At the Turn of the Century 1998 Yale-New Haven Hospital Annual Report

Yale-New Haven Hospital

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Yale-New Haven Hospital and its Contributions to Medicine

1813—Dr. Eli Ives presented the country’s first pediatric course at Yale Medical College
1826—General Hospital Society of Connecticut founded
1833—First permanent hospital building, called State Hospital, opened
1861—Hospital leased by U.S. Government during Civil War and renamed Knight United States Army General Hospital
1871—New Haven Dispensary opened as city’s first outpatient clinic
1873—The Connecticut Training School publishes the nation’s first nursing textbook, with three sections on delivery, child care and private nursing
1883—Board of Lady Visitors is organized
1884—Name of State Hospital is changed to New Haven Hospital
1896—Grace School of Nursing founded
1896—First X-ray in the U.S. produced by Arthur W. Wright at Yale
1908—First year New Haven Hospital allowed physicians to charge fees
1913—First formal agreement between Yale University School of Medicine and the General Hospital Society of CT
1914—First motorized ambulance purchased by New Haven Hospital
1926—All-day centennial of founding of General Hospital Society of Connecticut is held
1932—New Haven Hospital Clinic Building opened
1933—New Haven Hospital Volunteer Department became one of the first organized programs in the country
1942—First paid director of a hospital volunteer program in the country was at NHH
1942—First successful clinical use of penicillin in U.S.
1942—First use of chemotherapy as a cancer treatment
1945—Grace Hospital and New Haven Hospital merged to form Grace-New Haven Hospital
1946—First U.S. hospital to allow healthy newborns to stay in rooms with mothers
1947—Opened the Rheumatic Fever-Cardiac clinic—the nation’s first regional children’s heart center
1949—First artificial heart pump developed (now at the Smithsonian)
1949—First U.S. hospital to introduce natural childbirth as a general service for all obstetrical patients
1951—New Haven Dispensary formally merged with New Haven Hospital
1952—First cornea transplant in Connecticut
1952—Women’s Auxiliary of the Hospital created
1953—Memorial Unit (East Pavilion) opened
1954—First high energy radiation treatment unit in the state
1956—First in Connecticut to perform open heart surgery
1957—First medical facility in the world to electronically monitor a fetal heartbeat
1957—First peritoneal dialysis in CT
1958—First hemodialysis in CT
1958—First kidney biopsy in CT
1959—Discovery of melatonin
1960—First intensive care unit for newborns
1963—First linear accelerator in the state for cancer treatment (one of a half-dozen in the U.S.)
1964—First U.S. radiation therapy technology school opened at YNHH
1965—New affiliation agreement with Yale changed Grace-New Haven to Yale-New Haven Hospital
1966—Phrenic nerve pacemaker allowed quadriplegics to breathe without a respirator
1972—Started the first hospital-based comprehensive newborn screening program for sickle cell anemia in the U.S.
1967—First kidney transplant in Connecticut
1975—Lyme disease identified and named
1976—Hospital’s 150th anniversary celebrated
1976—First in state to treat cancer with photons and electrons
1978—First insulin infusion pump for diabetics
1982—“New Facility” (South Pavilion) opened
1982—Opened the first AIDS clinic in the state
1983—First liver transplant in Connecticut
1983—First in vitro fertilization birth in New England
1983—Yale New Haven Health System established
1984—First heart transplant in Connecticut
1984—First skin bank in New England
1985—Nation’s first fetal cardiovascular center
1985—First cochlear implant in CT
1985—First hospital-based inpatient child psychiatric unit in the state
1987—First hospital in Connecticut to use photopheresis
1988—First bone marrow transplant in Connecticut
1988—First heart-lung transplant in Connecticut
1988—First to transplant fetal tissue cells into patients with Parkinson’s disease
1989—First pancreas transplant in Connecticut
1990—First single lung transplant in Connecticut
1991—First in state to use Extracorporeal Membrane Oxygenation (ECMO), a sophisticated infant life support system
1991—First in state to use stereotactic radiosurgery to treat brain tumors
1992—First heart transplant from an unmatched donor in Connecticut
1993—First in state to use non-invasive stereotactic breast biopsy
1993—First full-service Children's Hospital in Connecticut, including first children’s emergency department
1994—First in state to use epidural endoscopy to diagnose back pain
1996—First in CT to do Battista heart reduction surgery
1997—Among first hospitals in the nation to use inhaled nitric oxide to treat newborns with pulmonary hypertension
1997—First documented heart transplants of adult twins, one in 1995, second in 1997
1998—Discharged the first patient in New England home with a left ventricular assist device implanted in his chest to await a heart transplant
2001—175th anniversary of YNHH
At the Turn of the Century

If you were to walk into New Haven Hospital in 1898, gas lights illuminated the rooms, the hallways and the streets. New Haven had already gained fame as the home of the first telephone switchboard, and New Haven Hospital was quick to install the new-fangled equipment. Other recent hospital improvements included “the purchase of 80 wire mattresses to replace the straw under beds and 48 folding bed trays for serving meals to those confined to their beds.”

