The Public Health Aspects of Rehabilitation in Cardiovascular Disease

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Because physicians are chiefly concerned with the immediate problems of diagnosis, treatment and rehabilitation of individual patients, the important public health and community aspects of heart disease may not be appreciated.

Heart disease presents important problems in the field of public health because:

1. It is a major cause of disability and premature death among our population. More than nine million persons in the United States are estimated to have cardiovascular renal disease in a significant form. Surely many of this group are disabled by their disease. Mortality, figures for 1955 show that diseases of the heart and blood vessels caused over half (52.7 per cent) of all deaths in the United States and that over 90 per cent of the deaths from cardiovascular disease were caused by arteriosclerosis and high blood pressure. This proportionate mortality has been graphically presented.¹ For all persons under 65 years of age, cardiovascular disease accounted for over one-third (35.4 per cent) of all deaths in 1952.²

2. Cardiovascular disease is increasing in its deleterious effects on our population. The death rates have almost doubled since 1900. While part of this increase can be attributed to our aging population, this does not detract from the importance of the fact. It is logical to assume that the increased death rates are accompanied by an increased amount of disability from heart disease in the population.

3. Knowledge is available which can significantly reduce disability and premature death from some cardiovascular diseases.

4. Because of this complex nature, problems are encountered by patients and their physicians which cannot be adequately met without the use of community resources.

Function of the Rehabilitation Agency

The function of the rehabilitation agency, either State or local, is to support the physician with rehabilitation services and skills so that the patient may be returned to gainful employment. Eligibility for rehabilitation in State programs is based upon: (1) The presence of a physical or mental disability with resulting functional limitations or limitations in activities; (2) the existence of a substantial handicap to employment caused by the limitations resulting from such disability; and (3) a reasonable expectation that vocational rehabilitation services may render the individual fit to engage in a remunerative occupation.³ State rehabilitation services are made available to the patient by formulating, in cooperation with the physician, a rehabilitation plan which includes the following elements:

1. Physical rehabilitation services: occupational therapy, physical therapy, nutrition, etc.
2. Vocational counseling: vocational assessment, placement, counseling, etc.
3. Social services: assistance in securing needed funds, transportation, etc.
4. Employment services: placement, counseling, etc.

with the physician, an individual plan for vocational rehabilitation of the particular patient. The basis for this plan is a comprehensive evaluation of pertinent medical, social, psychological and vocational factors in the case. The whole patient and his total environment must be considered, not just a single disability he may have. After rehabilitation it is the patient's total abilities that are important, not just the extent of recovery from his presenting disability.

As a part of this evaluation, a diagnostic study is made in order to determine the basis for: (1) establishing that a physical or mental condition is present which limits the activities the individual can perform; (2) appraising the current general health status of the individual in order to determine his limitations and capacities; (3) determining how and to what extent the disabling conditions may be expected to be removed, corrected, or minimized by physical restoration services; and (4) selecting an employment objective commensurate with the individual's capacities and limitations and a determination of the services required to prepare the patient for his selected work. The medical portion of the diagnostic study is divided into three parts so as to include:

1. A complete general medical examination to provide an appraisal of the current medical status of the individual.
2. Examinations by specialists in all medical specialty fields as needed.
3. Clinical laboratory tests, x-ray films and other indicated studies.

The diagnostic phase can include special studies that may be needed, such as "an evaluation of the individual's personality, intelligence level, educational achievements, work experience, vocational aptitudes and interests, personal and social adjustments, employment opportunities, and other pertinent data helpful in determining the nature and scope of needed services to be provided for accomplishing the individual's vocational rehabilitation objective."

When the evaluation is completed, the physician, the patient, representatives of the rehabilitation and health services are able to jointly develop the total plan for the particular patient and his problems. This plan spells out:

1. The rehabilitation objective or tentative goal where the ultimate objective cannot be immediately determined.
2. The services necessary to accomplish the patient's vocational rehabilitation.
3. The means for providing or securing the necessary services.

