilities. Emergencies were handled locally when possible. On more than one occasion a mother would bring in an oversized daughter in a muumu with acute abdominal distress, which was resolved by an unexpected delivery. Self-administered Trilene through a small hand-held mask combined with pudendal blocks worked extremely well for deliveries, until it was abandoned because of some reported problems. We kept O-negative blood available for emergencies, and a patient could be transfused when stabilized, or maintained in Waialua when indicated.

Surgical, obstetric, and orthopedic consultants would respond for operative fractures, gastric surgery, and C-sections, though we did these ourselves later during my stay. There was one memorable accident on a New Year’s day. Five adolescent casualties were brought in with wounds sustained from the explosion of a Coke bottle that had been filled with powder from unexploded firecrackers from the night before. One young man sustained a transection of his ilio-femoral artery and vein, and he nearly exsanguinated. I was able to access a vein as he was gasping his last breath, and give him O-negative blood and saline. As the blood was administered, he gradually picked up his respiration and other vital signs; we all heaved a sigh of relief. Meanwhile, we called Dr Scott Brainard, a cardiovascular surgeon who was visiting his nearby beach home. With the help of his wife, a surgical nurse, the vessels were repaired. The other children had lesser wounds although shards of glass kept surfacing and had to be removed in later years.

There was essentially no ambulance service. We responded to major auto accidents at the site, or the patients were brought to our emergency room. The hospital/clinic also accepted private patients from the community as there were few other physicians available, thus providing a needed service to the community. This also helped defray costs to the hospital through private payments; such arrangements were common throughout the plantation system.

Indigents were treated at Waialua Sugar since the senior physician
was designated the Queen's Hospital physician for the Waialua District. Patients were treated on a very limited allowance. Because of the inadequate allowance, Harry Taylor, who was the manager during my stay, subsidized cost overruns from month-to-month for the drugs needed for such patients. The buck stopped with the manager who, incidentally, held special stature in the community.

My experience was that, where indicated, specialty care such as orthopedics or heart surgery was paid for by the plantation. However, such expenditures were closely scrutinized and costs were balanced against tons of sugar produced in order to provide care.

The different cultural groups and individual employees and families made the Waialua Clinic practice special. There were Caucasians (British, American, Scottish—usually managers), Portuguese (who didn’t want to be classified as Caucasian or haole), Spanish, Puerto Rican, Chinese, Chinese-Hawaiians, Japanese, Koreans (few), and Filipinos. Each group had its own diversified language, culture and talents. Pidgin crossed most language barriers.

There was a tiny Japanese woman who was a practical nurse in the clinic, Sugi-san, who taught me a few very correct Japanese words and phrases which were helpful with the older population who did not speak much English. The younger Japanese had progressed to skilled jobs (supervisory, secretarial). I found them to be a proud, family-oriented group. A few close loyalties with the people with whom I worked were formed.

One of the largest families was Chinese/Hawaiian/Portuguese. They befriended us and made us feel part of the plantation family. Their luau was special with good music, food, and hula performed by the sisters. The majority knew how to hula, especially with the eyes and the hands. The brothers were plantation supervisors in the field operation.

Adjusting to plantation life was interesting, including accommodating to the patriarchal hierarchy and becoming accustomed to different cultures. There were the hana hana girls who wore heavy protective clothing in the fields and were usually middle-aged Japanese women.

My wife was warned when adjacent cane fields were to be burned, producing Hawaiian snow. When she spoke of the resulting extra cleaning the stock answer was, “It’s your bread and butter.” One special memory was of being invited to see off friends on the Lurline. There were parties throughout the ship; singing, dancing, then the confetti, and the band playing as the ship departed, listing to larboard with the weight of all the passengers throwing out their leis and waving goodbye.

An RN who worked many years for Waialua Sugar from before World War II describes cases of gas gangrene, tetanus (before tetanus toxoid became available), and cane-knife wounds, and says in her opinion medicine and nursing did well with the available drugs and equipment. She believes the personal aspects of care rendered before surpluses in quality the impersonal care available now. As a camp nurse she visited many outlying camp clinics, doing immunizations, offering formula and food supplements, and dispensing medicines. She travelled 1,000 miles in a month on those rounds. Dr A.L. Davis, of British origin, was the only physician present in the earlier part of her service. She knows of him privately supporting the family of an impaired father. She recounts that Dr Davis made the winner in machete fights pay the surgical bill, even though medical care was usually provided free.

The paternalistic system not only furnished medical care but also housing, free kerosene, and bath houses. It seems this paternalistic philosophy created a modern widespread perception of the need to seek care for even trivial illnesses and also for expensive insurance to cover minor complaints.

On the other hand, plantation medicine helped to develop excellent medical care throughout Hawaii. Development of modern medicine in Hawaii to a great extent parallels the development of plantation medicine, just as our modern ethnic diversity resulted from the requirements for labor by these industries. Over a period of 150 years dedicated plantation physicians, nurses and other professionals led to improved care and excellent medicine in modern times. We owe much to the pioneer plantation physicians, as well as their mentor, Nils Larsen.

Today many of our health professionals are descendants of the plantation patient population. This is truly a testimony to the opportunities afforded those who came to live in Hawaii.