In 1898, a doctor would travel by horse-and-buggy to visit his patient at home. The hospital’s horse-drawn ambulance responded to 253 calls that year. It would be five years before the first flight at Kitty Hawk and 10 years before Henry Ford would produce his model T. In 1998, 17,601 patients came to Yale-New Haven Hospital by ambulance and 123 patients by helicopter.

We stand at the turn of a new century. We talk of organ transplants, telemedicine and gene therapy. We rely on knowledge, drugs, tools and procedures which weren’t even conceived of at the turn of the last century. Medicine — the science and art of diagnosing, treating and preventing disease — has been around for centuries, but modern medicine really originated in the last 100 years.

One of the most significant technological inventions of the century — the computer — would not be in wide use until the 1980s. The Internet would become a household item in the 1990s. Today computers touch nearly every aspect of our daily lives — including transportation, communication, finance and health care.

Yale-New Haven Hospital’s 1998 Annual Report will look back at the progress of the past century — medical advances, new knowledge bases and changes in health care delivery. YNHH has made major contributions to the history of American medicine. This annual report is the first in a trilogy of reports that will outline the history of Yale-New Haven Hospital and bring us to a new millennium and the hospital’s 175th anniversary in 2001.
Surgery and Medicine, Then and Now

During the last century, most medical care was given at home. The most sophisticated medical technology (the stethoscope) could fit in the doctor's bag, and the most useful piece of equipment was a chair by the patient's bedside. Doctors relied on their five senses, experience and accumulated knowledge. Herbal medicine, bloodletting and purging were common practices.

But by the turn of the 20th century, all that changed. It became less acceptable to do surgery on the kitchen table. Private patients began to come to hospitals, which by then were practicing asepsis and accumulating precious resources — microscopes, x-ray machines, anesthesia and operating rooms.

Two world wars interrupted the century, bringing scientific and medical progress alongside death, destruction and the use of atomic energy. In World War I, plastic surgery developed to treat disfigured soldiers. More sub-specialities began to evolve and mature within the fields of medicine and surgery. After World War II, there was a tremendous investment in research and technology.

In 1949, New Haven Hospital's Dr. William Glenn and medical student William Sewell developed the first mechanical heart pump, one of the predecessors to open heart surgery, and later, to heart and other organ transplantation. In 1962, the first use of laparoscopic surgery was reported; by the 1980s, it was common.

At the turn of the last century, brain surgeons used a manual drill to create a burr-hole in the skull for a craniotomy. Today, we have the gamma knife which focuses 201 beams of concentrated radiation on brain tumors or blood vessel malformations, destroying them without making a single incision.

In 1953 James Watson and Francis Crick discovered the structure of DNA.

Progress was on a fast track. In 1990, the Human Genome Project was launched to locate the 100,000 human genes and read the entire genetic script by the year 2005. In 1991, Yale's Boyer Center for Molecular Medicine opened to research the molecular mechanisms of genetics, development, oncology and cardiobiology.

The era of molecular and cellular medicine, with new approaches to the screening, diagnosis, treatment and prevention of disease, has begun.

(Left) Operating theater in the early 1900s shows modern antiseptic practices. The 20th century brought rapid innovations in techniques and equipment. (Above): The YAG laser permitted noninvasive surgery of the retina. (Center left) Laser understanding also led to the development of fiberoptic technology, an important component of arthroscopic surgery. (Center right) Special cardiac catheterization laboratories allowed better diagnosis and treatment of heart disease. (Bottom left) In 1949, Dr. William Glenn, Dr. Paul Lurie and medical student William Sewell check a fitting on the mechanical heart pump. (Below right) Emergency medicine has become a specialty, with Yale-New Haven treating 75,246 patients last year.
Transporting People, Supplies and Information

"A hundred years ago, a doctor got into a buggy and traveled to a patient’s house. Since hospitals were relatively unsophisticated, he could do just as much in the home as he could in the hospital. But as hospitals acquired more technology, the vector turned. The patient got into the buggy and came to the hospital. We stayed in that model for a long time — the contact between the doctor and patient was in person, either in a hospital or an office.

The first big technological innovation was the telephone. Communication between the patient and the doctor changed. But the telephone had its limits, and good doctors knew when to say, 'That's a little confusing, you'd better meet me in the office or the emergency room.'

Then things really started to change. The Holter monitor began a quiet revolution into the use of telemetry. The personal computer was the next giant step.

