MEDICINE

# Early Tests Can Prevent Chronic Ills

By FAYE MARLEY

➤ LOW-COST mass screening services could help prevent some of the chronic illnesses that send old people to hospitals and nursing homes, witnesses said at a Senate hearing of the Subcommittee on Health of the Elderly.

A patient may today pay five dollars or more for laboratory services that cost 50 cents or less to perform, Dr. Ralph E. Thiers of the Duke University Medical Center said. He demonstrated a 12-channel blood-testing instrument called an Autoanalyzer for Sen. Maurine Neuberger (D.-Oreg.) who was chairman of the hearing, and others present.

It would be to the advantage of physicians and their patients if the laboratories would be allowed to do their jobs, freeing the physician for diagnosis and treatment, Dr. Thiers, who is a professor of biochemistry and director of the Duke Clinical Chemistry Laboratory, said. "A physician is wasting his training if he supervises the chemists," he added. "However, certain groups maintain that the conduct of all laboratory examinations is properly a part of the physician's practice, and the American Medical Association has passed a resolution supporting this stand."

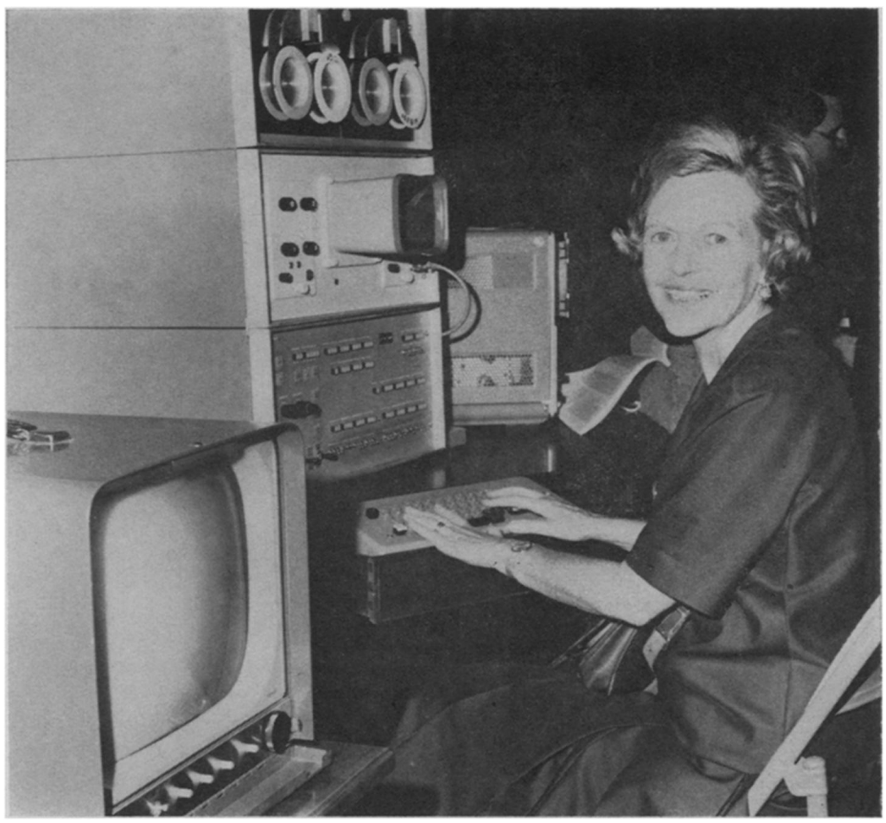
The American patient today gets, in the main, mediocre-to-poor quantitative laboratory services because budgets are inadequate to provide needed analyses that could be furnished by such instruments as the Autoanalyzer, he said.

Dr. Thiers referred to the genius of Dr. Leonard T. Skeggs Jr. of Western Reserve University, Cleveland, who developed the Autoanalyzer because he was a biochemist in an overburdened clinical laboratory. The Technicon Instruments Corporation perfected the instrument.

From one teaspoonful of blood, 12 complicated chemical analyses can be recorded on graph paper in directly usable form. The 12 tests are for sodium, potassium, chloride, carbon dioxide, total protein, albumin, urea, glucose, calcium, bilirubin, alkaline phosphatase, and glutamic oxalectic transaminase.

Opposition to multiphasic screening stems from the threat to the current charge structure of medicine, the present "disciplinary" lines and administrative arrangements, confusion about what is properly a part of the physician's practice, and the lack of enough expert chemists to do the necessary work, Dr. Thiers explained.

"Multiphasic analysis is not a futuristic dream," he said. "It is here today. In spite of the stumbling blocks discussed, I believe multiphasic screening will progress rapidly, break down the barriers and lead to a new era in medicine."



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CLINICAL COMPUTER—Sen. Maurine Neuberger (D.-Oreg.) answers questions about her possible allergies, using the LINC, or Laboratory Instrument Computer, programmed at the University of Wisconsin Medical Center. Questions are presented on a cathode-ray screen and responses are made by keyboard entries. Sample questions include, "Have you ever received penicillin? Had a skin rash? Joint pains? Chest wheezing? Shortness of breath?" If not, the computer says, "Good."

## Other Instruments

Dr. Warner V. Slack of the University of Wisconsin School of Medicine, Madison, demonstrated a Laboratory Instrument Computer called LINC, which had been programmed at the center.

The small, digital computer, which was developed and first constructed at the Massachusetts Institute of Technology in 1962 with the support of the National Institutes of Health, is of great help in taking medical histories.

Dr. Slack demonstrated questions and answers concerning a history of allergy symptoms (which provoked some amusement as the exchange took place), but said a medical history dealing with uterine cancer is now being tried at the University of Wisconsin Hospitals. Also, the center is developing gastroenterology, neurology, cardiology, psychiatry and pediatric histories.

Dr. Cesar A. Caceres, chief, Instrumentation Field Station, U.S. Public Health Service, gave an unusual demonstration, using a patient to show how electrocardiograms and other medical signals can be accurately analyzed by an electronic computer though the person is hundreds of miles away.

A portable medical signal cart was used to obtain electrocardiograms and spirograms (by means of a spirometer). These signals were instantaneously transmitted to the Control Data computer.

Other instruments demonstrated were the Warner-Chilcott Robot Chemist for blood chemistry and a plythysmogram.

Dr. Paul Dudley White, noted heart specialist of Boston, was among others who testified at the hearing. He said that at the age of 80, he himself had a personal interest in aging.

"The old adage about the ounce of prevention is still very true," he said.

"The health of old age is to a large extent dependent on the health habits of the young adult."