References
2. Dr Nils Larson was a pioneer in many facets of medicine during the 1920s and 1930s and was instrumental in upgrading and modernizing Queen's Hospital. He served in various capacities for that hospital and his portrait is seen in exhibits in the hallways. He was instrumental in gathering statistics and helped formulate the program and efforts of the plantation physicians. He helped found the Honolulu Medical Group and seemed to be tireless. He is one of the true pioneers of medicine in this state and should serve as an inspiration for all, including young physicians.
3. Plantation health: (Periodical) Honolulu. 1936-1964. Much of the historical information is derived from this source.
4. There was a program for high school students to work in the fields which was good training. My oldest son participated one summer. They loaded fertilizer in a plane for spreading over the different fields and then worked until the plot came back. Once he fell low and yelled, "Somahaiya!" (Summer hire), which sounded like bonsai and he released the residual fertilizers on the working crew.
How Open Heart Surgery Came to Hawaii

Scott C. Brainard MD

The evolution of open heart surgery had its beginnings in 1938 with the closing of a patent ductus arteriosus. In 1954 Hawaii began to perform right heart catheterizations and a bubble oxygenator was made locally out of plastic food tubing and a Sigamotor double head pump. The first open heart surgery was successfully performed at Queen’s Hospital in December 1959 on a woman from Hilo with a large interatrial septal defect (IASD).

The evolution of open heart surgery had its beginnings in 1938 with Robert Gross in Boston closing a patent ductus arteriosus. Dwight Harken in World War II was removing intracardiac foreign bodies, Alfred Blalock and Helen Taussig in Baltimore developed the Blue baby operation in 1944, and Gross and Hufnagel corrected coarctation of the aorta in 1945. By 1948 Bailey, Harken, and Brock were correcting mitral stenosis with closed finger-fracture procedures. In Philadelphia John Gibbon and his wife Maly brought their laboratory experiments to successful conclusion in 1953 by closing two interatrial septal defects using a heart-lung machine. However, after losing the next two patients they called it quits. In 1954 C. Walton Lillehei, at the University of Minnesota, corrected cardiac defects in children employing cross-donor circulation utilizing one of the parents as an oxygenator. He was criticized about the ethics of subjecting a normal parent to surgical risks; therefore, the following year he began using a bubble oxygenator constructed of plastic food tubing designed by Richard DeWall.

In Hawaii the Bureau of Crippled Children (BCC) was supervising the care of an increasing number of children with cardiac disease. Regular cardiac clinics were being held at Kauakeolani Children’s Hospital (KCH) as well as cardiac conferences regarding their treatment. There were no cardiac diagnostic procedures available to these children other than the usual EKG, chest x-rays, and physical exam. In 1956, with financial assistance from the Hawaii Heart Association (HHA), a two channel Sanborn recorder was purchased to provide intracardiac pressures through a catheter and EKG monitoring. Right heart catheterizations became a reality.

These cardiac procedures were performed in a regular, darkened fluoroscopy x-ray room with the operator wearing red goggles equipped with a sterile plastic horn used to manipulate the goggles when the room lights were turned on in order to draw blood or check the patient. There was no type of monitor visible to the operator so the technician would give a continual verbal report of the catheter tip location by observing the pressure curves and reporting any type of arrhythmia on the EKG. Serial blood samples were drawn through the catheter from various intracardiac locations to establish the level of shunts. It would take the technician all day to run oxygen levels on samples by the Van Slyke method. KCH was selected as the hospital to start cardiac catheterization because most of the patients were children and the x-ray department was open to scheduling most of the time. The technician came from the University of Oregon, and her salary was partially supported by the HHA.

Shortly after the start of cardiac catheterizations the need for angiography as a supplement became evident. There were no commercial pressure injectors available for dye injection through small lumen catheters. It was possible to purchase a 50 cc-thick-wall glass syringe, with a luer-lock tip to use with hand injections. A pressure injector that looked like a bottle capper was fabricated by Kats General Repairs of Honolulu utilizing a car axle as a center post and a steel cylinder in which to set the syringe so that if it broke the shards of glass would be retained. This worked well until an air pressure injector with a steel syringe became available. The angiograms were recorded on a long strip of x-ray film utilizing a Fairchild head unit with a picture speed once every 30 seconds. Lacking a full-time radiologist at KCH, the procedure was not completed until the film had been sent via taxi to the Honolulu Medical Group for George Henry to inspect and pronounce them to be adequate. The cardiac catheterization results and angiograms were reviewed at a monthly cardiac conference. If a child was in trouble, the Bureau of Crippled Children would forward the materials to Dr. Lillehei in Minnesota to see if the child was a surgical candidate. Some of these children with extracardiac lesions not requiring cardiopulmonary bypass such as patent ductus arteriosus, coarctation of the aorta and cyanotic lesions that would benefit from systemic pulmonary shunting, were operated on in Hawaii, usually at KCH.

In 1956 we began cardiopulmonary bypass runs on dogs using a Sigamotor double head pump and a DeWall bubble oxygenator made out of plastic food tubing. These half hour runs were done at Queen’s Hospital in the old obstetrics delivery rooms. Any of the available surgical house staff were commandeered for assistance, and it was obvious that any successful effort toward open heart surgery would have to better organize personnel and physical accommodations. Dr. Sumner Price, Queen’s Hospital administrator, was approached about space for experimental animal surgery. He allocated the old World War II orderly barracks and common kitchen at the mauka end of the Kamehameha wing for this purpose. A portion of the barracks was fitted with fencing for dog kennels and the old kitchen was set up for dog surgery.

Even though a large number of animals were destroyed weekly, the Hawaii Humane Society was very reluctant to become involved with any type of surgical program because of antivivisection leanings of their financial donors and board members. This made it difficult to obtain a supply of animals for surgery and blood to prime the oxygenator. Dr. Morton Berk, President of the HHA, mailed reprints of a Time magazine article, which detailed the development and progress in OHS, to different companies, the Humane Society board, and HHA donors, saying OHS could be available in Hawaii but would need dog surgery to develop a team. This put the squeeze on the Humane Society to the extent that they allowed us to anesthetize the dogs they were going to terminate and use a trochar to obtain intracardiac blood to prime the oxygenator. The Humane
Society would not agree to sell or give us animals for surgery, so we would line up a member of the house staff or a friend each week to go to the Humane Society in Kapahulu to purchase the largest dog available. The $10 fee included a dog license and a veterinarian's examination which was supposed to exclude heart worms, but we still encountered a 60% to 70% rate of heart worms—a squirming mass in the right ventricle.

