HEALTH AND INDUSTRIAL PROBLEMS OF HEART DISEASE IN MIDDLE LIFE

FREDERIC BRUSH, M.D.
Medical Director the Burke Foundation, White Plains, New York

Organization to prevent, cure and ameliorate heart disease is growing nation-wide. Standards and an extensive literature are forming. The studies thus far, however, mainly deal with preciser diagnosis, classification, heart-efficiency tests, schooling, youth-prevention of the disease incidence, and the relations of cardiac to other ailments. It is becoming increasingly evident that even one element such as the prevention of heart disease incidence in youth is going to require decades for its elucidation (mainly because acute rheumatic fever and its allies must first be mastered), and there is apparent danger now of neglecting the primal function of this or any health organization—the keeping of the people well and socially successful.

Let it be remembered that our heart health movement started in 1913 with a plan and plant (The Trade School for Cardiac Convalescents) to adjust and hold partly crippled men in productive living. Perhaps we are now in the midst of the writing-speaking stage, for there appears a tendency to ignore this first vital health segment. It is less interesting to physicians; it is not classed as scientific. Heart-literature is streaming forth, and too little is being done to aid the frankly heart diseased to "get along well" in their roundabout world. Yet a large and hopeful group, represented by social service and other health workers, employers, insurance, unions, vocational and employment bureaus, camps and vacationers, life-extension examiners, etc., are slowly forming, at the borders of precisional science, a mass of valuable fact and experience immediately applicable to

1Address before the Annual Meeting of the Philadelphia Heart Association, April 18, 1923.

ARCHIVES OF OCCUPATIONAL THERAPY, VOL. II, NO. 5
what we may call the *art of subnormal living*. Note how large funds are recently being diverted to these life-practice channels—a kind of social-medical-industrial research; perhaps a new science is forming.

We would here deal with the *problems of heart-diseased persons between ages thirty and sixty-five*—the average productive, stressful, citizenship period—the time of responsibility; and as applying to more men than women, for reasons assumed to be fairly understood. How many of these handicapped are in your community? Consensus of the reports from examinations in armies, schools, insurance, industrial groups, etc., arrives at a total 2 per cent plus cardiac population as an approximation. But those so examined have been always preponderantly in the younger age groupings; e.g., the majority are examined for life insurance before thirty-five, while circulatory disease as a cause of rejection and death in insurance classes shows rapid and steadily rising percentage increase after forty years. The too few other group tests indicate this same condition—a markedly increasing population percentage of this defect within the mature age limits above designated, going largely undiagnosed and unadvised. Drawing from statistics and from a considerable personal experience with this class we are coming to think that at least a three per cent heart diseased work-age population is fair assumption. You may thus figure the size of your own problem.

The percentage of suffering and disability, after all the most important consideration, resulting among these people may not of course be accurately estimated with our present knowledge. There is growing testimony to its being much higher than is generally believed, as will be indicated later on. And statistics of hospital days care, morbidity, etc., reveal but little of the *months and years of low-grade living of various kinds that afflicts the heart-hampered particularly*, and reacts most unfavorably upon the family, industry and the state. Here then is a factual proposition; one definite piece of work for heart organization. These mid-age lives are admittedly the most valuable; it is not good to train them, and then not “see them through.” No
other part of our achievement will be so promptly evaluated and bring the needed moral and financial support of the solid public. It is the heart of the heart-problem.

Good programs, ground plans laid on paper, have a continuing value. The Heart Association setting out for service to these productive-period citizens should have as instrumentali­ties: special heart clinics, increased social service, better adapted hospital and dispensary treatment, country convalescence facilities, adequate beds for the more serious cardiac cripples, an employment bureau for the handicapped including heart disease, means to bring about constant work-adjustments within the industries, schemes to increase periodic health examinations in the heart group and in general, and active public health education.

