

Several years ago the OHSU News ran a supplement describing the results of more than 50 years of exemplary clinical care at the Doernbecher Memorial Hospital for Children. This issue revisits the subject of caring for children at the OHSU. It presents the extraordinary range of outstanding skills and capabilities in Doernbecher Hospital and in the rest of the OHSU that are brought to bear in the service of children from all over Oregon and the Northwest. It highlights the special talents in the Department of Pediatrics; the Crippled Children's Division; the schools of dentistry, medicine and nursing; and a multitude of other university units such as those for genetics, psychiatry, emergency care and poison control. It describes work in units related to disorders of the eye, kidney, heart, nervous system, immune system, intestinal tract, joints, muscles, mouth and teeth, to name but a few. Other examples of outstanding resources available to children on Marquam Hill are the Shriners Hospital for Crippled Children and Portland Center for Hearing and Speech. Add to all that a vigorous research program, and you have a genuinely superlative center for pediatric care.

I stand more enthusiastically than ever behind the words I wrote last time: Arthur Miller, the playwright, once published a short story entitled, as I recall, "Children Are the Meaning of This Life." And so they are. They symbolize different aspects of life for each of us — for some, the renewal of the species; for some, a new chance to bring good to the world; for some, a sense of wonder at the beauty of the universe. Because of the special role of the child, illness of a child takes on a profound meaning. To those who expect fairness from the universe, a child's illness is the unfairness of all. Accordingly, a medical facility devoted to the care of sick children deserves great attention and unlimited support.

Leonard Laster, M.D.
President, OHSU

MARCH 1986



FOCUS ON
CHILDREN

THE OREGON HEALTH SCIENCES UNIVERSITY

NEWS

OHSU pediatric care: the common and complex

One child is healthy from birth, laughs readily and later learns to climb the tallest tree. Another is born with a physical or mental handicap that will require lifelong care. A third occasionally has an injury, gets the flu or needs some cavities filled. For yet another, the laughter stops when cancer comes, requiring the most sophisticated medical care available.

For all of these children, the Oregon Health Sciences University provides the health care they need.

And whether they come for routine checkups or have the most serious illness, children who receive care at the OHSU are fortunate indeed. They have the benefit of hundreds of specialized physicians, nurses and others in the university's inpatient units, clinics and laboratories. These health professionals give children the latest treatments, tempered with compassion.

Resources surround hospital

The range of resources for children on Marquam Hill is staggering. The OHSU children's health care system extends throughout University Hospital and other parts of the university campus. It includes unique treatment and diagnostic facilities such as laboratories with a nationwide reputation. (Many of these services and specialized programs are described in stories elsewhere in this issue.)

At the heart of pediatrics on campus — and close to the hearts of Oregonians for 60 years — is the Doernbecher Memorial Hospital for Children, Oregon's comprehensive children's hospital. The dedicated staff members of Doernbecher represent pediatric medical and surgical expertise not available in most hospitals in Oregon and some surrounding states. Doernbecher's inpatient facility occupies the top 2½ floors of University Hospital.

For children who don't need to go to

the hospital, the OHSU's Pediatric Clinic provides care on an outpatient basis from birth to adulthood. Its 20 clinics include general pediatrics and specialties for a number of different problems or no problem at all: the Well-Baby Clinic, for instance, is dedicated to keeping already healthy children on the right road.

In addition to the pediatric outpatient clinic, pediatric services are available at dozens of other specialized university facilities and programs, such as the Emergency Department, Oregon Poison Control and Drug Information Center, Child and Adolescent Psychiatry Clinic, Elks Children's Eye Clinic, Family Practice Center, Regional Hemophilia Diagnostic and Treatment Center, and Regional Cystic Fibrosis Center.

The OHSU's Crippled Children's Division, the statewide resource for handicapped children, provides treatment as well as diagnostic, rehabilitative and counseling services to thousands of children every year.

The university includes dental clinics located at the School of Dentistry and in University Hospital, which provide children with preventive care, oral health education, regular dental care or specialized treatment. These clinics also provide dental care to patients with emotional, medical or physical handicaps.

Additional resources on Marquam Hill are the Portland Center for Hearing and Speech (an affiliated program of the OHSU's Department of Otolaryngology), the Shriners Hospital for Crippled Children and the Ronald McDonald House (providing housing at minimal cost for families of hospitalized children).

Common to every clinic, every caregiver, every sick child on the hill is the availability of the full range of specialists.

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Facts about university children's care

Every year thousands of patients come to the Oregon Health Sciences University, referred by their physicians or drawn by the university's reputation. They come from every county in Oregon and from surrounding states.

Doernbecher Memorial Hospital for Children (the pediatric component of University Hospital) has 93 beds, including 49 general beds and 44 intensive-care and intermediate-care nursery beds.

More than 3,100 patients (ages 0-19; at least 2,700 are under 16) are admitted yearly as inpatients, making Doernbecher the leading hospital in the state for pediatric admissions. The Neonatal Intensive Care Center and Pediatric In-

tensive Care Unit cared for more than 700 premature infants and critically ill infants and children last year.

Another 750 patients yearly are children admitted for day surgery, and 3,700 children are treated in the Outpatient Clinic (18,500 annual visits).

Last year more than 2,500 children visited the Elks Children's Eye Clinic. The Poison Control Drug and Information Center handled 42,000 calls; 83 percent of poisonings involved children under 17 years of age. About 1,500 children a year receive treatment at the dental clinics.

The Crippled Children's Division currently serves 8,500 patients under the age of 21 (50,000 annual visits).



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The OHSU includes the schools of Dentistry, Medicine and Nursing; the Institute for Advanced Biomedical Research; University Hospital, including Doernbecher Memorial Hospital for Children; Outpatient Clinics; and the Crippled Children's Division.

Tiny hearts repaired with and without surgery

Serious disease in children gets serious attention at the Oregon Health Sciences University. Pediatric cardiologists use high skill, technologically advanced facilities and more.

What more? "Sympathetic and concerned care. It's an important part of helping," says Dr. Cecile Sunderland, professor of pediatrics and director of pediatric cardiology. She and the other four members of the pediatric cardiology team have applied their skill and concern to help hundreds of children grow up normal and healthy — including some children who, a few years ago, would have had severe disabilities or might not have grown up at all.

Eight of every 1,000 babies born have heart defects. Of the 320-400 born yearly in Oregon with heart problems, approximately three-fourths receive treatment at the Oregon Health Sciences University.

Children with heart problems get a double dose of expertise when they come to the attention of the OHSU, because services of University Hospital and the Crippled Children's Division are brought together to diagnose and treat their disease. Pediatric cardiologists in Doernbecher Children's Hospital are trained in specialties not available in other Oregon hospitals. They call upon University Hospital's cardiac surgeons when a child needs cardiac surgery.

Pediatric cardiac specialists can evaluate heart rhythms, look at the heart's valves in action, watch the way blood travels from chamber to chamber. The university's "miracle children" include ones who have received pacemaker therapy, sophisticated diagnostic techniques, open-heart surgery. Doernbecher's small

patients receive 24-hour-a-day attention from specialized nurses and resident physicians.

Since the 1950s, OHSU pediatric cardiologists and cardiac surgeons have led the way in early treatment. For example, the first open-heart surgery in Oregon was performed on a five-year-old child in 1958 at the OHSU. Later, university specialists pioneered the total correction in infancy of a common "blue baby" heart defect, tetralogy of Fallot. More than 350 total corrections have been done at the university since 1964, when OHSU surgeons pioneered the concept and the technique. Now more institutions are following the OHSU's lead.

More recently, pediatric cardiologists have been using a balloon so tiny it can be inflated within a young patient's heart valve or aorta to correct certain abnormalities without open-heart surgery. OHSU cardiologists are the only ones in Oregon with the technology and support service to use balloon catheters to dilate infant heart valves and recurrent narrowings of the aorta (coarctation).

Doernbecher and University Hospital staff members have at their disposal the most up-to-date methods of making a decisive diagnosis. They use echocardiography, an ultrasound of the heart. With a two-dimensional picture on a television-like screen, blood flow and speed can be calculated from outside the body. A new echocardiographic machine, purchased in part with money raised by the Doernbecher Hospital telethon, has improved diagnostic capabilities for premature infants, newborns and children two years or younger. Because echocardiography does not require surgery, it allows cardiologists



to study abnormalities and rhythm disturbances in the unborn child.

This safe, noninvasive diagnostic technique can often be used to avoid more invasive methods of evaluation. But when physicians need certain precise kinds of information, cardiac catheterization (inserting a tube into the heart) and cardiac angiography (X-ray after injecting an opaque solution) let them detect abnormalities and observe the workings of a tiny heart and blood vessels.

Just recently, the team introduced the

use of electrophysiology techniques to electronically map cardiac conduction defects in children, aiding in surgical correction of cardiac arrhythmias and post-operative conditions.

Newborns from throughout the region come to Doernbecher for these out-of-the-ordinary procedures. But for many children, cardiac care will come to them at outlying clinics held in or near their own communities.

The children of Oregon deserve that high level of technical and personal care.

University's research, teaching back up pediatric treatment

(continued from page 1)

Since no one doctor can be expected to be up-to-date in every area of practice, specialists provide the quality of care parents want for their children.

A record of leadership

"The university has the highest level of comprehensive pediatric care available in the state," says Dr. Robert Neerhout, professor and chairman of pediatrics. "It's that simple."

Neerhout backs up that statement with a long list of medical innovations devised by staff or introduced to the Pacific North-

west in the pediatric wards and clinics of the OHSU.

The innovations in caring for children began early at the Oregon Health Sciences University, and they continue to come from experts working in all pediatric subspecialty areas. They include:

- the Northwest's first nursery for premature infants, established in 1951 and since developed into the Neonatal Intensive Care Center, the state's largest
- Oregon's only critical-care transport program that has a trained team and complete life support for children older than infants, bringing them to Doern-

becher for care in the state's major Pediatric Intensive Care Unit.