Look at the video camera on top of the computer in my office — I can have videoconferences from here. This is the new field of telemedicine. We can actually follow the physiological status of a patient very thoroughly through minimally invasive, non-intrusive sensors, from home back to the hospital. If an emergency arises, we know where that patient is, and we can get urgent help to that victim. The so-called 'smart T-shirt' — a computer shirt woven with fiber optics and electrically conductive thread, may soon be able to monitor the health of patients at medical risk.

Telemedicine enables us to project our expertise and concern, which is now tightly fixed to our technical base here at the hospital, right into patients' homes. It's almost an electronic buggy making a house call and returning to the outreach of concern that characterized medicine a century ago."

Ronald C. Merrell, M.D.

(Left) From a horse to a helicopter, the speed of getting patients to the hospital has improved dramatically over the past 100 years. (Top) PYXIS, an automated pharmacy dispensing machine, delivers patient medication in the patient care units. (Bottom) In the 1980s, a manually assisted pneumatic tube system sent patient specimens to the laboratory for analysis. Today a computerized system delivers some 2,500 specimens a day in tubes which travel 22 feet per second through the hospital's walls. (Half Page) Moving data has evolved from the original use of the telephone in 1891 to the current use of computers for telemedicine.
VERTICAL LONG AXIS
Seeing Inside the Body

In 1895, German physicist Wilhelm Roentgen discovered the X-ray, launching a technological revolution in medicine. The X-ray was somewhat of a novelty at first, with people buying their own hand-held fluoroscopes, and shoe stores using them to see if shoes fit properly in the early 20th century.

The danger of over-exposure was not understood at first. Mr. Fred Hewitt, who sold X-ray equipment to New Haven Hospital when he worked for the Baker Electric Company of Hartford from 1908 to 1911, wrote, “I remember when in the spring of 1908, no X-rays were being taken at New Haven Hospital. The roentgenologist, Dr. Sprenger, had X-ray burns on his hands from fluoroscoping and had returned to Germany to try and cure them. He never came back.”

Gradually, radiology became a sophisticated medical specialty which provided an accurate, non-invasive method of diagnosing and treating illness.

X-rays also led the way to the development of other methods of imaging, including ultrasound, CT (Computed Tomography), PET (Positron Emission Tomography), SPECT (Single Photon Emission Computed Tomography) and MRI (Magnetic Resonance Imaging) which provide information on body function, metabolism and disease.

Without radiation, particularly the X-ray, procedures like angioplasty and other interventional cardiovascular procedures, image guided interventional procedures, radiosurgery, radiation therapy and nuclear medicine would not be possible.

Today, Yale-New Haven Hospital archives all CT and MRI scans with a new clinical imaging and information system which stores and transports images electronically over networks and the Internet. Predicts Dr. Bruce McClellan, YNHH chief of radiology, “The millennium will probably signal the end of the X-ray, as we know it. The X-ray of the past century is becoming the digital image of today.”

In the early part of this century, an X-ray was the first non-invasive way to see inside the human body. (Half page) By the latter part of the century, a gamma camera in YNHH’s cardiac nuclear imaging laboratory allowed doctors to see slices of a patient’s heart in a tomographic isotope image.
The 20th Century Armamentarium

The armamentarium — the tools and equipment of the physician and the hospital, including books, supplies, drugs and instruments — is far more complete at the end of this century than it was at the beginning.

First of all, laboratory medicine came into its own, providing information about the source of patients' illnesses and the effectiveness of various therapies. In 1900, the discovery of the main blood types would create the possibility of transfusion and blood storage. Today, laboratory medicine, one of YNHH's largest departments, includes chemistry, hematology, immunology, microbiology, TB and mycology, virology, the blood bank and pheresis and transfusion services.

The 20th century was the age of drugs. In 1899 aspirin was introduced on the market by Bayer of Germany, although it did not become the familiar tablet until about 1915. Before that time, the opiates or chewing on the bark of the willow tree or leaves of the meadowsweet plant were known to ease pain. Following its defeat in WWI, Germany surrendered its patent and aspirin lost its capital A. Oddly enough, aspirin, the most common over-the-counter medicine, became the quiet "magic bullet" of the 1980s. Its use had subsided in the 1970s with the introduction of non-aspirin painkillers, but doctors discovered that aspirin could inhibit the formation of blood clots — good news for people at risk for heart attacks and strokes.

Barbiturates were in use after 1905, followed by the discovery of insulin in 1921 and sulfa drugs in the 1930s. The most exciting breakthrough of the century, however, came with penicillin — discovered by Alexander Fleming in 1929 and first used on a patient at New Haven Hospital in 1942. Another national debut at New Haven Hospital that year was chemotherapy for cancer treatment.

In the post-war era, the pharmaceutical industry, which had begun to take shape between 1910 and 1920, was propelled into a new era. In rapid succession, antibiotics, anesthetics, cancer drugs, steroids, cardiac drugs, antidepressants and tranquilizers, birth control pills and thousands of other new medicines were produced to cure previously incurable diseases, prevent diseases, reduce the frequency and length of hospital stays and increase life expectancy. Advanced techniques such as recombinant DNA technology and genetic engineering promise to lead the way to the medicines of the next century.