We received numerous dogs through private donations. If we weren’t going to use them right away they had to be anesthetized and their vocal cords excised so they wouldn’t disturb the hospital patients. These debarked dogs had wonderful regenerative powers and would be hoarse for two or three weeks and gradually regain their bark. We would receive an early morning call from the nursing supervisor to come stop the racket that was disturbing the patients.

A basic surgical team of Drs Albert Chun, Carl Mason, Paul Gebauer, Unogi Goto, John Hanley, and I would do OHS on a dog every Wednesday morning. This consisted of putting the animal on the pump oxygenator after anesthetizing and heparinizing it and then opening the right ventricle for a minimum of half an hour. We then repaired the heart and watched the dog for survival. Carl Mason would arrive early at the Humane Society and get two or three pints of blood, while Paul Gebauer and Mary Connor, the pump technician, would be assembling the pump oxygenator. After anesthetizing the dog, Al Chun and I would prepare the dog, open the chest and expose the femoral vessels for cannulation. We were quite fortunate that Medicare, computers, and cost accounting had not arrived—the departments at Queen’s were quite liberal in giving us supplies. We could always obtain fresh pentothal from the patient mix in surgery and intravenous equipment. The central supply department would regularly phone to see if we could use outdated solutions and equipment. We calculated the cost for this disposable equipment to be about $125 per dog. We were using a considerable amount of electrical equipment which threw a heavy load on the old wiring. It wasn’t unusual to blow a fuse and have to replace it during the operation. Something electrical would then have to be replaced by hand power during the pump run.

We continued to use a bubble oxygenator with the Sigmamotor pump until the arrival of the horseshoe circumferential pumps. We changed to these and a small Plexiglas screen oxygenator since it was much more gentle with red blood cells. This oxygenator would have to be cold sterilized, since Queen’s did not have a gas sterilizer and had other short-comings, so we decided to switch to a disk oxygenator. As a prototype we had Hawaii Restaurant Supply fabricate a concave stainless steel trough approximately 18 inches long and 6 inches deep. Bearings were mounted at either end of the trough to support a small diameter steel axle running lengthwise on which we mounted dictaphone disks separated by 1/4 inch washers. These were enclosed with a Plexiglas cover with a connection for oxygen. By the time the blood traveled from the venous end to the outflow end, it had turned to a bright red and was obviously oxygenated; this little unit worked very well.

In late 1959 the volume of cardiac catheterizations had increased considerably due to the arrival of younger pediatric cardiologist. Demand increased further as diagnostic procedures on teenagers and adults were undertaken. The pediatric residents at KCH voiced their opposition to adult patients being admitted for cardiac catheterization so we approached the executive committee and board about the possibility of making the necessary investment to upgrade the catheterization equipment with the goal of starting an open heart surgery program later. They rejected it. Since selected angiography procedures were already being done at Queen’s and with an increase in the number of adults needing diagnostic procedures, it was decided to move the majority of cardiac catheterization procedures to Queen’s, and Mary Connor, the technician, became a full-time employee of Queen’s Hospital.

There continued to be a lot of sick children referred through the BCC to Lillehei at the University of Minnesota for open heart surgery. Pulmonary hypertension developing from intracardiac shunts was recognized soon after the establishment of OHS so that in addition to diagnostic cardiac catheterization and angiocardiography the cardiologists working with Lillehei were requesting lung biopsies. These patients were subjected to a minithoracotomy and biopsy, usually of the lingula, and their slides, with the paraffin block, were sent for review before the patients were accepted for surgery. After heart surgery some of these children would have a rough postoperative course with complications at the sternal closure or complete heart block. The wire sternal sutures were usually bolstered with Ivalon sponges on both sternal surfaces and if they became infected had to be removed. The patients with complete heart block needed to have a cardiac pacemaker implanted since complete heart block would be lethal eventually. This required a left thoracotomy to suture the myocardial leads onto the heart. Only fixed rate pacemakers were available. They measured about 2 1/2 inches in diameter and 3/4 inches thick with two nipples protruding from the edge into which a Keith needle could be inserted percutaneously to turn controls for voltage and rate. The entire unit was covered with a thick layer of self-sealing silicone for protection if the Keith needle adjustments were used. These pacemakers were huge in contrast to the small recipient they were to be implanted in and there were many complications of skin breakdown particularly over the two control nipples. The subcutaneous pocket would have to be revised or possibly the entire pacemaker unit replaced.

Our success with the locally fabricated disc oxygenator led us to purchase a Kay Cross disc oxygenator manufactured by Pemco of Cleveland, Ohio, which could be totally heat sterilized. The oxygenator consisted of a Pyrex glass cylinder onto which stainless steel ends were fitted to support a long steel axle on which stainless steel discs were mounted separated with washers. There were ports at the proximal end for venous blood and oxygen, with oxygenated blood and gas outflow at the opposite end. The entire unit had to be boiled in Xylene and resiliconized between cases, reassembled and sterilized, a service of about 12 hours. While we were waiting for the arrival of this oxygenator, Paul Gebauer fabricated a steel table with the pump heads and controls mounted. He could raise or lower the entire table assembly to control siphonage of venous blood from the patient.