- a nationally recognized pediatric cardiology team of five specialists, making the university the regional referral center for children with heart defects
- an oncology team offering the latest treatments and participating since 1977 in the Children's Cancer Study Group, a national effort to find new cancer cures
- Oregon's only pediatric immunology section, which helps children born with deficiencies of the immune system
- a nephrology team that pioneers the latest treatments for children with kidney

disease, including the state's only pediatric kidney dialysis and transplant program

- a Pediatric Metabolic Laboratory and staff breaking new ground in the study of metabolic disorders
- a nationally recognized neonatology program that pioneered studies on infant nutrition and found new ways to intravenously feed newborns as small as one pound, nine ounces
- the state's only full-time pediatric urologist, allowing the university to offer reconstructive surgeries and specialized urological care
- Oregon's only Cystic Fibrosis Center, serving 200 children with CF and other lung diseases
- the first program in the state to deal with children who have gastrointestinal and liver disorders
- ophthalmologists who treat children's special eye problems, and are now leading a national study to prevent blindness in children born prematurely.

If the list of specialties is long, the list of conditions they treat is even longer. (See box at left.)

The people providing pediatric care at the OHSU are also training the next generation of health professionals; as educators, they must be at the forefront of medical advances. The university's faculty members conduct research into the causes, treatment and cures of diseases that afflict children. Because research provides early access to the newest advances in health care, clinicians at the university are able to apply the latest treatment discoveries for their young patients.

Thus, the Oregon Health Sciences University, as the state's biomedical research and educational institution, is advancing the knowledge of pediatric care. The concentration of patients receiving treatment in specialty areas such as cancer, kidney transplant and heart programs is making it possible to redraw the borders of science, pushing back the boundaries of pediatric understanding and finding new cures for what ails children.

Specialty care, special cases

The Oregon Health Sciences University treats everything from allergies to urological problems — the usual and the unusual. Fifty pediatric medical and surgical physicians offer wellness care, primary care, treatment and patient counseling. Hundreds of nurses, dozens of pediatric residents and more than 100 volunteer pediatricians are augmented by the university's complement of other physicians, therapists, dietitians and technicians.

Among the many problems that may face children — diseases and conditions that can be treated by university specialists — are the following:

allergies	epilepsy	nutritional problems
asthma	eye problems	orthodontia
autism	growth disorders	orthopedic problems
behavioral problems	hearing problems	paralytic disorders
birth defects	heart defects	poisoning and drug overdose
cancer	hemophilia	prematurity
cerebral palsy	hyperactivity	psychiatric disorders
child abuse	hypertension	psychological disorders
cleft lip or palate	infectious diseases	rheumatoid arthritis
cystic fibrosis	(including common childhood diseases)	scoliosis
dental needs	injuries	SIDS (sudden infant death syndrome)
depression	intestinal problems	skin problems
developmental abnormalities	kidney diseases	sleeping disorders
diabetes	learning disorders	speech and language disorders
drug abuse (including alcohol)	liver diseases	spina bifida
ear, nose and throat conditions	lung disorders	teenage pregnancy
eating disorders	mental retardation	urological disorders
	metabolic disorders	
	muscle disorders	

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Most of the children pictured in this issue are healthy children and are not associated with the stories their photographs accompany.

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Doernbecher: Sixty years of caring for your children

This year, Doernbecher Memorial Hospital for Children celebrates 60 years of innovative caring for Northwest families. Since the doors opened in 1926, generations of children have found aid and comfort at Doernbecher.

A gift to the people of Oregon from the estate of a prominent Portland manufacturer, Doernbecher Hospital was the first university-affiliated children's hospital in the Northwest. Today, the hospital enjoys a national reputation for much of its work in providing pediatric care to the region.

Frank S. Doernbecher, a Portland furniture manufacturer, set aside \$200,000 in his estate to be used by his children "for

the benefit of the people of the state of Oregon." The project eventually chosen to fulfill Doernbecher's wish was a special hospital devoted to the complicated medical and surgical problems of children.

To raise the additional funds needed to build the hospital, a group of citizens formed the Doernbecher Children's Hospital Guild. They raised more than \$100,000 to keep the project alive, and their successors continue to help support Doernbecher today.

Doernbecher opened in 1926 with a waiting list of patients, 80 beds and a staff of five volunteer physicians.

Dr. Joseph B. Bilderback was the first

chief of the Doernbecher staff. "Dr. Bill" had arrived in Portland in 1909 as the first pediatrician in the Northwest. He was a founder of the American Academy of Pediatrics, one of its early presidents and head of pediatrics at the University of Oregon Medical School (now the Oregon Health Sciences University).

Bilderback died in 1969 at the age of 99, 19 years after he retired as chief of staff. Doernbecher has had just three medical directors since he left: Dr. Allen Hill, Dr. Richard Olmsted and, currently, Dr. Robert Neerhout.

Even in its earliest years, Doernbecher was busy, and the commitment from its small, volunteer staff was great. "I can truthfully say that some of the best days of my life were at Doernbecher," wrote Clayton Brandt, one of Doernbecher's first patients. "Please pass on my appreciation to the current staff that is turning things right-side-up for sick kids. Their work is never forgotten." The hospital's strong commitment continues today, and continues to be reflected in the positive response of patients. A young kidney transplant patient, Cory Fields, recently spent his "best birthday ever" at Doernbecher Hospital.

Today, patients come to Doernbecher from all over the state of Oregon as well as adjacent states and Alaska. The close relationship between Doernbecher and regional health care providers has helped to establish a quality health care network sensitive to the needs of children throughout the Northwest.

Sixty years after Frank S. Doernbecher's special wish materialized, his dream remains strong. The priority of the health care specialists at Doernbecher has remained the same: making children well.

Although the dream is the same, many things have changed at the hospital over the years.

In 1956, the Doernbecher Memorial Hospital for Children expanded to 113 beds and relocated to the upper 2½ floors of the newly completed south building of University Hospital.

Through the years, patient care programs also continued to expand — some representing the only specialty expertise available in the state of Oregon.

During the 1970s, as the emphasis in pediatrics shifted toward subspecialties, Doernbecher added a number of subspecialists to deal with specific problems. Pediatric nephrologists care for children with kidney problems; pediatric cardiologists treat children's heart defects; and many other subspecialists treat other children's conditions.

Some of Doernbecher's changes reflect changes in the patients the hospital cares for. In the early years, children were admitted most frequently for tonsillectomies and infectious diseases such as polio and rheumatic fever. Today, up to one-third of

the children in Doernbecher are admitted with cancer — about half of these with leukemia, the rest with various types of tumors. With a larger percentage of the patients being acutely ill, intensive care units are more important than they were 30 years ago.

Doernbecher's broad scope of clinical care, backed up by the Health Sciences University's technology and research, makes it the leading pediatric hospital in the state, says David Witter, interim director of University Hospital, of which Doernbecher is a vital part. It's not just a small hospital with small patients in small beds, he observes. Doernbecher patients benefit from the extensive laboratories,

The tender attention of each nurse, physician and other professional goes a long way toward restoring the health of a tiny infant or a sick teenager.

surgeries and other diagnostic and treatment services in other parts of the OHSU. Thus, Witter says, Doernbecher is well situated not only to provide every kind of care a child could need, but also to promote a close and cooperative relationship with faculty and staff throughout the university.

The high-technology equipment available and sophisticated treatment given to Doernbecher's children are only part of their care, however. From the children's play therapy program to the specially age-oriented treatment plans for each age level, Doernbecher provides what sick children of the Northwest need. And the tender attention of each nurse, physician and other professional goes a long way toward restoring the health of a tiny infant or a sick teenager.

Doernbecher combines tenderness and technology — the best of both worlds.



OHSU doctors and nurses team up against childhood cancer

Cancer knows no age.

Every year some 85 Oregonians younger than 21 are diagnosed with the disease. Most of them will receive care at some point in their lives at Doernbecher Memorial Hospital for Children, the special children's unit within University Hospital. Most of them, too, will benefit from the cancer programs that have established the OHSU as a major center for cancer research and treatment.

The seven-year-old girl sitting on the exam table in Dr. Derry Ridgway's office would rather think about ice cream cones or Easter egg hunts than about the regular leukemia checkup she is going to receive. Fortunately, the time she spends in Ridgway's office might save her life. Ridgway, an assistant professor of pediatrics, is a member of a research group called the Children's Cancer Study Group (CCSG), a consortium of specialists at 30 health centers around the country dedicated to re-

searching and treating childhood cancer. The group's research is supported by the National Cancer Institute; the OHSU has belonged to the CCSG since 1977 and is Oregon's only member health center.

Research groups like the CCSG make a world of difference to children who have cancer because much of the progress against this disease has been made through clinical research, trials designed to find the optimal combination of surgery, chemotherapy and radiation therapy. Members of the CCSG conduct these trials simultaneously throughout the country so promising treatments can quickly become part of standard care. Results are analyzed continually and reported back to participating health centers.

CCSG research has contributed significantly to improved survival rates for children with many types of cancer. For example, 20 years ago fewer than 10 percent of children with leukemia survived;

today nearly two-thirds of the children with this disease are cured.

Still, these odds are not good enough for OHSU pediatric oncologists. Ridgway and Drs. Robert Neerhout, professor and chairman of pediatrics, and Lawrence Wolff, associate professor of pediatrics, hope to improve the futures of more children with cancer. They draw on the diverse resources of many OHSU subspecialties including genetics, pediatric surgery, pediatric urology, neurosurgery, radiation oncology, ophthalmology, orthopedics and hematopathology.

"We also work very closely with pediatricians and other physicians around the state to see that children have access to the most advanced therapies available," says Neerhout, head of the pediatric oncology team. "We have nearly all the available investigational drugs as well as the latest information about exactly which combination of treatments offers the best

chance of success. Physicians in the community are particularly important to the success of cancer therapy. They use our program to become more knowledgeable about diagnosing cancer at the earliest, most curable stage."

In addition, says Neerhout, community physicians help administer some of the chemotherapy in their home communities and are the ones providing continuity of care as the children grow up. Modern cancer care is very much a team effort, and the community physician is an integral member of the team.

Because the disease itself is only part of any cancer patient's troubles, Doernbecher's child life specialists are available to help young patients and their families manage the stress of cancer and its treatment. Through their efforts, and the work of dozens of other cancer specialists at the OHSU, pediatric cancer patients have a better chance of just being children.

