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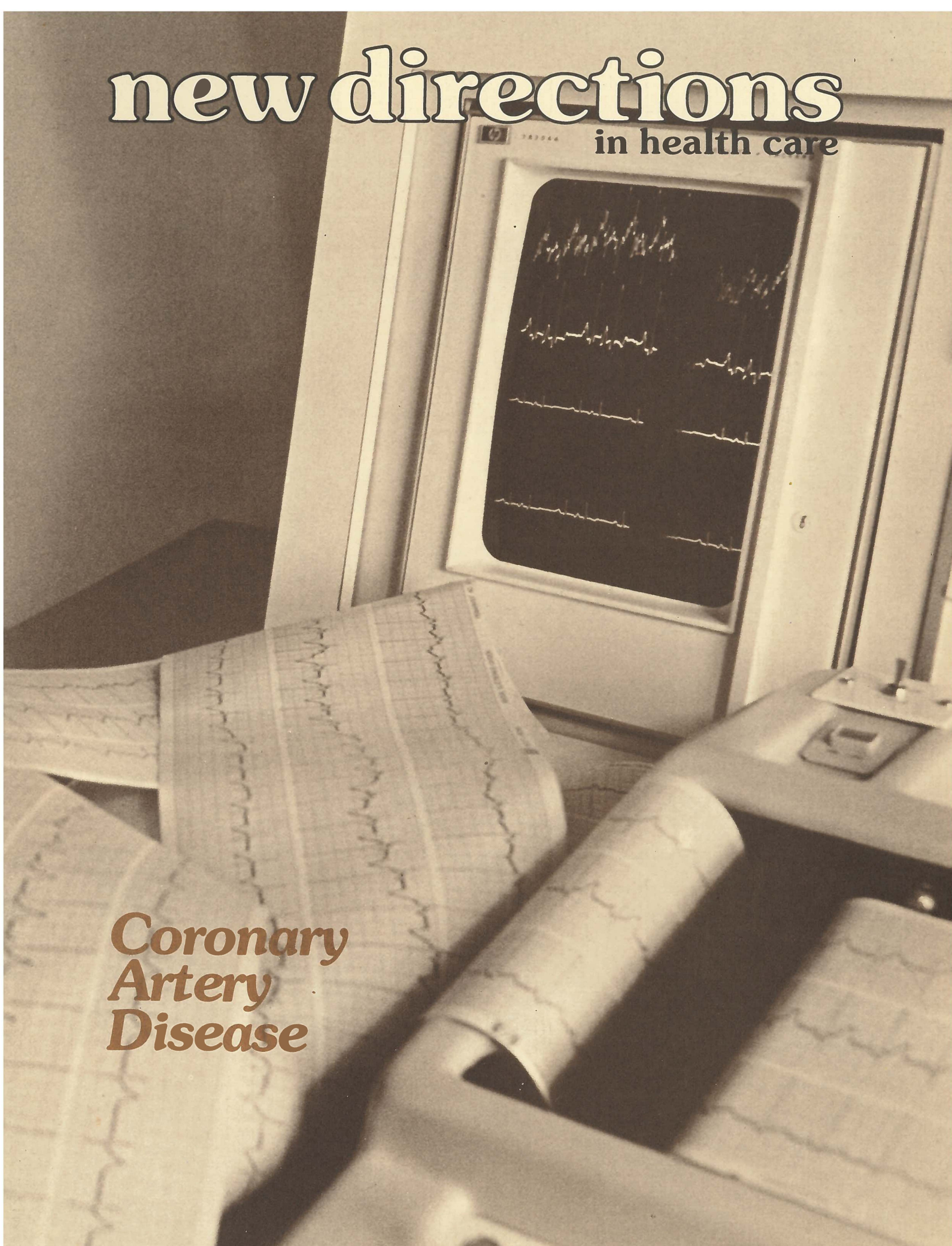
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new directions

in health care

**Coronary
Artery
Disease**



Volume 1 Number 2

April, 1978

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new directions

in health care

April, 1978

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LUTHERAN HOSPITAL
OF MILWAUKEE INC



health caring **Comment**



Mr. Donald K. Mundt, immediate past chairman of the Board of Directors of Lutheran Hospital of Milwaukee, Inc. has written this comment.

The first issue of NEW DIRECTIONS IN HEALTH CARE dealt with hypertension, and we hope it was of interest to you. This second issue is devoted primarily to coronary artery disease — the most common and most lethal of all heart diseases. This sequence of topics is not happenstance. As you may know, hypertension is one of the major risk factors associated with the development of coronary artery disease.

Major changes in the diagnosis and treatment of coronary artery disease, as well as public awareness of the devastating effects of cardiovascular diseases, have led in recent years to a drop in the death rate from heart disease. But heart disease is still our number one killer, and coronary artery disease continues to be the most common cause for an American to die.

Coronary artery disease is presented from initial diagnosis to eventual rehabilitation. We recognize that in this issue we cannot answer all the questions you may have. But we hope that the knowledge you gain from NEW DIRECTIONS will help you in the maintenance of your good health.

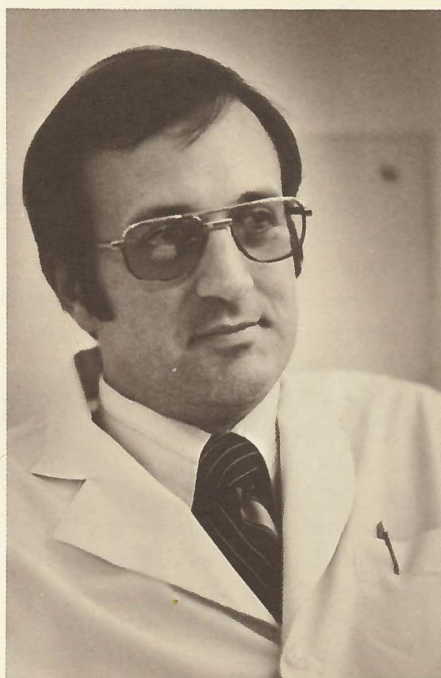
We would be pleased to receive your reactions to NEW DIRECTIONS and to Lutheran Hospital's new plans and programs as they are announced in this publication.

Donald K. Mundt

Donald K. Mundt

CORONARY ARTERY DISEASE

Help is on the way



Daniel J. Forward, M.D.

Coronary artery disease holds the distinction of being America's number one killer. Relatively unknown fifty years ago, this form of heart disease has become the leading cause of premature death in the American male. It kills women, too. The disease process probably begins in childhood. But help is on the way.

During the past several years, the death rate from coronary artery disease has *dropped* even as the incidence of those people found to have the disease has *risen*.

Cardiologist Daniel J. Forward, M.D., notes that greater awareness of the risk factors thought to be involved in the development of coronary artery disease has combined with the availability of new drugs, the development of sophisticated diagnostic tools and surgical procedures, the advent of specialized hospital coronary care units, and rehabilitation programs to drop the death rate.

"Coronary artery disease is a narrowing in the arteries that supply blood to the heart," states Dr. Forward. The slow, progressive build-up of fatty deposits, atherosclerotic plaques, on artery walls causes the narrowing and sets the stage for heart attacks.

Forward notes that detection of that narrowing is diagnosed in three ways:

... One presentation of the disease is in the form of chest pain called *angina*. "It's a major symptom that allows the physician to diagnose coronary artery disease as opposed to other heart diseases."

... *Heart attack* is a second means of diagnosing the disease. In some patients, it can be the first manifestation of the disease. "A heart attack is the sudden occurrence of total lack of blood supply to an area of heart muscle. As a result, a patch of heart cells actually dies."

... *Sudden death* is the third presentation of the disease, initiated by abnormal heart rhythms or a massive heart attack. "Roughly

speaking, patients present these disease characteristics in equal thirds," notes Dr. Forward.

