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THE CALIFORNIA HEART ASSOCIATION
AND ITS COUNTY AFFILIATES
WITH THE COOPERATION OF THE INSTITUTE OF
INDUSTRIAL RELATIONS, UNIVERSITY OF CALIFORNIA, (BERKELEY)

First Western
Conference on Employment
and
Heart Disease

March 19th and 20th 1955

INSTITUTE OF INDUSTRIAL
RELATIONS LIBRARY
UNIVERSITY OF CALIFORNIA
BERKELEY

APR 5 1955

Dwinelle Hall, University of California, Berkeley,

Berkeley 1955

The first western conference on employment and heart disease is sponsored by the California Heart Association and its county affiliates, with the cooperation of the Institute of Industrial Relations, University of California, Berkeley, and is supported in part by grants from Riker Laboratories, Inc., Los Angeles, Lakeside Laboratories, Inc., Milwaukee, and Wyeth Laboratories, Philadelphia.

CONFERENCE PLANNING COMMITTEE

William H. Thomas, M.D. Chairman, Cardiac in Industry Committee, California Heart Association	Mrs. Lloyd L. Thomas San Francisco Heart Association
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Benjamin Lieberman, M.D. Chairman	



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CALIFORNIA HEART ASSOCIATION
1428 Bush Street
San Francisco 9, California

SOME NOTES ON THE PROBLEM OF WORKERS WITH HEART DISEASE

The immense improvement in working conditions in America in the past 20 years has brought with it unique problems.

We have achieved a degree of employment security unmatched in our previous history. In addition to substantial social security coverage, in many areas significant numbers of workers of all classes are additionally covered by group insurance and retirement plans.

Yet this regularization and formalizing of the employment relation has operated, unfortunately, to create large classes of people who are marginal workers in good times as well as in bad.

Actuarial considerations, completely irrelevant to the ability of a worker to do a job which may be going begging, are often heavily weighted in the mind of the man who is doing the hiring: his pension plan or insurance contract will not permit the initial employment of men over 45 (or 40 or 35, or in rarer cases, 30) or people with a long list of health conditions¹ which may not be disabling.

The problem of the older worker has been admirably explored in a number of conferences. The problem posed by those with spectacular physical handicaps has claimed an immense amount of popular attention. This conference, for the first time in this area, focuses the spotlight on people with diseases of the heart and circulatory system (a technical classification which comprises, for the most part, high blood pressure and hardening of the arteries).

There are at least ten million people with heart or circulatory disease of varying degrees of seriousness in the United States and over 50% of all deaths each year result from these diseases. Somewhere in the neighborhood of 4,000,000 of these people are in the labor force, with about 350,000 of these workers in California.

Estimates of the yearly number of man-days lost through heart diseases run as high as 170 million, with a probable wage-loss of more than 2 billion dollars. (No estimate of the cost to industry, such as the loss of productivity and the cost of training replacements has been made that we are aware of). California experience in 1949-50 (covered employment and State disability insurance plan only) showed 27,160 heart disease disability claims with 1,810,200 days of benefits paid.² Roughly applying these figures to the total labor force at that time (without weighting for the generally higher age of workers in uncovered employment) we arrive at a total of 45,000 workers temporarily disabled by some form of heart disease, with some 3,000,000 man-days lost³. Heart and circulatory diseases were the largest single cause of disability,⁴ and the working days lost per claim was disastrously high -- 67 days on average.

Data from the State Department of Social Welfare indicate that "cardiacs" comprise about 19% the 6,000-family caseload receiving assistance under the Aid to Dependent Children program because of incapacitated fathers⁵. No data are

available on the number under the general relief programs in the counties. The State Bureau of Vocational Rehabilitation estimates that 32% of disabled who will ultimately be eligible for old age and survivor insurance will be cardiac cases⁶.

.....

These facts on the seriousness of the heart disease problem are put forward only to show it in its true light, as a problem intimately involving industry, labor and the government. For heart disease is not well-known as an industrial problem: most people think of it as primarily a disease of old age and "heart attacks" as always certainly--and usually quickly--fatal. On the contrary, as we have seen, about four cases out of ten are in the active labor force--for heart diseases affect all groups from infancy to extreme old age (see charts in resource material). And not only are those who suffer from the various heart diseases part of the industrial population before they have the "heart attack" which is the acute phase of their disease, but they remain so afterward. The majority of those who have had even serious heart attacks survive them. About eight out of ten who survive can go back to work, often at the same job they left. Typical is the experience of the Consolidated Edison Company of New York, which studied 896 employees whose heart conditions were serious enough to cause absence from work or change of assignment in 1952⁷. The group averaged 45 years of age and was regarded at peak productivity by the company.