Dentistry — cavities, cleaning, complicated cases

Pediatric dentistry, or dentistry just for children, is no small thing at the Oregon Health Sciences University. It plays an important part in education and treatment programs at the School of Dentistry, University Hospital and the Crippled Children's Division.

It also plays an important part in the lives of children. A youngster with physical and other handicaps needs all the help there is just to keep on smiling. For some, this kind of help is only available here.

Children who have complex dental problems are referred to the School of Dentistry by private dentists. Other child dental patients are found at Doernbecher Memorial Hospital for Children. Add to these the children who, although they are not hospitalized, have a combination of ailments and ongoing medications that may complicate their dental care. All of these children need highly specialized dental treatment.

There are others as well. The Crippled Children's Division at the OHSU provides dental care for certain children under its service umbrella. Children from Providence Child Care Center also come to the OHSU.

At University Hospital, the Hospital Dental Service is a further resource for young patients. Some need dental care in an operating-room setting with general anesthesia. Children who are developmentally delayed, who have behavior disturbances or who are very young may require this extraordinary care.

Even children with garden-variety dental problems come to the OHSU. These 1,500 children make up the roster of

teaching cases for the dental school.

Junior and senior dental students work with these child patients in the Pediatric Dentistry Clinic. This is part of a student's clinical training and the work is done under supervision of pediatric dentists. Students treat patients who have cavities and other problems commonly seen in a general dental practice.

Dental hygiene students see children in the Dental Hygiene Clinic. Under supervision, these students clean youngsters' teeth, apply fluoride and sealants and teach oral hygiene techniques.

Other teaching cases are seen at the pediatric dentistry residency program. Graduate dentists — many from private practices — join this program to specialize in pediatric dentistry. They carry out a child's complete routine dental care for approximately 18 months, or as long as the child has a dental condition that lends itself to ongoing teaching.

There is a resident program in orthodontics, but this clinic has a long waiting list and enrolls new patients only once a year.

What qualifies children to receive care at the dental school? First, the child must have the kind of problems that students or residents need to learn about.

Second, a child must have parents who are able to devote time to the child's treatment. Treatments take longer than they would in private practice, because student work is both supervised and checked by faculty members at the School of Dentistry. The treatment sessions are part of a student's "class" or clinic hours. Because of this, appointments often can't be adjusted to fit the

child's schedule of lessons or activities.

Work is accomplished at reduced prices, but is not free. Unless the patient has insurance or a welfare medical card, cash payments are made at the beginning of the clinic period. For the pediatric dentistry residency program, 20 percent of the total treatment cost is due at the first treatment and the remainder paid in six months.

Despite these stringent requirements, many parents find this a workable arrangement. Some are motivated by the savings factor. Others want to help students prepare for their professional careers. In either case, parents know that their children are receiving care in a sys-

tem that has provided a succession of the Northwest's best-qualified dentists and dental hygienists.

Pediatric dental care at the OHSU covers a surprising range of ages and difficulties. Children are seen in the clinics just mentioned, in Doernbecher Children's Hospital, and at the Hospital Dentistry Service at University Hospital. Their ages range from one year to 20, and many have more than cavities to contend with.

Pediatric dentists and residents work with patients who are handicapped, or who have various medical disorders. These patients include children who are preparing for heart surgery or transplant

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Telethon inspires other events to help support hospital

Within the next few months, thousands of Oregonians will have the opportunity to help the children of the Northwest by participating in "For the Love of Children," a year-round fund-raising (and friend-raising) campaign to benefit the children of Doernbecher Memorial Hospital for Children.

Doernbecher, a hospital within the OHSU's University Hospital, is staffed by a team of pediatric, surgical and nursing specialists dedicated to maintaining and advancing the quality of children's health care in the Northwest. Money raised through a number of events supports this goal by making it possible to buy new, more advanced equipment for research and treatment, and to upgrade existing facilities.

Currently, there are approximately 20 fund-raising events planned for this year. The events are coordinated by OHSU volunteers and the Doernbecher Guild, an organization whose primary goal is to encourage community support for Doernbecher Hospital. With money raised by the guild and other volunteers last year, Doernbecher was recently able to purchase a special kidney dialysis machine for children and equipment for evaluating children with intestinal diseases. The hospital also modernized its facilities for diagnosing and treating children with heart problems.

Besides coordinating the year-round events, members of the Doernbecher Guild, along with OHSU volunteers, contribute extensive time and energy to the annual Children's Miracle Network Telethon. The national telethon is produced by the Osmond Foundation to celebrate the achievements of children's hospitals around the country and raise money for them. Last year, thanks to more than 125 OHSU employees and others who volunteered weekend time to the telethon, approximately 5,500 Oregonians made pledges that added up to more than \$250,000. The telethon will be broadcast live on KGW-TV May 31-June 1 and will feature Doernbecher patients and staff members.

The telethon is still two months away,

however. In the meantime, there are plenty of opportunities to have fun and benefit children at the same time.

If you are an experienced runner or just a beginner, sign up for the May 4 Lifeline Run. A new 10-kilometer downtown route has been planned as well as a shorter fun run for the less avid runner. If you prefer other sports, Doernbecher has events planned for jazzercisers, golfers, softball players and square dancers. For those who like auto racing, there will be a

Doernbecher Memorial Dash sponsored by the Cascade Sports Car Club June 28-29 at the Portland International Raceway.

In the coming months, other fund-raising events will be taking place in grocery stores. For example, for a brief period designated by local markets, the purchase of specially marked Sunny Delight products will help to benefit Doernbecher children. During the month of May, Plaid Pantry stores in the Portland metropolitan area will sponsor a canister

drive to collect money for Doernbecher Hospital. In addition, for every label from a Heinz baby food product sent to the Doernbecher Guild throughout the year, Doernbecher will receive six cents. Labels can be sent to the guild at 1220 S.W. Morrison, Suite 635, Portland, OR 97205.

If you would like to become involved in the telethon or other events or want more information, call the Doernbecher Guild at 223-5341.

Do it for the love of children.



Making Miracles for Doernbecher Kids

**Children's
Miracle Network
Telethon**




National Co-hosts:
 Marie Osmond
 John Schneider
 Marilyn McCoo
 Merlin Olsen

Local Hosts:
 Cheryl Hansen
 Pete Schulberg
 Tracy Barry
 Jim Little
 Scott Lynn

Special Guest Host:
 Kathy Smith

**Watch the Fourth Annual
Children's
Miracle Network
Telethon
and be part of a miracle!**

**All proceeds from the local
telethon will be put to use
helping the special kids of
Doernbecher Memorial Hospital
for Children.**

**6 p.m., Saturday, May 31
to
4 p.m., Sunday, June 1**

KGW-TV, Channel 8

**Oregon Honorary Chair:
Governor Victor Atiyeh**

Hereditary defects addressed in OHSU clinics, labs

They are the oldest of human afflictions, but often they show up at life's earliest stages. Diseases that involve disorders of the genes and the chromosomes can mark the unborn, the baby and the young child.

Families come to the Oregon Health Sciences University for help with such hereditary defects. Here these problems are researched, diagnosed and treated. During a family's counseling and care, experts from many disciplines may be involved, including geneticists, genetic counselors, orthopedists, cardiologists, ophthalmologists, endocrinologists, internists, hematologists and pediatric dentists as well as pediatricians and a variety of support staff.

Some hereditary problems, such as cleft lip and palate, are obvious at birth. Others smolder on, as it were, to flame up only later in life. Though the abnormal genes are present at conception, conditions such as Huntington disease (a progressive degeneration of the brain) do not become evident for many years. One-fourth of the children admitted to hospitals have a condition with a genetic component, such as a predisposition to infections or a difficulty in handling food normally. At least two percent of the population have some form of genetic defect.

As researchers probe more deeply into the molecules of the cell, they are achieving greater understanding of how normal and abnormal genes act. Since genes control all the activities of cells and organisms, the capability of cloning a gene represents a giant step toward this understanding. In time, research may find ways to engineer the faulty genes to perform correctly.

More immediately, new techniques are becoming available to identify carriers of genetic disorders — disorders that were undetectable a year or even a few months ago. (A carrier is a person with a defective gene that may be transmitted to a child.) This is one of the most exciting areas in genetics, according to Dr. Neil Buist, professor of pediatrics and medicine. He says tests for carriers of cystic fibrosis, muscular dystrophy and Huntington disease could become available at the university soon.

Tests are already available for a number of conditions, including some that are specific to particular population groups: Tay-Sachs disease, far more common among Jews than in the general population; sickle cell anemia, more common among blacks; and abnormal-hemoglobin diseases, among Mediterranean and Oriental people.

Genetic conditions treated

When a child comes to the OHSU for help with a known or suspected genetic disorder, not just the patient but the entire family will receive attention. In the course of the first interview, each family is asked to outline a complete family history covering at least three generations. The patient's family members may be examined. Tests may be performed to diagnose

possible chromosomal or metabolic disorders. The skills of the OHSU's clinicians come into play in recognizing clues to one of the thousands of known genetic diseases.

Depending on the type of abnormality suspected, diagnostic tests may be analyzed in the Cytogenetics Laboratory, directed by Dr. Ellen Magenis, professor of the Crippled Children's Division, medical genetics and pediatrics; or the Pediatric Metabolic Laboratory, co-directed by Buist and Dr. Nancy Kennaway, associate professor of medical genetics. Both labs are internationally recognized for the quality of their work and research. Some tests are done in other specialized laboratories at the university.

The clinical genetics program at the Crippled Children's Division has evaluated the genetic conditions of more than 10,000 families since 1965. More than 30 physicians and health specialists work regularly in the genetics program. Dozens more cooperate in its treatment plans.

Families can come to four specialized clinics:

Diagnostic and Counseling Clinic — offering evaluation and counseling for a variety

of genetic disorders. Some of these disorders stem from single genes that follow predictable patterns of inheritance. Other disorders involve many factors. This clinic also helps children who are affected by unknown conditions only suspected of being inherited, such as a baby with multiple birth defects. After thorough history-taking, physical examination and testing, these children and their families may receive a diagnosis and information about the risk of defects in future children and other family members.