The era of vaccines, which began in 1796 with the smallpox vaccine, accelerated in the 20th century with vaccines for viruses such as measles, mumps, rubella, polio, influenza and many other diseases. Viruses were also developed for bacterial infections such as tuberculosis, typhoid fever, cholera, diphtheria, whooping cough and tetanus. By 1998, many diseases which used to decimate entire families had become practically non-existent.

Testing and equipment blossomed, too. The first electrocardiogram (EKG) was performed in Chicago in 1913 and the first electroencephalogram (EEG) recorded human brain waves in 1929. Add to the list advances in the microscope, the invention of the electron microscope, the development of the cardiac pacemaker (in which New Haven's Dr. Glenn also played a key role), dialysis, in vitro fertilization, and countless other discoveries which improved the lives and health of many.

Yale-New Haven was a leader in Connecticut, becoming the first hospital in the state to perform a cornea transplant (1952) and open heart surgery (1956); to use high energy radiation treatment (1954) and a linear accelerator for cancer treatment (1961); to offer peritoneal dialysis (1957) and hemodialysis (1958); and to perform the first kidney biopsy (1958). But Yale-New Haven made major contributions to the world, as well, becoming the first medical facility in the world to electronically monitor a fetal heartbeat in 1957 and discover melatonin in 1959.

In addition to new technology and drugs, the 20th century brought increased public health measures (some as simple as the chlorination of water in 1902 and fluoridation of water in the 1960s), the isolation of Vitamin B in 1906 and increased understanding of the role of nutrients, cholesterol and other dietary issues. Bacteria and viruses were both mysteries until this century, when many of their related diseases can now be prevented or cured.

(Top row) A century of pharmaceutical development has resulted in effective drug therapies. (2nd row left) A modern electrocardiogram (EKG) strip compared to an early EKG testing laboratory at New Haven Hospital. (2nd row center) The first skin bank in New England opened at YNHH in 1984. Skin is preserved in liquid nitrogen for transplantation. (2nd row right) Modern laboratory instruments have become increasingly automated and computerized. (3rd row left) An academic medical center like YNHH serves as a bridge between laboratory research and clinical research. (3rd row middle) The 1942 medical record of the first patient to be treated with penicillin successfully still exists at YNHH. (3rd row right) Devices enhance the work of the surgeon. A stereotactic surgery frame holds the head in position during brain surgery. (Bottom row center) Although the microscope has been around for 400 years, the compound microscope did not evolve until 1900, the scanning electron microscope until the 1960s and the scanning tunneling microscope until the 1980s. (Bottom row right) Through today's modern laboratory techniques, molecular genetics can identify specific DNA or RNA sequences. (Left) Model of DNA double helix.
Aspirin 1899 anti-inflammatory
Insulin 1922 antidiabetic
Penicillin 1942 antibiotic
Propranolol 1967 antihypertensive
Cyclosporine 1983 immunosuppressant
Zidovudine 1987 antiretroviral
Clozapine 1989 antipsychotic
Erythropoietin 1989 blood modifier
Colfosceril 1990 lung surfactant
Childbirth and Children

In 1898, there were 47 births at New Haven Hospital — 21 males and 26 females, not counting 7 still births. Last year, 4,991 babies were born at Yale-New Haven Hospital.

The delivery and care of children has changed radically in this century, and Yale-New Haven Hospital helped lead the way. A century ago, the specialty of pediatrics did not even exist. Parents, grandparents and neighbors took care of sick children. One of the first physicians to show a genuine interest in the health of children was Dr. Eli Ives, a Yale professor and one of the hospital's founders, who began to lecture Yale medical students on the diseases of children. Treatments were simple — herbs, baths, leeching, poultices, plasters, fresh air and exercise.

The 20th century brought an unexpected scientific breakthrough with the pasteurization of milk. This was followed by other advances in public health and nutrition, vaccinations to prevent many childhood diseases and the control of children's infectious epidemics such as summer diarrhea, meningitis and typhoid.

Yale and New Haven Hospital created a pediatric department in 1920, and quickly became known for major contributions in the early advances of newborn nutrition, the elimination of rickets, intravenous therapy, and viral and bacterial infections in children. Yale-New Haven Hospital is often credited with beginning the pediatric movement which emphasized the unique developmental and psychosocial needs of sick children.

New Haven Hospital gained fame for its work in pediatric cardiology, opening the nation's first regional children's heart center in 1947. The '50s also brought one of the country's first cystic fibrosis programs to New Haven Hospital and significant contributions by the Yale Poliomyelitis Unit isolating the polio virus and developing vaccines.