Total		896
Died	36	
Retired	30	66
Returned to work		830

Of 66 members of this group who had suffered an acute coronary thrombosis--what people usually think of as "a heart attack"--only 15 (22%) had died, while 46 (69%) had returned to work.

.....

The problem, then, is large, it is a true industrial problem, primarily a problem of giving people a chance to get back to work, and not of caring for invalids. (Incidentally, when "heart cases" do get back on the job they are, like other "handicapped" workers, a trifle more productive at similar jobs than unhandicapped workers, according to the United States Department of Labor, (Hammond study).

While recovery from a heart attack can be expected, and ability to perform adequately on the job is also a normal prospect, it must not be thought that heart disease is "no worse than a bad cold." "Heart capacity"--the heart's working power, its ability to deliver more than normal horsepower over a period of time without symptoms--is often lowered: the Edison Company's experience showed also that it was thought best to place about 600 of the 830 returnees for some length of time at duties which were in some manner limited. However, the group was regarded as in all respects still a productive part of the company's labor force: they were not on "made" work, but were restricted merely as to heavy

-more-

lifting, excessive stair climbing or walking, driving, and any emergency work. Indeed, the doctor reported confidently that: "We at Consolidated Edison, have shown that the cardiac can work. The keys are an adequate medical service in industry, coupled with selective placement. They are worth using....The problem of the cardiac in industry is too big and too real to be sidestepped or ignored. In terms of human happiness--of productivity--and dollars and cents, the stakes are high enough to warrant careful consideration."

#

- 1 For instance, a 1953 Alameda County survey (see resource materials in this workbook) which covered 14 plants of various sizes, showed 12 of them with pre-employment physical examinations required. Seven of the 12 required also period physicals after employment.
- 2 Abstracts of State Department of Employment data furnished by Bureau of Chronic Diseases, State Department of Public Health
- 3 The last month (May 1953) study by the State Department of Employment, annualized, indicates disability claims for a year under both private and State plans of 45,000, payments to claimants of \$19,000,000, and days lost of 3,000,000--all figures excluding uncovered employees, who were a smaller number in 1953 than in 1949-50.
- 4 In contrast, "heart trouble" is a much smaller problem under the Workmens' Compensation Act than any one of a number of other causes of lost time. In 1954, only one in 330 lost-time work injuries was assigned to "cardiovascular strain or disease." While one in six of 1954 fatalities was reported as involving such strain or disease, the number (121 heart deaths) was so small, in proportion to covered employment, as to be inconsequential.
- 5 "Medical Study of Incapacitated Fathers Receiving Aid to Needy Children", Donald S. Freedman, M. D., Sacramento, March, 1954
- 6 Comments from a point in time study by California State Department of Education, Bureau of Vocational Rehabilitation, December 1, 1954
- 7 "Heart in Industry" conference proceedings, New York Heart Association, Inc., 1954. Speech of Dr. S. C. Franco, Associate Medical Director, Consolidated Edison Company of New York: "The Cardiac Can Work"

The California Heart Association and its County Affiliates

with the cooperation of

The Institute of Industrial Relations,
University of California, Berkeley

presents the first statewide conference on

EMPLOYMENT AND HEART DISEASE

Date: March 19 and 20 - early registration and reception on Friday evening, March 18
at 7:30 p.m. on the Lido Deck of the Claremont Hotel in Berkeley

Place: Dwinelle Hall, University of California, Berkeley

More than 350,000 California workers with heart and circulatory
diseases are facing a problem of limited employment opportunities.

How can we help solve this problem?

Conferees will consider possible solutions to this problem. Discussion leaders will meet with participants after each panel presentation to aid in organizing discussions on the material presented by the panel speakers. Serving as discussion leaders will be Milton Chernin, Dean of the School of Social Welfare; William Griffiths, Associate Professor of Public Health; Luigi M. Laurenti, Assistant Head of Business Administration Extension; Davis McEntire, Professor of Social Welfare; Burt W. Miller, Coordinator of Management Programs at the Institute of Industrial Relations; and Frederick J. Seubert, Assistant Professor of Business Administration -- all of the University of California, Berkeley.

