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AUTOMATED MULTIPHASIC HEALTH TESTING
AND THE
REGIONAL MEDICAL PROGRAMS

Introduction

In November, 1970, the National Advisory Council requested that RMPS examine its activities in the area of automated multiphasic health testing (AMHT). Accordingly, a subcommittee of the Council was formed, and the status of RMPS supported AMHT projects was reviewed. The observations of the subcommittee were presented in the report entitled, "Automated Multiphasic Health Testing and the Regional Medical Programs," May 11, 1971. The following conclusions were reached:

1. RMPS supported projects had not been in operation for a sufficient time to allow for an adequate evaluation of their experience.
2. Automated health testing is very costly.
3. The influence of the projects on the regional deployment and utilization of health care resources was highly unpredictable and its value remained speculative.
4. Many important questions pertaining to cost of the systems, proven health care benefits, and impact on existing health care delivery system remained unanswered.

Council accepted the following recommendations:

1. That no new projects featuring automated health testing be funded.
2. Inter-agency consultation and investigation be instituted in order to--
 - a. Provide market and financial analysis and advice to avoid loss of postgrant operations of projects.

- b. Build into RMP and other projects base line data, defined goals, and measures of progress.
- c. Utilize systems analysis and available epidemiologic data to study the natural histories of diseases and identify those for which secondary prevention might be feasible and acceptable in cost.
- d. Conduct multi-variate analyses of the results of multiphasic testing.

Subsequently, Council requested that RMPS acquire additional information concerning the status of twelve AMHT projects that had received RMPS funding. Project directors were asked to submit progress reports for the year 1971. In addition, the project directors and their representatives were invited to attend an RMPS hosted meeting in Rockville, Maryland on March 8-9, 1972. The specific objectives of this meeting included:

1. To identify data currently being collected by the ongoing AMHT projects.
2. To determine parameters for use in the evaluation of RMPS funded projects by a retrospective study, a prospective study or both.
3. To determine the commonality of the data already collected.

The present report summarizes the conclusions reached at this meeting. The suggestions of the participants are presented, along with RMPS recommendations with respect to future RMPS involvement with AMHT projects.

Type of Data Currently Collected

Selected information available from project progress reports is summarized and attached to this report. There is a paucity of current data dealing with:

- a. Actual cost per subject and per test procedure.
- b. Total cost of operation.
- c. Effects of test abnormalities upon overall costs.
- d. Related parameters necessary for detailed cost analysis.
- e. Cost savings attributable to early disease detection.
- f. Valid indicators of AMHT influence on health status of screenees.
- g. Measurements applicable for the determination of AMHT influence on existing patterns of health care delivery.
- h. Data concerning the value of AMHT as an effective access point into the health care system.
- i. Data indicating that AMHT expands the capabilities of health care providers.
- j. Data indicating the effects test results have on medical care provider decisionmaking.

The meeting participants expressed two general sentiments with respect to the absence of the above mentioned information. Firstly, the original project proposals did not address themselves to these questions. Primary attention had been directed towards establishing the feasibility of the AMHT concept; i.e., X number of people can be subjected to Y number of tests in a manner that is more efficient than encountered in existing practice. All agreed that AMHT feasibility in this sense had been demonstrated. Much less attention had been given to problems related to the costs of and the usefulness of AMHT. They agreed that such information is indispensable for an adequate evaluation, and were unanimous in their desire to pursue this area of investigation.

The second general consensus of the project directors was that accurate parameters capable of measuring the usefulness of AMHTs, and their influence upon the health care system were lacking. Though experimental evaluative models exist, their applicability was questioned. They agreed, however, that acceptable criteria could be cooperatively formulated.

Commonality of Data

The project directors were unanimous in their agreement that a meaningful retrospective evaluation of the RMPS funded AMHT projects would be most difficult. The major obstacle to such a task was the lack of commonality among the projects. It was noted that the projects differed significantly with respect to:

1. Goals and objectives.
2. Definition of terms and measurements.
3. Types of populations screened.
4. Mechanisms for entry into the system.
5. Variety of tests performed.
6. Differences in testing procedures.
7. Mechanisms of patient retesting and follow-up.
8. Referral patterns.
9. Linkages to health care delivery systems.
10. Variations in types of data collected.