Chromosome and Dysmorphology Clinic — for children with known or suspected chromosome abnormalities (such as Down syndrome) or other multiple problems. Dysmorphology refers to an unusual shape or appearance. In the course of receiving comprehensive diagnostic help, many parents have the opportunity to see black-and-white photographs of their or their child's chromosomes. These "karyotypes" are high-resolution photographs enlarged 3,000 times. Chromosome abnormalities occur in one out of 150 live births and are present in 50 percent of fetuses miscarried early in pregnancy.

Metabolic Clinic — Oregon's only refer-

ral and treatment center for those with inborn errors of metabolism. Dealing with these is no small task. One in every 100 Americans is affected by one of the many metabolic disorders that have been identified so far.

Metabolic disorders are caused by a chemical abnormality inside the body. The defect may affect the normal functioning of the brain, the liver, the muscles or any other part of the body. These diseases can be hard to detect, for the patient may look physically normal. That is why the Pediatric Metabolic Laboratory provides special kinds of metabolic tests unavailable in most other laboratories.

The clinic, which currently serves 400 patients who have 100 different diagnoses, is part of the Metabolic Birth Defects Center, funded by the March of Dimes and directed by Buist.

Prenatal Counseling and Diagnostic Clinic — the regional center for women who are at risk of bearing a child with birth defects. Women are candidates for testing if:

- they will be over 35 years of age at the time their child is born, which increases the risk of Down syndrome and other chromosomal abnormalities
- they have previously had a child with a birth defect that can be diagnosed before birth
- they or their mates are carriers of known genetic disorders.

Women referred for counseling may undergo amniocentesis, a process in which amniotic fluid is withdrawn through a needle inserted in the pregnant abdomen. Chorionic villus sampling is a newer technique in which a catheter is inserted through the cervix into the placenta. In both cases, the cell samples obtained are used for diagnosis. A fetus considered to be at risk for a genetic defect can be tested for hundreds of different disorders.

A prediction of abnormality (which occurs in only a small percentage of the tests) can help parents prepare for their child's special needs or decide whether to continue the pregnancy. Personnel in the Prenatal Counseling and Diagnostic Clinic offer counseling support. The prospective parents decide on the course of action they wish to pursue.

Looking to the future

Magenis points out that everyone carries problem genes that, if paired with a mate's abnormal gene, could result in an abnormal child. Hereditary problems could affect any family. "The potential for birth defects is extraordinarily high; the only reason we don't have more problems is that each disorder in itself is so rare."

Because an individual has between 50,000 and 100,000 genes, it would seem an impossible task to isolate individual bad actors from a cast of this size. Yet, thanks to work being done at academic health centers like the OHSU, it may one day be possible to prevent many of the diseases children now inherit.



Children breathe more easily thanks to Cystic Fibrosis Center

Not much longer than a decade ago, many children with cystic fibrosis died before they were old enough to attend school.

CF is still the number-one inherited cause of death in children and young adults in the United States. The disease, which attacks the pancreas and lungs and causes digestive problems and recurrent pneumonia, affects one in every 1,800 newborns. But, although CF is almost always fatal, the life expectancy of those with the disease has increased to an average of about 20 years.

In Oregon, most children with CF, and many others with chronic and inherited lung and digestive problems, are being cared for at the Oregon Health Sciences University's Cystic Fibrosis Center, which has been partially supported financially

since 1963 by the National Cystic Fibrosis Foundation.

The center is co-directed by Dr. Michael Wall, one of the state's few pediatric lung specialists, and Dr. Annie Terry, one of only two pediatric gastroenterologists in Oregon. Their specialty areas encompass most of the problems encountered by CF patients.

Wall is trying to alleviate the impact of children's lung diseases such as bronchial asthma, one of the leading pediatric disorders requiring hospitalization. It accounts for many of the young patients who are seen by Wall in the University's Pediatric Pulmonary Laboratory.

"This is the only lung function lab in the state set up specifically for testing children," Wall says. "We see children and adolescents with a wide variety of

lung diseases. We see children with CF, asthma, congenital lung disorders of every type. We offer a full range of lung function testing."

Wall, an associate professor of pediatrics, and other Pediatric Pulmonary Laboratory staff are involved in research as well as providing patient services. Wall's main research interest has been in developing methods of assessing lung function in children under five years of age. He is principal investigator in a National Institutes of Health grant to study the problem. Future research is directed at ways to test the breathing of very young infants and toddlers.

Next to respiratory diseases, gastrointestinal infections are the commonest cause of childhood illness in the country. In her clinic, Terry, an associate professor

of pediatrics, sees children with disorders of the esophagus, stomach, large and small bowels and liver. Problems include ulcers, diarrhea, malabsorption and inflammatory bowel disease.

Together, Terry and Wall use their expertise in the Cystic Fibrosis Center to provide CF patients specialized diagnostic tests and therapy designed to alleviate their symptoms and extend their lives. The Cystic Fibrosis Center serves approximately 200 patients, most of them under the age of 18.

The university's experience in diagnosing and managing children with cystic fibrosis and other lung diseases is valuable to patients throughout the Northwest, whose physicians call upon the CF Center and Pediatric Pulmonary Laboratory for referral and consultation.

CCD works to soften crippling blows of childhood

A crippling handicap is one of the worst blows nature can deal to a child, but Oregon children have something extra in their corner. The OHSU's Crippled Children's Division (CCD) provides diagnosis, treatment and rehabilitation for handicapped people and their families throughout the state.

Oregon is one of only three states in the nation in which Crippled Children's Division services are administered by a university health sciences center. In addition to its Child Development and Rehabilitation Center on the OHSU campus, the CCD operates clinical facilities in Eugene and Medford. Its staff travels to Bend, Coos Bay, Corvallis, Pendleton and Roseburg to see patients and offer specialized training to community health care practitioners.

Children with handicaps, especially those with multiple disabilities, require care by health professionals from many disciplines. This care must be carefully coordinated and often extends beyond the clinical setting into the school and home. CCD staff members use a team approach to achieve total care of handicapped children. Health and behavioral science professionals work together to provide comprehensive, coordinated services not readily available elsewhere in the Northwest.

Many services are provided to children in their own communities, combining local resources with CCD resources whenever possible. Where necessary, the division calls on varied university and community resources and tailors them to the needs of a particular child. A child does not have to be an inpatient at Doernbecher Memorial Hospital for Children to be eligible for services.

The Crippled Children's Division also provides a setting where model services can be demonstrated, and where OHSU students in all three schools can learn about children's handicapping conditions and how these problems can be handled.

The CCD's University Affiliated Facility (UAF) program provides training for a broad array of health professionals. The UAF program trains specialists in the interdisciplinary care of the developmentally disabled. Regarded as one of the top three or four such training programs in the national system, Oregon's is the only UAF component in the country that com-

bines crippled children's clinical services with interdisciplinary training.

In the nick of time

For most Oregon children, a nick in the heel is the closest contact they will ever have with the CCD.

It's the rare child who comes to the attention of the division through this tiny puncture of the foot, but a child well worth the seeking. The nick is the result of a blood test required by law on every newborn in Oregon. Results of the test are screened by the state Health Division, which searches out children who might have one of several rare inborn errors of metabolism (disorders of body chemistry).

Untreated, children with these invisible birth defects will suffer mental retardation or may even die. But with diagnosis, counseling and management, there is every chance for healthy development.

Only a few of the thousands of newborn children tested each year will need help from the Metabolic Clinic, part of the CCD's program described below.

Nine important programs

Through the CCD's nine clinical programs, the state's handicapped and their parents have access to all the services of the Oregon Health Sciences University. The nine programs are:

Genetics — In the genetics program, would-be parents who are at risk of giving birth to a child with a genetic disorder look to the CCD for counseling and testing. The CCD genetics program, which began in 1965, is the oldest in the state.

Special services are available to certain parents whose infants die in the second half of pregnancy or in the first week after birth. The CCD plays a part in counseling parents who are concerned that they may never have a healthy baby. While this is not a bereavement counseling service, the staff is sensitive to what the parents have experienced.

First, project staff will help determine why the baby died. Then, the couple can be advised about what risks they may face in future pregnancies.

The pilot program began with couples from University Hospital, Bess Kaiser Hospital and Kaiser-Sunnyside Hospital in Portland; Salem Hospital; St. Charles Medical Center, Bend; Sacred Heart General Hospital, Eugene; and Rogue Valley

Memorial Hospital, Medford.

There are other programs in genetics. Children with birth defects or peculiar abnormalities that fit into "syndrome" patterns — Down syndrome or Klinefelter syndrome, for example — are evaluated at genetics clinics. These are held weekly in Portland, and at intervals in Eugene, Medford and Bend.

Cerebral Palsy — The cerebral palsy program provides clinics in the four cities mentioned above and also in Coos Bay, Corvallis, Klamath Falls, Pendleton and Roseburg. Special feeding clinics, infant-parent training and teen clinics give help in this far-reaching program.

Orthopedics — When Oregon first legislated its concern for crippled children in 1917, the focus was on polio, tuberculosis of the bone, and rickets, a deformity caused by vitamin deficiency.

These three threats faded with time and better preventive treatment, but the CCD still has an active program in orthopedics. Scoliosis, juvenile rheumatoid arthritis, chronic orthopedic problems and growth disorders are the commonly seen problems related to the skeletal structure.

Paralytic — Paralytic clinics deal with crippling muscle disorders, spina bifida (inadequate development of the spinal cord), and traumatic injuries.

Congenital Heart — Between 200 and 250 young patients a year are added to the CCD's congenital heart programs. Congenital heart clinics at the division incorporate the expertise of university pediatric cardiologists and heart surgeons. This CCD heart program serves about 1,200 patients a year throughout Oregon, and provides consultation for children suspected of having heart disease.

Communication Disorders — The CCD helps schools evaluate learning problems in speech. The division has a coordinating and educational role in the statewide in-school hearing tests given each year.

Hemophilia — The CCD in Portland is the location for the Regional Hemophilia Diagnostic and Treatment Center. The center provides direct patient care for individuals who have hemophilia, a blood-clotting disorder. Its staff conducts a community-oriented outreach program to train health professionals who need better skills to manage hemophilia patients. Through outreach parents, too, gain skills to use at home: they learn to



intravenously administer the blood products their child may need.

