



Mrs. Louis Orr, center, widow of past A.M.A. President, cuts ribbon at dedication ceremonies. At far right is Dr. Sheldon S. Brownton, chief medical officer of New York World's Fair. Between them is Dr. Hugh C. MacGuire, founder of Atomedic project.

## Dedicate First Atomedic Hospital

The world's first Atomedic hospital was dedicated in Montgomery, Ala., on October 30, before an audience of some 300 invited representatives of business, industry, science and medicine.

Dr. Hugh C. MacGuire, originator of many of the unique concepts incorporated in the Atomedic project, thanked the hundreds of people who helped to make "his dream come true." The first prototype of the hospital became a reality after more than eight years of research and planning.

Main speaker at the dedication ceremonies was Dr. Sheldon S. Brownton, chief medical officer of the New York World's Fair. A second model of the Atomedic Hospital is now being constructed and

will serve as the official hospital for the Fair's anticipated 80 million visitors.

Others participating in the dedication ceremonies were Mrs. Louis Orr, widow of the past president of the American Medical Association; Governor and Mrs. George C. Wallace of Alabama; and other civic and industrial leaders.

Later the guests toured the circular-shaped, pre-fabricated hospital and inspected its many unusual structural features and equipment. The hospital incorporates the latest scientific and medical electronics, space and medical techniques. In commercial production, the new hospital is expected to lower hospital costs dramatically. Cost of





Photo of first Atomedic hospital, in Montgomery, Ala., shows circular construction and futuristic design. It is a prototype for similar model to be used at New York World's Fair next year.

conventional hospitals per bed is now close to \$30,000. It is estimated that Atomedic hospitals will cost some \$15,000 per bed and will cost only 70 per cent as much to operate as conventional units.

The hospital's unique design provides for a center activity core, encircled by 22 wedge-shaped rooms. Thirty-three beds are ex-

pected to be the norm.

These rooms are ringed with an exterior corridor for the use of visitors without hindering hospital routine or contaminating the sterile center area.

A windowless structure, Atomedic is built primarily of lightweight aluminum, enamelled white on the outside, covered with



ABOVE: Dr. MacGuire, center, chats with Walter Davis, left, of Durr Surgical Supply Co., and Paul Reichert, regional manager for Becton, Dickinson & Co. RIGHT: Harry Roth, President of Clay-Adams, visits with Walter Davis in the revolutionary new hospital.







**LEFT:** B-D representatives, Paul Reichert, left, and Tom Berkstresser, were on hand to see that all of the B-D products donated to the hospital were properly stored and shelved. Storage space is at a premium, yet precise planning has provided room for all necessities.



**ABOVE:** Representatives of Baxter Laboratories, George Newport and Dick Benningfield, placed bottles of parenteral solution in storage cabinet. All equipment and supplies in the hospital were donated by the manufacturers. **BELOW:** Harry Roth checks equipment supplied by Clay-Adams. He and Mrs. Roth attended the dedication ceremonies.





textured plastic on the inside. Lighting is engineered to the specific needs of the different parts of the hospital.

The design of these low-maintenance structural units allow for mass production, air-lifting and quick assembly. It is estimated that a few men could assemble the entire hospital in less than a week.

Hospital equipment is also designed in units, to allow for air transport and easy assembly, but also in anticipation of simple and inexpensive replacement necessitated by today's fast scientific progress.

Rooms have built-in showers and water closets with lavatories, service consoles and multi-duty light fixtures which the patient can control easily from his bed. This unit also houses the intercommunication relay section, patient TV monitoring pickup, room phone, storage area, room radio, oxygen and respirator outlets, an I.V. stand arm, and remote control for TV.

Sterile air from the hospital's radio frequency ionizing filtering system passes through the center activities area, through patient rooms to the outside corridor and back into the filter, minimizing danger of infection.

Use of a new technique of operating, with the patient in an inflated plastic tent, insures aseptic conditions. Two operating rooms are portable and set up only as needed, freeing the space for other use. In the tent technique, the surgeon, working outside the tent, uses plastic gloves actually built into the plastic unit.

The Atomedic hospital is a self-



Views in hospital room show, above, panel telephone system, with a dial in unit for easy use by the patient; below, aluminum panelled walls and doors. Rooms are windowless, yet attractive, colorful and with ample space.



sufficient plant, having its own generating system, eventually to be atomic powered. The Montgomery prototype uses the city utility, saving its generators for emergency use only. But if constructed in an underdeveloped area, it could operate just as efficiently with periodic refueling.

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## **Atomedic Hospital**

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Many of the adaptations and innovations in equipment have come to Dr. MacGuire through the efforts of manufacturers of electronic recording and monitoring devices; sterilizers, X-ray and laboratory equipment; telephone systems; computers; cabinet work and building materials.

Conventional methods of checking temperature, pulse and respiration have given way to an electronic monitoring system. Signals, picked up by tiny transducers taped to the patient's body, are sensitive measuring instruments which are radioed to a unit located in the central core. Here the physiological data is recorded to be read by the doctor and fed to a computer for permanent records. The monitoring device includes an alarm, which alerts the nurse when the patient is in trouble.

**Closed-circuit television** maintains a constant nurse-to-patient communication, both visual and verbal. Eventually, Dr. MacGuire expects closed-circuit television, used in conjunction with electronically recorded physiological data, to be the accepted method of consulting with far-away medical specialists. Doctors will perform operations under the televised consultation of an experienced, though perhaps distant, surgeon.

All equipment consoles in the central activity area are below eye level and personnel can see in one sweeping glance around the area whether any patient needs help.

The traditional kitchen is eliminated, with all on-site food prepa-



ration confined to a V-shaped console less than 20 feet long. It contains necessary refrigeration and heating equipment to bring prepared and portioned entrees from deep freeze to serving temperatures in less than ten minutes.

The total food service plan was developed by Armour & Company and provides an assortment of precooked entrees packaged in individual foil dishes (tailored to the diet requirements of each patient, and color-coded accordingly). Everything, except the serving tray itself, is disposable after the meal. Such items as salads, desserts, soup and breakfast items are provided fresh locally.

The need for a laundry is also obviated by the use of plastics, paper and cotton substitutes for bed linens, cubicle curtains, uniforms, gowns and drapes. In the future, washed instruments will pass under a cobalt-60 bomb, housed in a concrete-lined hole, on a moving band, eliminating the steam bath and sterilizing more efficiently as well as more economically.

**All of the equipment** and supplies used in the prototype hospital—in fact, all of the materials and labor that went into the building itself—were donated by the manufacturers. Some of the participating sponsors in the medical field include: Brewer Pharmacal Engineering Co.; Becton, Dickinson & Co.; Baxter Laboratories; Bird Corp.; Oxygen Equipment & Service Co., Chicago; Logan Hospital Equipment Co.; Clay-Adams, Inc.; Simmons Company; Wilmot-Castle, Inc.; and Sierra Electric Corp.

The Atomedic Hospital in Montgomery is now being staffed and



patients are being received. Time and cost estimates, equipment and all related data and techniques will be checked over a three to four month period to determine if any basic changes will be necessary before the second prototype is constructed at the World's Fair.

With the exception of the cobalt-60 bomb, atomic power and radioactive isotopes, this first prototype Atomedic hospital has most of the aforementioned equipment and devices.

In view of its self-sufficient nature, the Atomedic hospital is adaptable to any of the underprivileged, under-developed areas of the world. The Armed Forces are interested in adopting it for a field hospital. Atomedics has unlimited potential for the benefit of people everywhere.