The magnitude of disagreement was exemplified by the inability of those present to establish an acceptable definition of automated multiphasic health testing. Furthermore, it was obvious that some of the projects went beyond the role of disease detection, and engaged in patient evaluation, and management. It was the group's opinion, therefore, that retrospective and evaluation of the RMPS supported projects would be of little value.

Evaluative Process

The need for, and the desirability of, an evaluation of AMHTs designed to answer questions related to cost effectiveness, influence on health status of participants, and compatibility with existing medical resources was, therefore, established. The project directors felt that such information could be obtained through a planned prospective study of RMPS supported programs. It was proposed that:

1. An interconvertible data base, i.e., data obtainable from and applicable to all projects, be derived.
2. A specific protocol for a prospective evaluation be developed.
3. The protocol should include adequate and acceptable definitions of all terms and measurements, standardization of testing procedures, and delineation of quality control mechanisms.
4. Participation in such an evaluation should be on a voluntary basis.

Project Directors' Recommendations to the National Advisory Council

The participants recommended that no change be instituted with respect to the existing RMPS moratorium on funding new AMHT projects as demonstration or feasibility models. They agreed that multiphasic health testing, as a process, was achievable. However, many questions concerning its utility remain unanswered, including: AMHT cost variables, its ability to integrate with and expand the capabilities of the current health care delivery system, and its influence on the health status of utilizers.

All future RMPS funding of AMHT projects should be directed at programs designed to examine evaluative and performance parameters so that the necessary information in the areas mentioned may be obtained.

The group suggested that RMPS support a prospective study of currently funded RMPS AMHT projects to deal with the questions raised. It was felt that RMPS should assist in developing an evaluative methodology and apply it to AMHT projects within RMPS. The potential for wider application of the protocol was recognized.

RMPS Conclusions and Recommendations

1. Many of the concerns identified in the previous RMPS paper on AMHT systems persist. Little is known about the total economy of AMHT systems, the influence of such programs on consumer systems, or their effects on patterns of health care delivery.
2. Because of the potential costs of AMHT systems, both in terms of dollars, and in manpower, there exists a pressing need to analyze in detail currently operating programs.
3. Such a study should be directed towards establishing the degree of usefulness of AMHT systems both with respect to subscriber benefit, and to their impact on utilization of health resources.
4. A protocol should be developed for the purpose of:
 - a. Standardization of terms, definitions, procedures and measurements.
 - b. Collection of a common data base.
 - c. Agreement on parameters capable of indicating the effects of AMHTs in the areas mentioned.
 - d. Prospective evaluation of currently functioning AMHT projects.

5. Design and implementation of such a protocol should be a combined effort employing the resources of all interested Federal agencies including NCHR&D, CHS, and NCHS, as well as RMPS.

6. RMPS funding of new AMHT projects in the absence of a plan for cooperative prospective evaluation is inappropriate at this time. Furthermore, an evaluative study of existing projects must be limited to those which the appropriate Regional Advisory Groups are willing to continue without supplementary funding.

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

TO : RMPS Staff
Dr. Gordon McLeod
Director, HMOS

DATE: May 8, 1972

FROM : Deputy Director, RMPS

SUBJECT: Materials for the June 5-6 Council Meeting

For your information, Mr. Kenneth Baum will be on annual leave for the next two weeks. In his absence, Mrs. Eva Handal will be the contact point for preparing for the June Council meeting. Please give her your complete cooperation relative to the meeting.

Materials to be Included in the Council Books:

Please provide to Mrs. Handal, by close of business on May 15, 80 copies of each item, properly assembled and punched for 3-ring notebooks. Materials not available at that time cannot be included in the Agenda books which are to be mailed to Council members in advance of the meeting. Any item which is not available by May 15 should be supplied to Mrs. Handal as soon thereafter as possible for inclusion in the folders provided at the meeting for staff and Council use.

From Mr. Peterson

Evaluation Plan for FY 1973
Grantee-RAG-Coordinator Relationship Statement

From Mr. Robins

Intersociety Commission Report

From Mr. Croft

Contract Proposals FY 1972

From Dr. Hirman

Multiphasic Health Testing

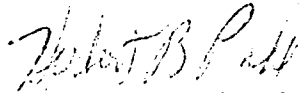
From Mr. Gardell

Discretionary Authority of RMPS

From Dr. McLeod (HMOS)

Summary of HMOS review process

If you have any questions, please let me know.