A detailed copy of the conference program and a registration form are enclosed. For further information contact:

Mr. J. Keith Thwaites
California Heart Association
1428 Bush Street, San Francisco
GRaystone 4-1437

or

Miss Virginia B. Smith
Institute of Industrial Relations
University of California, Berkeley
ASHberry 3-6000, Ext. 8137

Conference Program

FRIDAY, MARCH 18

7:30 p.m. Registration and Reception Lido Deck, Claremont Hotel
Berkeley

SATURDAY, MARCH 19

9:00 - 9:30 Registration Room 155, Dwinelle Hall

9:30 - 9:45 Welcome

William H. Thomas, M.D., Chairman, Cardiac in Industry Committee, California Heart Association

Arthur M. Ross, Director, Institute of Industrial Relations, University of California, Berkeley

Arthur R. Twiss, M.D., President, California Heart Association

9:45 - 11:00 BARRIERS TO EMPLOYMENT OF THE CARDIAC: A Panel Room 155

Chairman: Lester Breslow, M.D., Chief, Bureau of Chronic Diseases, California State Department of Public Health

Speakers:

Rolf Adriansen, Area Occupational Analyst, California State Department of Employment

Daniel C. Atwater, Personnel Manager, Marchant Calculators, Inc.

Harold A. Hatch, President, Argonaut Insurance Company, San Francisco

Arthur R. Hellender, Director, CIO Community Services of Northern California

James H. Thompson, M.D., Secretary, California Society of Internal Medicine

11:00 - 12:15 Discussion Groups

12:30 - 1:45 Luncheon International House

INTERPERSONAL RELATIONS AND WORK TENSIONS - an address by

Patrick L. Sullivan, Ph.D., Chief Clinical Psychologist, Veterans Administration Mental Hygiene Clinic, Oakland

Chairman: Benjamin Lieberman, M.D., Conference Planning Committee, California Heart Association

2:00 - 3:00 INDUSTRIAL COMPENSATION ASPECTS OF HEART DISEASE: A Panel Room 155

Chairman: Douglass A. Campbell, Referee, State Industrial Accident Commission, Los Angeles

Speakers:

Rodney R. Beard, M.D., Professor of Preventive Medicine, Stanford University School of Medicine

Meyer Friedman, M.D., Director, Brunn Institute of Cardiology, San Francisco

Leon Lewis, M. D., Lecturer in Medicine, Stanford University School of Medicine

Irving S. Rosenblatt, Jr., LL.B.

Howard J. Scott, LL.B., partner, firm of Kearney, Scott and Klopston, Los Angeles

3:00 - 4:30 Discussion Groups

SUNDAY, MARCH 20

9:30 - 10:45 REMOVING THE BARRIERS: A Panel Room 155

Chairman: Milton Chernin, Dean of the School of Social Welfare,
University of California, Berkeley

Speakers:

Robert S. Ash, Secretary, Central Labor Council of Alameda County
Z. L. Gilledge, Executive Secretary, State Senate Interim Committee on
Education and Rehabilitation of Physically Handicapped Children
and Adults

Ellsworth Metteer, Division Claims Manager, Liberty Mutual Insurance
Company, San Francisco

Nathan Nelson, Consultant, Bureau of Vocational Rehabilitation,
California State Department of Education

John C. Ruddock, M.D., Medical Director, Richfield Oil Corporation,
Los Angeles

10:45 - 12:00 Discussion Groups

9:30 - 12:00 INDUSTRIAL MEDICINE AND HEART DISEASE: Room 111
(Special Session for Doctors)

Chairman: Sidney S. Sobin, M. D., Director of the Cardio-Vascular
Laboratory, Children's Hospital, Los Angeles, and Co-Director of
the Los Angeles Work Classification Unit

Speakers:

William L. Adams, M.D.

James C. Reavis, M.D.

*Rodney R. Beard, M.D.

*Robert E. Rock, M.D.

R. Christopher Leggo, M.D.

John C. Ruddock, M.D.

Leon Lewis, M.D.

Jerome Shilling, M.D.

*Robert W. Oblath, M.D.

*Reports on the Lockheed, Industrial Accident Commission, and
Los Angeles City Employees studies of cardiac workers.

12:00 - 12:30 A SUMMATION: General Session Room 155

Chairman: William H. Thomas, M.D., Chairman, Cardiac in
Industry Committee, California Heart Association

Reporting:

Dr. Breslow

Mr. Campbell

Dean Chernin

Dr. Sobin

12:45 Luncheon Shattuck Hotel

PRESENT AND POSSIBLE FUTURE PROSPECTS IN HEART DISEASE - an address by
John J. Sampson, M.D., Vice-President, American Heart Association

Chairman: I. Lyon Chaikoff, M.D., Professor of Physiology, University
of California Medical School, San Francisco

The conference is supported in part by grants from Riker Laboratories, Inc., Los Angeles;
Lakeside Laboratories, Inc., Milwaukee; and Wyeth Laboratories, Philadelphia.