Back to babies . . . A pioneer in family-centered maternity care, in the late 1940s, New Haven Hospital was featured in several national magazines for its innovations in childbirth. NHH was among the first American hospitals to offer natural childbirth, and in 1946, became the first hospital in the nation to initiate rooming-in, where mother and newborn were able to stay in the same room and be cared for by the same nurse.

Today, Yale-New Haven remains the hospital-of-choice for having a baby, from prenatal to postpartum care, from routine to high-risk pregnancies, from fertility problems to maternal special care.

Yale-New Haven Hospital was the first hospital in the nation to routinely test newborns for sickle cell disease in 1972, serving as a model for other hospitals. Important work in the detection of fetal abnormalities, fetal and neonatal surgery, and care of the critically ill newborn brought acclaim to Yale-New Haven. In 1960, YNHH opened the first newborn intensive care unit in the world, helping to save the lives of more and more premature infants and babies with congenital abnormalities or long-term problems. Today, YNHH is the site of several federally-designated centers for the care of children, including centers for the study of lung disease and learning disabilities, the Yale Cancer Center and the Children's Clinical Research Center. It was there, in the 1970s, that the pacemaker was developed to allow quadriplegics to breathe on their own and a portable pump to treat children with the blood disorder thalassemia. That same pump technology was later converted to the world's first insulin pump for diabetics at YNHH.

In the 1960s, subspecialization took hold in pediatrics — but primary care was not forgotten. The hospital, Yale, and the city health department embarked on a cooperative lead screening, reporting and prevention program. In 1975, a brand new Primary Care Center opened to meet basic health needs of area children and families, many of whom had no other source of health care.

Over the past century, YNHH has played a major role in the development of pediatric medicine culminating in 1993, with the opening of the Yale-New Haven Children's Hospital, which houses the region's most comprehensive pediatric services, including a separate pediatric entrance, emergency room and operating rooms, as well as newborn and maternity services.

Top left) Childbirth in the early 1900s represented a shift from the midwifery and home birthing rooms of the 1800s. (Top right) In the 1940s, New Haven Hospital pioneered the revolutionary concept of "Rooming-in." (Bottom left) Polio was a dreaded disease which paralyzed half of the 20,000 people who contracted it annually, including many who had to rely on an iron lung to breathe. (Bottom right) Today the Newborn Special Care Unit annually cares for 1,500 premature infants and babies with congenital abnormalities or long-term problems.

Contemporary "milk mustache" ads rely on celebrities to promote what has been exalted for years: milk helps build strong bodies, bones and teeth.

"Dr. Edith Jackson's work on Rooming-In has attracted the interest and attention of professional and lay persons throughout the world; visitors from many foreign lands as well as from this continent have streamed through the Rooming-In unit in order to learn how such arrangements in patient care might be applied in their own hospitals."
"I remember the kerosene lanterns which we took with us each night when going on duty from 7 p.m. to 7 a.m. There was a gas light over each bed, but the gas lights were put out at 9 each evening, after which time the lanterns were used by the nurses in making their rounds."

Mrs. Albert G. Lobb, graduate nurse, Connecticut Training School, 1903

A Century of Patient Care

"The art is that of nursing the sick — please mark — not nursing sickness."

Florence Nightingale

Nursing grew out of war, really. Up until the 1800s female family members or household servants followed the doctors’ orders and took care of patients at home. But the soldiers didn’t bring their families to war, so the Civil War, the Spanish-American War and the Crimean War, in particular, gave rise to the modern profession.

By the turn of the last century, nursing had already begun its migration from the home to the hospital. The growth of cities and changing social conditions, including increased numbers of immigrants, poverty, overcrowding, poor urban sanitation and a quickening industrial pace with occupational injuries, led to a need for peace-time nursing. Nurses were trained on the job and in the hospitals. The rapid expansion of hospitals spurred the growth of nurses’ training schools. In 1873, New Haven Hospital opened one of the nation’s first three nursing schools.

World War II brought nurses into positions of authority. Postwar shortages moved nursing, like medical care and hospitals, toward more specialization. New Haven Hospital was among the first to offer new services like intensive care, cardiac care, burn units and dialysis. The role of the allied health professional in the hospital developed — social workers, physical and occupational therapists, respiratory therapists, speech and language pathologists, pharmacists, radiation therapists, laboratory technicians and others.

Postwar nursing experienced growing pains. While there was a high demand for hospital nurses, they continued to experience the disadvantages of a gender-segregated work force. Hospital nurses had increased responsibilities, without increased compensation or authority about patient care decisions. The profession responded to these frustrations with revised forms of practice. Primary care nursing emphasized the need for continuity. Nursing also established career ladders to affirm the value of bedside nursing and developed advanced practice roles.