Herbert B. Pahl, Ph.D.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: California - Area III

Project #46: Multiphasic Screening for Urban and Rural
Poor in San Joaquin County

Prepared by: Virgil J. Gianelli, M.D. - March 8, 1972

The screening programs administered by Health Facilities Foundation, including the San Joaquin "Health Check-up," are somewhat unique in their emphasis on measured participation. Most screening programs report participation in terms of so many people per day, week or month. Our interest is in the number of persons screened out of a given population: a cannery, Indian reservation, or (as in the case of San Joaquin) a given census tract.

Experience has shown that multiphasic screening as a part of the daily operation of a clinic or hospital, does not achieve a very high percentage of participation. This is not to say that screening should not be done in a permanent setting, but rather that the emphasis is then different. In a fixed, daily setting, the advantages of multiphasic screening relate primarily to the automation aspects; saving the time of the physician, etc. Most of the examinees are persons who have come to the clinic or hospital for a reason other than a periodic check-up. The mobile setting, however, permits a screening program to move deep into the neighborhood areas, emphasizing case-finding and the preventive aspects of screening.

The San Joaquin program thus takes advantage of the fact that it is only in the community for a few weeks; but during those weeks a great deal of effort is placed on involving as many people as possible in each census tract. The annual "health fair" notion simply attracts more people to preventive care than an on-going screening service.

High participation (limited only in San Joaquin by the funding available) makes it possible to develop a significant "health profile" and data bank for the community, valuable not only in determining the priority of health needs, but also in defining the population for health maintenance organization purposes.

Concentrated, mobile screening does not mean that the community is ignored the rest of the year. In San Joaquin, the screening program initiated and supported the development of a Consumer Health Council (year around), promoted the growth of one neighborhood clinic (now in its third year), and the imminent development of two additional clinics. Manpower training, information and referral, and consumer advocacy have become established in the community.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Florida

Project #1: Community Multitest Health Screening Center

Prepared by: Ewen M. Clark, M.D. - March 8, 1972

The Gainesville AMHT Center performs a standard series of tests; only minor changes have been made since the original selection was made. The unique feature of the Center is having the majority of tests on-line to the computer, resulting in three major benefits:

1. Minimal data transcription error
2. Rapidity of report generation
3. Great reduction in personnel operation costs

In retrospect, both strengths and problems in the development of the program are evident. Included in the strengths are a detailed description of the Center's operating capabilities and performance. Descriptions of the systems response to stress loadings, instrument and computer failure resulting in an actual back-up system. Precise validation of test instrument accuracy, reproducibility, standardization and calibration have resulted in a high level quality control program to insure adequate instrument and system performance.

In regard to problem areas, many have been encountered, some have been solved and the solution to others sought. Almost all problems stem from the difficulty of integrating the AMHT system into the general health delivery system. These problems fall into three general categories:

1. Conservative attitude of physicians and health administrators
2. Lack of common medical record system
3. Equivocation by 3rd party payers

These considerations have led to a shift in emphasis of goal setting and priorities for attempting to achieve these goals.

Since completion of the granting period, the financial status of the Center is precarious. However, it appears that the patient load is adequate for the project to be self-supporting. We have a flow of patients which includes referrals from scheduled hospital admissions, migrant health programs (grant supported), city employee health program and outpatients referred by private physicians and the rural community health clinics. We anticipate a slow but steady increase in patient flow from these sources as the program continues to become more fully integrated into the existing delivery system. The integrative process with the rural community health clinics is occurring quite rapidly due to the introduction of a medical record system totally compatible with the clinic and the AMHT Center.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Illinois

Project #2: Multiphasic Screening in Chicago Area Industrial Plants to Detect Coronary Prone Persons and Individuals with Sub-Clinical Heart Disease

Prepared by: James Schoenberger, M.D.

Approximately 32,000 individuals have been screened since the program started in November, 1967. The feasibility of multiphasic screening in Industry has been established and the efficiency of the procedure has been improved by automation of data handling, etc. At the present time, 46-50 individuals can be screened by a four-person team at a real cost of \$14 per screening. Intensive follow-up by letter and phone call has been developed in order to accomplish maximal referral of those at risk to medical care. In the final year of RMP support, the project has two objectives:

1. evaluation of the impact of screening and referral on risk status by a large scale re-screening examination
2. investigation of alternate sources of financial support for continuation of screening activity

The screening examination was designed to identify those at increased risk of developing coronary heart disease, as well as those with sub-clinical disease, by assessment of : (1) relative weight, (2) supine blood pressure, (3) electrocardiogram, (4) serum cholesterol, (5) serum uric acid, (6) plasma glucose one hour after a 50 gm. ural load and, (7) cigarette smoking status.