The hemophilia center also provides follow-up and record-keeping for hemophilia patients in Oregon, Idaho, Alaska and southern Washington. Long-kept records are useful for research. Today, half the patients monitored by the center are older than 21.

Craniofacial Disorders — Children who have cleft lip and palate get services and treatment through the craniofacial dis-

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Troubled children, teens treated in psychiatric clinic

A family with a troubled child is always on the lookout for help. Many such families have found the OHSU's Child and Adolescent Psychiatry Clinic to be just what they were searching for. They don't keep this news to themselves.

According to Dr. Herbert Woodcock, associate professor of psychiatry and pediatrics, "Families who tell other families

Depression and suicidal feelings are treatable mental disorders. With support from family and friends and professional treatment, children and teenagers who have been suicidal can be steered to a healthy path of development.

are our number-one referral source. Our clinic is a good starting point because of our diagnostic services. We evaluate and we make recommendations. That's one reason we get referrals from across the state and not just from local sources."

The clinic was established in 1972 and has been headed by Woodcock for the past four years. Today, the clinic is staffed with four child psychiatrists, members of the OHSU faculty, who see children and

their families. There are also four child psychiatry fellows, physicians who have two or three years of adult psychiatry before training as child psychiatrists. Four general psychiatry residents (physicians furthering their clinical training) and a psychiatric social worker are at hand. The clinic receives further help from clinical faculty, the physicians in private practice who spend time with patients and students at the school.

In a typical month, the clinic has more than 250 appointments. The staff sees, on the average, 220 parents and 236 children aged three to 20. These families have come to the only academically based outpatient clinic for children and adolescents in Portland. They have found their way to one of the few places in Oregon where children can receive long-term psychotherapy as well as other forms of treatment.

Located in the Outpatient Clinic, the Child and Adolescent Psychiatry Clinic serves children 18 and under who are experiencing social, emotional or behavioral difficulties. There are problems at home, at school and in the community. Some of the children have been traumatized by sexual abuse. Others are autistic — unresponsive to people and showing unusual, extreme responses to objects. There are children who, in anguish from a chronic disease or a death in the family, are lost in anger, fear or bewilderment.

Each young patient must be referred to the clinic, but referrals need not come from medical professionals alone. Parents and guardians may contact the clinic by telephone or letter to start the referral process. Attorneys, psychologists, physicians and community agencies such as schools also make referrals.

After the clinical social worker reviews the reasons for the referral, an appointment will be made with the family within two weeks. Patients are charged for their visits on a sliding-fee scale.

Some young people come to the attention of the clinic in a dramatic way. A young patient may arrive at the Emergency Room in University Hospital, where a psychiatrist is available 24 hours a day for patient consultation and evaluation.

Beds in University Hospital's Crisis Unit and its general psychiatric ward are available to young patients when needed. Severely disturbed adolescents are sent to a secure facility at the Oregon State Hospital in Salem. Their treatment is provided in part by members of the clinic staff.

Most young patients arrive more quietly. They and their families want expert advice on what to do next. The clinic provides comprehensive psychiatric evaluations. It also provides court custody evaluations when requested by Children's Services Division, the juvenile justice system, family court or private attorneys.

Treatment at the clinic varies according

to the child's need. Physicians conduct both psychotherapy, the therapy involving patient-physician contact, and pharmacotherapy, which incorporates medications. Cognitive therapy mobilizes a patient's perception, reasoning and intuition and helps the patient apply these to current problems.

A special clinic is held for children who have a very special difficulty: Asian and Indochinese refugees, transported to an alien culture while they were still dealing with traumatic emotional events. Some have witnessed the murder of family members. Their early years may have been filled with life-threatening events.

Other clinics are in the planning stages. They include one for the depressed or the potentially suicidal child under 18. Suicide is the second leading cause of death for people aged 10 to 24, according to the American Academy of Child Psychiatry. The academy also points out that depression and suicidal feelings are treatable mental disorders. With support from family and friends and professional treatment, children and teenagers who have been suicidal can be steered to a healthy path of development.

Each addition to the clinic adds to its ability to deal with a wide variety of psychiatric disorders in children of all ages. For Oregon families who are searching for help, these are lights that make the journey to health far easier.

Division takes services to families



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orders clinics. For youngsters who have gross malformations of the head and face, an extensive team of specialists may be involved, ranging from plastic surgeons to dentists, and including other medical and surgical specialists and allied health personnel.

Children too young to speak or to respond to conventional testing may have both hearing and sight evaluated through brainstem audiometry. An electroencephalogram may reveal what the infant cannot.

Child Development — The child whose development lags, who has a learning disorder or mental retardation, may come to the CCD for evaluation. It is here that interdisciplinary teamwork comes to the

fore in programs that range from parent training to special recreation to sophisticated treatment. Child development clinics are held regularly in Portland, Eugene, Medford, Bend, Coos Bay and Pendleton. Programs are pulled together from various resources, as the needs of the child require.

Beyond narrow borders

CCD specialists, alone and in unique combination with university and community resources, have a lot of territory to cover. It includes the state of Oregon and sometimes, other states in the region. More than 8,500 children currently receive services from the division.

The CCD province is any crippling affliction that affects a child, from the top of

the head to the tip of the toe. The division's wide-ranging concern for crippled children begins before the youngsters are born and sometimes, before they are conceived. The age range extends to 21 years.

Parents of healthy children as well as parents of children with handicaps can be glad that the CCD stands ready to help. Dr. David Macfarlane, professor of pediatrics and interim director of the CCD, points out that the division is committed to provide a single standard of care to all patients, regardless of financial means. Charges are assessed on a sliding scale. Consultant, caregiver and evaluator, the Crippled Children's Division brings hope and help to children and families who are especially in need of services.

Lecture honors Bilderback, first NW pediatrician

Grumbach will speak on "Puberty and Its Disorders" on April 21 at 8:30 p.m. in the Library Auditorium.

Dr. Melvin Grumbach of the University of California at San Francisco will present the Department of Pediatrics' 24th Annual Bilderback Lecture. Grumbach, professor and chairman of pediatrics at the UCSF School of Medicine, will speak on "Puberty and Its Disorders: The 50th Anniversary of Dr. Bilderback's Contribution."

The Joseph B. Bilderback lectureship was established in 1963 as a tribute to Dr. Bilderback, who actively participated in the teaching program at the OHSU's School of Medicine for 57 years. Known regionally and nationally as a leader in pediatrics, he was the first pediatrician in the Northwest and first director of Doernbecher Memorial Hospital for Children (see page 3). He was president of the American Academy of Pediatrics in 1940.

Grumbach, who has made extensive contributions to pediatric education and research throughout his career, graduated from Columbia College and received his M.D. degree in 1948 from the College of Physicians and Surgeons at Columbia University. He completed his residency at Babies Hospital of the Columbia-Presbyterian Medical Center in New York. After two years in the U.S. Air Force, Grumbach was a postdoctoral fellow in pediatric endocrinology at Johns Hopkins Hospital and was later appointed to the faculty of the College of Physicians and Surgeons. He assumed his current position in 1966.

Currently a member of many national and international societies, Grumbach has received numerous honors and awards including the Borden Award for Research in Pediatrics from the American Academy of Pediatrics and the Robert H. Williams Distinguished Leadership Award from the Endocrine Society. In 1983 he was appointed to the Institute of Medicine of the National Academy of Sciences.

In addition to his clinical and laboratory work, Grumbach has written more than 254 publications about endocrinology, growth and maturation.

The lecture will be presented on Monday, April 21, at 8:30 p.m. in the Library Auditorium.



Work at dental school improves quality of care for children

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surgery. The child must be free of infection if surgery and recovery are to go well. Decayed teeth or inflamed gums could cause complications.



Some dental patients are very small. They may have "nursing caries syndrome," which is tooth decay that may occur if the child goes to sleep while drinking from a bottle or breast. Milk left in the mouth during prolonged periods such as during sleep causes rapid tooth damage. Patients as young as one year of age have been treated for extensive tooth decay from this cause.

Patients who have hemophilia, a blood-clotting disorder, are also treated here but less commonly than in the past. Dr. Arthur Retzlaff, professor and chairman of pediatric dentistry, credits improved clinical programs for residents. At one time these patients had to come to the OHSU because dentists in the community wouldn't accept them as patients and there were few specialists in the community to treat them. Today, dental students also rotate through the hospital as part of their training. They learn how to treat patients with medical complications and when to refer the patients for specialty care.

That's a large improvement for the small patient who needs special care.

OHSU launches your child, cares for growing family

Caring for your child begins even before birth at the Oregon Health Sciences University.

If you're already a parent, getting the best pediatric care is one of your priorities. But perhaps you've recently decided to start a family.

If so, you'll discover a bundle of choices. Should you start your family now or later? Where should you look for a crib, clothing and carseat? What will you name the baby?

Whether this is your first child or the newest addition to a growing family, there is one gift more important than any other you can provide for your baby: the gift of good health.

And one of the most important choices you will make, the one that will help wrap up that precious gift, is selecting the people who will care for you and your child before, during and immediately after the baby is born.

The Oregon Health Sciences University offers its own bundle of choices of maternity care providers to help launch your child into the world. And those options are all located on Marquam Hill.

"We are in the forefront of thoughtful obstetrics," says Dr. Paul Kirk, professor and chairman of obstetrics and gynecology. "We think about what people need. By that I don't mean thick carpets on the floor, but things like the attitudes of the staff in labor and delivery, or the variety of experiences people want to be able to choose from for their delivery."

"Then there's the clinical research being done here, by which we influence the care available in the community. And there's the basic research at the university, by which we get a better understanding of human health as a whole."

Staff of the OHSU's University Hospital lead the way in performing vaginal deliveries after previous cesarean births. As Kirk points out, University Hospital has for years been a front-runner of Portland obstetrical care. The hospital's health care providers were among the first in Oregon to:

- welcome fathers to the delivery room during childbirth and the operating room during cesarean sections;
- introduce the concept of the birthing room so that labor and delivery could happen in one place;
- design the special, more comfortable bed now used in many delivery rooms throughout Portland; and
- put cradles in the mothers' rooms so healthy newborns can stay right there instead of in a nursery down the hall.