Depending upon the requirements of the individual case, many different skills may be used by the physician for the total treatment of the patient with cardiovascular disease. A partial listing of skills and services would include the following:

1. Medical Specialists

Cardiovascular diseases may be associated with other medical conditions affecting the treatment of the case that require expert medical consultation. For example, a patient with coronary artery disease may have an associated allergic, bronchial asthma, whose effective relief by an allergist
would improve response to treatment for cardiovascular disease. A similar wide range of medical specialists such as orthopedists, industrial physicians, pediatricians, and internists might be needed and used as consultants by private physicians.

2. Social Workers
Social workers make an important contribution to the efforts of the physician by aiding with problems of the patient and his family that aggravate his disease. They are familiar with the available community facilities for financial relief and direct home services that may be needed by the patient and his family, including case work service, special transportation, food purchasing, homemaker services, etc., as well as arranging for other needed assistance to the family through relatives, friends or community agencies.

3. Psychiatrists and Psychologists
Because of the important long-term effects of most cardiovascular diseases, emotional problems may develop that affect treatment and recovery. These can often be evaluated and effectively relieved following psychological study of the patient. "Take it easy" or "let up for a while" is rarely sufficient counsel for a hypertensive person who has worked his way to the top in a competitive world. Similarly, "cheer up" or "you are getting along fine" may not prevent a depressed individual from committing suicide.

The problems of fear, and acceptance of limitations imposed by cardiovascular disease are other examples of where a psychiatrist or clinical psychologist can be effectively used as an aid in accomplishing successful medical therapy.

4. Vocational Counselors
If a change of occupation or work seems advisable, study of the patient's actual and potential ability by a vocational counselor will enable the physician to evaluate the need for a change of occupation. If a change is considered necessary or desirable, the studies of the vocational counselor are an important aid in the selection of an occupation that is appropriate for the interests and abilities of the patient as well as coming within his physical capacity.

5. Employment and Personnel Counselors
These skills are needed by the person who has been forced to change his occupation and, following maximum physical recovery and reeducation, is ready to re-enter the labor market. Much ingenuity and education is required to convince employers that the individual with cardiovascular disease can work and is a valuable employee. Fear of aggravation of the disease by work and provisions of "the second injury law" make many employers reluctant to hire rehabilitated cardiac patients, because they may not be protected by their industrial insurance or the provisions of the Employee's Compensation Act when one with known cardiovascular disease is hired and later suffers recurrence.
6. Consultant Industrial Physicians

Consultant industrial physicians have made important contributions by helping convince both management and labor of the value of rehabilitated patients as employees and fellow workers. Proper placement and on-the-job follow-up by industrial physicians can help the patient maintain the benefits of rehabilitation.

Function of the Health Department

In the local situation, the health department usually functions as a contributing member of the rehabilitation team that works under the leadership of the private physician. In addition, the health department carries out its broader responsibility by conducting cooperative community programs for the prevention and control of disease. Many programs are in development stages and the guidance, cooperation and assistance of organized medicine is always required. It should be emphasized that preventive measures are considered applicable to some cardiovascular disease conditions, many of which have important public health aspects, such as:

1. Drug prophylaxis for prevention of rheumatic fever.
2. Drug prophylaxis for certain operative procedures involving infections so as to prevent subacute bacterial endocarditis.
3. Weight reduction among the obese.
4. Identification and diagnosis of preventable secondary hypertension.
5. Prevention of rubella during the first trimester of pregnancy to prevent congenital cardiac abnormalities.
6. Detection, diagnosis and case management of diabetics so as to reduce arterial damage associated with unmanaged diabetes.

It is recognized that atherosclerosis and essential hypertension are the two most important cardiovascular diseases, and that proved preventive measures are not yet available for them. Because of this, the physician's efforts must be directed toward early detection and treatment intended to slow or prevent the progress of these diseases. While this might seem to restrict the applicability of health department facilities, quite the reverse is true, because of the long term nature of these two diseases.