In November of 1959 we had completed 100 animal open heart procedures and felt qualified to move into the human theater. Unogi Goto had a patient from Hilo who had a large IASD and was a little cyanotic. After we explained the surgery and informed her that she would be our first open heart case, she readily agreed. In anticipation of this, Bill Kekoa, the Queen’s Hospital electrician, had run additional circuits into the selected operating room (OR). We moved all our equipment to the OR, which included John Hanley’s anesthesia machine from Children’s Hospital, so we could use halothane. The monitoring equipment consisted of an aneroid pressure manometer with a three-way stopcock for continuous arterial pressures, a water manometer for venous pressures, and a single lead Electronics for Medicine sealed EKG monitor on John Hanley’s anesthesia machine. Two operations on dogs were done at night (with Charles Price, the assistant hospital administrator, guarding the door) so that the equipment spacing, patient draping and electrical connections could be worked out. This culminated in successful closure of Harumi Yoshimoto’s IASD in December 1959. The recovery room was utilized as an OHS intensive care unit.
We were grateful to have the recovery room nurses providing around the clock shifts with Harumi and the other patients. There was no medical or surgical intensive care unit (ICU) then so after 48 hours, when Harumi appeared stable, she was transferred to a private room until discharge. Today Harumi works as a seamstress for Hilo Hattie’s in Hilo.

Gladys Tsugawa RN organized this recovery room unit and it became axiomatic that no matter when she called and tactfully announced that the “chest tubes felt warm,” the bleeding source needed to be checked out. The postoperative cardiac monitoring was done with an Electrodyne unit which was a combination EKG monitor and pacemaker. The EKG screen was smaller than a playing card and had no rate meter, but alarms could be set for high and low rates and the pacemaker was supposed to cut in at the lower rate. This monitor was set in a tubular aluminum stand and raised above the height where explosion was a danger. All four legs, spread-eagled, were on wheels. The small screen forced virtually everybody to put their noses on the screen to read it and invariably they tripped over or kicked those monitor legs. Blood gases were not available then but we did run pHs with a Sanborn machine. We relied heavily on venous pressure monitoring for fluid administration because there were no quick-acting diuretics. If the patient had a low blood pressure, low urinary output, and low venous pressure, we gave more volume either blood or fluids but kept the patient on the dry side. The patients were all extubated as soon as possible in contrast to present protocol of longer respiratory assistance. The postoperative pain was controlled with small, frequent doses of narcotics intravenously. Actually the most frequent post operative complaint proved to be thirst.

We had a dry spell until our next case and then had quite a few cases, mostly pediatric, from Guam, Samoa and Hawaii. Many of the children from Samoa couldn’t speak English. When possible, a family member would come with them, but before any diagnostic or surgical procedure could be carried out it had to be explained to the High Talking Chief who would talk to the family and then give his consent to proceed. All of these children were wonderful patients and were sent back to the pediatric ward from the recovery room. As soon as we removed the chest tubes and monitoring lines they would be out of bed and scooting down the hall to play with the other children in the TV playroom.

We did well until we lost case 13 due to mechanical problems and then continued on into the 20s without incident. The Hawaii Medical Association (HMA) held its annual meeting at the Princess Kaiulani Hotel about 1961 and Paul Gebauer took all the oxygenator equipment and table to the meeting as a display. One of the women newspaper reporters who always attended the HMA annual meetings walked up and started chatting with him about the number of cases we had done and how many had we lost. He told her we had lost case 13. She thought this was a most newsworthy item and on the front page of the second section of the Star Bulletin that day appeared huge headlines in red ink: QUEEN’S BARES OPEN HEART DEATH. Needless to say I received a letter from an attorney in the next morning’s mail requesting specific details!

The Hawaii Blood Bank did a terrific job with the added load of these open heart cases since fresh heparinized blood was required to prime the oxygenator and for transfusion during the case, and fresh regular blood was needed for transfusion postoperatively. This required the bank to cross-match about 20 donors for each case and then have these donors show up early the morning of surgery to draw the blood. The blood bank operation of course made it really hard to delay or cancel surgery for unexpected fevers, colds, etc.

The BCC wanted accreditation of our team by a team already approved by the government so in the early 1960s they invited Dr C.W. Lillehei, cardiac surgeon, and Dr Paul Adams, pediatric cardiologist, of the University of Minnesota, to evaluate the diagnostic and surgical facilities at KCH and Queen’s as well as our team. We scheduled three surgical cases in two days with a “double header” in which two cases had the same blood type. The oxygenator with the blood in it was kept intact and utilized for the second case. Both physicians observed the surgery. Dr Adams participated in cardiac clinic and conferences, watched some cardiac catheterizations, and monitored our postoperative care. They also had a follow-up clinic with cases from Hawaii they had operated on in Minnesota. It was a good learning experience for all of us and we received our accreditation.

In the early 1960s the need for an expanded cardiac catheterization department became apparent and a full time technician, Annette Wills, was employed by Queen’s. Cardiac catheterizations were still being done in surgery in the room used for carotid angiography. This room had a small fluoroscopy unit and a Fairchild angiography camera which would take serial radiographs similar to the one at KCH. Several younger cardiologists had started practice and the volume of catheterization cases rapidly increased. A five channel Electronics for Medicine Monitor was acquired and the procedures were moved into x-ray. In 1965 an image intensifier with a cine camera was purchased and installed by the Queen’s Hospital Auxiliary allowing rapid movie filming of angiograms. The image intensifier made the procedure much easier since the catheterization could be done in a lighted room. About this time hydrogen gas recirculation curves were instituted and were much more accurate in identifying intracardiac shunts. About this time hydrogen gas recirculation curves were instituted and were much more accurate in identifying intracardiac shunts. The hydrogen tank had to be kept down the hall away from electrical equipment, making it necessary for someone to leave the room and walk down to the tank with an anesthesia bladder attached to a mask, fill it with hydrogen and then walk back to the room. The patient would inhale from the mask with a timed recording to determine how rapidly the gas circulated to show if there was a defect into the right heart where the electrode on the catheter tip was located.

In the early 60s the cardiac lab purchased an oximeter which allowed blood oxygen saturation determinations to be done almost instantaneously as the samples were drawn during a cardiac catheterization. This oximeter also allowed us to determine pulmonary artery saturations postoperatively. Sometime later the cardiac lab purchased a blood gas analyzer which permitted much more precise acid-base balance during longer pump runs and postoperative care.