DISCUSSION GROUPS

CONFERENCE - EMPLOYMENT AND HEART DISEASE
March 19-20, 1955
Dwinelle Hall, University of California Campus
-

Group A
Room 117 Frederick J. Seubert, Discussion Leader
Resource: Jack Berman, M. D.
Francis Hatch, M. D.

Group B
Room 127 Burt W. Miller, Discussion Leader
Resource: Vernon C. Harp, Jr., M. D.
Richard Young, M. D.

Group C
Room 142 Davis McEntire, Discussion Leader
Resource: James B. Pope, M. D.
Arthur W. Potts

Group D
Room 146 Luigi M. Laurenti, Discussion Leader
Resource: Richard C. Dickmann, M. D.
Leon Lefson

Group E
Room 156 William Griffiths, Discussion Leader
Resource: Rodney Beard, M. D.
Max Kossoris

Group F
Room 179 Milton Chernin, Discussion Leader
Resource: Donald Freedman, M. D.
Eliot D. Sorsky, M. D.
Chauncey Alexander

FACTS ABOUT DISEASES OF THE HEART AND CIRCULATION

HOW MANY PEOPLE DIE FROM HEART AND CIRCULATORY DISEASE?

In 1953, the latest year for which figures are available from the National Office of Vital Statistics, diseases of the heart and blood vessels were responsible for 794,120 deaths, or 52.3% of all deaths at all ages. About 247,000 deaths occurred in the so-called "productive" years below 65.

HOW DOES THIS COMPARE WITH OTHER LEADING CAUSES?

The next five leading causes of death in 1953 were: Cancer, 229,110; accidents, 96,230; pneumonia, 52,330; diabetes, 25,390; tuberculosis, 19,870; and kidney disease, 18,990.

WHAT IS THE INCIDENCE?

It is estimated that about 10,000,000 Americans, or about 1 out of every 16, suffer from some form of heart or blood vessel disease. Among them are about 500,000 school children.

HAS THE DEATH RATE CHANGED IN VARIOUS AGE GROUPS?

For those under 24 years of age, the risk of dying from heart disease has been reduced by 70% within the past generation; for those between 24 and 44, by about 35%. After 45, three out of every five deaths are caused by heart and blood vessel disease. Among white males aged 45 to 54, the death rate from cardiovascular diseases has increased by 20%, and in the 55-64 age group, by 11%. Among white females, the death rates in these two age groups declined by 34% and 28% respectively. The increase in the total number of deaths is due in part to the fact that, with many other diseases either preventable or controllable, more people are now living to the ages (65 and over) where the heart diseases take their greatest toll.

WHAT PROGRESS HAS BEEN MADE?

Some forms of heart disease now can be prevented, a few can be cured, and nearly all cases can be helped by proper treatment after early diagnosis. Here are a few of the notable achievements that have resulted from heart research:

- **HIGH BLOOD PRESSURE:** *New, improved drugs which lower blood pressure are bringing relief to thousands; in carefully selected cases, surgery is effective.*

- **"HEART ATTACKS":** *Significant gains have been made in diagnosis, care and treatment; drugs which retard blood-clotting (lessening the likelihood of further heart damage) are being widely studied.*

- **RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE:** *Initial attacks of rheumatic fever (often the forerunner of rheumatic heart disease) can be prevented by knocking out the "strep" infections which precede them with antibiotics like penicillin; most recurrent attacks of rheumatic fever (increasing the danger of heart damage) can be prevented by consistent long-term use of penicillin or sulfa drugs.*

- **ADVANCES IN TREATMENT:** *Radioactive iodine is producing beneficial results in the treatment of congestive heart failure and angina pectoris; deaths from subacute bacterial endocarditis (an infection of the lining of the heart) have been reduced from almost 100% to about 20% by prompt and effective treatment with penicillin.*

- **DIAGNOSIS:** *Many new tools and techniques have been developed. Some examples: The heart catheter (a long and slender tube painlessly introduced through an arm vein into the heart to take blood samples and measure pressure); and angiocardiology (injection into the circulation of material which shows up on X-Ray). These two techniques, among others, are making possible dramatic advances in heart surgery.*

- **SURGERY:** *Surgeons are now repairing heart valves damaged as the result of rheumatic fever; correcting certain structural heart defects with which some children (such as "blue babies") are born; removing clots from blood vessels; and grafting sections of healthy vessels to replace diseased arteries. "Heart-lung" machines have been devised to take over the work of the heart and lungs while surgeons operate within the heart under direct vision, and within a bloodless field. In the same way, a mechanical "artificial kidney" has been developed to carry out the kidney's functions during periods of emergency. Surgeons are also applying "deep freeze" methods of lowering body temperature, a technique that slows the body's functions and reduces blood circulation for the time necessary to perform heart surgery.*