Prior knowledge helps. The physician can determine probable development of coronary artery disease by assessing the risk factors obtained in the patient's medical history.

Hypertension, smoking, elevated levels of cholesterol and triglycerides, diabetes, family history of heart disease, and lack of exercise are today thought to play major roles in the development of coronary artery disease.

"The physician can select patients who have high risk factors and consider recommending them for diagnostic testing," says Forward. Initially, that testing comes in the form of resting and stress electrocardiograms (EKG).

An EKG records the electrical impulses generated by the heart on body surfaces. The recorded tracings can often give an accurate picture of heart diseases and abnormalities.

Dr. Forward points out that a resting EKG can be used to diagnose coronary artery disease if a heart attack has occurred; and, in some patients, it's found to discover a heart attack the patient didn't even know about.

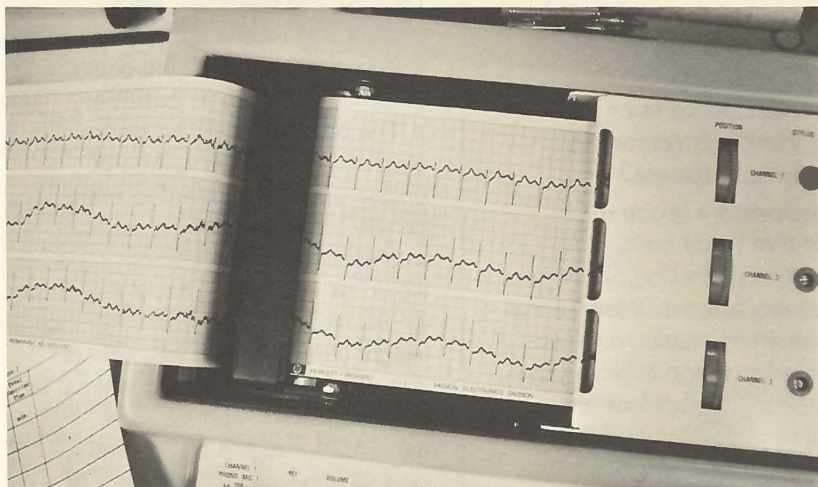
A stress test is an EKG taken during exercise on either a stationary bike or a treadmill. It determines the response of your heart to exercise. The speed and slope are adjusted to greater levels during the course of the test.

Forward notes that "A stress test is not intended to place more than the usual work load on the patient, but simply to reproduce normal levels of activity.

The test is stopped immediately when the patient indicates symptoms of discomfort or fatigue."

EKG stress testing may indicate a change which shows areas of the heart not receiving sufficient blood supply, and it may also show abnormal rhythms not indicated on the resting EKG.

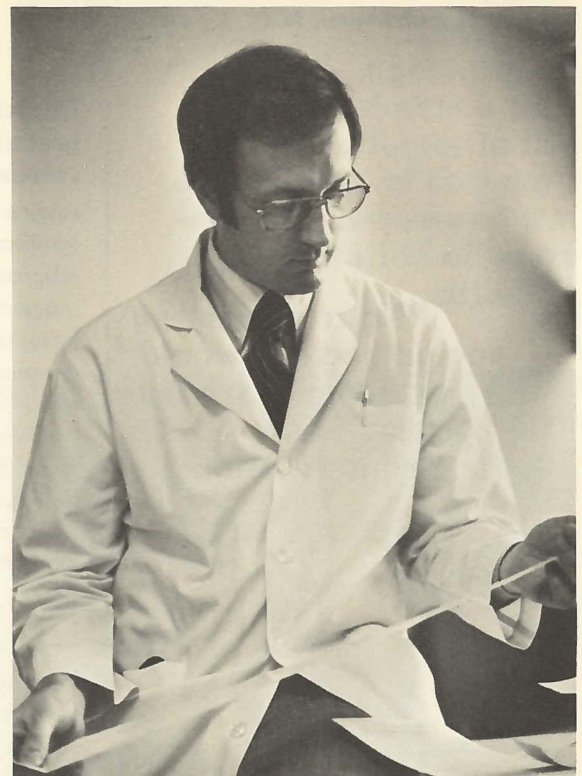
Stress testing can be used to identify people who have a higher risk of developing coronary artery



An EKG records the electrical impulses generated by the heart on body surfaces.

disease without actually having its symptoms. Those individuals are asked to control risk factors and are provided with guidelines to safe exercise levels.

Based on the severity of the EKG changes seen during the stress test, further tests may or may not be indicated. "For example," concludes Forward, "a cardiac catheterization may be performed to tell the extent of coronary artery disease." ■



EKG stress testing may indicate a change which shows areas of the heart not receiving sufficient blood supply...

Angina Pectoris

An Interview with Cardiologist Lamont R. Schweiger, M.D.



Lamont R. Schweiger, M.D.

“No treatment of angina pectoris would be complete today without attention to risk factor intervention...”

Dr. Schweiger, what is angina pectoris? How is it related to coronary artery disease?

Angina pectoris is a group of symptoms that result from atherosclerotic narrowing of one or more coronary arteries. Injury to the lining of an artery results in various degrees of obstruction in blood flow within the artery. Symptoms are provoked when the demand for blood in a portion of the heart muscle is not satisfied because of the abnormality in the artery nourishing that area.

What is the basis for development of atherosclerosis?

The precise cause of the disease is unknown, but it begins with the deposit of cholesterol, and later, chronic, intermittent deposits of fibrin and platelets, both normal blood constituents. Ultimately, at these deposit sites, thrombosis (blood clotting) and scar formation occur.

What are the symptoms and sites of angina pectoris?

The symptoms are variously described as pressure, tightness, fullness, heaviness, crowding, burning, or choking. A symptom is never quick or sharp. Typically, the sensation lasts for two to ten minutes. The intensity of the sensation is not important; both mild and severe angina symptoms are equally significant.

Characteristically, the individual may feel symptoms in the chest or upper abdomen; in the shoulders or between the shoulder blades; through one or both wrists or elbows; in the throat, ears, neck, gums, or teeth.

How do you treat angina?

The goals of treatment are to prevent and relieve symptoms and to restore the patient's living patterns as close to normal as possible.

The patient should be made aware of the chronic nature of angina and be prepared to make certain lifestyle concessions. No treatment of angina pectoris today would be complete without attention to risk factor intervention including weight control by use of a prudent diet with reduced calories, animal fat and cholesterol; and for some individuals, drugs may be used to control abnormally high levels of blood fat. Diabetes must also be controlled and cigarette smoking discontinued.

Increasing evidence suggests that a program of regular exercise is beneficial. The physician should advise the patient concerning the type and duration of an exercise program.

There is abundant evidence that uncontrolled hypertension is a powerful factor in the aggravation of coronary artery disease and the precipitation of heart attack. Thus, high blood pressure must be controlled.



Schweiger: "The goals of treatment are to prevent and relieve symptoms and to restore the patient's living patterns as close to normal as possible."

Drug treatment for angina pectoris has changed significantly in recent years. The introduction of the drug called propranolol (Inderol) has had tremendous impact in the control of symptoms. Among its important effects, propranolol allows the heart to function effectively with lower amounts of blood oxygen.

An individualized treatment plan, combining propranolol with various vasodilating drugs (blood vessel dilators) such as nitroglycerin, enables many patients to pursue normal, or near normal, life patterns.

Generally, nitroglycerin is used immediately upon the appearance of angina. But another important application is in the prevention of symptoms by use of the drug prior to the start of physical or emotional exertion.

Finally, since anxiety and other emotional states may lower the threshold at which angina appears, efforts should be made to modify such factors by attempting to achieve a state of relative tranquility.



Schweiger:
 "...uncontrolled hypertension is a very powerful factor in the aggravation of coronary artery disease and the precipitation of heart attack."