Some of these essential agencies merit brief discussion. The special clinic ideally assists its members but soon becomes overworked, can cover only a modest portion of the field, and may after all reach its highest value as a demonstration and clearing-house center. Social service (here considered very inclusively), benefits by the special clinic example, gains wide contacts with

Fig. 1. A Restricted Easy Form of Baseball Proves Good Therapy
cardiacs and can be expected to aid in the direction and follow-up of the major portion; standing between physician, family and industry, it is in position for largest single auxiliary accomplishment. It sometimes seems as if hospitals were doing their poorest work with heart disease. They do not admit numbers enough nor early enough for prevention, they discharge too quickly in average cases, the badly crippled hold the beds too long for lack of outlets, patients are commonly discharged to private or dispensary or no follow-care without sufficient up-grading in exercise and reserve and with no proper work arranged for; and their very high-cost service is taken largely by the chronic repeater class instead of being applied to skilled diagnosis and the measurably sure restorations of early type cases to occupational status. How long will taxpayers and the donors of millions consent to the waste of money, comfort and lives incident to patients being put and kept in the wrong places, when they understand hospital costs to be $4.50 per day, country convalescence
$1.50, clinic and home care 50 cents or less, and handicapped labor self-supporting? Heart associations can greatly aid in effecting reforms along this whole line. General dispensary care is growing by millions of visits and reaching out even to rural populations. Work-age heart disease should always be most extensively found in the dispensary; lack of time and trained assistants hamper its efficiency, but the heart clinics, electrocardiographic departments, the wards and social service, all housed adjacent, tend ever to leaven and bring up the dispensary practice, and a system of better coördinated reference of dispensary heart and border suspect cases to and from these special departments will mark important advance affecting great numbers. One test-measure of our special cardiac clinic value is going to be its teaching effects upon general dispensary and private practice.

Country convalescence is a recognized essential in any improvement régime for adult heart disease. Reasons and methods have
been sufficiently reported in the past five years. The mental restitution and re-couragement are most important results too little accredited. The elimination or possible correction of the considerable numbers of neurotic, non-working "cardiac rounders" is another function. But can you succeed, where New York has partially failed, in setting up the industrial-medical-social-mechanism that will get your workers sent out periodically, or as need and on time, to these preventive and "holding" recuperations? The fault is not usually with employers, who will pay directly or indirectly to have their workers kept fit. Lacking country place outlet, supervised preventive home rests can, and must often be arranged.

The so-called cardiac cripple—the chronic relapser—is under study by the heart association in New York with report soon to be made. These persons aggregate to a large burden upon the community. Hundreds of added institutional beds are needed
for them in each large center. They are discussed here because they cling to the edges of industry, and due to the admittedly uncertain prognosis in heart affections, there is a borderline back-and-forth interchange always going on between this class and the handicapped wage-earners. Furthermore, the bad chronics unjustly stigmatize the abler cardiacs in occupation, etc., and call for a better classification and placement. Augmented comfort and a moderate productiveness can no doubt be given these sadly stricken people through further organization. Municipal institutions should be the first to extend them facili-

![Fig. 5. Starting out for the Country](image)

ties, often by re-distributions of patients, without added beds, nor much increased expenditure. Sub-sections for them in heart clinics may yet prove feasible.

Those with the experience now advise that the special employment bureau should cover many kinds of handicapped, and not be for cardiacs only. The latter are the hardest to place and keep in occupation and employers are won over to taking them, e.g., by preceding success with other handicapped. There are various other confirming reasons, which will be summarized in the course of a comprehensive report now being prepared, under
the Sturgis Research Fund, by the New York Employment Bureau for the Handicapped. It will be repeatedly urged that existing governmental and private employment agencies can be brought to cover your cardiac placement. They may aid, but I am convinced that distinct organizations for this purpose are required in the larger cities. The Heart Association may subsidize or aid their portion of the general handicapped bureau. Suitable employment is the backbone of this whole effort. Nothing else relapses adult heart disease like job-hunting, which so frequently ends in the desperate taking of the wrong job and a re-establishment of the vicious circle. America, which has been developed and run on its youth, is beginning to call for all of its workers, even those capable of only a fractional product; we shall go somewhat the way of older countries in this. Occupation for the handicapped is we trust, at last an established national concern with us; and heart disease is vitally linked with it from youth to age. No single field of betterment equals that of the cardiacs’ adaptations to the standard industries and constant wise readjustment and grading in them. These are not wordy generalities; the practice is fairly under way in the well organized communities. The possibilities are found so great that it is being said that all cardiacs of fair workable power and reserve can be made wage earners in our industrial world as it is, without vocational schools or special factories, etc. Numerous examples could be cited, as where a large construction company holds all of its “watchman” and like jobs for heart patrons of the Employment Bureau, or the steamship company that fills certain suitable places with cardiacs only.