The following are some of the health department services that can be effectively used by the private physician in caring for a large variety of cardiovascular disease cases.

1. Public Health Nursing Service

The public health nurse can be an invaluable aid to the physician in seeing that his prescribed treatment is carried out in the home. The nurse can also be an important aid to the physician with his long term follow up of patients, such as those on prophylactic therapy for the prevention of rheumatic fever recurrences. Also because the nurse sees the patient and his family on repeated occasions, she can save time for the physician by educating the patient and his family on aspects of his disease that the physician desires them to know, but which cannot be fully appreciated at the first explanation.

From her contacts in the home, sometimes other members of the family
are noticed by the nurse who should be seen by their physician. In this way, children with congenital heart disease or adults with hypertensive headaches may be referred to the physician's office for consideration of their symptoms, and diagnosis if disease is found.

2. Home Nursing Service
   This community facility may be available through the health department or a voluntary agency where actual bedside nursing in the home is the most practical solution to a particular treatment problem.

3. Nutrition Consultation
   A nutritionist can supplement the physician's treatment by working with the patient and teaching him what he needs to know to easily and accurately follow the diet prescribed by the physician. Thus, low sodium or low calorie diets can be more effectively used by physicians when good nutrition consultation is available. Many physicians ask their obese patients to participate in cooperative group weight reduction programs conducted by some health departments.
   A few health departments have conducted classes for diabetic patients in response to requests from local physicians and voluntary health groups. These classes are considered to have a beneficial effect from the cardiovascular disease standpoint by reducing the vascular complications associated with uncontrolled diabetes.

4. Laboratory Facilities to Aid in Diagnosis
   Where clinical laboratory facilities are not readily available, health departments may be able to assist the physician by arranging for bacteriological studies for patients suspected of having streptococcal infections. This is of particular importance for patients who have a history of rheumatic fever and are not on drug prophylaxis or who have allowed prophylactic treatment to lapse.

5. Social Services
   For more effective treatment, many physicians use social services for study and evaluation of the patient's problems in the home and on the job. Where indicated, social workers may assist in obtaining such necessary help as financial relief, and homemaker service, or work with the members of the family to assist them in adjusting to changed home conditions resulting from the illness of one member of the family. A social worker or nurse can be of great help to the private physician by participating in his program for alleviating the emotional problems of both the patient and his family.

6. Special Diagnostic or Treatment Facilities
   While the generosity of physicians and hospitals, and the important work of voluntary groups concerned with heart disease have assisted greatly in meeting local needs for special diagnostic or treatment facilities, there are instances in which the health department can be of assistance in arranging for specialized diagnostic or treatment procedures such as
cardiac catheterization, angiography, vectorcardiography, and complicated cardiovascular surgery.

7. Expert Medical Consultation

With the cooperation of specialists and local voluntary groups, health departments can often make available expert medical consultation to practitioners where it would not be otherwise obtainable. Physicians use and appreciate this consultation in such problems as the evaluation of poorly defined heart murmurs, the estimation of activity in a case of rheumatic fever, the definitive diagnosis of congenital cardiovascular lesions, or the estimation of work tolerance in cases of coronary disease.

8. Work Classification Units

A work classification unit is a kind of specialized consultation that can give the private physician an evaluation of a cardiac patient's physical capacity. It uses many different skills in making its study and evaluation of the patient's capacity. Such consultation is of great help to the physician who is contemplating returning his patient to work.

Many of the skills and services mentioned as available from either the Rehabilitation Agency or the health department are not rigidly fixed in either organization. There is much variation among local communities in their availability and source.

It is important to remember that the facilities of the health department can be made available for those patients who may not be able to qualify for the benefits of the state vocational rehabilitation programs.

Voluntary Agencies

Many communities have Heart Associations which have been pioneers in helping the community obtain needed services. Community work classification units for cardinals have been established in many cities through the stimulation of the local Heart Associations. These organizations have also made important contributions in supporting local and national cardiovascular disease research programs. Many of these research studies deal with the epidemiology and public health aspects of heart disease.

