

## MEDICINE

# Hospital of the Future

Hospitals of the future are designed to suit the patient who wishes as short a stay as possible with as little cost as possible.

By HELEN BUECHL

► THE NEXT TIME you go to the hospital for treatment, instead of ordering you to bed immediately, the nurse may ask you to operate one of the elevators for a few hours. Or, a day after an operation, you may walk to the hospital cafeteria for your meals instead of eating them in bed.

These are examples of the new thinking, new planning and new policies which may soon evolve in many of the 7,000 hospitals in the United States. Called "progressive patient care," the plan is more closely designed to fit the hospital to the patient's needs.

At present in most U. S. hospitals every patient, regardless of his or her condition, has identical equipment, facilities and services. Whether the patient underwent a critical operation yesterday or is preparing for departure in an hour, all of the complex hospital forces are poised at hand for the patient's service.

Bedside oxygen and suction equipment; a bed with tucked away pulley devices; the continual availability of expert nursing surveillance; all can be essential to the patient who needs these services.

But what about the patient who does not need them? They still cost money, whether they are used or not. Many patients are housed in these well-equipped rooms when they could be convalescing in simpler, less expensive ones.

Furthermore, every patient who enters the hospital is not so ill that he need be put into pajamas, put to bed and waited upon. This is very boring for many patients who are well enough to be up and around for the majority of the daytime hours.

## Constructive Activity Needed

Psychologically, the patient is much better off if he can do something constructive during the day. Perhaps he could get his meals at the hospital cafeteria, or help in some small way right at the hospital to relieve the boredom of dreary hours.

The U. S. Public Health Service is currently conducting a survey of some 7,000 hospitals to find what, if any, progressive care has been initiated. One such hospital is the Manchester Memorial Hospital in Manchester, Conn.

Edward J. Thoms, administrator of the 189-bed Manchester Hospital, has already begun a "progressive patient" system. Mr. Thoms' plan combines three extremes in hospital care. The patient is gradually placed in transition from special surveillance to self-help. This type of service can work in reverse, also. The plan might move in

a circle, from diagnostic examination in the self-help unit, to surgery and the intense care unit, back to self-help again.

The self-help unit of the hospital provides hotel-like rooms where the patient dresses himself, bathes, and finds freedom during the daytime hours. And, it is less expensive.

The cost scale at Manchester is \$22 per day for the intensive care unit, with continuous nursing surveillance, \$18 for the intermediate care unit, and \$11 per day for the self-service unit, where service by a registered nurse is minimal and the patient is able to care for himself.

## Progressive Care Benefits

Although individual costs may be less under progressive patient care, its really big advantage lies in much better care for the patient's hospital dollar, Dr. Edward T. Thompson, director of the Public Health Service study, has noted. Dr. Thompson is chief of intramural research activity for the division of hospital and medical facilities, Department of Health, Education and Welfare.

Other benefits which could be realized

from a change to the "progressive patient care" plan, he said, include:

1. Closer contact between the hospital and the attending doctor. Only the doctor would decide when and if the patient should be transferred from one unit to another. Under the present setup, the doctor has little, if any, direct contact with the hospital.

2. Substantial reduction in the over-all construction and operating costs. Expensive equipment for the intensive care unit would be installed in only one section of the hospital. Design and architecture of the buildings would change, as a result.

3. The prospect of accumulated savings, due to these reductions, might very well bring costs within the means of communities which now, in the midst of recession, are struggling with the problem of financing new hospitals or enlarging existing ones.

4. The skill of trained medical personnel would be used to more advantage by concentrating it in the intensive care unit where it is needed.

5. With more effective care, concepts of medical economics regarding the number of hospital beds per so many thousands of population would become more adjusted to actual needs.

6. The existing premiums for hospitalization insurance could be changed to a per unit rate, each unit rate costing a proportionate amount. Policy holders could have the option of paying premiums for all three units of hospital care, two units, or one.



**A SELF-CARE UNIT**—Crowell House at Manchester Memorial Hospital in Connecticut is reserved for self-care patients. Here, hotel-like rooms are occupied by those who are able to help themselves. Such a patient is Harold Borst who was admitted to Crowell House on the basis of bizarre symptoms. He required a complicated physical examination after which he was released to his private doctor.

Already there is some solid evidence from Manchester that patients are not only getting better care under the new plan, but are experiencing a briefer hospital stay at less cost to them and to the hospital, Milton Golin, assistant to the editor, reported in the *Journal of the American Medical Association*.

### Reorganization Plan

A reorganization plan has been worked out by Dr. Aims C. McGuinness, special assistant to the Secretary for Health and Medical Affairs, Department of Health, Education, and Welfare. It consists of five units. They are:

Intensive care—for a patient with a severe condition who needs constant nursing attention with lifesaving devices at hand.

Intermediate care—for the patient who does not need intensive treatment, but must remain in bed.

Self-care—for the patient with a minor ailment or one who has nearly recovered from a serious one. This patient is able to leave his bed for a bath or a walk to the hospital cafeteria.

Long-term care—for the patient who is aged or who has a lingering ailment which requires many weeks of hospitalization.

Home care—for the patient who comes to the hospital for quick treatment and can be sent home almost immediately.

This plan is specifically designed to eliminate such problems as the overly elaborate hospital where some patients come in only for a check-up or diagnosis.