The 1980s brought more change as cost-containment pressures from the federal government, insurers and employers led to “reorganized” ways of providing patient care in hospitals. The role of the nurse was supplemented with patient care associates, environmental associates and business associates, in an effort to create a more efficient, patient focused system.
The scenes have all been shifted;
Our footsteps long erased
From the corridors of old,
That stone has now replaced.
Tho' millions have erected
Fine buildings on the site,
The peace of old neglected,
Has long since taken flight.
Still science is advancing
Each decade marks a stride
In Medicine's progression
O'er stepping-stones of pride.

Sarah W. Hilley, Connecticut Training School for Nurses, Class of 1915

Over the course of the last century, the hospital's buildings have changed, its address has changed, its size and its role have changed many times and in many ways. So too, have the numbers of patients and procedures, the policies, budgets and staff to accommodate changing times.


(Half page) In 1898, soldier-patients were housed in tents at New Haven Hospital. Nearly a century later, another tent protects a bone marrow patient requiring a sterile environment specially designed for patients with vulnerable immune systems.
GENERAL STATISTICS

Males. | Females. | Total.
--- | --- | ---
Remaining in hospital, Dec. 31, 1897 | 64 | 49 | 113
Admitted during 1898 | 814 | 356 | 1170

Total | 878 | 405 | 1283

Of this number there have been discharged—
Cured | 510 | 195 | 705
Improved | 165 | 100 | 265
Unimproved | 14 | 17 | 31
Died | 104 | 42 | 146
Not treated | 7 | 8 | 15

Total | 800 | 362 | 1162

Remaining under treatment, Dec. 31, 1898 | 78 | 43 | 121

MONTHLY ADMISSIONS.

From January 1, 1898, to December 31, 1898.

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AGE AT TIME OF ADMISSION.

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Total | 814 | 356 | 1170

NATIVITY OF PATIENTS ADMITTED.

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In addition to reports by the Superintendent, Board of Directors and Medical Board, the 1898 annual report contained interesting facts and figures about the hospital's expenses and about those it served. These are a few excerpts from the superintendent's account of expenditures in 1898: Flour, 8,505 lbs., $234.19; Bread and crackers, 47,210 lbs., $1,425.60; Eggs, 9,778 1/2 doz, $2,243.48; Medicines, $1,374.65; Barn and farm expenses, $198.34. Of the 1,283 treated in 1898, these were some of the patients' occupations: Blacksmith - 15; Bologna maker - 1; Cattle dealer - 1; Farmer - 23; Harness maker - 1; Iceman - 1; Oysterman - 1; Varnish maker - 1.
Our Growing Community

Remember the Maine! Those words may well have been spoken on the New Haven Green in 1898. Although there is no one alive today who remembers the Spanish-American War, its impact was felt at New Haven Hospital.

The Spanish-American War — which unofficially began with the sinking of the U.S.S. Maine in Havana Harbor — sent 202 soldiers to New Haven Hospital — 100 of them with typhoid. Although the unexpected soldier-patients strained its resources, the hospital responded immediately by renovating two isolation pavilions, converting the Gifford Chapel to a ward and erecting three large tents on the grounds, in addition to securing additional nurses from nearby hospitals and hiring two more house physicians.

"A grand example of the reserve power of the Hospital for great good was seen in the experience during the war in caring for the sick soldiers transferred from Camp Wickoff and Niantic. Almost without warning, the government called upon the Hospital to care for the men, and the ready and effective response proved the strength of the institution, as did the generous contributions declare the patriotism of our citizens. It was a constant pleasure to witness the happiness and uniform gratitude of the soldier sick, for their treatment and their experience here. They could not seem to say enough in praise of everything and every body. This illustrates the fact that there oft times needs a stranger to enter our institutions to teach us by comparisons he knows so well of, the excellence and value of our own."

The Report of the Board of the Lady Visitors, 1898 New Haven Hospital Annual Report

Yale-New Haven Hospital has been affected by many wars in this way. During the Civil War, all civilian patients were moved out of the hospital to 154 Whalley Avenue, and the U.S. government took over operation of New Haven Hospital, renaming it the Knight U.S. Army General Hospital. During World War I, Yale's 39th Hospital Unit developed the concept of the Mobile Surgical Unit. During World War II, New Haven Hospital became one of the first hospitals in the nation to plan and prepare fully for home defense.

Wars, epidemics, new buildings, affiliations, agreements, new discoveries, people over time, the evolution of health insurance, the passage of Medicare and Medicaid, competition, public and private efforts to "manage" health care costs — all of these have shaped the Yale-New Haven we now know.

One thing has not changed: the mission of Yale-New Haven Hospital — to take care of the sick and the poor, to teach and to train, to understand and apply new scientific knowledge and understanding and to care for the community.
Year-End Message

During the past year, two large photographs were put on permanent display in the main entrance of Yale-New Haven Hospital. One photograph shows the strong, graceful and enduring columns of the old Clinic Building and the other photograph shows Yale-New Haven Hospital care-givers at work. The etched inscriptions on each image — A legacy for caring . . A passion for healing — capture the tenor of YNHH’s 172-year history. 1998 was another year in which these themes were advanced at Yale-New Haven.

