The Hypertension Problem
What We Can Do About It

Hypertension represents the major health challenge in the country today. It is the leading cause of strokes and heart failure, and is a major risk factor in heart attacks and kidney failure. Hypertension is the major cause of death in blacks. More than 23 million people in this country currently have hypertension, less than 50 percent of them do not know they have it, and less than 10 percent are under effective treatment.

What can be done in a practical way about this epidemic? Although our community screening and follow-up program in inner city Washington has enjoyed much success, it must be emphasized at the outset that 1) the majority of patients screened were not under any medical care; 2) a well organized facility in the geographic center of the area screened was available for follow-up; 3) heavy reliance was placed on paramedical personnel; and 4) probably most important, the program was government financed. Screening the millions of undiagnosed hypertensives in other communities, particularly where the majority of patients would be under private medical care, would frequently frustrate the patient, antagonize the physician, and cause chaos in already overcrowded offices. In order for community screening programs to be successful (and it is my strong belief that this method of attack is the only practical way to manage the millions of hypertensives) three changes must be made: 1) Physicians must be re-educated to consider that strokes, kidney failure, and heart failure are all preventable complications of hypertension and, therefore, that all patients with hypertension, even mild hypertension, should be treated. 2) Patients must be educated to seek medical care, not just when they are sick but in order to stay well. 3) The basic structure of medical delivery (private practice and clinics) must be reorganized with emphasis on personalized care.

If physicians would recognize, appreciate, and take advantage of the currently available therapy and fully utilize already existing facilities, not only would the stage be set for successful community screening in the future but millions of hypertensives would immediately be brought under care and treatment. Effective medical treatment is presently available for preventing most of the major complications. Treatment is frequently simple and can be administered by any physician or by specially trained nurses or allied health personnel working under the direction of a physician. In this regard, the beneficial effects of a combination of a thiazide plus reserpine in the VA studies should be emphasized. The addition of a third drug, hydralazine, resulted only in a 4 mm Hg further reduction in diastolic pressure. If such "simple therapy" controlled the arterial pressure in these patients with moderately severe hypertension, it should most assuredly be effective in the vast majority of undiscovered hypertensives, 75 percent of whom would have mild disease. A recent study in an inner city population demonstrated that in 70 percent of newly discovered hypertensive patients, the blood pressure was brought to normal by a combination tablet of reserpine plus chlorthalidone, e.g., a pill a day.

Many physicians recognize that effective treatment of the more severe types of hypertension reduces morbidity and mortality but are not convinced that antihypertensive agents are beneficial in patients with moderate or mild forms of the disease. Many university centers place the highest priority on the diagnosis of unusual secondary forms of hypertension and place little emphasis on therapy. This emphasis on diagnosis has led to the practice of routinely performing expensive, sophisticated tests on newly discovered hypertensives. Indeed, the expense has been a barrier to physician and patient alike and has frequently delayed institution of effective therapy. The American Heart Association has recently recommended that the only tests indicated in the routine workup of the asymptomatic newly discovered hypertensive patient over age 35 years are determinations of glucose, creatinine, and potassium, the cost of which is under $10.00.

The cavalier attitude that many physicians take regarding patients with mild and moderately severe hypertension is demonstrated by the recent studies.
of Schoenberger et al.\textsuperscript{5} which revealed that 55 percent of newly discovered hypertensive patients in the offices of cardiologists and internists were not even given a second appointment. The message found in the VA\textsuperscript{2} and Public Health Studies,\textsuperscript{3} i.e., control of arterial pressure significantly reduces morbidity and mortality, has obviously not reached the practicing physician. Indeed, the Schoenberger study\textsuperscript{5} suggests that a smaller percentage of hypertensives are being treated today than several years ago.

Many physicians do not routinely record blood pressure. Think of the number of subjects who would immediately be screened if psychiatrists, dermatologists, otolaryngologists, etc. would routinely record blood pressures. Indeed, any person who visits a physician or dentist, or any medical facility for any reason should automatically have his blood pressure checked. The lack of routine recording of blood pressure is not peculiar to office or clinic practice. The recording of blood pressure is not a routine on all services in the average hospital. A nurse working with our group recently recorded blood pressures on hospitalized patients in a city hospital who were not on the medical or obstetrical services. Of the 1300 blood pressures recorded, 400 were over 150/100 mm Hg, 285 patients did not know they were hypertensive, and only 8 were under therapy.