In 1965 Paul Gebauer fabricated a heat exchanger out of hydraulic airplane tubing that fit right into the oxygenator under the rotating disks and would allow the temperature change to be accomplished at the time of oxygenation with less blood trauma. This heat exchanger was copied and manufactured by Pemco to be sold with their oxygenator. This equipment was used with dextran hemodilution to close a septal defect in an adult patient who was a Jehovah’s Witness. He did very well. We used hypothermia quite often and even used deep hypothermia down to approximately 22° C at which point the oxygenator was stopped and the blood drained from the patient into the oxygenator. After the procedure was done under complete cardiac arrest, the blood was returned and the patient rewarmed using the oxygenator.

Deep hypothermia without the oxygenator was used in two infants with total pulmonary anomalous venous return. The infants were anesthetized and then packed in ice until their temperature fell to about 20° C. This produced cold cardiac arrest and then incisions were made in the back wall of the left atrium and the anterior surface of the pulmonary veins. Anastomoses were carried out from inside the atrium. The first child’s temperature was returned to normo-
ermic spontaneously with external rewarming and the second one with the pump utilizing a heat exchanger.

The availability of hypothermia led to participation by other specialties. The neurosurgeons wanted to use brain cooling and arterial occlusion to ligate or clip cerebral aneurysms. They would do a craniotomy while we dissected out and cannulated the common carotid arteries and one femoral artery. Also both vertebral arteries were encircled with occluding tapes. With the patient on a warming blanket to maintain body temperature, cooled femoral artery blood was pumped into both carotids to achieve rapid brain cooling. Then with all four cerebral vessels occluded, the neurosurgeon would deal with the aneurysm after which the patient’s own circulation was restored to re-warm the brain. Several extremity malignancies were treated using a heat exchanger in conjunction with a small bubble oxygenator to perfuse and arterially isolate a leg. Extremity hyperthermia was used in conjunction with an anticancer drug being introduced into the system for a specified time. This caused a rapid regression of the malignant lesion and reduction in pain for a time.

In 1961 the Starr ball-valve prosthesis was introduced for replacement of the mitral valve. This was followed shortly by aortic valve replacement. As is usually the case with new procedures the sickest patients were selected first. They had had the full medical course, were usually in negative protein balance and chronically ill. These patients didn’t do well with surgery unless their heart failure was relieved. This was the period when mercurial diuretics, digitalis and low salt intake were the mainstays of treatment for cardiac failure. To reduce the energy requirements of respiration on the heart, a tracheotomy was done. Utilizing low pressure tracheotomy tubes, breathing was taken over completely with an Engstrom respirator.

The Engstrom respirator came from Sweden and was well engineered to deliver specific ventilatory requirements. These patients would usually improve in 48 hours and then the internists would want to wait another 24 hours before surgery. The patient would often lose some of their improvement and then we would have to deal with another 24 hour postponement or proceed with surgery. The Engstrom respirator had a built in anesthesia unit so it could be utilized during surgery. We began by using the Starr ball valve for mitral valve replacement. Then during the 60s there was a flood of new valve prostheses designed with a low profile in which the ball was replaced by a flat disk because the ball in the Starr valve took up too much space in the ventricle causing a low cardiac output syndrome postoperatively.

Dr Frank Spenser at the New York University School of Medicine pioneered the technique of placing a small diameter polyethylene catheter through the chest wall, into the right ventricle and on into the pulmonary artery to use for pressure monitoring and blood sampling postoperatively. Pulmonary blood oxygen saturation gave a very useful indication of cardiac output. Faced with a low saturation, even though the patient appeared to be doing well, you knew that the patient would never leave the hospital unless you could improve cardiac output.

The aortic valve results were better when replacement was done with a homograft. So we collected and measured aortic valves from autopsies and then freeze-dried them to be reconstituted at the time of surgery. They were a lot more difficult technically to suture into what was frequently a calcified aortic root without twisting or deforming the graft. Nevertheless, aortic homografts were a lot better from a physiologic and an embolic standpoint. A supply of homograft aortic valves was hard to come by and ultimately we started using commercially prepared porcine mitral and aortic valves sutured onto stents.

The early 1960s saw a large increase in patient volume at Queen’s, both medical and surgical, bringing about a demand for an ICU. One was constructed at the Ewa end of Nalani II and was supposed to accommodate both medical and surgical patients. Electronics for Medicine wall-mounted bedside monitors with a central console were installed and for the OHS patients a portable three channel Electronics for Medicine unit was used which put the EKG and venous and arterial pressures on the screen. This ICU was poorly situated for surgical patients because of the distance from surgery and the elevator ride necessary to reach it plus the poor patient monitoring during the trip from surgery. Demand for these ICU beds far exceeded the few beds available and there was a constant battle between the internists and surgeons for them. Ultimately in the early 1970s additional surgical ICU space was built on the Diamond Head end of Kinau IV and a medical ICU on Kinau II.