In fact, many of the maternity care ideas introduced at the university have since become standard practice at hospitals around the state. University Hospital pioneers better ideas for health care because of its basic commitment to education and research to improve health care; that's what being part of the only academic health center in Oregon means.

Planning ahead

Innovative, high-quality care at the OHSU ensures a variety of obstetrical-care and delivery options for expectant parents:

Special Delivery — an early-discharge maternity program designed for low-risk mothers who want a family-centered childbirth experience in a birthing room, and who want to go home shortly after delivery. "Low-risk" means that the mother has no serious medical and reproductive problems and that the baby is a normal, full-term infant. The program includes childbirth preparation and prenatal care, labor and delivery in a special birthing room, and follow-up care after the birth. Because mother and baby recover and rest at home instead of in the hospital, Special Delivery costs less than traditional maternity hospitalization.

High-risk obstetrical care — for women with unusual medical needs. University Hospital's highly trained medical, nursing and technical staff are experts at helping



expectant mothers who need special help due to complications such as diabetes, hypertension, premature labor and multiple births. The special studies unit utilizes various techniques including ultrasound and heart wave monitoring to assess the health of the fetus in the weeks before delivery.

Family Practice Center — continuous, comprehensive health care by one family doctor for mother, baby and all other members of the family. Family physicians are specially trained in many different areas, including pediatrics, internal medicine, gerontology, obstetrics and gynecology, occupational health, sports medicine, surgery and psychiatry. Because one doctor can maintain contact with a patient from before birth into adulthood, a close patient-doctor relationship is formed, which can be important to children and to adolescents during the period of transition from pediatrics to adult care. For the convenience of patients, the Family Practice Center offers Urgent Care for rapid treatment of minor illnesses and conditions. Patients may walk in without an appointment between 11 a.m. and 2 p.m. Monday through Friday.

Nurse-midwifery — a popular alternative to traditional maternity care. In this program, a team of five nurse-midwives provides complete prenatal care, as well as labor and delivery services, with the consultation services of the obstetrical medical staff available at any time. Certified nurse-midwives are registered nurses who have received additional education in the care of women before, during and after

childbirth. The nurse-midwife helps the mother plan the child's birth, encouraging as much participation as possible by the mother and her family, and stays with the mother throughout the labor and birth. Nurse-midwives at University Hospital attend uncomplicated deliveries; if problems arise, they can arrange for immediate care by an obstetrician.

Childbirth preparation classes — a seven-week series of classes preparing parents for their labor, birth and postpartum experience. Trained instructors use a broad and flexible range of relaxation, breathing and coaching techniques. Hospital birth options, medications, cesarean birth, family adjustments and early parenting concerns are explored. The OHSU also offers one-time, free classes on early pregnancy, infant care, cesarean birth and vaginal birth after cesarean, as well as a tour of University Hospital specially designed for prospective parents.

The Mother-Baby Unit — inaugurated in 1985, the newest addition to the OHSU's facilities helping to make childbirth a family affair. The Mother-Baby Unit, with 11 double and eight single rooms, is designed to foster a healthy beginning for each new baby and to allow family members to visit and participate in caring for babies during their first hours and days. All rooms have phones with direct numbers. Shower facilities are provided for fathers or support people. If the mother is in a private room, the father or support person may stay overnight.

Infertility Service — offering new hope for the one couple in six who are unable to conceive and carry a child without

help. The program offers a state-of-the-art facility, the most recent knowledge about the causes and treatments of infertility and a compassionate staff who can help each couple with individual needs from counseling to conception. Infertility problems are becoming more common, and the OHSU's service has about a 60-percent success rate in helping couples become parents.

Prenatal diagnosis — the most up-to-date testing methods, capable of detecting more than 100 disorders during pregnancy. About 450 women each year seek prenatal diagnosis and counseling at the OHSU's University Hospital and Crippled Children's Division. The patient and her doctor or nurse-midwife may select certain tests including ultrasound (to determine fetal growth and multiple births) and amniocentesis or a newer technique,

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Amniocentesis can diagnose genetic disorders early in pregnancy.

Parents' questions about children's growth answered

Is my child's growth normal?

Pediatricians everywhere are faced with that question over and over again from anxious parents. In Oregon, some answers are being provided by the two specialists in pediatric endocrinology at the Oregon Health Sciences University.

When a pediatrician or family doctor in Oregon sees a child who has a serious disorder of the growth or any other hormone system, he or she is likely to call Dr. Stephen LaFranchi, head of the Pediatric Endocrine Clinic, or his associate, Dr. Cheryl Hanna. Both are associate professors of pediatrics.

Some children treated by the pair (who are two of only four board-certified pediatric endocrinologists in the state) have short stature, resulting from a deficiency of growth hormone. The university currently uses the new biosynthetic growth hormone recently approved by the federal Food and Drug Administration.

"We get quite a few calls from doctors who have diagnosed growth problems in their patients," LaFranchi says, "and we can usually help them if the child is seriously enough affected to warrant ther-



apy." The team treats approximately 85 infants and children a year diagnosed with pituitary growth hormone deficiency.

Too little growth is not the only problem in children LaFranchi and Hanna see. Some children grow too quickly. Others enter puberty too early, which can cause behavioral problems. Hormone therapy is a possible treatment in both instances, although in the former case it is

generally not advised.

Growth is a highly variable entity in children, according to LaFranchi, and consultation with the pediatrician will generally show whether a child is within the normal range. If the child is too large or too small, tests are available to see if there is a correctable cause.

The results can go a long way toward answering the question all parents ask.

Many prenatal, obstetric, postnatal options offered

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chorionic villus sampling (to detect the presence of possible genetic disorders). Ninety-seven percent of the results of prenatal tests at the OHSU are normal, reassuring most patients who are concerned about their chances for bearing a normal baby. Families with a history of genetic problems may also choose to have genetic counseling.

The baby is here

Once the baby is born, the first few days and weeks of life are the most crucial

for health care. Again, the OHSU offers the most advanced care to help your child get the best possible start in life:

Rooming in — combines the best in care from nurses and from the new mother herself. University Hospital is a leader in "rooming in" accommodations that allow healthy newborns to stay with their mothers instead of in a separate nursery. New parents get to know their baby and become confident about caring for the newborn before they go home. As in all University Hospital services, nurses are always ready to provide as much care and

advice as the new parents wish.

Neonatal Intensive Care Center — providing specialized care for 380 critically ill and premature infants a year. (See story on pediatric emergency care, page 12.)

Breast Feeding Service — to help meet the needs of the increasing number of women who wish to breast-feed. This service is the only one in the state offering classes, an outpatient clinic and inpatient consultation in breast feeding, and one of fewer than 10 such programs in the country. Special help is available to mothers who encounter problems in nursing their

babies or who have particular questions — such as mothers of twins or premature babies, women who have had breast surgery or have flat or inverted nipples, and mothers who are returning to work.

Infant Monitoring Project — for children who have symptoms that may precede sudden infant death syndrome (SIDS). At least two babies each week are referred to the university's Infant Monitoring Project, established to take advantage of research on SIDS and to protect infants from the tragedy of "crib death."

Neonatal assessment — studying newborn babies to recognize each child's unique behavioral traits. Since using the Brazleton Neonatal Behavioral Assessment Scale in a research study (Parent-Child Interaction in Research During the First 18 Months), the OHSU is one of the few places in the nation providing training for professionals in use of the scale. It's also used as a tool to teach parents about the individual behavior of their children.

Pediatric services — providing care to promote your child's well-being and solve health problems throughout childhood. Pediatric care is offered through the Pediatric Outpatient Clinic and Family Practice Center.



The university helps expectant parents achieve the two things they want most: healthy babies and participation in one of the most memorable experiences of their lives.

Once a child is safely past the crucial first few weeks of life, the rest of the pediatric services of the OHSU, described elsewhere in this issue, come into play. Until then, the university's bundle of choices will continue the practice of helping expectant parents achieve the two things they want most: healthy babies and participation in one of the most memorable experiences of their lives.

Portable dialysis eases child's journey to transplant

Children's time is too valuable to be spent in hospitals.

But children whose kidneys don't work get to know hospitals all too well. They may spend their first days, weeks or months in intensive care. They may make frequent trips to the hospital, spending many hours attached to stationary hemodialysis machines.

The Oregon Health Sciences University has pioneered ways to help infants and children with acute and chronic kidney failure to spend more time at home. Home, where they can lead normal and active lives. Home, where they can grow up.

Because kidney failure stunts growth, and may also inhibit intellectual and emotional development, a primary objective in treating children with this disease is to enable them to grow normally. A successful kidney transplant, the ultimate goal in working with these children, accomplishes this. Thanks to recent advances here, the smallest of these patients with renal (kidney) disease also are helped to grow taller and heavier.

Repeatedly, OHSU nephrologists have made history in the treatment of children with renal disease. The first person to undergo a kidney transplant on the West Coast was an 11-year-old girl, who received a kidney from her identical twin sister in 1959 at University Hospital. At the time, she was the youngest person to have a kidney transplant. She and her sister still live in the Portland area, and the transplanted kidney is still functioning.

OHSU physicians perform between eight and 12 kidney transplants yearly on children, putting the university's program

among the top 10 pediatric kidney transplant programs in the nation. Recently, they were first to describe antirejection treatment with the monoclonal antibody OKT3 in children who had received a transplant.

Large strides in the treatment of children awaiting a transplant have accomplished the mutual goals of letting children spend more time at home and helping them grow until they can receive a transplant.

"The convenience and safety of CAPD have made it an attractive treatment even for very young infants."

When a child's kidneys fail, dialysis is the temporary measure used to replace their functions until the child is old enough and large enough to receive a transplant, until a suitable kidney is available for transplant or until the child's kidneys begin functioning on their own. Many children in this situation have no appetite, so special measures are necessary to help them get the nourishment they need.