Heart Catheterization and Coronary Angiography

Coronary Catheterization is an investigative diagnostic technique. Within the past twenty years, selective coronary catheterization in patients with atherosclerotic heart disease has been developed to a high level of sophistication.

Various catheterization methods can be used to confirm a diagnosis and to define the extent and severity of the heart's abnormalities. The tests can, for example, pinpoint and visually record the exact anatomic position and extent of coronary artery obstruction.

In this way, catheterization provides necessary information, in the presence of clinical indications, to determine whether coronary artery bypass surgery is technically feasible and reasonably safe for the patient. The test can also be used to assess the long term results of bypass surgery.

"Coronary arteriography is not indicated for everyone with chest pain," states cardiologist Donald A. Spring. He points out that a complete work-up (with a careful diagnosis based on patient history and physical examination, stress EKG testing, and the response to medical treatment) helps screen out people who do not need arteriography.

Likewise, he notes that referral for bypass surgery is not the inevitable outcome of a coronary catheterization procedure.

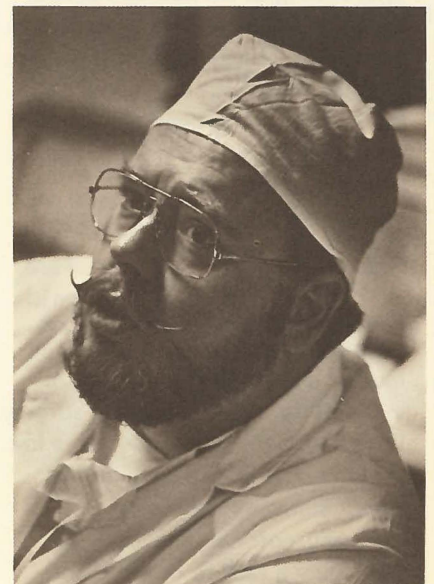
"However," states Dr. Spring, "one in ten patients suspected of having coronary artery disease and subjected to investigative cardiologic testing will be found to have Left Main Coronary Disease, and it's a killer." When the left main coronary

artery is blocked, the entire blood supply to the powerful left ventricle pumping chamber of the heart is severely reduced, and that may cause sudden death.

As a detection method for coronary artery disease, the catheterization procedure begins "with a well prepared, relaxed patient who *knows* what's going to happen," notes Spring.

The patient is mildly sedated but awake, as there is need for communication between the cardiologist and patient during the procedure.

A local anesthetic administered to the inside of the elbow over the arm's main artery temporarily numbs the area. "A small incision in the artery allows insertion and passage of a smooth-walled tube catheter into the vessel," states Spring. It's maneuvered through the vessel to the large artery originating from the left ventricle of the heart, the aorta,



Donald A. Spring, M.D.

and through the aortic valve into the heart chambers.

"As the catheter slides up the arm, the patient may experience a tickling feeling, but once past the shoulder, the patient usually doesn't feel a thing as there are no nerves in the great vessels or the heart itself," he states.

A highly skilled team including the cardiologist, the catheterization laboratory nurse, and two radiologic technicians work together throughout the procedure. Pictures of the blood vessels, the heart muscle chambers, and arteries are simultaneously recorded on high speed 35mm movie film and video tape.

Once the catheter is inside the heart, procedures adapted to fit the diagnostic needs of each patient are begun. These may include blood sampling, assessment of the pumping capacity, recording the pressures in the various chambers, and checking the performance of the heart's valves. "Throughout the entire procedure, the patient's heart rate, EKG, blood pressure, and numerous other hemodynamic (blood flow, volume, and pressure) measurements are continuously monitored and stored in a computer," notes laboratory nurse Linda Marcus.

A contrast medium called a "dye" is then injected into the vessels and heart chambers. The dye causes a brief feeling of warmth throughout the body. Projected on X-ray film as a negative, image-producing outline, the dye mixes with the blood, and the motion of the heart muscle is visualized, disclosing valve action. Scarring of the walls and blood clots within the chambers may also be revealed.

Specific study of the main pumping chamber of the heart, a ventriculogram, gives indication of muscle power. "It's an important index of the risk of coronary surgery. If the muscle is good, the risk is low. If the muscle is diseased, the risk rises," states the cardiologist.

Finally, coronary angiography (providing a picture of the blood vessels) closes in on the coronary



Marcus: "Throughout the entire procedure, the patient's heart rate, EKG, blood pressure, and numerous other hemodynamic measurements are continuously monitored and stored in a computer."

arteries. The left and right coronary arteries encircling and feeding the heart are studied with the aid of a rotating laboratory table, a contrast dye, and the roving-vessel catheter tip.

"At the conclusion, the catheter is withdrawn, a few stitches are taken in the skin, and the patient returns to the hospital room for rest, breakfast, and an afternoon walk," states Spring.

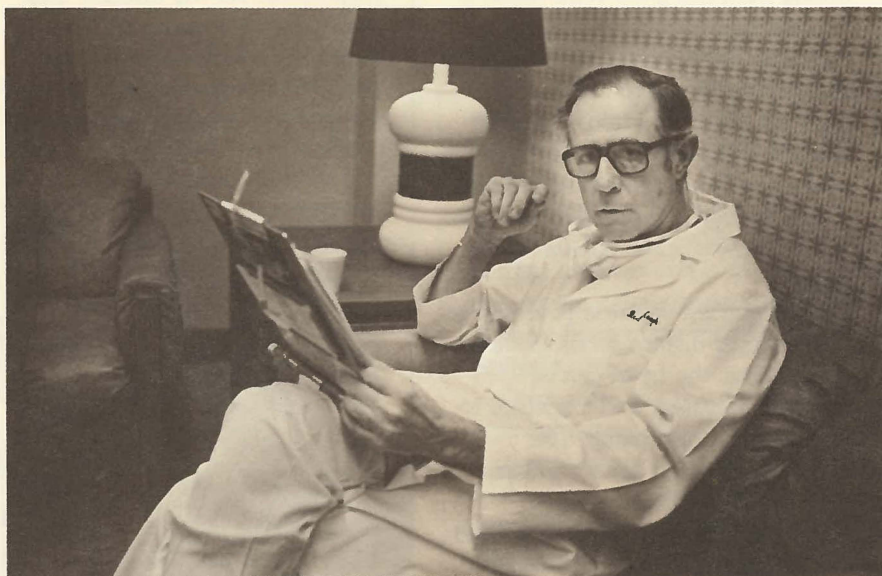
Any invasive heart procedure involves patient risk. "Remembering that people with coronary artery disease may be subject to sudden death at any time, the cardiac catheterization team takes every precaution to minimize that risk through constant monitoring by highly trained personnel. Everything available in a coronary care unit is here in the catheterization laboratory," states Spring.

He concludes that the death rate is less than 1 in 1,000 for the catheterization method. This statistic shows the diagnostic yield to risk ratio to be very satisfactory. ■



A 35mm movie film frame of the right coronary artery.

An Anatomy of Bypass Surgery



As told by
Cardiovascular Surgeon
Donald E. Koepke, M.D.

Coronary bypass surgery got its start after the development of coronary angiography in the early 1960's. Angiographic X-ray pictures were a necessary predecessor to bypass surgery. They mapped out blocked arteries giving a blueprint of a patient's anatomy and visually demonstrating obstructions in the coronary arteries.

Coronary artery surgery was then pioneered in the mid 1960's. But since that time, the operation has improved considerably, just as progress has been made in all forms of heart surgery.

Within the past few years, for example, it has become possible to better protect the arrested heart during surgery. Use of a cold potassium solution now allows us to work on the heart for up to one hour without any circulation in that organ.

We have learned that in the early days we tried to do too much, too late. Ideally, bypass surgery should

be performed before there is heart muscle damage, and the surgery should be complete, bypassing all coronary arteries showing blockage.