The 1960s were dynamic and innovative for OHS. There were many mechanical and perfusion problems experienced by all teams and attending bed sessions at the thoracic surgical meetings was quite rewarding in solving these problems. Some of the problems discussed were: sucker design to avoid hemolysis, type of blood filters to use, postoperative headache and occasional confusion suspected of being due to silicone particles, optimum perfusion rates and temperatures. Also, there were two separate camps: one in favor of coronary perfusion, the other cardiac arrest. The Thoracic Surgery Journal changed its name to the Journal of Thoracic and Cardiovascular Surgery to reflect these changing interests and the articles covered many approaches to exposure, instruments and ideas for improving OHS, as well as pitfalls. It is interesting that during this decade there developed two main divisions of thoracic surgeons: the older group with a primary interest in lung diseases and cancer and the younger group just coming out of residencies more interested in open heart surgery. This finally resulted in the establishment of the Society of Thoracic Surgeons by the younger group with their own journal, The Annals of Thoracic Surgery. [Dr Brainard was a founding member of the society.—AM]

There were many foundations and individuals who made it possible for us to perform the first open heart surgery in Hawaii on Harumi in 1959. Financial assistance by the McInerny Foundation, Mary Castle Foundation, Hawaiian Electric Co, Hawaiian Telephone Co, Honolulu Gas, Hawaii Heart Association and the Medical Group Research Foundation as well as the Queen’s Auxiliary and Queen’s Hospital Board were ongoing and always generous. There were many individual contributors who gave their time and knowledge. To name a few: Lucy Douglas, Fran Batura, Gladys Tsugawa and the recovery room nurses, Thelma Jones, Bess Owens, Yoki Higa, blood bank personnel, Will Henderson, Katsuki Nakamoto, Kenneth Bermudes and many others to whom we are indebted and grateful.
Life in These Parts
ERT Confusion
The June 15 issue of the New England Journal published a Harvard Med School team report of a 46% increased risk of breast cancer in women ages 50 to 64 who were on hormones for 5 years.

Hawaii cancer researchers rose in defense of ERT despite the report. Brian Issell, director of the Cancer Research Center of Hawaii, said, "The risk is not all that great." He pointed out far more definitive results will come from the Women's Health Initiative which began two years ago with Hawaii as one of 40 study sites. Mari Nakashizuka, medical director of the Breast Health Center at Queen's says, "With all the beneficial effects we know for sure exist, I would continue to recommend hormone replacement."

Helen Petrovitch, U of Hawaii Med School researcher, explained that the new study was based on information from the ongoing Nurses Health Study of 121,700 women and was not definitive.

Researcher Richard Wasnick, head of Hawaii Osteoporosis Center, says certain groups have problems with osteoporosis: Female athletes who exercise so much that they stop menstruating; Asian-Americans with lactose intolerance and a lower consumption of dairy products; and young women with eating disorders. Dick says, generally two-thirds of women end up with osteoporosis while 30% of men develop osteoporosis as they age, especially in the 80s. A 5-minute bone densitometry will give a clear indication whether a life-style change or medication is appropriate.

David Curb, Honolulu Heart Program principal investigator, reports that a 30-year ongoing study suggests that Japanese-American men in Hawaii are the longest lived in the world. David adds that both Japanese and women in Hawaii have a longer life expectancy than anywhere else. The NIH has spent $25 million since 1965 on the long-term study of 8,000 Japanese-American men on Oahu.

Marian Melish, prof of pediatrics and chair of the medical school faculty senate, proposes a med school tuition increase from $5,800 a year to $10,800 to offset a $1.3 million medical school budget cut. The tuition increase for 200 med students will raise $1 million or more. Marian says, "While we recognize that a substantially increased tuition would be a hardship to our medical students, we felt that we needed to enhance our revenues in order to preserve the quality of the school or even the existence of the school."

Physician Moves
August—Radiologist Ryan Matsuo associated with Radiology Associates, Queens POB II, Ste 87. (Ryan will do angiography/interventional radiology at QMC dept of Radiology)

September—Pediatric surgeon Jennette Boakes in Shriners Hospitals; first full-time assistant chief of staff. Jennette will assist chief of staff Kent Reiner. OB-Gyn Jan T. Fujita joined her brother and OB-Gyn Jon S. Fujita at Aiea Medical Building, 99-128 Aiea Heights Drive, Suite 402. (With their dad Sidney Fujita, they make an OB-Gyn trio.)

Orthoped Gregory H. Chow (a member of Orthopedic Associates of Hawaii) opened his practice at Kapiolani Medical Center at Pali Momi, Suite 300, and at Queen's POB I, Suite 608.

Potpourri
Cartoon of two rhino discussing their horns: One rhino is saying to the other: "Well, I've had it, 15 years and, frankly, I don't consider it much of an aphrodisiac."

Snoozing Sickness
by David Rapaport (From Stitches, July-Aug '95)
Snoozing sickness is one of the most demoralizing problems that we physicians face. We all joke about nodding off during conferences as soon as the room is darkened for slides, but inflicting this on a patient is unacceptable.

Trying to stifle a yawn by doing it with mouth closed is a sneaky, noisy process.

The doctor might appear to be in deep concentration. Snoring destroys this illusion, of course.

Stage 2 is the related problem of snoozing, not to be confused with narcolepsy because it only lasts for seconds. It's accompanied by the head nodding and/or jerking back.

Stage 3 of snoozing sickness, actually falling out of the chair, is quite dangerous. Even this may have escaped notice, as I alerly pretended to be retrieving my pen from the floor.

In my case, I came to realize that yawns and snoozing occurred mostly in the deadly after­lunch siesta period, particularly following a large meal.

Re a fellow physician:
"I noted that over about 30 seconds, his eyes closed slowly down to narrow slits and his mouth drooped open as his head went back. This is known as the classic catching-flies pose."

A Glossary of Useful Research Phrases
(From Stitches, July-August 1995)
"It has long been known that..."
I didn't look up the original reference.

"A definite trend is evident."
These data are practically meaningless.

"...of great theoretical and practical importance."
Interesting to me.

"Time and time again."
I've seen two cases of this.

"Three of the samples were chosen for detailed study."
The others made no sense.

"While it has not been possible to provide definite answers to these questions..."
This experiment was unsuccessful, but I still hope to get it published.

"Typical results are shown."
The best results are shown.

"The most reliable results are those obtained by Jones."
He was my grad assistant.

"It is believed that..."
I think.

"It is generally believed that..."
A couple of other people think so too.

"Correct within an order of magnitude."
Wrong.

"A statistically oriented projection of the findings..."
A wild guess.