(over)

● **RESUSCITATION:** *Powerful new drugs have been perfected which abolish irregular heart rhythms that often prove fatal in patients recovering from "heart attack," and in persons under anesthesia during operations. New drugs, and an electric "pacemaker" which stimulates the heart with an electric current, are being successfully used to revive the heart that has stopped beating and to restore its regular action. New surgical techniques now permit opening the chest and manual massage of the heart to restore its action.*

WHAT IS THE MAIN TARGET OF HEART RESEARCH?

The primary objective of heart research today is to discover the basic causes of the three disorders which are responsible for about 90% of all heart disease. Once the causes are identified and understood, medical science will be better able to establish controls or even cures. The three disorders are:

● **ATHEROSCLEROSIS:** *A form of "hardening of the arteries" in which the inner lining of the arteries becomes hardened, narrowed and roughened (similar to lime clogging a water pipe), setting the stage for "heart attack" or damage to the brain, kidneys and other vital organs. Atherosclerosis is responsible for the great majority of deaths from heart and circulatory disease.*

● **HIGH BLOOD PRESSURE:** *A condition believed to be the result of constriction of the smallest arteries that produces increased resistance to blood flow. This often leads to heart and kidney disease. Atherosclerosis and high blood pressure, singly or in combination, account for almost all cerebral vascular accidents or "strokes."*

● **RHEUMATIC FEVER:** *which is almost always preceded by a "strep" infection, and is sometimes followed by rheumatic heart disease—a leading fatal disease among those aged 5 to 19, affecting about 1,000,000 Americans.*

ARE THERE OTHER RESEARCH OBJECTIVES?

Yes. While researchers are attempting to track down the basic causes of heart and circulatory diseases, they are at the same time seeking more effective methods of treatment, care and prevention. They are developing new drugs, new surgical techniques, new diagnostic and study tools.

HOW CAN WE SPEED THE FIGHT AGAINST HEART DISEASE?


By giving generously to the 1955 Heart Fund. This is the only time of the year when you can do your share in the fight against heart diseases.