Bypass mortality here at Lutheran Hospital is very low. It runs between one and two per cent in those patients selected for surgery based on having satisfactory ventricles without significant previous heart damage.

The surgery takes three to four hours with the surgical team working slowly and carefully. An initial incision is made in the middle of the chest and the breast bone is divided, exposing the front of the heart.

During this time, saphenous veins are being taken from the lower legs, to be sewn onto the exposed aorta, the large artery coming from the heart's left ventricle. The legs' saphenous veins can be spared, are easily available, and are of proper caliber to function as bypass grafts. Occasionally, the internal mammary artery, which runs parallel to the sternum (breast bone), is used in addition to a leg vein.

An essential anticoagulant drug, heparin, is now used. Without this medication, we could not do the

surgery because blood would later clot in the heart-lung machine.

The aorta is clamped; a round patch of tissue is removed from it with an aortic punch, and then the vein is sutured to the artery.

Next, the patient is connected with tubing from the great veins leading into the heart to the heart-lung machine. Blood is drained via gravity to that machine which takes over both the pumping job of the heart and the oxygenating job of the lungs for several hours. Blood is returned to the body and is pumped back into the ascending aorta, bypassing the heart.

Next, the left ventricle is vented to prevent over distension of the heart. At this time, the heart can be handled, elevated, and inspected to locate spots for grafting. The angiograms taken earlier become very critical now, indicating specifically the vessels to be grafted.

The heart is arrested by cross clamping the aorta and instilling the cold potassium solution into the base of the aorta. This allows us to sew the veins to the artery while the heart is quiet. The free end of the vein is beveled to the artery and sutured in place, bypassing the area of obstruction. The average is three and a half bypasses per patient.

After completion of the bypass procedure, the heart is restarted by releasing the clamp on the aorta. Very often the heart spontaneously resumes regular rhythm. At other times, electric shock is required to restore heart rhythm. When the patient is disconnected from the heart-lung machine and tubes are removed from the heart, a drug called protamine is used to counteract the heparin. Blood clotting is restored.

The sternum is then wired closed, the incision is sutured, and the operation is over.

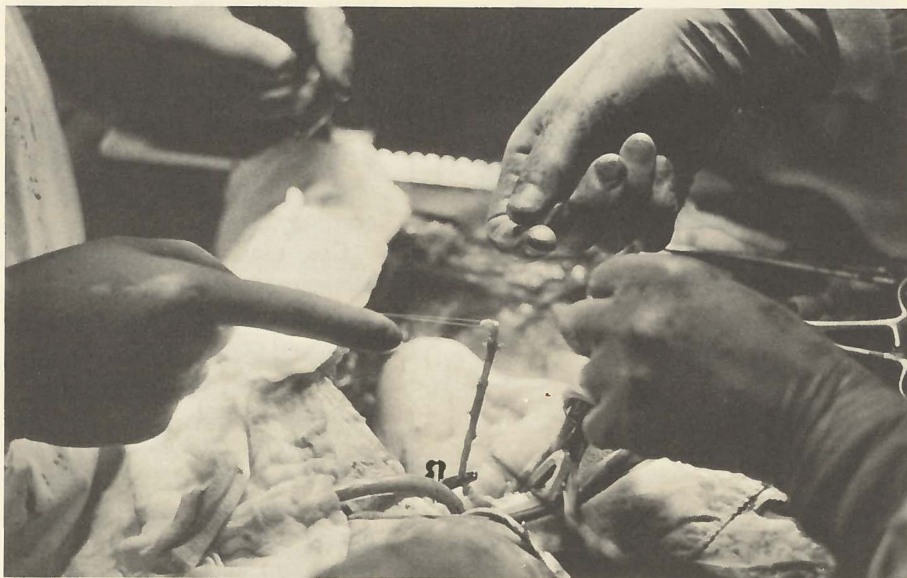
The patient can expect to spend two days in intensive care. A day after surgery, much of the monitoring equipment can be removed. After intensive care, the patient's hospital stay varies from five to nine days. Generally, a patient returns to work in six to

twelve weeks, depending upon the physical activity required in the job.

Although the operation is actually more beneficial than we realized when first initiated, surgery alone is not the answer. Ideally, a patient must control the risk factors that are responsible for the disease. Best results for prolonging life and improving the quality of life are obtained by the combination of surgical and medical treatment. ■



Koepke: "An initial incision is made in the middle of the chest. . . . During this time saphenous veins are being taken from the lower legs . . ."



Koepke: "The free end of the vein is beveled to the artery and sutured in place, bypassing the area of obstruction."

Rehabilitation of the Cardiac Patient

"Cardiac rehabilitation allows you to know what you've got and how to live with it," states cardiologist Burton J. Friedman, medical director of Lutheran Hospital's Cardiac Rehabilitation Program.

"The purpose is patient education, and it begins, ideally, as soon as the patient enters the hospital."

Rehabilitation is aimed first at teaching the patient about the disease diagnosis, including the medical or surgical treatment plans,

and measures to prevent further progression. It provides guidelines to help the patient physically and psychologically during and after the hospital stay.

The program is similar for medically and surgically treated cardiac patients and is carried out by the cardiac rehabilitation team with support from other members of the hospital staff.

During the first few days of hospitalization, physicians and nurses involved in patient care while in the Coronary Intensive Care Unit function with the rehabilitation team. They have the greatest responsibility and specialized training for the initial stabilization of the patient through intensive medical care. During that time, they are able to observe and evaluate a patient's emotional reactions to the illness.

Lutheran Hospital's cardiac rehabilitation coordinator is Suzanne Englehardt, R.N. Under her guidance, each patient (referred by the attending physician) is introduced to the program. Depending upon the length of hospital stay and personal needs, the patient may meet one or more times with various members of the rehabilitation team.

A physical and an occupational therapist, a dietary and a pharmaceutical clinician, a social and psychological counselor are all available to the patient while in the hospital.



Suzanne Englehardt, R.N.

A physical and an occupational therapist, a dietary and a pharmaceutical clinician, a social and psychological counselor are all available to the patient while in the hospital. If necessary, this teaching can continue on an outpatient basis following discharge from the hospital.

Dr. Donald H. Martin, M.D. acts as the liaison psychiatrist to the rehabilitation program. His interest in the field has evolved since his own triple bypass surgery was performed in 1973.

Dr. Martin observes that heart disease is a personal crisis situation in all its forms and is not just confined to surgical patients. It is especially difficult for the younger person with coronary disease who considers him or herself to be in the prime of life.

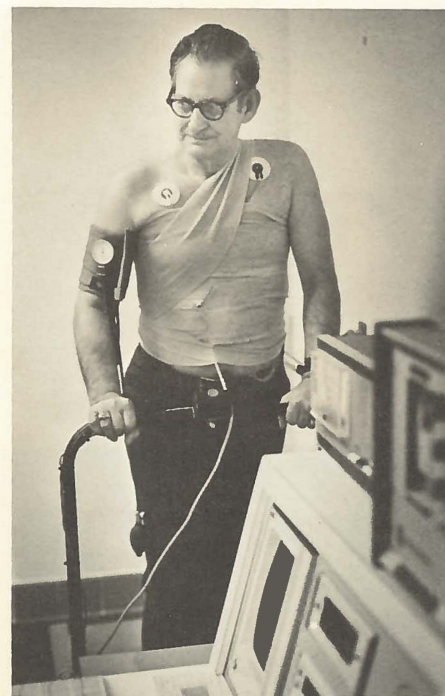
Physical therapy activities are instituted in the hospital and activity levels raised as tolerated by the patient. Those exercises include shoulder, arm and hand movement, treadmill walking, and stationary bicycle riding. The goal is to progress to a level of activity compatible with the patient's daily life and to teach the patient to maintain, and if possible later exceed, that level.