Analysis of the data in the first 22,929 screening examinations reveals a high yield of (1) previously undetected hypertension, hypercholesterolemia, hyperglycemia and abnormal electrocardiogram, (2) a significant yield of those with multiple risk factors and hence at high risk for CHD, (3) generally poor control of major disease problems such as hypertension. Preliminary evaluation of follow-up indicates that over 50% of those referred do actually see a physician; analysis of actions taken by the physician are currently underway.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Intermountain

Project #26: Health Information Testing Center -
Demonstration Project in Multiphasic Screening

Prepared by: Mr. Ray Miller - March 8, 1972

The Intermountain Regional Medical Programs proposal for a multiphasic screening project was the last to be funded - September 1970. The target date for initial operation is March 18, 1972. In implementing the project, the task is to develop an automated MPS instead of a "turn-key" operation. Characteristics of the project follow:

1. Potential Population: M.D. referral basis only
 - a. Private sector
 - b. Employer and labor groups
 - c. Neighborhood Health Center - socioeconomic disadvantaged
 - d. ACF from the medical center
2. Stand alone unit - capable of testing 20,000 per year.
Area occupied = 7,500 square feet.
3. Medical Assistants, with minimal medical background, have been trained to conduct all of the tests offered at the center. Each medical assistant spends approximately 2 weeks in a physician's office learning how to conduct individual tests, i.e. 2 weeks pap smears, laboratory, dental, etc.
4. "Automated On-Line Tests"

EKG Blood Pressure Spirometry Height/Weight History	<u>"Manual"</u> Mammography Chest x-ray Panorex Oral Cavity Laboratory (28 Chem., 6 hematology, urine, VDRL) Pap smear Instruction on self-breast exam. Vision acuity Tonometry Audiometry
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5. Consultant Services - X-ray, laboratory, mammography. The information is picked up daily at 5:00 p.m. and returned by 12 noon the next day. This profile is then sent to the referring physician - within 24 hours after the patient's visit to the Center.

6. Establishing a base for a Data Collection Program and also an evaluation program to answer specific questions relative to morbidity, reduction in time required by physicians, use of outpatient services, hospital admissions - length of stay, etc.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Maryland

Project #44: Comprehensive Screening Program for School-Age
Indigent Children

Prepared by: Oscar C. Stine, M.D. - March 8, 1972

We have developed and tested a multiphasic health screening program for school-age children in low income neighborhoods, who are eligible for a health maintenance organization. The program offers a way for children to enter the health care system to achieve a designation as: (1) well child with all needed immunization (2) well child treated for a correctable problem (3) child with a defined problem receiving long term care.

The characteristics of the program include: (1) integration of screening activities in terms of staff and information system into an existing health maintenance organization (2) reduction of physician time to problem definition, diagnosis, decision making, treatment and referral (3) anticipation of need for diagnostic tests (4) calculation of the child's risk of developmental failure by discriminant analysis of multiple parameters (5) calculation of excess frequency of disease requiring program development by the health maintenance organization.

The program obtained cooperation of the schools, parents and children. It designated important proportions of children in need of services by nutrition, social work, psychological and long term medical supervision within the organization.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Memphis

Project #17: Prevention Clinic - Demonstration Program in Preventive Services for Heart Disease, Cancer, Stroke and Related Diseases

Prepared by: Dean F. Davies, M.D. - March 8, 1972

The Prevention Clinic at the University of Tennessee Medical Center has several objectives including preventive services to its largely low-income and indigent clientele; demonstration and evaluation of the components of a chronic disease detection program; establishment of a health data base for clientele; reduction of costs of medical care; extension of the effectiveness of health care without increasing physician shortage; and others.

The Clinic served 10,000 plus persons during the calendar year 1971 and anticipates levelling off at 18-20,000 registrants. Unique features of the Clinic include avoidance of over-referral through secondary testing; a problem directed print-out coded by urgency, indicated action and health index; and a separate health maintenance clinic.