Diseases of the
HEART
and Blood Vessels

LEADING CAUSES OF DEATH

in the United States

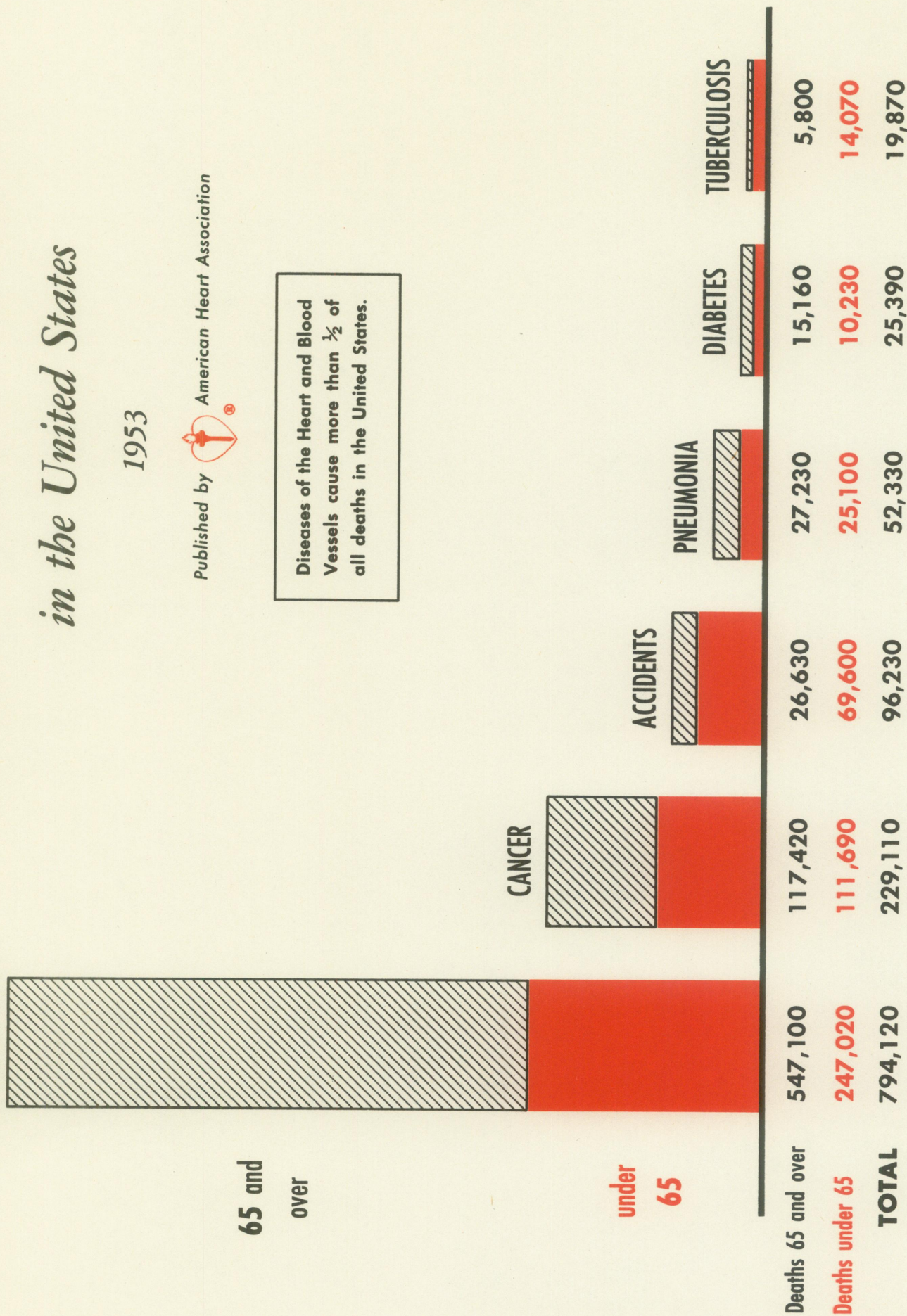
1953

Published by  American Heart Association

65 and
over

under
65

Diseases of the Heart and Blood
Vessels cause more than $\frac{1}{2}$ of
all deaths in the United States.



CORONARY OCCLUSION - INDUSTRIAL ASPECTS - 1939-1954
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(Courtesy of Leon Lewis, M. D.)

RESOURCE MATERIAL

Findings of a study of personnel practices relating to the employment of cardiacs in 14 representative companies, Alameda Co., California.

Alameda County Heart Association 1953

I. Total firms interviewed - - - - - 14

A. Number of plants requiring pre-employment physical examinations - - - - -	12
Number of plants not requiring pre-employment physical examinations - - - - -	2
B. Number of plants requiring a pre-employment questionnaire - - - - -	11
Number of plants not requiring a pre-employment questionnaire - - - - -	3
C. Number of plants requiring periodic physical examinations - - - - -	7
(Promotion only 1	
For certain jobs only 1	
Prolonged illness 1)	
Number of plants not requiring periodic physical examinations - - - - -	5

II. Company policies regarding employees who develop cardiac or blood pressure conditions on the job:

- A. Five plants stated that it depended upon length of service with the company.
- B. Job adjustments are made for these employees in 13 of the plants. However, three of these mentioned that union approval was necessary, but they are usually most cooperative.
- C. Four companies follow the recommendation of their plant physician or medical department.

The majority of the companies stated that each case would be handled on an individual basis with every humanitarian consideration given, and with due regard to length of service, recommendation of the medical department, availability of lighter jobs, labor potential, etc.

III. Companies' interest in using Work Evaluation Center for referring employees who develop cardiac or high blood pressure conditions while on the job:

Number of interested companies	10
Number of disinterested companies	2
Number who want more information	2

IV. Factors which militate against the hiring of cardiacs and those known to have high blood pressure:

- A. Workmen's Compensation Insurance laws as they are presently set up.
- B. Not enough light jobs.
- C. Medical department will not pass them.
- D. Safety programs are being intensified to reduce frequency rates of industrial accidents which prevent hiring of handicapped people.
- E. Rigid company policy which cannot be broken.
- F. Insurance carrier will not permit the hiring of them.
- G. Will not place lives and machinery in jeopardy. Just too dangerous.
- H. Liberalized sick benefits and are not willing to start off with ill people.
- I. Disability insurance rates are too high.
- J. Handicapped people are malingerers. They get in through the back door and use the Workmen's Compensation Act as a ruse.
- K. Competition in labor is rough because of high pay, thus the atmosphere is not natural for a cardiac.
- L. Two companies offer no resistance if they can do the work.

V. Companies which are interested in hiring cardiacs who have been evaluated by the Work Evaluation Center.

Number of those interested	8
Number of those not interested	6

SUMMARY

It appears that the majority of companies take care of their employees who develop disabilities while on the job by making job adjustments for them. Most of them are interested in using the Work Evaluation Center to refer these employees to assist them in this job adjustment.