Continuous ambulatory peritoneal dialysis (CAPD) is a treatment that parents can provide at home. Pediatric nephrologists at Doernbecher Children's Hospital were the first in the United States to adapt this procedure for use with children. It was 1979, and the first young CAPD patient was 17 months old.

Children on CAPD have a small plastic tube surgically implanted in the lower abdomen. The tube carries dialysis fluid from an external bag into the abdominal (peritoneal) cavity. The fluid remains for four to eight hours. The external bag, now empty, can be rolled into a small bundle and slipped into a pocket or knapsack.

Waste products in the blood (normally removed by the kidneys) are drawn into the dialysis fluid. Later, the child's parent drains the waste-filled bag into the empty bag for disposal and a new bag of dialysis fluid is attached. The painless process is repeated four or five times a day.

In continuous cyclical peritoneal dialysis (CCPD), a mechanized cousin of CAPD, kidney dialysis fluid is cycled at night during sleeping hours with the aid of a machine.

Doernbecher currently follows the progress of about 20 children on CAPD and CCPD. They live in communities throughout Oregon and in Alaska, Washington, Montana and northern California.

"The convenience and safety of CAPD have made it an attractive treatment even for very young infants," says Dr. Steven Alexander, director of the Pediatric Kidney Disease Program at Doernbecher. Without CAPD, the very young patient might not be treated at all. With it, older patients can engage in almost any activity, even swimming and vigorous noncontact sports.

Two years ago Doernbecher began a feeding program to accompany CAPD and CCPD. Infants are fed special formulas through a tiny, soft, transparent nasal tube that empties into the stomach. This nutritional therapy also helps infants who

have kidney disease serious enough to hamper growth but not serious enough to warrant dialysis.

"Early results have been spectacularly successful," Alexander says. Infants treated with tube feeding and CAPD have had accelerated growth in height, weight and head circumference (which in infants is a reflection of brain growth).

Within the last year, Doernbecher's nephrologists have developed continuous arteriovenous hemofiltration (CAVH) for use on infants and children. CAVH, a new method of cleansing the blood, is an alternative to dialysis in the most severe cases of acute kidney failure. OHSU physicians were the first to describe CAVH in older infants and children and are the only ones on the West Coast using the technique on pediatric patients.

At Doernbecher, the only Oregon hospital providing a children's dialysis program and performing kidney transplants on children, patients have the added benefit of a pediatric dialysis team. Treatment goes beyond simply delivering dialysis therapy to encompass many more of the needs of the child and family, especially those related to growth and physical, intellectual and emotional development. Specialized social workers, child psychologists, dietitians, child life therapists, schoolteachers, pediatric nurse specialists and pediatric nephrologists provide total patient care for children with end-stage renal disease.

Advances in diagnosis and treatments at Doernbecher are bringing more children to transplantation at near-normal size and with their full intellectual potential intact.

And sending them home again.

Childhood vision care can save a lifetime of sight

Pediatric ophthalmology services are one of the brightest spots on the OHSU campus. It's no wonder, when you consider the 3,000 youngsters each year who come to the Department of Ophthalmology with vision problems and discover they can, with help, see a sharper edge on a speeding softball, study tiny creatures at the bottom of a pond or read Mom's smile a block away.

Children's eye problems are an important element in the university's many vision services, ranging from diagnostic care as routine as eye examinations to research into treatment for complex and rare forms of blindness.

Treatment in childhood can save a lifetime of sight.

"Adults who need eyeglasses can walk around without them and not hurt their eyes — they'll feel eye strain, but won't have permanent damage," says Dr. Shawn Goodman, an ophthalmology fellow. "In a child under age six, not having glasses when they are needed could lead to abnormal visual development."

In an examination room at the Elks Children's Eye Clinic, a nearsighted teenager receives a prescription for a crisp new look at the world: eyeglasses. More than 40,000 children from birth through age 18 have made more than 135,000 visits to the clinic since it opened in 1949.

"Without cryotherapy, these infants will have about a 50-percent risk of blindness. We hope to reduce the number of blind infants by more than 20 percent."

Over the years, the Oregon State Elks Association has contributed \$3 million in support of the OHSU clinic.

Dr. Earl Palmer, clinic director, specializes in pediatric vision problems and in strabismus, or misalignment of the eyes. Amblyopia (lazy eye) and strabismus (crossed eyes) are among the most common childhood vision disorders treated at the clinic. Fortunately, a child's eyes can be surgically realigned in a day-surgery procedure. Certain patterns of strabismus respond to orthoptic treatment. In these cases, Michele Hartwell, orthoptist, determines which of the eye muscles are responsible for the problem and prescribes treatment under direction of a staff ophthalmologist. Children don't typically outgrow strabismus. If the condition is left untreated past a child's early school years, the effects can be difficult if not impossible to correct, although the cosmetic appearance may be improved.

In addition to his work directing the Elks clinic, Palmer is principal investigator of a new national study to investigate treatment of a form of blindness that strikes the most defenseless among us: premature newborns.

The disease, called retinopathy of prematurity (ROP), is the chief blinding eye disease of premature infants. To date there is no proven cure or way to prevent the disease.

In the 1950s and 60s, premature infants as hefty as five pounds developed ROP. "Today," says Palmer, "five-pound preemies seldom get ROP any more, but because we are now saving preemies who weigh as little as two pounds, ROP is on the increase." ROP is a developmental disease that strikes the retina, a light-sensitive layer of cells at the back of the eye that relays images to the brain. Infants born two to three months early are most susceptible to retinopathy because the retina is the last part of the eye to develop during gestation. Such premature infants must finish developing their retinas outside the protective world of the womb. Many infants who display signs of ROP recover without treatment, but too many — about 2,000 infants in the United States each year — suffer eye damage from this

disease. Approximately one-quarter of those will be blind as a result, says Palmer.

In 1981 Palmer began investigating a surgical treatment for ROP. The procedure, called cryotherapy, takes two surgeons more than an hour to perform. They freeze the edge of the retina to arrest growth and scarring of abnormally developing blood vessels.

His work has led to a study that involves ophthalmologists and patients in 24 centers across the country. Last fall the National Eye Institute of the National Institutes of Health granted Palmer first-year funding of \$162,000 for the study's national headquarters, located at the OHSU. Funding during the next four years is expected to total about \$669,000.

In addition, Palmer received \$66,000 to support one of the 24 centers, also located at the OHSU. The four-year award for the Oregon center will total about \$241,000. Twenty-three other medical centers from across the nation have been selected to join Oregon in studying the disease of ROP itself and its possible treatment. Palmer and Dr. Joe Robertson, OHSU assistant professor and retina-vitreous specialist, are already performing

treatment; in December they instructed 100 doctors from the 23 other centers involved in the study.

Palmer expects the national study will identify and follow more than 6,000 very low-birth-weight infants over a 2½-year period. From this group, approximately 300 infants expected to be stricken with the most severe form of the disease will be selected for study. If cryotherapy is performed, it will be done on only one of the infant's eyes. This is because the therapy has the drawback of limiting peripheral vision, and other long-term effects are unknown.

"Without cryotherapy, these infants will have about a 50-percent risk of blindness," he says. "We hope that cryotherapy will reduce the number of blind infants by more than 20 percent."

At three months and again at one year after the procedure, the centers will take photographs of both retinas of each child treated. The photos will go to Dr. Robert Watzke, professor of ophthalmology and director of the OHSU Fundus Photo Reading Center. Photography of these infant eyes will be difficult, but the photographs are essential in determining the results of

cryotherapy. Watzke and his team of ophthalmic photographers will analyze the photographs to determine whether cryotherapy will lessen the devastating effects of ROP. Watzke's work is funded during its first of four years by a \$57,000 grant from the National Eye Institute; the four-year award will total \$199,000.

In other rooms of the ophthalmology clinics, patients find help for a spectrum of vision problems. People who once found contact lenses unbearable discover the latest technology has made contact lenses more comfortable. Infants are scheduled to undergo surgery for cataracts. Children receive cornea transplants. Active youngsters seek surgical repair of eyes that suffered too-close encounters in fishing, skiing and other accidents.

Whether they care for routine or exotic problems, the physicians, residents and fellows of each ophthalmology service share compelling goals: the preservation and restoration of sight and the prevention of blindness through treatment, research and education. Because of the OHSU ophthalmologists and their staff, thousands of children will see brighter futures.



Immunology helps children fight back against odds

One in 100,000.

Long odds, to be sure, but that provides no solace when it's "one's" turn; when, against the odds, a baby is born without an effective immune system.

"These children typically don't survive more than one to two years," says Dr. Michael Borzy, who is head of pediatric immunology at the Oregon Health Sciences University.

With the help of Borzy and the staff of Oregon's only pediatric immunology section, Jason Cronin of Salem beat the odds.

Jason was the "one" in 100,000; he was born with severe combined immune deficiency disease, which made him extremely susceptible to infection. The most effective treatment for his condition is a bone marrow transplant. The best donor is a sibling because the procedure requires a close genetic match. And among children with this condition, not one in

four has a matched sibling donor.

Jason beat the odds again. His sister Wendy was a perfect match. In the first bone marrow transplant in Oregon for severe combined immune deficiency disease, Borzy withdrew two ounces of marrow from Wendy, then injected it into Jason's abdominal cavity. The disease-fighting cells then traveled throughout the body and developed into the immune system he was born without.

Jason the "one" is now four years old. And the odds have swung to his side.

Borzy, associate professor of pediatrics and director of the Pediatric Immunology Laboratory, also treats children with other, less rare immune deficiencies. For some, treatment consists of injections of gamma globulin ("giving what the body doesn't make," explains Borzy). Other children, whose conditions cannot be treated this way, are kept on preventive

antibiotics and watched carefully in case infections develop. The laboratory is actively researching other forms of treatment for children with various immune deficiencies.

In addition, the pediatric immunology section is where children with acquired immune deficiency syndrome or AIDS-related complex go for treatment. So far, Borzy says, no pediatric AIDS cases have been confirmed in Oregon, but the section is monitoring several youngsters who have AIDS-related complex, a possible precursor of AIDS. Some are children with hemophilia, who presumably were exposed to the AIDS virus through the blood products they receive to treat their hemophilia, he says. Thanks to a recently developed screening test, it is now possible to screen blood to protect recipients of such products from exposure to the AIDS virus.