"A carefully monitored exercise test taken on an EKG-monitored treadmill is made one day before

discharge," notes Engelhardt. The results are reviewed by the patient's attending physician as well as the cardiologist, who then writes an exercise level prescription for the individual.

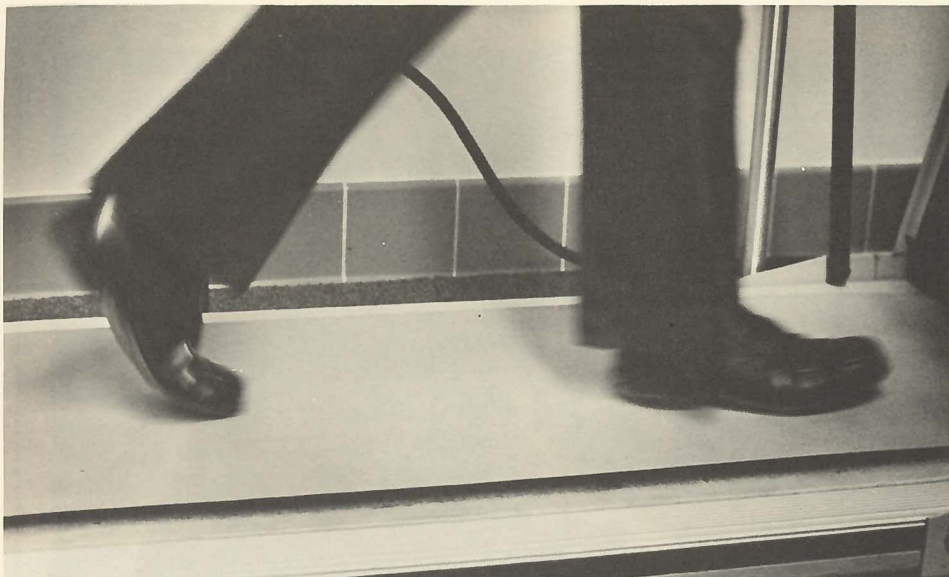
"The objectives are to evaluate the patient's readiness to go home, or to discover a need for change in medication, or to determine the need for further study of the individual's heart," states Friedman.

In that way, notes Engelhardt, the patient becomes aware of the heart's tolerance and gains an objective evaluation of personal physical ability. "And the patient goes home knowing how *well* the heart is functioning," concludes Friedman. ■



Burton J. Friedman, M.D.

"The objectives are to evaluate the patient's readiness to go home, or to discover a need for change in medication or to determine the need for further study of the individual's heart."



Engelhardt: "A carefully monitored exercise test taken on an EKG-monitored treadmill is made one day prior to discharge."

Friedman: "... the patient goes home knowing how *well* the heart is functioning."

Counterpoint

by Cardiologists Lamont R. Schweiger, M.D. and Donald A. Spring, M.D.

Dr. Schweiger:

Various attempts have been made in the past to treat angina pectoris by surgical methods, but these early measures were unsatisfactory.

Beginning in the late 1960's more definitive surgical techniques were employed, now referred to as coronary bypass grafting, intended to improve the blood flow to the heart muscle with compromised arteries.

In my experience, there are relatively few patients who require this type of treatment, the prime candidate being one who, notwithstanding the use of optimal medical management, continues to have an unacceptable amount of angina. For such a patient, the bypass procedure is of tremendous benefit.

Currently, there is considerable controversy regarding the role of surgery in prolonging life and preventing coronary events. Unfortunately, many of the comparisons of results of medically

and surgically treated patients were obtained before the current, widespread use of propranolol and therefore are not reliable as indicators of the respective benefits of optimal medical or surgical treatment.

Dr. Spring:

Coronary revascularization surgery is the result of a long quest. Since its beginning, the bypass procedure has been steadily finding its place in the treatment of heart disease.

The goals of bypass surgery are to relieve angina, to prevent or prolong the development of major myocardial infarction, and to prolong life.

Previous forms of treatment for coronary artery disease including rest, exercise, and medical management have been aimed at balancing a diminished blood supply to the heart by reducing its demand for oxygen.

Bypass revascularization is the only treatment which provides a direct increase in oxygen delivered

to the heart muscle.

It is my belief that some patients will wish to be treated conservatively. In many cases, medical management of those patients with the use of drugs such as propranolol and long-acting nitroglycerin can offer relief.

However, medical management without the establishment of a specific anatomic diagnosis by catheterization may lead to a "crippling" false label of heart disease in the patient who has chest pain but whose arteries are, in fact, normal. Furthermore, because a significant per cent of patients are found to have Left Main Coronary Artery Disease, and since the prognosis for that disease without bypass surgery is extremely grim, potentially salvageable patients may be overlooked.

I believe that just as surgery has been shown to reduce angina dramatically, follow-up data will show that bypass surgery can help reduce the incidence of heart attack and prolong life.

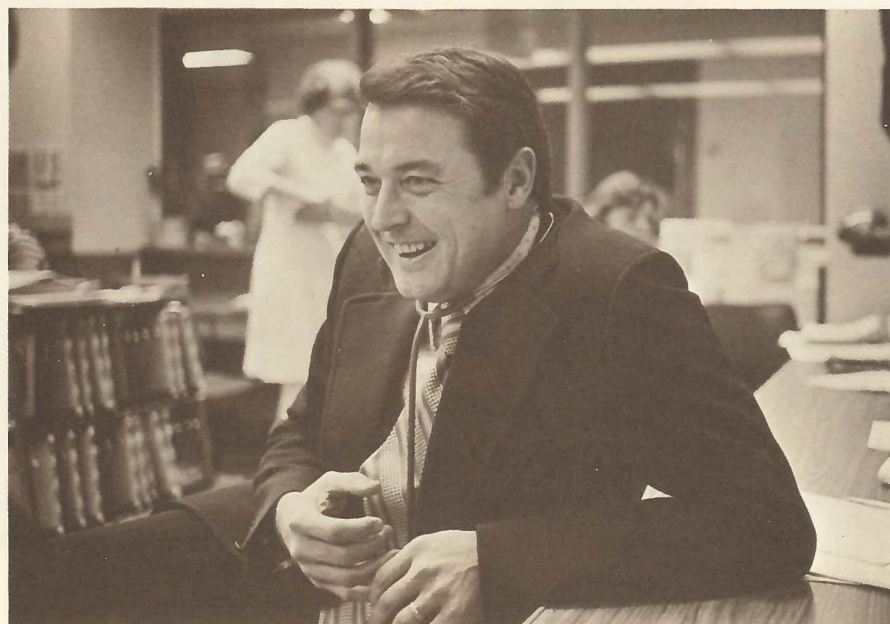
health caring people

A New Chief

James S. Ziolkowski, M.D., was a Marquette University School of Medicine graduate in 1958, beginning a five-year internship and residency study affiliation with Lutheran Hospital of Milwaukee.

In 1962, he became a member of this hospital's medical staff. That close affiliation has lasted. Today he is the newly elected Chief of Staff.

A specialist in internal medicine, Dr. Ziolkowski is a member of the American Board of Internal Medicine. He maintains an active



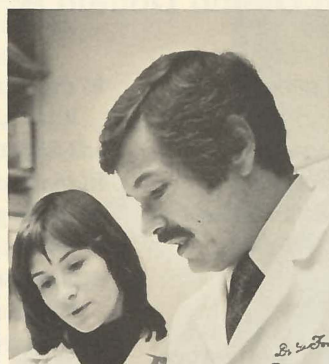
private medical practice and is an assistant clinical professor involved

in teaching internal medicine at the Medical College of Wisconsin.