There is a decided lack of interest among these companies to want to hire people who have been evaluated as to work capacity by our Work Evaluation Center. The factors which militate against the hiring of cardiacs seem to indicate a need for an adjustment in Workmen's Compensation laws and an intensified educational program to the employability of cardiacs in industry.

Attach: Survey Form

NAME OF COMPANY _____ PERSONNEL MANAGER _____

ADDRESS _____ TELEPHONE NUMBER _____

1. Do you have pre-employment physical examinations which will disclose:

a. Cardiac disabilities? Yes () No ()

b. High blood pressure? Yes () No ()

2. Do you require a questionnaire which will disclose:

a. Cardiac disabilities? Yes () No ()

b. High blood pressure? Yes () No ()

3. Do you require periodic physical examinations? Yes () No ()

4. What is your company's policy regarding employees who develop a cardiac condition while on the job?

Those who develop high blood pressure?

5. Does your company make job adjustments for those employees?

Yes () No ()

6. Would your company be interested in using the Work Evaluation Center for referring employees who develop cardiac conditions or high blood pressure while on the job?

Yes () No ()

7. What major factors, if any, militate against the hiring of cardiacs or people known to have high blood pressure by your organization?

8. Would your company consider hiring a person with a cardiac condition or high blood pressure who has been evaluated as to work capacity by the Work Evaluation Center, providing you have a job opening which the Work Evaluation Center feels is within the physical capacity of the person referred?

Yes () No ()

Comments: _____

9. What types of job classifications does your company offer?

Cardiacs in Industry

Table 1

Number of Claims by Occupation Group
and
By Selected Individual Occupations

Occupation	Total	Reviewed	Not Reviewed
Total	583	398	185
Professionals	33	21	12
Farmers and Farm Managers	2	2	0
Managers, Officials and Proprietors	26	18	8
Clerks	14	9	5
Salesmen	18	12	6
Craftsmen including:	149	116	33
Carpenters	32	27	5
Foremen	15	10	5
Auto Mechanics	14	11	3
Other Mechanics	13	10	3
All other craftsmen	75	58	17
Operatives	84	57	27
Including:			
Truck and Tractor Drivers	18	11	7
All other operatives	66	46	20
Service Workers	140	98	42
Including:			
Firemen	46	35	11
Guards	12	9	3
Policemen	59	41	18
All other service workers	23	13	10
Farm Laborers	9	4	5
Other Laborers	77	49	28
Not Stated	31	12	19

Cardiacs in Industry

Table 1a
Number of Heart Claims per Year
per 100,000 Workers^{1/}
By Occupation Group and By
Selected Individual Occupations

OCCUPATION	Claim Rate per 100,000
Total	5.3
Professionals	3.1
Farmers and Farm Managers	0.5
Managers, Officials and Proprietors	1.8
Clerks	1.9
Salesmen	2.0
Craftsmen	6.5
including:	
Carpenters	10.2
Foremen	8.2
Auto Mechanics	7.2
Other Mechanics	5.1
All Other Craftsmen	5.5
Operatives	4.7
including:	
Truck and Tractor Drivers	5.3
All Other Operatives	4.5
Service Workers	17.6
including:	
Firemen	103.1
Guards	21.5
Policemen	87.1
All Other Service Workers	3.7
Farm Laborers	1.6
Other Laborers	9.0
Not Stated	-

^{1/} From U. S. Census Counts by Occupation

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Cardiacs in Industry

Table 2

Age Distribution

Number of Cases, by Reviewed and Not Reviewed

	Total	A G E G R O U P					Not stated
		Under 35	35-44	45-54	55-64	65 & over	
Total	583	26	102	228	168	44	15
Reviewed	398	16	67	165	119	30	1
Not Reviewed	185	10	35	63	49	14	14

Table 2a

Age Distribution

Percent of Cases, by Reviewed and Not Reviewed

	Total	A G E G R O U P					Not stated
		Under 35	35-44	45-54	55-64	65 & over	
Total	100.0%	4.5	17.5	39.1	28.8	7.5	2.6
Reviewed	100.0%	4.0	16.8	41.5	29.9	7.5	0.3
Not Reviewed	100.0%	5.4	18.9	34.1	26.5	7.5	7.6

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Table 3a

Severity of Occupation
Number of Cases - Reviewed and Not Reviewed

	Total	Severity			
		Strenuous	Moderate	Mild	Not Classified
Total	583	98	360	89	36
Reviewed	398	58	264	61	15
Not Reviewed	185	40	96	28	21