Pediatric nurses know patients' needs, 24 hours a day

Chances are when you think of hospitals and when you think of caring, you think of nurses.

Understandable. Nursing and caring are as synonymous as nursing and hospitals.

Nurses are there whenever they are needed — they are in the hospital around-the-clock. They are among the first and last people patients are likely to see when they enter and leave a hospital.

"Nurses are the glue," says Mary McBride, associate nursing director of maternal/-child nursing. This is true in both Doernbecher Memorial Hospital for Children and the outpatient clinics at the Oregon Health Sciences University. The OHSU's primary nursing system gives pediatric nurses responsibility for planning and carrying out the care of their young patients.

Nurses at the OHSU also have the added edge of working in an academic setting where compassion for patients and excellence in technique go hand in hand.

Says Dr. Pam Hellings, who chairs the School of Nursing's Department of Family Nursing, "Because we have students and teachers here, we always have a dynamic exchange of information. We continually question what we're doing and try to find better ways to do it, in a joint effort between clinical staff and faculty. For instance, right now we are researching how effectively a new product sprayed on the skin reduces children's pain during immunizations."

Children are the subject, and the potential beneficiaries, of other research at the nursing school, Hellings points out. In one project, researchers are conducting a national study of how pregnant women get access to health care before, during and after the birth of their child. Other projects are looking at: how new parents make the transition to parenthood; what helps mothers succeed or fail in breast feeding; whether preschoolers exhibit Type A behavior (possibly putting them at higher risk of coronary artery disease) and whether that behavior can be modified; and how children respond to research methods designed for adults.

The presence of the School of Nursing enhances the opportunities for all university nurses to further their professional education. For example, a nurse who would like to become a pediatric nurse practitioner — with special qualifications to provide primary health care to children — can enroll in the graduate program to become eligible for certification. The university offers a complete range of other graduate-level courses and has recently established Oregon's first doctoral program in nursing.

As primary nurses responsible for the quality of nursing care in the OHSU's

hospital and clinics, nurses pull together all the elements of children's care into a coordinated program that is best for each child from admission until the patient is discharged. Children get to know their nurses; they have someone they know they can turn to. "Our nurses take a good deal of pride in coordinating and conducting the care of their patients," McBride says.

"Nurses become the best barometer of a child's psychosocial state and they are also a good barometer of his or her physical state," she continues.

But their care — and their caring — goes beyond. "The old belief that if you are a pediatric nurse you only enjoy kids doesn't cut it any more," McBride says. "You had better be able to work with adults, too. When you are dealing with a patient, you are dealing with much more than just the child in the clinic or hospital room, you're dealing with the family."

"Everyone involved becomes part of your patient care. You don't just nurse the child; you nurse the entire family."

For that reason, families are encouraged to stay with their children or visit sib-

lings while they are in Doernbecher, anytime of day or night.

Oregon Health Sciences University nurses are highly specialized professionals, knowledgeable in normal growth development, nursing science, complex medical problems and family dynamics, and able to assist in educating future nurses in the School of Nursing.

The university's nurses are growing and learning, so they can give children the best possible care.

Because most of all, the OHSU's nurses are caring.

How to reach OHSU clinics and services

For your convenience, listed below are telephone numbers for the inpatient and outpatient services described in this special issue of *OHSU News*, "Focus on Children."

EMERGENCY SERVICES 225-7551
OREGON POISON CONTROL AND
DRUG INFORMATION CENTER 225-8968

PEDIATRIC OUTPATIENT SERVICES
Outpatient Clinic 225-8500
Includes allergy, cardiology,
cystic fibrosis, dermatology,
endocrinology, gastroenterology,
hematology, immunology,*
infectious disease, metabolism,
neonatology, nephrology,
neurology, neurosurgery,
oncology, pediatric primary care
and wellness, plastic surgery,
pulmonology, rheumatology*,
surgery, urology



OUTPATIENT SERVICES (cont.)
Dentistry 225-8871
Family Practice Center 225-8573
Ophthalmology (Elks Children's
Eye Clinic) 225-7830
Otolaryngology 225-8510
Orthopedics 225-8633
Psychiatry 225-8646
Psychology 225-8617

OBSTETRIC AND RELATED SERVICES
Obstetrics/Gynecology 225-8638
Breast Feeding Clinic 225-8500
Childbirth Education 225-5767
Mother-Baby Unit 225-8527
Nurse-Midwifery 225-8383
Special Delivery 225-8202
Infertility
Artificial insemination,
sex selection, semen analysis 225-8261
In-vitro, female infertility 225-8449

CRIPPLED CHILDREN'S DIVISION 225-8095
Includes cardiology, genetics,
hemophilia bleeding disorders,
neurodevelopmental pediatrics,
neurology, nursing services,
nutrition, occupational therapy,
orthopedics, pedodontics, physical
therapy, prosthodontia, psychiatry,
psychology, social work, special
education, speech pathology and
audiology

For inpatient admission by community
physicians 225-8811
For general information about
hospital and clinic services 225-8505

*physician referral required

Pediatric emergency care makes a critical difference

When a little patient has a big problem, doctors and hospitals across the region look to Doernbecher Memorial Hospital for Children to help. They know that Doernbecher, a hospital within University Hospital, is unique in the resources it can bring to bear on behalf of a child. With all of the faculty of the Oregon Health Sciences University to draw upon, the hospital's comprehensive pediatric emergency services can meet almost any need a child might have for critical care.

When the need for care is intensive

Doernbecher's wards for high-risk newborns are the busiest in Oregon. One such unit is the Neonatal Intensive Care Center (NICC), where each year, 380 tiny patients spend their first day. Three-fourths of them have been born too soon. Some cannot function on their own because essential organs are not fully developed. Sometimes, they spend months under care of the neonatal pediatric specialists on the staff.

A specially trained nursing staff and resident physicians provide round-the-clock care. This is the only NICC in the state with such complete 24-hour coverage.

Some babies in the NICC have birth defects or need surgery. They will receive the most advanced care available from a staff of specially trained pediatric surgeons, physicians and nurses. More than 80 percent of the babies — some weighing less than two pounds — survive.

The NICC is the only unit in the state with facilities for the diagnosis and surgical therapy of infants born with heart problems. Of the more than 300 babies who are born in Oregon with heart defects each year, most will be diagnosed and treated here.

Another ward, Intermediate Neonatal Care, provides the special attention needed by moderately ill babies born in University Hospital and takes care of children convalescing after a stay in the NICC.

The Pediatric Intensive Care Unit (PICU) cares for about 340 critically ill children each year. It receives patients referred by pediatricians throughout the Northwest.

Like the babies in the NICC, children in the PICU have 24-hour coverage by specially trained pediatric teams. Nurses are trained in critical, intensive care for children, and resident physicians are always available.

So are pediatric and surgical specialists. Just as pediatrics is a specialty of medicine, there are subspecialties within pediatrics. The staff at Doernbecher Hospital and the rest of the teaching faculty at the OHSU have uncommon skill. There are pediatric subspecialists in kidney, heart, lung and digestive disorders. Others have certification to treat problems ranging from nerve and gland disorders to cancer and infectious diseases.

Save a little time, save a little life

Often, when children need help, they need it fast. Sometimes an ambulance will do the job, and other times — and other distances — help must take to the air by fixed-wing aircraft or helicopter.

The OHSU's neonatal and pediatric emergency transport systems respond at once to emergencies in all corners of Oregon, southwest Washington and western Idaho. Since 1979, more than 2,000 newborn infants and 650 critically ill and injured children have been transported to Doernbecher Children's Hospital. Doernbecher has the only pediatric transport team in Oregon that offers comprehensive pediatric life support to children older than newborns.

Treatment begins when the team arrives and continues during the trip to Doernbecher. The transport team includes a pediatric physician, a transport nurse and a respiratory therapist.

A new service can slice hours from the time it takes to reach remote locations. A specially outfitted Agusta 109 Mark II helicopter has ample room for the three-

member transport team and intensive care equipment. With a round-trip range of 300 miles, the craft can serve patients on the Oregon coast and north to Longview and Aberdeen, Wash., and can navi-

gate the Columbia Gorge east to Pasco, Wash. It can reach hospitals as far away as Roseburg.

Pediatric transport at the OHSU has evolved into a mobile intensive care unit.



From helicopter, airplane or ambulance, the pediatric transport team maintains contact with Doernbecher's Pediatric Intensive Care Unit to coordinate the care of the sick youngster.

The emergency transport service is more than "quick response." The service brings the intensive care unit to the patient, including the entire team of health care professionals and necessary intensive care equipment. In this way, the patient's level of care is not decreased during transport.

A question of poisoning

For parents anywhere in Oregon, one type of emergency help is just a telephone call away. Last year the Oregon Poison Control and Drug Information Center at the OHSU answered calls from every county in Oregon — 42,000 of them. More than 75 percent involved children under six years of age.

The center's physicians are trained in toxicology and critical-care medicine. With nurses and pharmacists, they are available by telephone 24 hours a day. Poison control staff members have at hand computerized listings of 400,000 drugs, poisons and toxic chemicals and their effects and antidotes.

A call to the Poison Control Center can trigger numerous services. First comes advice on what to do. If hospital care is needed, the center will call a local ambulance. The local hospital's emergency department is then notified and instructed about treatment.

The center follows up by calling the parents at intervals, by working with the personal physician when called for, and by arranging for transport to the OHSU in the case of a seriously poisoned patient who needs specialized care. Instructions are conveyed to the pediatric transport team while the patient is en route.

Speed. Teamwork. Expertise.

The Oregon Health Sciences University's pediatric emergency care is a powerful resource for sick or injured youngsters. From babies born too soon to children with traumatic injuries or extensive poisoning, the hospital is set up to treat children faster, with more sophistication, and by care providers with highly specialized knowledge.

Just as the University Hospital Emergency Service is a leader in emergency physician training, the OHSU's pediatric emergency care has a leadership role in child health. Doernbecher leads the way in helping children — even when the odds seem very much against them — to survive and to thrive.

FOCUS ON CHILDREN

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