Now, the average nursing unit consists of one or two seriously ill patients mixed with a few who need moderate care, plus some long-term patients and one or two who need almost no attention. The new plan will eliminate such imbalance.

Even the hospital staff itself has been known to be so overburdened with extra duties that the trained and professional help was bogged down with time-consuming duties. Such a case was that of the nurses of a Tennessee hospital.

It was discovered that the head nurses were doing so much clerical work that they had little time to supervise the care of the patients.

### Better Care for Less

Today, about one-third of the population, more than 50,000,000 people, have no hospital insurance whatsoever. One of the major aims of this plan is to reduce the cost of the average hospital stay and eliminate the needless expenditure on equipment. More and better shortcuts resulting in greater efficiency are on the agenda for the future.

Certainly the hospital of the future has great potential. It may not be too long before these revolutionary ideas are in practice throughout the nation.

Science News Letter, July 5, 1958

Even if all forest land in the U. S. capable of growing commercial crops of trees is put fully to work, this country may have difficulty in meeting its future timber needs.

### GENERAL SCIENCE

## Soviet Elects U.S. Scientists

► TWO RUSSIAN scientists are members of the United States National Academy of Sciences and have been for more than a decade.

On June 21 the Soviet Academy of Sciences in Moscow announced Dr. Detlev W. Bronk, president of the U. S. National Academy of Sciences, and Dr. Linus C. Pauling of the California Institute of Technology had been awarded full membership in the Russian Academy.

The two Russians, who are foreign associates of the American Academy, are:

Dr. Peter L. Kapitsa, a world-famous physicist specializing in low temperature studies and credited with master-minding the Russian sputnik successes. Dr. Kapitsa, who refused to have anything to do with the Soviet atom bomb effort and was punished accordingly, was weaned away from England's Cambridge University in 1934. He was elected to the National Academy of Sciences in 1946.

Dr. Paul Alexandroff, a mathematician at the Mathematical Institute of the Russian Academy of Sciences. Dr. Alexandroff who was elected to the National Academy of Sciences in 1947, ironically, was not elected to the Soviet Academy until 1953.

Foreign associates of the National Acad-

emy of Sciences have the privilege of attending meetings and of reading and communicating papers to the Academy. They are also entitled to receive the papers of the Academy. They cannot, however, take part in the Academy's business nor are they subject to its assessments.

Dr. Bronk expects to meet his Russian counterpart, Alexander Nesmeyanov, sometime this summer when he will travel to the Soviet Union to discuss the exchange of scientists between the two countries. Under an agreement made with former Russian ambassador Zaroubin it was specified that the heads of the Academies of both nations would meet in Moscow to discuss future exchanges.

Curiously, the first American to be honored by the Russians with election to their scientific society was Benjamin Franklin, who in 1789 was made a member of the Imperial Academy of Sciences of St. Petersburg.

The U. S. National Academy of Sciences is a private non-profit corporation established by an Act of Congress, approved by President Lincoln March 3, 1863, to further science and advise the Federal Government, upon request, in scientific and technical matters.

Science News Letter, July 5, 1958

### MEDICINE

## Device "Sees" Behind Eye

► AN ULTRASONIC technique now makes it possible to examine areas of the eye formerly too difficult to reach.

Physicians had had no instruments for examining the areas behind the eye and so could only surmise what disease processes might be taking place in these areas.

But now, with the ultrasonic technique, a cross sectional view of the eye and the areas behind the eye may be obtained, even when the tissues are totally opaque to light, because the "seeing" is accomplished by high frequency sound waves instead of by light or X-ray, an ophthalmologist reported at the American Medical Association meeting in San Francisco.

The ultrasonic device operates on a sonar principle. A burst of high frequency sound is transmitted. When the sound waves strike an object in their path, a return echo is set up. The ultrasonic echo is picked up by a special microphone, capable of responding to high frequencies, which converts the sound into electrical energy.

The electrical energy is converted into light in a manner similar to the operation of a television receiver.

To obtain an over-all view of the eye, the transmitter and receiver are moved in a sweeping motion over the eye. Echoes reflect from different portions of the eye to a radar receiver. The radar receiver then displays the interior of the eye and the orbit, Dr. Gilbert Baum of the Veterans

Administration hospital in the Bronx, N. Y., and the department of ophthalmology of New York University Post Graduate Medical School, explained.

Diseases of the eye that formerly were beyond the range of known instruments but have now been "seen" included: Tumors obscured by cataract, certain types of intraocular foreign bodies that were invisible to X-ray and a detached retina in an eye opaque to light because of a hemorrhage in the back of the eye, Dr. Baum said.

He was assisted in the development of the instrument by Ivan Greenwood, physicist for Avionics Division of General Precision Laboratories of Pleasantville, N. Y.

Science News Letter, July 5, 1958

### MEDICINE

## Cholesterol Unreduced By Safflower Oil

► ADDING unsaturated oil (safflower oil) to a normal diet does not reduce the level of cholesterol in the blood, tests on 24 young men have shown. Dr. Irving S. Wright, Dr. Richard Perkins and Miss Barbara Gatje, New York Hospital Cornell Medical Center, did the study reported to the New York Heart Association because many researchers have felt that lowering this level can prevent or slow down the development of atherosclerosis.

Science News Letter, July 5, 1958