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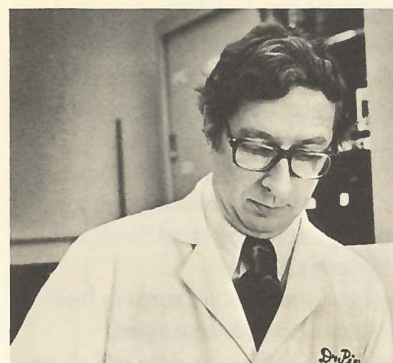
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not pictured:

Richard H. Lillie, M.D., *Chairman, Department of Surgery*

Dean K. Roe, *President of Hospital (ex-officio)*

It's a Lifesaver...

When you can't speak for yourself, Medic Alert can. That's the basic lifesaving feature built into a personal identification system called Medic Alert.

The Women's Auxiliary of Lutheran Hospital is distributing Medic Alert brochures. "Interest in the project has been reinforced by members of the nursing and medical staffs who've seen the need for emergency identification of medical conditions," states project head, Ellen Casey.

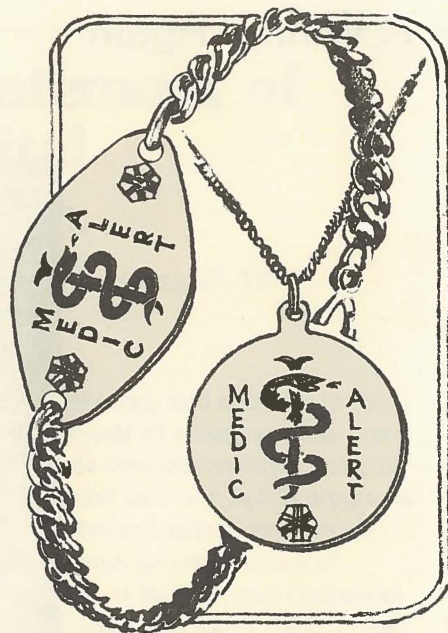
If you have medical conditions that can't be easily seen or identified, like diabetes, allergies to

medications, epilepsy or even contact lenses, a Medic Alert bracelet or pendant can provide that information for you.

But there's more than just a bracelet...

"The Medic Alert Foundation is a nonprofit, public benefit organization. It serves as a central source for specific vital medical information for emergency use that you provide in addition to that printed on your bracelet or wallet card," Casey states.

The ten dollar lifetime membership fee for Medic Alert services includes the emblem bracelet or pendant, is tax deductible, and is not limited to adults.



Critical Care...

The Critical Care Nursing Internship Program at Lutheran Hospital is a sixteen week course designed to train registered and graduate nurses in caring for seriously ill patients.

The objectives and format of the program were written by Janice Gibson, R.N. Supervisor. Critical Care Clinician Sally Peterson, R.N. developed and implemented the teaching program one year ago.

"The goal is to provide a structured learning environment for nurses new to critical care so that they can develop the complex skills necessary to take care of seriously ill patients," states Peterson.

That goal is reached through an initial four weeks of training. It includes orientation to the hospital as well as developing and refining general nursing skills.

During the next twelve weeks of guided clinical practice, interns rotate through each of the four critical care areas: Medical Intensive Care, Surgical Care, the Concentrated Care Unit, and the Intermediate Cardiac Care Unit.

That in-depth preparation will confidently prepare the intern to render expert nursing care as well as psychological support in the complex critical care environment.



A Winner Again

When is a game not just a game?
Ask Lutheran Hospital's Kathy
Wolf, a registered occupational
therapist who recently received her



second national Maddak award, this time, for developing a game called "Housebound" which won First Place Recognition from the American Occupational Therapy Association.

"The game is geared toward anybody, male or female, young or old, who has a household and may be encountering difficulty running that household smoothly," says Wolf.

"Housebound" incorporates tasks like budgeting, nutrition planning and discipline as a basis for the discussion of problems encountered. It offers alternative methods of coping with these daily tasks.

Marketing "Housebound" is now being considered by the company that provides the award grant.

We are proud and pleased with the national recognition Kathy Wolf has again received from her professional colleagues.

A Bit of History...

We believe that the first appendectomy performed and documented by the renowned surgeon Nicholas Senn, M.D., PH.D. may have been the first in the state of Wisconsin.

The procedure was performed at Lutheran Hospital, then known as Milwaukee Hospital, on May 1st, 1889.

In a case study published in *The Journal of the American Medical Association*, November, 1889, Dr. Senn described his patient: "S. J., 22 years of age, clerk by occupation, came under my observation during the last week in April, 1889."

Following a detailed description of



the medical treatment and surgical procedures, Senn recounted that, "at the end of the second week the patient left the hospital, and in the course of another week resumed his

occupation. He is now in perfect health, has gained in flesh, and has been free from pain. The amputated appendix proved to be a very interesting pathological specimen."

The Mission Statement of Lutheran Hospital of Milwaukee, Inc.

As adopted by the Board of Directors on February 23, 1978

LUTHERAN HOSPITAL OF MILWAUKEE, INC. is a private, general community hospital, operated on a non-profit basis, located in the center of Metropolitan Milwaukee. Founded in 1863 during the midst of the Civil War, Lutheran Hospital endeavors to meet its primary goal of addressing the changing health care needs of the community while adhering faithfully to a strong Christian philosophy in the Lutheran tradition.

Lutheran Hospital believes that every human being, regardless of race, creed, color or financial status, is a unique individual, created by God, and requiring in time of need not only medical and physical attention, but also psychological and spiritual ministrations.

The following objectives direct Lutheran Hospital's constant efforts to achieve its primary goal:

- Lutheran Hospital will efficiently administer high quality patient care, amply seasoned with Christian love and concern.
- Lutheran Hospital, operating as a general community hospital, will provide principally primary and secondary patient care programs with required tertiary level services.
- Lutheran Hospital will be cognizant of the changing health care needs of the community and adjust its services and introduce new and innovative programs within its capabilities.
- Lutheran Hospital shares a responsibility for meeting the community's health care needs with other institutions and agencies; hence, Lutheran Hospital will cooperate with these institutions and agencies to the interests of achieving lower costs while maintaining high quality of patient care and health programs.
- Lutheran Hospital will provide, through an environment of superior facilities and equipment, opportunities for its medical staff to practice its skills and to increase its capabilities, and scientific knowledge. In addition, it will maintain an open relationship with its medical staff to insure an effective utilization of its resources and an inflow of physicians.
- Lutheran Hospital will provide educational experiences for health care personnel in a clinical setting. Its primary goal, however, will be providing high quality patient care.
- Lutheran Hospital will provide attractive and wholesome working conditions, competitive compensation levels, and open communications to encourage the employment and retention of competent and enthusiastic employees.
- Lutheran Hospital will provide a pastoral care program that welcomes the clergy of all faiths to minister to the patients' needs.
- Lutheran Hospital, although a non-profit organization, shall maintain an economically viable operation through astute stewardship and a vigorous cost containment philosophy.
- Lutheran Hospital, always affirming its theological and cultural heritage, will seek to meet the needs of the Lutheran community and involve this constituency in support and affirmation.

Major Change

A major reorganization of the corporate structure of Lutheran Hospital of Milwaukee has occurred.

An announcement following the February 23, 1978, hospital annual meeting stated that expansion of membership in the corporation has been authorized to provide broader representation reflective of both the community-at-large and the Lutheran community.

In the past, a greater number of the corporate members were Lutheran deaconesses. Members of this sisterhood had helped found historic Lutheran Hospital in 1863. The dedicated and sacrificial efforts of the deaconesses, the Diaconate movement and the corporate body have guided Lutheran Hospital in its first 115 years of service to the health care needs of its community.

Recognizing an organizational turning point in the Hospital's history and in the interest of carrying forward and expanding the excellent heritage of the past, the Board of Directors has proposed expanded

participation in its Corporate Body.

