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"DOC, THAT TICKLES!"—Dr. Sam Edwards, an associate in pediatric cardiology, elicits a smile and a giggle from patient Eddie Bailey of Durham as he checks the placement of electronic sensors attached to a new "super electrocardiogram." The computer-linked device, currently being developed at Duke, promises to give researchers and clinicians a more complete picture of heart defects in children. (Photo by David Williamson)

Now Do Yourself a Safety Favor... Keep Eyes Peeled for Job Hazards

You've been working at the hospital for some time now. You've made some friends, and, being honest with yourself, you'll admit you take pride in your job.

Odds are you like working in a place where "people take care of people" or you wouldn't be here. Perhaps you'd be out making a product or selling a product.

At Duke, like any good hospital, the patient comes first.

But do you ever take time out to think about your own safety or the safety of your fellow employees? With all of the

surgical, radiological, research and maintenance equipment around, there are countless "opportunities" for accidents to happen.

The fact is on-the-job safety is everyone's concern even though it's something people tend to take for granted.

As a result of the Williams-Steiger Occupational Safety and Health Act passed by Congress, recommendations by the university's workman's compensation insurance company, and Duke's

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MAKING THE ROUNDS—Fire and safety coordinator Marshall Fowler affixes a safety sign to an ice machine in a research area of the hospital. Twice each week Fowler has been visiting selected areas of the medical center in an effort to identify potential hazards to employees. (Photo by Dale Moses)

Spach, Barr Say---

Super ECG May Improve Heart Defect Case Odds

More than 26,000 babies are born in the United States every year with congenital heart defects. Many undergo corrective surgery for the disorders and survive to lead normal, healthy lives.

Unfortunately, however, a significant number of them with severe defects do not survive, and many others are denied the pleasures of a vigorous childhood.

Now, with the aid of a highly sensitive "super electrocardiogram" currently being developed by a team of Duke scientists, the odds these youngsters have to face may be much more favorable in future years.

Supported by grants from the National Foundation—March of Dimes and the National Institutes of Health, team leader Dr. Madison S. Spach, professor of pediatrics and associate professor of physiology, and his associates have been "mapping" the heart's electrical activity so that cardiologists will be able to detect and evaluate heart defects in children before making decisions regarding surgery.

Working with Spach are Dr. Roger Barr, assistant professor of both pediatrics and biomedical engineering, and Drs. Sam Edwards and Woodrow Benson, two Duke pediatric cardiologists.

By using a specially designed vest with 150 built-in electrodes instead of the 12 ordinarily used in an electrocardiogram (ECG), the researchers can create a three dimensional picture of waves of electricity produced by the heart that they feel will be invaluable in supplying information not previously available about a patient's condition.

"Existing electrocardiograms are rather like taking a trip through the country and staying on the same well-travelled road," Spach and Barr explained. "You can't see much of the scenery, and you don't learn much about the area you're interested in.

"The new system we're working on has already shown us aspects of heart function we haven't seen before, and we're beginning to get back significant data," he said.

At present the Duke scientists are in the process of recording heart action in both normal and abnormal infants. The "body maps" which result from feeding the information received into a minicomputer will be compared to the clinical condition of each infant, and data from the group as a whole will be computer-processed to sort out duplicated or useless information.

The aim, according to Spach, is to produce a system which will record and organize all potentially useful data on infant heart action with a minimum number of electrodes, perhaps as few as 24.

The researchers are highly optimistic about the computerized map technique. Barr believes the method, if not totally replacing current methods of ECG research, will at least form a more

complete body of knowledge to guide the interpretation of conventional ECGs.

Spach said critically ill patients may benefit considerably because the time needed for studies before surgery would be reduced from four hours to approximately 30 minutes, and the "isopotential" surface maps, as they are called, could help eliminate the need for the more cumbersome and painful heart catheterization studies.

In addition, the Duke system will hopefully prove to be more efficient in detecting previously unsuspected heart defects because "normal and abnormal baby hearts often appear very similar on existing electrocardiograms," Spach explained.

— DAVID WILLIAMSON



JOHN M. STRIBLING

John M. Stribling To Leave D.M.C.

John (Mac) Stribling, assistant administrative director of the hospital will become administrator of Broad Oaks Hospital, a psychiatric facility in Savannah, Ga., June 3. The hospital is one of many facilities owned by the Charter Medical Corporation of Macon, Ga.

A native of Ninety Six, S.C., Stribling joined Duke in 1970 as unit administrator of the operating rooms. Subsequently his responsibilities were expanded to include administration of the recovery room, the acute care unit and the hospital laundry.

Prior to his appointment as assistant administrative director of the hospital in 1973, Stribling participated in Duke's Health Administrators Management Improvement Program.

Stribling received his B.S. degree in business administration from Lander College in Greenwood, S.C. Before coming to Duke, Stribling served as a store manager for Sears Roebuck, Inc., a training coordinator for the Monsanto Co. and an assistant production manager for Roxboro Manufacturing Co.