"It is clear that much additional work will be required before a complete understanding of the phenomenon is possible."
I don't understand it.

"A careful analysis of obtainable data...
These pages of notes were obliterated when I knocked over a glass of beer.

"A highly significant area for exploratory study..."
A totally useless topic suggested by my committee.

Conference Notes
"Arthritis Management in Managed Care Environment"
Visiting professor James McGuire from Stanford at QMC-UGH Friday morning conference Oct 6, 1995:

• RA Management & Cost
Stanford Clinic sees 17,000 patients per year.
Cost when treated by rheumatologist: $6,000 per year; primary care MD: $3,500 per year.
Cost breakdown:
- Hospitalization: highest
- Lab cost: next
- Drug cost
- Physician fee: lowest
  - Accuracy in diagnosis and early treatment lowers the cost
  - Rheumatologist sees-RA patients after two years of disease onset.
Primary care physician sees the earlier cases. Drug costs rise with MTX Rx
(i.e., the monitoring of the patient).
Lab tests: To repeat RF is unnecessary and raises the cost.

• Relative Incidence
Rheumatoid Arthritis (RA) and Osteoarthritis (OA): 5 million RA patients in the U.S.
versus 50 million OA patients.

• Diagnosis of RA patients
Early RA (Before 2 yrs)
Asymmetry (joint involvement)
x-ray: no erosions
RF negative
Fatigue, malaise, morning stiffness, etc.

Late RA
Symmetry of joint involvement
X-ray: erosions present
RF positive

• Prognosis RA
A function of monitoring ADL (activity of daily living). Mortality is a function of ADL.
Survival of RA patients depend on:
  • Earlier therapy
  • Ability to keep patients going

• Therapy
RA-Diagnosis specific Therapeutic Plan

  • Drug Therapy RA
  Primary care MD:
  - Motrin (At Stanford generic Motrin costs 2 cents each)
  - Plaquinal (No retinopathy when used less than 6 months)
  - Inject joints, eg, knees, shoulders

  • Rheumatologist: MTX
  Prednisone Low dose: less than 7.5 mg/d
  Complications of Prednisone Rx:
  - Infections 39.9%
  - GI bleed 20.1%
  - Fractures 19.6%
  - Cataracts 15.5%
  - Osteoporosis 1.3%
  - Endocrine 1.0%
  Prevention osteoporosis in RA pts on prednisone:
  - Calcium supplements: 1 gm calcium/d; cheese, milk, ice cream
  - Resitive exercises
  - Walking program
  Studies have shown that even with strict bed rest, walking 15 minutes/24 hr will reduce urinary calcium excretion.

• Therapy: OA-Diagnosis Specific Therapeutic Plan:

  - Physical Measures: weight loss, PT, exercise
  - Joint injections will reduce cost by delaying TJR (total joint replacement)
  - OA pts with hip or knee pain:
    Hip: greater trochanteric bursitis
    Knee: bursitis; ic, medial and lower knee.
  - re NSAIDs: Use propionic acids
    eg. Motrin 3-4 x /d
    Naprosyn 2-3 x /d
    Daypro: 1 x /d
  - Avoid feldene: it causes GI bleeding.
  - re gold and MTX therapy; gold Rx takes 3 months to work; 18 months maximum duration. MTX Rx: 2-3 weeks to work;
    use indefinitely.
  - re GI bleeding with prednisone Rx: only when prednisone used with NSAIDs.

Joke of the Month
(Asimov'S Laugh Again)
A senatorial candidate felt it would be best for his political future if he demonstrated an interest in Native Americans.
He, therefore, visited a Navajo tribe and launched into an impassioned speech. The Navajos listened and shouted with fervor, "Ungah! Ungah!"
The candidate wound up to a tremendous peroration and, amid the repeated enthusiastic cries of "Ungah," came to a perspiring and breathless halt.
The chief of the tribe stepped forward and said, "Mr Senator, we of the tribe are grateful for your interest in us and wish to bestow a gift on you. In yonder corral are the tribal horses. Go in and choose which one you wish to have as your own, but please, be careful not to step in the piles of ungah."

Paul Gebauer's Letter to the Editor
(June 8, 1995, extracts therefrom)
Social Security is a federal fiscal flop. Many years of Social Security benefits have produced the following unwanted by-products: secret burials, even murder for the monthly checks; a rash of holdups and robberies of mail delivery people in LA; and a new U.S. industry (nursing homes).
1934: Social security is born. Pneumonia, tuberculosis and hypertension cause most of the deaths. In church and community-operated old folks homes, vegetative and terminal states are not supported.
Today: The extension of longevity past 70 years (considered such a fruitions) that preservation of life regardless of quality, consequence, or cost has replaced those easy deaths in old folks homes. The old folks homes have been replaced by a huge industry—nursing homes (25 on Oahu) where the support of hopeless living is common and especially sad in cases of senile dementia. Its victims are certain to become so numerous that society will re-embrace and decriminalize euthanasia and possibly make it an available public service. Euthanasia would slash Medicare costs, rescue Social Security funds, and may bring back nonprofit old folks' homes.
No matter how you slice it, it's still baloney.

The ranks of states that do not have an optometric therapeutic law are growing thinner. Illinois and Nevada are the most recent states to allow optometrists to use some form of therapeutic medication. Five states remain without treatment laws—California, Hawaii, Massachusetts, New York, and Pennsylvania, however, the New York legislature passed a bill which remains unsigned on the governor's desk. The most recent Hawaii legislative session produced a bill which was deemed unacceptable by the optometric leadership.

I can't understand why people are frightened of new ideas. I am frightened of old ones.