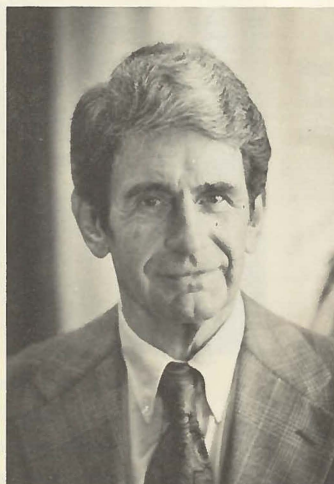
Upon recommendation of the nominating committee of the Board, invitations to join the corporate membership of Lutheran Hospital will be extended to a broad spectrum of individuals representing and reflective of the interested community-at-large, local Lutheran organizations and congregations.

John R. Parker will head the expanded corporation as newly elected chairman of the hospital's board of directors. He follows the leadership of Donald K. Mundt who has been Chairman of the Board since February, 1976.

The Board of Directors



Mr. John R. Parker,
Chairman of the Board
President,
A.O. Smith Corporation



Mr. John A. Archer,
Vice-Chairman
of the Board Retired —
Vice President-Distribution
Joseph Schlitz Brewing Co.



Mr. Earl A. Schiefelbein,
Secretary of the Board
Vice President,
Lutheran Hospital
of Milwaukee, Inc. ex-officio



Mr. Neil Rittershaus,
Treasurer of the Board
Vice President,
Lutheran Hospital
of Milwaukee, Inc. ex-officio



Sister Rose Kroeger,
Assistant Treasurer
of the Board
Directing Sister, Lutheran
Deaconess Motherhouse



Mr. Dean K. Roe,
President of Hospital



Mr. John E. Arpe,
President,
The Heil Company



Mr. Robert W. Braeger,
President,
Braeger Chevrolet, Inc.



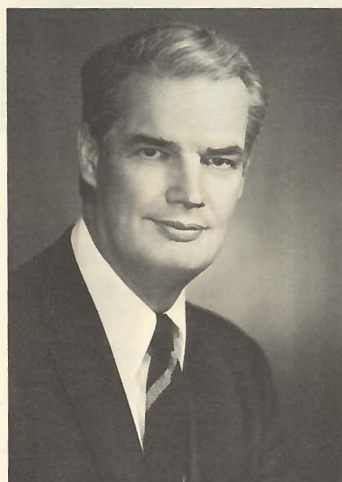
Mr. Elvin R. Danielson,
Manager, Employee
Relations Process
Equipment Groups
Allis-Chalmers Manufacturing Co.



Mr. Jack R. Jaeger,
President,
Milwaukee Electric Tool Corp.



Rev. Chester L. Johnson,
Pastor, Fox Point
Ev. Lutheran Church



Mr. Charles S. McNeer,
President,
Wisconsin Electric
Power Company



Mr. Donald K. Mundt,
Executive Vice President,
Northwestern Mutual
Life Ins. Co.



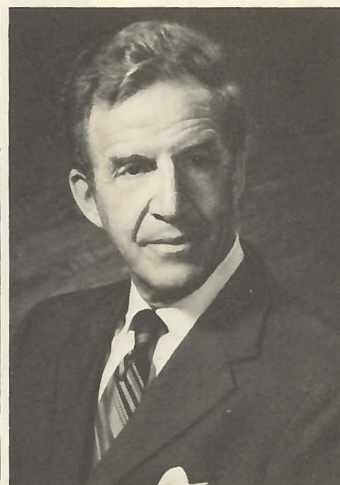
Mr. August K. Paeschke,
Paeschke Associates



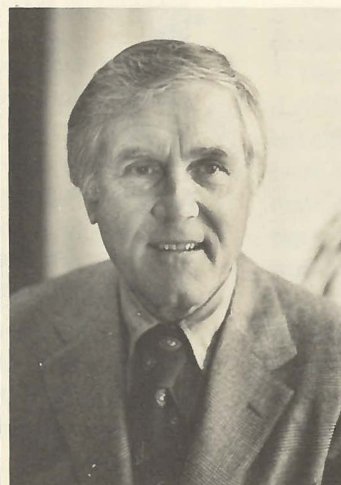
Mr. Arthur W. Riemer,
Chairman of the Board
Wisconsin Bridge
and Iron Company



Sister Gladys Robinson,
Director of
Pharmacy Services,
Lutheran Hospital
of Milwaukee, Inc.



Mr. Ralph von Briesen,
Attorney, von Briesen,
Redmond, Schilling and
Kreunen, S.C.



Mr. Edward H. Yewer,
President, Western
Leather Products Corp.



Dr. James S. Ziolkowski, M.D.,
Chief of Staff

It's in the wings...

We await word for approval of a Family Practice Residency Program to be instituted at Lutheran Hospital. The purpose, to train young medical doctors in the field of family medicine.

The Residency Review Committee of the American Medical Association is studying the extensive plans developed by Lutheran Hospital and the Medical College of Wisconsin to sponsor this family practice residency training program.

"The Medical College has designated Lutheran Hospital as the site because Lutheran wants it and has the facilities for it," states the Director of the Family Practice Program, Dr. Glen Dall.

For the past twenty-eight years, Dr. Dall has been a Lutheran Hospital staff member and is an assistant professor of Family Practice Medicine at the Medical College of Wisconsin.

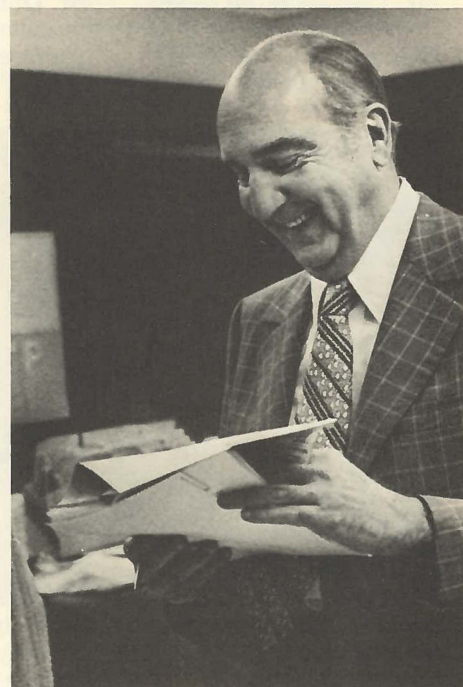
The extensive three-year residency training program will provide multi-discipline hospital and private office practice education for doctors who will then be eligible for certification in the specialized American Board of Family Practitioners.