Function of the Private Physician

In the rehabilitation process the role of the private physician is that of a leader of a team of medical and related services necessary for the total treatment of his patient. Because modern treatment must consider the whole individual—his physical, mental and social well-being—the physician, in his role of leader, should use all the needed and available rehabilitation and community facilities to aid him in returning the patient to his maximum capability in the community. It is of great importance that physicians concerned with the prevention, diagnosis and treatment of cardiovascular disease consider what public health and rehabilitation services are needed by, or could be beneficial for, each of their cardiovascular disease patients.
The need for increased use of rehabilitation services by private physicians and medical agencies is urgent, if patients and their communities are to derive the fullest possible benefits of existing and planned rehabilitation programs. As an example, it is estimated that the 2562 cardiac patients rehabilitated under the public vocational rehabilitation program in 1955 increased their annual earnings by more than $5,000,000.

The cooperation and assistance of physicians is needed by professional organizations, health departments, heart associations, and other community groups in working toward the improvement of facilities in the community for the care and treatment of cardiovascular disease patients.

In addition, physician participation in cooperative programs of public health research is greatly needed so that new discoveries for better prevention, detection, diagnosis and treatment of cardiovascular diseases may be rapidly and accurately developed and instituted.

Where particular skills or services are needed but not available, physicians and physician groups should explore means of obtaining them. The leadership, stimulation and counsel of organized medicine and individual physicians can be of tremendous importance in acquiring needed services for the community.

SUMMARY

Modern medicine requires the treatment of the total patient by the physician so that he may be returned to the greatest usefulness in his community. The goal of public health and rehabilitation programs in cardiovascular disease is to provide the community skills and services needed by physicians and patients so that treatment of the total patient can be accomplished. The private physician is the leader of the team of community skills and services that are available to him. Increased use of this team by the physician will enable him to improve the treatment and rehabilitation of his patients and reduce losses to his community from disability and premature death from cardiovascular disease. The leadership of physicians in the community is also needed to help their communities obtain public health and rehabilitation services that are not available.

RESUMEN

La medicina moderna requiere el tratamiento total del enfermo de manera que pueda ser reintegrado a la comunidad con la mayor posibilidad de ser útil. El objetivo de los planes de salubridad pública y de rehabilitación en enfermedades cardiovasculares es proporcionar al médico y a los enfermos las facilidades que tenga a su disposición la comunidad de modo que el total tratamiento del enfermo pueda realizarse. El médico que hace práctica privada es el guía hacia las posibilidades que ofrezca la comunidad.

El mayor uso de estas facilidades por el médico, le permitirá mejorar el tratamiento y la rehabilitación de los enfermos y reducir las pérdidas de la comunidad por incapacidad y muerte prematura debido a enfermedades cardiovasculares. La guía de los médicos en la comunidad es también
necesaria para ayudar a los grupos sociales para obtener servicios de salubridad y de rehabilitación que aún no estén establecidos.

RESUME

La médecine moderne exige le traitement total du malade, il faut qu'il puisse retrouver l'activité la plus efficace, dans la collectivité à laquelle il appartient. Les programmes d'hygiène sociale et de réadaptation dans les affections cardio-vasculaires ont pour objectif l'obtention de moyens d'action mis à sa disposition par la collectivité à la demande des médecins et des malades, pour que le traitement puisse être mené de bout en bout.

Le médecin privé doit diriger l'ensemble de ces moyens d'action mis à sa disposition par la collectivité. Leur utilisation de plus en plus importante par le médecin lui permettra d'améliorer le traitement et la réadaptation de ses malades. Ainsi seront réduits les dommages subis par la collectivité à la suite d'incapacité et de mort prématurée d'origine cardio-vasculaire. L'union des médecins de la collectivité est également indispensable pour leur permettre d'obtenir les moyens qui ne sont pas encore mis à leur service.

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REFERENCES