Cost experience was examined for nine procedures carried out for a full year and an additional six (20 tests) for part of a year. Equipment was amortized. Contributions of non-RMP costs were included except that no arbitrary cost was assigned to rental of space (an in-kind contribution for employee screening); for hidden costs of some follow-up services of health department; or for indirect costs. On this basis the cost per person registered was \$8.68 for measurable costs. A more reasonable estimate for the full complement of tests, allowing for hidden expenses is roughly \$20. Automation and a higher flow rate will keep this stable.

Among on-going evaluations is one which examined reasons for attendance and non-attendance of the Clinic by recipients of public welfare. The study was made by interview. Preliminary results showed that a high level of acceptability was found among those who had attended the clinic, a finding consistent with the experience in rural northeast Mississippi.

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Obesity, hypertension, iron-deficiency anemia, diabetes and hypercholesterolemia are among the most common conditions found, all of them controllable and insidious in onset. Five of the six are high risk factors for cardiovascular accidents.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Memphis

Project #18: Mobile Multiphasic Health Screening, North East Mississippi

Prepared by: Harry Cosby, Jr., M.D. - March 8, 1972

The purpose of this project is to upgrade the health of the people by detecting disease and disease prone persons and to create health awareness so that medical care will be sought.

The rationale and aims of the mobile health trailer are similar but not identical to those of the Prevention Clinics of the City of Memphis Hospitals. For comparative and evaluative purposes the tests and procedures will be the same as those carried out in the Prevention Clinic; the same methods and quality control systems being used as this is essentially a field project prototype for mobile health clinics to be established in other parts of the region.

The main differences will be the mobility of the Clinic and the population served. Because of the rural distribution of the population, the trailer will stay a minimum of one week in a single location, the duration depending on the population density. The entire adult population of the medical trade areas of the applicant hospitals will be served with no financial restrictions. The design of the trailer allows for 100 or more persons to be screened per day and it is anticipated that 20,000 persons can be screened each year.

The services provided on the trailer will include a questionnaire and measurements of height, weight and blood pressure, chest x-ray, electrocardiogram, spirometry, cervical and vaginal cytology, urinalysis, blood chemistries, white blood count, hematocrit, hemaglobin electrophoresis, tonometry, instruction in breast self-examination, and health information. Tests for occult blood in stool will be carried out with consent of the client.

We are obtaining increased (1) health awareness, and in (2) inventory of chronic disease. Our screening unit has been able to act as a catalyst to obtain EEA funds for our county, in which we have one registered nurse and one LPN in our county schools daily discussing and teaching health and behavior patterns. We have been able to aid in the founding of State Comprehensive Health Planning for our designated counties and have assisted the Appalachian Committee in developing Health Services for Childhood Growth and Development Project. Our Tishomingo County Health Department Building is being expanded, and the staff has increased by one health nurse, one assistant sanitarian and one clerk, which is an increase of one hundred percent in staff. All physicians of Tishomingo County are actively involved with the Health Department Family Planning Program, and serve weekly terms in rotation.

We believe that the multiphasic testing has created a large amount of interest in health awareness and chronic disease maintenance, by the fact that the first year's testing was accomplished on 11,544 persons out of a population of 15,000 in our county. These were voluntary patients as our target area is not a closed group.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: North Carolina

Project #35: Adult Screening and Referral Program for Signs of Hypertension, Heart Disease, Possible Impending Stroke, Diabetes and Anemia

Prepared by: Robert N. Headley, M.D. - March 8, 1972

The Adult Screening and Referral Program of the North Carolina Regional Medical Program commenced actual testing on January 21, 1972 in industrial sites. The tests being administered are: (1) Single lead electrocardiogram (Electrocardiometer) (2) Blood sugar (Dextrostix) (3) Hematocrit (Microcentrifuge) (4) Arterial blood pressure (Roche automated unit) and (5) Auscultation for carotid bruit (Questionnaire and Phonocardiogram). The tests were specifically chosen to provide a high yield of indicators of potential disease states which may be amenable to therapeutic intervention. Non-paid volunteers are utilized to conduct the testing and provide follow-up which effectively reduces the unit cost and spares valuable professional effort.

As of February 29, 1972, 2,903 people have been screened and of this number, 1,063 were referred for further evaluation. Preliminary responses indicate physician confirmation of the abnormality in 40% of referrals. Hypertension, abnormal electrocardiogram and anemia were the most frequent basis for referral.

On March 20, 1972, screening will begin in the inner city area of Forsyth County (predominantly indigent black). The activity will shift to a rural area of the County in mid May, 1972. It is anticipated that the current rate of screening will continue, i.e. 100-175 screened per 5 hour period - time required for each screenee is 15 minutes.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Ohio Valley

Project #7: Multiphasic Screening Demonstration Project

Prepared by: George F. Shields, M.D.