Although it was a time of continued transition and turmoil in the health care marketplace, for Yale-New Haven Hospital (YNH), Fiscal Year 1998 was a year of accomplishment. In addition to increased managed care and other marketplace forces, inflationary pressures related to the aging population, the cost of new medical technology, the need for investment in information technology and new delivery approaches added to the challenge of continuing to provide high quality services in an increasingly price-conscious market. However, sound planning and management and a continued commitment to measuring and demonstrating the quality of care and service provided resulted in strong clinical, operating, financial and marketplace performance.

The hospital recorded 40,262 discharges this year, a slight decrease from last year, but 200 cases above projections. At the same time, outpatient procedures increased, with some of the most notable growth in ambulatory cardiac and neurovascular procedures — replacing previous inpatient admissions. The Yale-New Haven Children’s Hospital volume increased slightly this year, compared to an 8.5 percent decrease in pediatric admissions statewide. Overall, YNHH maintained its position as the leading inpatient provider in Connecticut.

During Fiscal Year 1998, Yale-New Haven Hospital made substantial progress in its continued quest to differentiate its services on the basis of clinical and service quality, cost effectiveness and price competitiveness, and comprehensiveness and accessibility, as described in its business plan.

A Legacy for Caring

Despite the constraints of the marketplace, YNHH continued its commitment to advanced, high quality patient care — offering advanced and innovative patient services, enhancing key clinical programs, introducing new technology and supporting clinical recruitments. Highlights included a new neuroangiography suite in diagnostic imaging, the only one of its kind in North America; a

expanded bone marrow and stem cell transplantation program; and a new partial hospital program for children who need psychiatric day treatment.

In addition to clinical service enhancements, YNHH continued its efforts to provide patients and families with support and amenities to enhance their hospital stay and to reduce barriers to diagnostic and treatment services. Hours of operation were expanded for key diagnostic services such as cardiac stress testing, MRI and CT scans. YNHH also concentrated on improving the patient’s experience across the continuum from the hospital to rehabilitation centers, subacute and long term care facilities, assisted living and home care services. Key infrastructure enhancements included a new telephone system and the first phase of a 5-year project to renovate the 18-year-old South Pavilion.

A Passion for Healing

The quality of patient care and satisfaction with service continued to be driving forces behind both the business plan and day-to-day operation of the Hospital. Guided by patient satisfaction surveys, as well as traditional clinical quality assessment and improvement initiatives, YNHH has taken a multi-faceted approach to measuring, evaluating and communicating quality advantages at Yale-New Haven.

As a result, there were noticeable improvements in patient services throughout the institution, as well as recognition and awards by outside agencies who cited YNHH for its quality of care. For example, Marriott Award Healthcare Services presented the Hospital’s cardiology quality improvement council with the Excellence Award for Internal Service in streamlining patient care, decreasing length of stay and lowering readmission rates for cardiac and cardiothoracic surgery patients. YNHH won a first place national pharmacy award from Abbott Laboratories for its efforts in reducing the number of emergency department visits and admissions among adult asthma patients.

As the front door to the Hospital, the Emergency Department implemented its Caring Culture program to create a friendly and responsive environment, high-performance work teams and enhanced patient and family satisfaction.

In addition, the Center for Outcomes Research and Evaluation (CORE) continued to work to improve the quality, efficiency and effectiveness of patient care and achieved national recognition for leadership in several quality improvement initiatives that enhanced patient care.

A Legacy for Caring and A Passion for Healing are photo displays of the Corinthian columns of the Clinic Building and caregivers at work which greet visitors to Yale-New Haven Hospital. (L-R) Edwin C. Cadman, M.D., Chief of Staff; Julia M. McNamara, Chair of the Board from 1992 to 1998; Marna P. Borgstrom, Executive Vice President and COO; and Joseph A. Zaccagnino, President and CEO.
Improving Quality and Cost Effectiveness

Another important contributing factor to the hospital's quality of care efforts this year was the work of the Managing to the Market (MTM) initiative, part of the Hospital's ongoing programs to control costs while enhancing quality of care. Numerous contributions and recommendations from over 25 department-based, interdisciplinary MTM work teams helped streamline the process of patient care and eliminate non-value added costs.

Most importantly, from a patient's perspective, MTM produced significant service and quality improvements throughout the Hospital. MTM-related improvements ranged from shortening the length of time a patient has to wait for a mammography, to increasing the number of operating room cases that started on time, to faster turn-around time in obtaining virology laboratory test results, to expanding social work services to more areas of the Hospital.