Table 3b

Severity of Occupation
Percent of Cases-Reviewed and Not Reviewed
For Those Classified for Severity

	Total	Severity		
		Strenuous	Moderate	Mild
Total	100.0%	17.9%	65.8%	16.3%
Reviewed	100.0	15.1	69.0	15.9
Not Reviewed	100.0	24.4	58.5	17.1

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Table 4
Causative Episode By Award
Number of Cases - Reviewed Only

A W A R D				
	Total	Received Payment		Received No Payment
		Decision IAOE	Compromise and Release	Denied or Dropped
Total	398	127	169	102
Unusual Exertion	81	30	40	11
Physical Trauma	41	12	19	10
Neither Exertion nor Trauma	250	76	97	77
Not Classified	26	9	13	4

Table 4a
Causative Episode by Award
Percent of Cases - Reviewed Only

A W A R D				
	Total	Received Payment		Received No Payment
		Decision IAOE	Compromise and Release	Denied or Dropped
Total	100.0	31.9	42.5	25.6
Unusual Exertion	100.0	37.0	49.4	13.6
Physical Trauma	100.0	29.3	46.3	24.4
Neither Exertion nor Trauma	100.0	30.4	38.8	30.8
Not Classified	100.0	34.6	50.0	15.4

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Table 5

Policemen and Firemen
by Award
Number of Cases - Reviewed Only

A W A R D				
	Total	Received Payment		Received no Payment
		Decision IAOE	Compromise & Release	Denied or Dropped
Firemen	35	22	8	5
Policemen	41	23	3	15

Table 5a
Policemen and Firemen
by Award
Percent of Cases - Reviewed Only

A W A R D				
	Total	Received Payment		Received no Payment
		Decision IAOE	Compromise & Release	Denied or Dropped
Firemen	100.0	62.8	22.9	14.3
Policemen	100.0	56.1	7.3	36.6

Cardiacs in Industry

Table 6
Amount of Payments
Number of Cases - Reviewed Only

		A M O U N T O F P A Y M E N T						
		Weekly payments only	Less than \$2000	\$2000 to 3999	\$4000 to 5999	\$6000 to 7999	over \$8000	Not known to have received payment
ALL CASES	398	36	76	57	39	39	1	151

Lump sum payments averaged \$3,350. Weekly payments averaged \$33. Nine persons received both a lump sum payment and weekly payments.

Table 6a
Amount of Payments
Percent of Cases - Reviewed Only

		A M O U N T O F P A Y M E N T						
		Weekly payments only	Less than \$2000	\$2000 to 3999	\$4000 to 5999	\$6000 to 7999	over \$8000	Not known to have received payment
ALL CASES	100%	9.0%	19.0	14.3	9.8	9.8	.3	37.8

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Cardiacs in Industry
Table 7

Qualifications of Reviewers by Their
Judgement of the Work-Connection of the Heart Claim
Number of Reviews

	Total	Cardiologist	Internist	Not Certified
Total	1990	240	860	890
Positive	786	94	298	394
Undecided	408	44	171	193
Negative	796	102	391	303

Table 7a
Percent of Reviews

	Total	Cardiologist	Internist	Not Certified
Total	100.0	100.0	100.0	100.0
Positive	39.5	39.2	34.6	44.2
Undecided	20.5	18.3	19.9	21.7
Negative	40.0	42.5	45.4	34.0

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Cardiacs in Industry

Table 8

Amount of Agreement Among Reviewers
For Cases where 3 or more Reviewers
Say Information is Sufficient

Number of Reviewers Agreeing Out of 5 Reviewers	Number of Cases
5	47
4 only	99
3 only	125
No majority (only 2 agree)	48
	<hr/> 319

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Table 9

Amount of Agreement of Reviewers
with Themselves as to Work Causation or Aggravation
(For 101 cases sent to the same reviewer twice)

		Reviewer's First Judgment		
ALL CASES	Total	Positive	Indefinite	Negative
Reviewer's Second Judgment				
Total	101	46	16	39
Positive	42	34	2	6
Indefinite	13	4	6	3
Negative	46	8	8	30

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Cardiacs in Industry
Table 10

Association of Reviewer's Group Judgments with
Industrial Accident Commission Awards

All Reviewed Cases with Sufficient Information
Number of Cases

	M A J O R I T Y J U D G M E N T			
	Positive	No Decision	Negative	Total
Industrial Accident Commission Award				
Money Awarded	127	28	88	243
Money Not Awarded	18	8	50	76
Total	145	36	138	319

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