Vocational training in schools may prove a certain limited value to youth. Vocational training “on the job” is the solution for adults, and mainly for youth too. In the New York district there is at present a steady call for cardiacs and other handicapped under forty years of age to be given training in chosen sections of the standard industries, and under fair wage from the start. And here appears an interesting side-value; it is common testimony that the best prescription for middle-grade heart disease is the pay-envelope—so definitely does non-productivity weaken
and depress the person, his family and environment. The proposal to establish special factories for the heart handicapped may not be discussed here, except to voice a personal negative opinion, for the present. Workmen’s compensation laws bear unfavorably upon the cardiac in industry, and the relation is worthy of deepest study by a national organization, which may yet join kindred societies in suggesting modifications giving justice to the handicapped. Those interested in these auxiliary but essential questions are referred to the forthcoming report by the New York Employment Bureau.

The great value of periodic health examinations in middle life is slowly gaining recognition. Proofs of the prolongation of comfort, productivity and life itself are accumulating. (Reference is made especially to reports by Dr. Dublin, of the Metropolitan Life Insurance Co.) Such testing broadly applied would throw much needed light on the apparently underestimated heart disease incidence (from hypertension, overstrain, syphilis, etc.) after forty, and it would factor most valuably in all of our welfare efforts. The Burke Foundation has conducted a special diagnostic clinic for six months past and found among the general convalescents in residence, chosen as suspects, a total with definite heart disease equal to the number sent to us as cardials. Routine testing of our entire institutional population would undoubtedly give a still higher ratio of the undiagnosed, or uncharted, who come by the way from the best hospitals and medical sources. Furthermore, we find (from an experience of over 5000 cardials) that any heart deficiency, even with another ailment as principal, generally prolongs convalescence and inhibits full restoration: till we have come to think that the tendency to class the lesser and borderline defects as functional or unimportant is now being carried too far. This has bearing upon rehabilitation; one who can’t convalesce promptly and fully presumably cannot enter work fully, etc. All-round betterment for the adult cardiac population depends much upon these frequent overhauling of the human machine, and the heart association may exert strong influence to get it done—through clinics, insurance, life-extension, surveys, industrial plants, and
large group associations everywhere. Health departments may be thus inspired to gradually take over much of this function.

Following better tabulations for mid and old age, and higher skill in prognosis, more substandard insurance should be granted this class in question. Cardiacs need the better protection both in sick and death benefits, and insurance interests are awaiting in some measure the results of our studies and pressure to cooperate in these desired extensions.

We shall not go far to improve the status of the heart diseased millions without educating the public. Lay people, given opportunity, take hold on this really great public health problem with unusual understanding and zeal. Everyone or everyone's family has heart ailment soon or late; it carries no contagion-fears nor stigma; advice is not all negative but cheerful; the very word helps to bring sympathetic support. As the main factor in first prevention is earlier recognition and firmer treatment of rheumatism and allied conditions, so better, longer lives for the affected will be attained through prompter recognition and correction of incipient circulatory failure. "Taken in time"—is the slogan. The people should be given full confidence in this matter—told but not scared. This helps also in forestalling misuse of the public by cults and charlatans that will assuredly spring up around this propaganda. The lay press is the best instrument—underused—overfeared by physicians and leaders; and scores of worthy publications intermediate to lay and medical are waiting to carry widely the right material. The two least developed elements in this whole movement so far are the prevention of relapse and heart overstrain and a bolder public education.

SUMMARY

The prevention of overstress in cardiacls of work-age is really a form of heart disease prevention, for each recurrence is a new disease-complex. It is being measurably neglected.

The middle productive age now especially demands and will highly repay more organized health care, gaining most through the various industrial adjustments.
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The agencies to accomplish this, with the exception of country recuperative places for men and chronic hospitals, are fairly ready (as above summarized).

Stronger public health education will be a main line to success.

A nationalized heart association is needed to exert influence upon many of the broader social and legal questions involved.