A recent Illinois judicial ruling has the potential for wide impact on the independence of doctors. The court ruled that hospitals may not employ doctors for the purpose of seeing or treating patients. Specifically, the court ruled that the contract violated the Illinois Medical Practice Act which prohibits the corporate practice of medicine and the “fee-splitting" arrangement spelled out in the employment contract. Moreover, many hospitals are licensed as nonprofit corporations, and the law under which they are qualified does not include the practice of medicine under permitted activities.

The greater the cost of putting a plan into operation, the less chance it will be abandoned—even if it subsequently becomes irrelevant.

Despite aggressive promotion, corneal laser surgery has failed or barely succeeded in Italy, Korea and Spain. Canada has flourished, largely from the flow of Americans who make up about 80% of their clientele. Yet even in Canada, experts say the laser is not necessarily a gold mine because supplies and maintenance can run $75,000 to $100,000 each year. A recent study by Arthur D. Little, Inc, found that market projections have been grossly exaggerated. However, while the FDA has yet to approve the procedure, the medical industrial complex is tooling up. Using promotional seminars and 800 telephone numbers, more than 20 would-be laser surgery companies are busily luring doctors and investors. The bucksters are projecting $700 million in revenue with $171 million in profit by 1997. If one assumes the procedure will be approved, and the cost projected to be about $2,000 per eye, what will be the public acceptance? As Arthur D. Little, Inc, has determined, there are serious doubts.

I can remember when the air was clean and sex was dirty.

When photorefractive keratectomy (PKR) wins approval from the FDA, two states will possibly permit optometrists to perform the laser surgery. Idaho and Oklahoma have laws so liberal that optometrists can take laser courses and apparently become “comfortable" with the procedure. And perhaps you recall a few years back when naturopaths promoted a bill in the Hawaii State Legislature to allow them to perform surgery.

Managed care—health hazard for doctors and patients.

A Seattle doctor wrote to the JAMA complaining that managed care was affecting his blood pressure. His office nurse monitored his blood pressure every day for a month after his phone calls to insurance plans, and found that his pressure averaged 154/95. His BP was 139/80 during other activities. Attempting to refer a patient with numbness in her hands to a neurosurgeon, he waited 20 minutes only to be turned down. In another case, it took extraordinary effort to get a patient with a possible retinal detachment to an ophthalmologist rather than an optometrist.

Wise men learn by other's mistakes—fools by their own.

A patient suffered a transient ischemic attack and sought medical care at a hospital emergency room. His cardiologist referred the patient to a neurologist who determined that the patient had previously had TIAs, and he believed the patient was at great risk for having a major stroke in the near future. The patient signed a consent form, and a surgeon performed an angiogram. During the procedure the patient had a stroke and later sued the hospital, the neurologist, and the surgeon. The hospital was dismissed from the case, and the jury supported the neurologist, but ruled against the surgeon. Reason: the jury thought a reasonable person would have consented to the angiogram, but the patient was not capable of giving informed consent.

The bitterest wine is always drained from crushed ideals.

The attempt to eliminate health care fraud has generated a nationwide campaign by federal and state agencies. In the biggest medical fraud yet, National Medical Enterprises of Santa Monica, California, has paid out $370 million in fines and restitution. The executive who conceived the scheme pleaded guilty to masterminding $20 million in kickbacks, and named names. He got probation. However, one of the names, a PhD-licensed counselor, pleaded guilty to accepting payments for referrals, and got eight years in prison! The reason for punishing the doctor and excusing the supervisor was explained by the "fact that the doctor was betraying his professional duty." The direction now is for prosecutors to settle charges against corporations, and then go after individuals, especially doctors.

You get what you pay for. But if the government runs it, you may not get it at all.

Norway is a rich little country. The 4.3 million people enjoy a lucrative North Sea oil enterprise, a busy fishing industry, a large maritime fleet, and bounteous hydroelectric power. Yet their cradle-to-grave socialized medical system is in trouble. Its aging population has too few workers supporting too many sick people. Elective surgical procedures may be delayed six months or longer, especially cataracts and benign prostatic disease (catheters and bags).

Addenda

♀ 94% of all heart attack patients eventually leave the hospital alive and well.
♀ Real Kona coffee goes for almost $20/lb. All less expensive Kona coffees are blends, with perhaps as little as one Kona bean/lb.
♀ Why did Bob Dole cross the road? To get to the middle.

Aloha and keep the faith—
Twenty years ago, when commercial carriers abandoned the medical professional liability insurance market, MIEC was formed by northern California medical societies and a group of pioneering physicians. When this liability insurance crisis spread to Hawaii, the Hawaii Medical Association agreed that physicians should participate in their own professional liability insurance company. With HMA support and sponsorship, MIEC was licensed in Hawaii and has provided protection for its physicians since 1981.

In our twentieth anniversary year, MIEC covers 5,200 physicians in California, Alaska, Hawaii, Idaho and Nevada. Together with our wholly-owned subsidiary, Claremont Liability Insurance Company, we can insure the liabilities of individual doctors and organizations involved in today’s changing “managed care” environment.

MIEC has returned more than $115 million in premium credits to its policyholder owners. MIEC also has consistently earned A.M. Best Company’s top rating of A+ (Superior) for its financial stability.
“Hawaiian Trust, huh?”

“I spent a lot of time scoping out the best 401(K) for my company, and their Future Horizons plan got my vote.”

“You didn’t go for a big Mainland outfit, with all the sales flash?”

“No way.”

Wise choice. The Future Horizons 401(k) of Hawaiian Trust was developed specially to meet the retirement needs of Hawaii’s people. It’s flexible. Offers a variety of quality investments. And it’s designed to take care of the details while you and your company’s officers take care of business -- which makes it very, very cost effective.

The Future Horizons 401(k) is more tailored to Hawaii business than possibly any other 401(k) plan in the state. To find out more, call the Retirement Experts, at Hawaiian Trust. (808) 538-4400. Or toll-free from the Neighbor Islands, 1-800-272-7262.

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