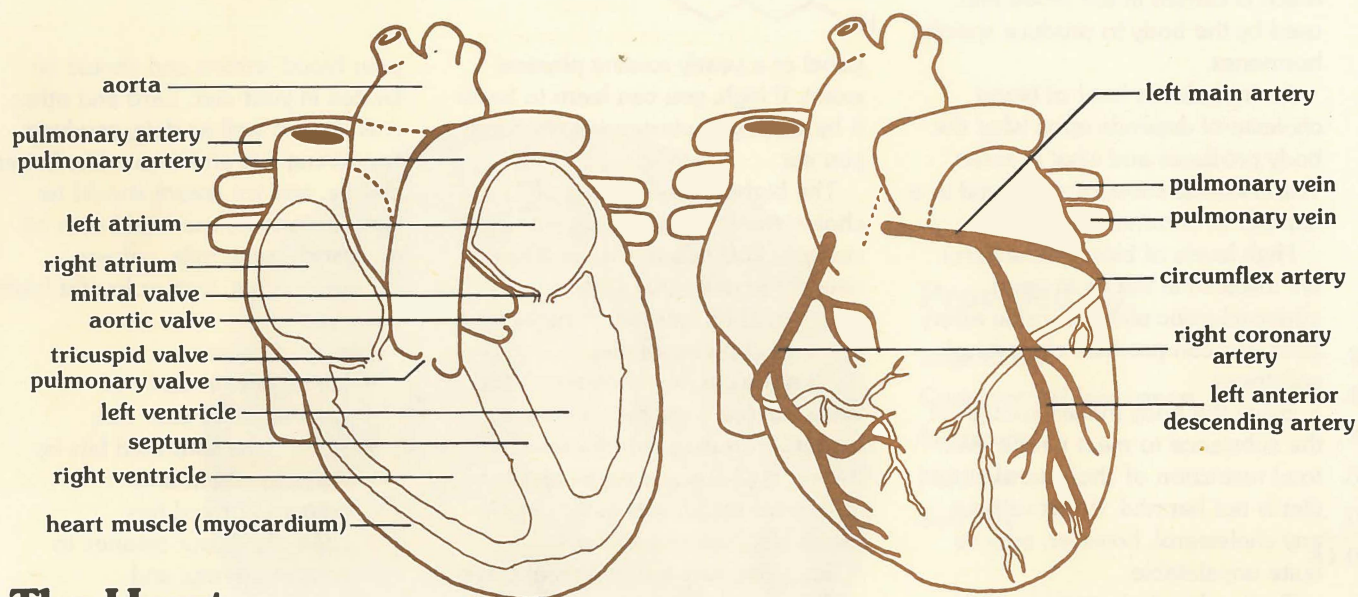
Dr. William P. Wendt

Accolades to Dr. William P. Wendt, who, for the past five years, has provided Lutheran Hospital with exceptional service as the Chief of Staff.

"Continually active, accomplishing new directions, excellent leadership, representing the needs of the entire staff through always open lines of communication and easy to work for," are but a few words of praise raised for Dr. Wendt. A grateful hospital staff says "Thank you."



health caring to your good health



The Heart

described by Sally Peterson, R.N.

The heart is a fist-sized four-chambered hollow muscle. It weighs less than a pound and is located in the mid-section of the chest under the breast bone. Its apex is pointed left toward the diaphragm. The heart walls are made of thick muscle called myocardium.

The right and left sides of the heart are divided by a muscular wall, the septum. Each side is divided into two chambers separated by valves. The lower left and right chambers are called ventricles. The upper right and left chambers are called atria.

A drop of blood traced from your toe travels through veins to the heart entering by way of the large transporter vein, the inferior vena cava. The great vein above the heart, the superior vena cava, transports blood from the head, neck, and upper extremities. Both veins empty blood into the right atrium chamber.

As the atrium fills, blood flows

downward through the tricuspid valve into the right ventricle. The right ventricle contracts, pushing blood through the pulmonary artery to the lungs. Another valve, the pulmonary, opens to allow blood flow to the artery, and then, like all heart valves, it closes to block backflow.

Blood enters the lungs, getting rid of carbon dioxide waste and picking up oxygen and nutrients.

It returns to the heart via the pulmonary veins and enters the left atrium. That chamber fills and then contracts to send blood downward through the mitral valve into the left ventricle, the heart's workhouse pumping chamber.

A strong ventricle contraction pumps blood through the aortic valve into the aorta. The aorta is the large trunk-like artery which arches up and behind the heart and down through the body. It branches off into large main arteries, smaller

arterioles, and then the tiny capillaries where nourishment is fed directly to the tissues.

Like other body tissues, the heart must have a blood supply of its own. That supply comes from the two main coronary arteries branching off the aorta near the point at which it comes out of the heart.

The left main coronary artery divides into two branches.

The left anterior descending (LAD) and the circumflex supply the left side, part of the front, and the back of the heart muscle. The right main coronary artery supplies the right side and the back of the ventricle area of the heart.

It is the blockage of blood flow to the coronary arteries because of atherosclerosis which deprives the heart muscle of oxygen and other vital nutrients.

clip & save

Cholesterol

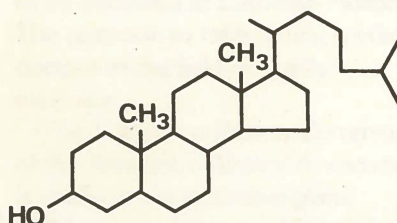
Cholesterol is a complex organic chemical. The liver produces and stores most of this fatty substance which is carried in the blood and used by the body to produce specific hormones.

An individual's level of blood cholesterol depends upon what the body produces and what is eaten. The chemical substance is found in a number of common foods.

High levels of blood cholesterol are involved in the build-up of atherosclerotic plaque inside artery walls and can produce cholesterol gallstones.

Since the body makes enough of the substance to meet needs, even total restriction of cholesterol in the diet is not harmful. A diet without any cholesterol, however, may be quite unpalatable.

Testing for cholesterol levels is usually part of the blood screening



panel of a yearly routine physical exam. If high, you can learn to lower it by limiting cholesterol in the foods you eat.

The highest food source of cholesterol is the egg yolk; one egg contains 250 milligrams. That's almost the daily limit (300 milligrams) for hospital patients on a low-level cholesterol diet.

All red meat has cholesterol, too. Well-marbled, fatty meats have higher levels than lean meats. Bacon, cold cuts, sausage, and hot dogs have high levels as do organ meats like liver and kidneys.

Saturated fats are of animal origin and are solid at room temperature. They raise the level of cholesterol in

your blood stream and should be limited in your diet. Lard and other solid fats as well as dairy products containing fats and cream like butter, cheese, and ice cream should be limited. Instead, use liquid corn oil margarine, skim milk, cottage cheese, sherbet, fruit or low-fat (skim milk) yogurt.

We recommend:

- limiting the sources of cholesterol in your diet
- limiting the saturated fats by replacing them with polyunsaturated fats
- controlling your calories to control obesity, and
- attaining your ideal body weight.

Some Tips About Your Stay

by Janice Gibson, R.N.

When you enter the hospital for medical or surgical treatment, it pays to be prepared. Knowing what to expect makes the transition from home to hospital easier.

Bring:

- Personal identification and hospitalization insurance identification.
- Pajamas, slippers, a robe and personal care items like a toothbrush, comb, make-up.
- Small change for newspapers and notions.

Don't Bring:

- Valuables like jewelry or large sums of money.
- Any medications you are presently taking. Your physicians will order any necessary medication for you from the hospital pharmacy.

You'll be asked to read and sign a hospitalization consent form. It gives the hospital permission to care for you and administer treatment as prescribed by your physician.

Expect:

- A blood test and urinalysis.
- If a surgical patient, a chest X-ray and, if male over 40 and female over 45, an electrocardiogram (EKG).
- A personal health history and physical examination.
- Vital signs — temperature, pulse rate, respiration and blood pressure.

Evaluation of these tests and health history questions allows the physician and other members of the health care team to determine your general state of health.

Surgical patients can expect:

- A visit from the surgeon to evaluate your health and to discuss the surgical procedure with you.
- To read and sign a legal surgical consent form.
- A visit from the anesthesiologist to evaluate your condition and answer questions regarding use of anesthesia.

If you are having surgery, Lutheran Hospital provides evening Pre-Op Teaching classes. Conducted by nurse clinicians, the sessions are designed to inform you and your family members about the specific health problem that has led you to surgery, including why and how the surgery is done and what you can expect.

Your Hospital Dollar...

A portion of each of the
\$18,095,386 revenue dollars used
to operate Lutheran Hospital of
Milwaukee, Inc. in 1977 was:



Provided by:

Blue Cross	\$.25
Commercial Insurance	.26
Medicare	.37
Medicaid	.09
Self Pay	.03
	<hr/>
	\$1.00



Used for:

Employee Compensation	\$.64
Supplies and Other Expenses	.25
Depreciation	.06
Interest	.01
Medicare, Medicaid and Blue Cross	
Contractual Allowances	.03
Uncollectible accounts, Charity and Other Allowances	.01
	<hr/>
	\$1.00

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Milwaukee, Wisconsin 53233

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