This is a cooperative program between Good Samaritan Hospital and Cincinnati General Hospital. The Good Samaritan unit was established in the latter half of 1970 and has served as a system design and training base for the Cincinnati General Hospital unit.

Good Samaritan began operation in August, 1970 and screened at the rate of 20 per day, (5,000 per year) during 1971. In the morning, referrals from private physicians, neighborhood health clinics, inner-city high school students and hospital employees were screened. In the afternoon, the unit performed pre-admission tests for scheduled elective adult admissions.

Since expiration of RMP funding in December, 1971, the GSH unit has become self-supporting at a price of \$29 for the standard battery of tests. Other tests may be added. A variety of medical histories are being formulated so that the testing may fit a number of needs. Pre-admission testing, offered on an individualized basis, has resulted in length of stay an average of 10 days for neurological patients and from one to three days for medical admissions. The program also has helped pinpoint ways in which quality control of automated laboratory services could be strengthened and has been one of the factors precipitating the laboratory computer system now being installed.

The Cincinnati General Hospital MHT trained at GSH for two months and then began receiving patients at CGH in April, 1971. After operating well below capacity during the summer, patient flow rates have improved and 1,200 patients were tested during 1971. It is planned that the CGH unit will become self-supporting during the fall of 1972. New clinic patients, specialty clinic referrals and referrals of chronic patients for periodic review are the groups served at CGH. High school students and employees are also referred for testing.

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RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Rochester

Project #7: Early Disease Detection Unit

Prepared by: Barbara Bates, M.D. - March 8, 1972

The Early Disease Detection Unit, funded by the Rochester Regional Medical Program, is based half-time at the university hospital and operates satellite visits one or two half days per week in 2 neighborhood health centers and one community hospital. Access is by physician referral. When screening was fully grant supported, the unit saw 800 patients per month and had developed a 3 month waiting list. At a charge of \$35, it is down to 200 patients per month.

Evaluation studies support the following conclusions:

1. The most important reason underlying M.D. reluctance to order a screening test is lack of clinical signs or symptoms.
2. Most M.D.'s, most of the time, ignore most of the reported abnormalities. This pattern does not seem to be highly correlated with M.D. specialty, age, type of practice or a number of patient variables e.g. age, sex, race, socioeconomic status. Eventual impact upon morbidity and mortality, although not documented, must be correspondingly low.
3. Screening and clinical evaluation by a physician pick up different kinds of problems: there is only a 17% overlap in problems identified by the 2 systems. Hence screening and traditional medical evaluation are not readily interchangeable.
4. Patient satisfaction is high.

Our greatest present problem is economic. An undocumented but reasonably educated guess related to factors involved is stated as follows: As long as the patient must pay \$35 for screening, the patient would just as soon pay the M.D., especially if he has to see him anyhow; the M.D. would just as soon collect the money himself.

RMPS CONFERENCE ON
MULTIPHASIC HEALTH TESTING ACTIVITIES

CAPSULE SUMMARY

Region: Tennessee Mid South

Project # 28: Meharry Multiphasic Health Testing Service

Prepared by: Leonard B. Victor, M.D. - March 8, 1972

The Meharry Automated Multiphasic Health Testing Service is primarily aimed at the urban disadvantaged but is not geographically limited. About 85% are black, 2/3 women, age 18 and over. The daily rate averages 25, and the project has been in operation for approximately 1½ years.

Approximately 53 tests/procedures are commonly administered, and the results entered on mark sense cards for batch computer processing; the print-out and original data (MAMHTS keeps a microfilm record) are then in the referring M.D. or clinic office within 5 working days.

Patients are referred primarily by the OEO neighborhood health center, the Comprehensive Health Service Clinics, who reimburse under contract. Private M.D. referrals are charged the estimated operating cost of \$35, which is invariably not reimbursed by insurers.

Recruitment has been carried on by television, radio, fliers and community health aides. State and local health officials, M.D.'s families and community leaders are invited to come through free.

The follow-up is over a 36 week period by letter and phone to try and be sure that the patient is not lost to the health system of the community.

A good many questions have been raised, among these are:

- . data validity
- . intercomparability of data in the patient record
- . medical record linkage
- . ranges (peer group)