Discovering that the patient has hypertension and placing him on therapy really solves nothing. All the advances in therapy are not going to be realized—strokes, congestive heart failure, heart attacks, and renal failure are not going to be prevented—unless the patient continues to remain under medical care and takes his medication. It has been my experience both in private practice and in the clinic that patients (particularly the asymptomatic ones) will not remain under care and on medication unless they are properly motivated, and such motivation can only result from a good doctor-patient relationship. (Recent experience with an inner city population has attested to the fact that a well-trained, understanding, paramedical person may well be substituted for the physician in this relationship.) Once this relationship has been established, time can then be spent in educating the patient rather than in just reassuring him.

Let us be honest with ourselves! Our expertise as cardiologists has centered around the unravelling of complicated diagnostic problems or treating the patient in the emergency-crisis situation. The long term routine care of the hypertensive patient offers no challenge. Just as we rely on specially trained nurses in the coronary intensive care unit, we must become aware of their value in the follow-up of hypertensive patients. Once the hypertensive patient has been initially evaluated and placed on a therapeutic regimen by a physician and has reached a status quo situation, the patient can ideally be followed by a nurse or health assistant working under the nurse. The nurse is challenged by this assignment, and establishes a meaningful relationship with the patient which then allows her to motivate the patient to take medication and remain under care for the rest of his life.

Wherever such projects have been carried out they have been successful. The Amos Project at Ft. Belvoir, the Ambulatory Care Project at the Beth-Isreal Hospital in Boston, and the Hypertension Detection and Follow-up Program in inner city Washington are a few examples. Utilization of the specially trained nurse and paramedical personnel goes a long way toward eliminating the overcrowded clinics and teaches patients and doctors that it is not necessary for the doctor to examine the patient on every visit.

With a trained nurse effectively directing the clinic in consultation with a physician and assisted by two paramedics, 30 to 40 patients can easily be seen per day. Doubling the paramedical personnel (ours are recruited from the community and trained by the clinic staff), can usually double the number of patients such a clinic can handle. Considering the roughly eight-to-one cost ratio of physicians to paramedical personnel, this arrangement leads to substantial economic savings and frees the doctor to carry out other duties.

Nursing schools are accepting this challenge by changing their curricula to prepare the nurse as an independent professional so she can practice the discipline of nursing as an independent member of the health care community. She will not only be able to hang out her own shingle in private practice and see clients for nursing services, but with further preparation she will specialize as a pediatric or hypertension nurse-practitioner. Such a program has already been implemented through the junior year of the Georgetown University School of Nursing and the first class of “future nurses” will graduate in 1974. During the past year leaders in the hypertension field have also taken up the challenge. Drs. Edward Freis in Washington and Joseph Wilber in Atlanta have been training nurses in the diagnosis and fundamentals of treatment of hypertension so that they can “take over” the
operation of hypertension clinics. Schools of pharmacy are also taking up the challenge, changing their curricula to prepare students to practice pharmacy and not to own pharmacies—to play a key role in drug selection and to become active members of the health care community.6

Once a sufficient number of nurses, health assistants, and pharmacists specially trained in hypertension are available, they can be placed in already existing facilities, e.g., in the private practitioner's or private group office, in VD clinics, in birth control clinics, and in general medical clinics in hospitals where the back up facilities would be immediately available. When this stage has been reached, community screening and programming can then be launched. The key to the success of this program lies in the basic assumption that 75 to 80 percent of the estimated 23 million hypertensives have mild to moderate disease. Once screened, verified, and placed on a therapeutic regimen (90 percent of which can be accomplished by paramedical personnel), they can then be followed three to four times a year without fear of overloading the system.

The government has already started to attack the problem. The National Heart and Lung Institute is currently sponsoring a program in 14 different communities to demonstrate that intensive therapy of all types of hypertension reduces the incidence of death, strokes, and heart attacks. Emphasis in this program is placed on reorganization of clinics, full utilization of paramedical personnel, and finding ways to motivate patients so that they will stay on medication and remain under medical care.

In July of 1972, HEW Secretary Richardson launched a National Hypertension Information Program, an unprecedented cooperative effort combining all health forces for the government (National Institutes of Health, Federal Drug Administration, Veterans Administration, Department of Defense, Health Services and Mental Health Administration) and organized medicine (American Medical Association, American Heart Association, American College of Cardiology, industry, and insurance and pharmaceutical companies) to fight one disease. The main thrust of this program is and will be educational, making every citizen aware of the frequency of hypertension, its complications, what can be done about it, how to take advantage of already existing facilities, and re-educating physicians to consider that strokes, kidney failure, and heart failure are all preventable complications of hypertension. This program is not attempting to finance health care for hypertensives but rather to provide a focal point for those organizations, be they private, voluntary, or professional. Its immediate objective is to create public awareness which later can be translated into community action programs, e.g., providing expertise in initiating community control programs. Ideally the cardiologist should provide the leadership, not only in the academic setting but also at the community health level.

FRANK A. FINNERTY, JR.

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