After two years, MTM achieved more than $32 million in total savings, or a reduction of 7.4 percent from the Hospital's operating expense base. MTM also helped the Hospital save several million dollars by renegotiating contracts, consolidating vendors and introducing formularies and product standardization throughout the hospital. The MTM savings allowed the Hospital to absorb some inflationary increases, make budget-based adjustments and help support clinical program investments.

In addition to slowing the rate of growth of YNHH's expenses and prices, MTM helped contribute to the organization's positive financial performance this year. YNHH's FY 1998 net operating gain was $14.1 million and non-operating income totaled $18.2 million.

The hospital's positive financial performance was achieved, despite decreased payments from managed care companies and government payers and increasing costs associated with expensive implantable devices in radiology and in the operating rooms. For example, the single largest unexpected nonsalary expense in clinical care in FY 1998 was an additional $6 million cost (almost 1.5 percent of the hospital's operating budget) for new cardiac technology which did not even exist five years ago. In spite of these costs and reimbursement challenges, a continued organization-wide focus on budget planning, re-allocation and management produced strong financial performance, which will allow Yale-New Haven to reinvest these funds in future capital needs and services necessary to continue to improve and advance patient care.
The Yale-New Haven Community
A key factor in differentiating YNHH is the quality and breadth of its graduate medical education programs, as well as other allied health career educational opportunities. YNHH continued its collaborative work with the Yale University School of Medicine, serving as its primary teaching hospital and the site of important clinical research.

In addition to its commitment to patient care, medical education and clinical research, YNHH continued to serve and invest in the greater New Haven community and remained a leading public health advocate throughout the state. In 1998, YNHH provided an estimated $27 million in free or uncompensated care, and participated in numerous community activities, housing initiatives, school-based health centers and partnerships.

YNHH supported the Hill Housing Rehabilitation Project, a multi-institutional six million dollar collaboration to renovate 65 housing units in the Hospital’s neighborhood. YNHH launched its first middle school partnerships in New Haven when it opened school-based health centers at the Sheridan Academy for Excellence and the Walsh Middle School.

The community publicly recognized the Hospital’s ongoing commitment. YNHH received the New Haven Public Education Fund’s School/Business Partnership of the Year Award for expanding its outreach and programming to support students, staff and the community, at a time when hospitals and other organizations are downsizing. The NAACP presented YNHH with its annual Health Award in recognition of the significant resources (a level unmatched by any hospital in the region) YNHH devotes to outpatient care for people on Medicaid or with no insurance. The NAACP also acknowledged YNHH’s efforts to address the unique needs of the New Haven community, particularly those health issues that disproportionately impact African Americans.

During Fiscal Year 1998, YNHH participated in numerous community activities, including the International Festival for Arts and Ideas and the NAACP health fair, provided leadership for the Greater New Haven Partnership for a Healthy Community and contributed $132,800 through employee donations to the annual United Way campaign.

A contributing factor to YNHH’s overall success in 1998 was its on-going support of the Yale New Haven Health System (YNHHS), which helped expand geographic and clinical service access, broaden the care continuum, provide more access to managed care contracts and increase market share.

The evolution of YNHHS has facilitated operating efficiencies, infrastructure improvements and physician network development for YNHH.

At the Turn of the Century
Despite the pressures within health care, Yale-New Haven Hospital demonstrated remarkable stability last year — financially, operationally and philosophically. This year’s contributions toward our “legacy for caring” and “passion for excellence,” would not have been possible without the guidance and support of the Board of Trustees and clinical and administrative leadership, as well as the hard work, dedication and compassionate care provided by our extraordinary Hospital staff.

Within the larger context of the Yale New Haven Health System, YNHH continued its tradition of excellence and commitment to its mission, as exemplified by the pillars of the old Clinic Building and care-givers at work, which hang in the hospital entrance. As it approaches the turn of the century, in its 172nd year of operation, YNHH remains steadfast in its commitment to its founding missions of patient care, teaching, research and service to the community.
Giving, Then and Now

Two things have remained constant for more than a century — the Hospital’s need for philanthropic support to achieve its mission and the generosity of friends who have continually supplied that support. From Dr. Jonathan Knight, a founder of the Hospital, who pledged a portion of his income as support for the fledgling institution, to today’s multitude of donors, the dedication to assuring that Yale-New Haven can continue to provide for the health and medical needs of the community has been unwavering.

The amounts involved have grown as the needs have increased. In 1826, Dr. Knight and three colleagues each pledged a yearly amount of the greater of 10 percent of his professional income or $100. Today, millions of dollars are needed, and millions are raised. Gifts of all sizes and types make up the total required to achieve what is just as important today as in Dr. Knight’s time — the finest, most advanced health care possible delivered in a warm and caring environment.

We thank all who have kept the tradition of philanthropy alive and strong. With your help, it will continue to flourish in the next century as it has in the past.

Frank Estes, LL.B., Director of Planned Giving
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