

New Birth Defect Computer System Demonstrated

A computer system that MIT helped develop and which quickly provides the latest information on all kinds of birth defects was demonstrated at the 1973 Birth Defects Conference in San Francisco, Calif., Tuesday, June 13.

The system offers physicians and researchers instant retrieval of birth defects information gathered from leading medical institutions around the world. It was developed jointly by MIT, The National Foundation-March of Dimes and Tufts-New England Medical Center.

Data comprising the core of the information retrieval system have been assembled and verified by some 436 physicians from 22 countries and coordinated under the direction of Daniel Bergsma,

M.D., editor of the March of Dimes Birth Defects Compendium, and chairman of the management committee of the Center for Birth Defects Information Services.

Collaborators with Dr. Bergsma in development of the Birth Defects Information System and members of the Center management committee are Dr. Sydney Gellis, chairman, department of pediatrics, Tufts University School of Medicine, and Dr. John J. Donovan, associate professor of management science at MIT's Sloan School of Management.

Accessible 24 hours a day, the computer will operate through the public telephone system, making it possible to dial the central processing unit from computer terminals in hospitals or medical

centers. A physician can now request information about more than 1000 different birth defects, and the computer responds by displaying all the most recently available information. New genetic and birth defects data are continually being entered.

The system has other potential uses, among them diagnostic assistance. It is anticipated that when clinical testing is completed in the near future, a physician with a diagnostic dilemma will be able to present the computer with signs and symptoms observed in a patient.

The system will then help narrow down the possible diagnosis through a series of questions suggested by the physician's initial observations. The questions and

answers continue until the system has received enough symptoms, signs and test results to suggest one or more probable diagnoses.

Eventually, the system will also operate as a birth defects registry, classifying previously unknown birth defects and matching scattered reports to identify "new" syndromes. In this capacity it may also help prevent birth defects by pointing to environmental causes which may be avoidable.

The system also has potential as an educational tool to help train medical students in diagnostic procedures, birth defects medical terminology and other aspects of medical practice relating to birth defects.

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Tech Talk