The Bay Area Asbestos Surveillance Project

Case Study of a Community Health Screening Project

January 1981

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
Public Health Service
National Institutes of Health

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/1



The Bay Area Surveillance Program attracted considerable media attention which stimulated thousands of telephone calls from the public, especially from shipyard workers.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/2

THE BAY AREA ASBESTOS SURVEILLANCE PROJECT

CASE STUDY OF A
COMMUNITY HEALTH SCREENING PROJECT

Prepared by Western Institute for Occupational
and Environmental Sciences

Published by the National Cancer Institute

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health
NIH Publication No. 81-2327
March 1981

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 3 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/3

TABLE OF CONTENTS

Introduction 1
Background Research 5
The Pilot Project 9
Creating an Organization 12
Mobilizing Resources 14
Administering the Screening 22
Following Up 31
Conclusion 36
Appendix 37

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/4

INTRODUCTION

From time to time, health agencies or individual health professionals are called upon to conduct screening projects for groups of individuals believed to be at high risk for a particular disease. This booklet tells about one such screening effort--the Bay Area Asbestos Surveillance Project (BAASP)--how it originated, how it was organized and run, what problems were encountered, and what successes were achieved.

The booklet is not intended to be a screening manual, nor do the experiences described necessarily provide a model for other programs, because to be effective, screening must be tailored to a particular set of needs. But this booklet can serve as a guide. Some elements of the Bay Area Project are common to nearly all screening efforts, and we hope that readers will be able to select and interpret those elements that will be most useful in designing their own programs.

The Problem

In a society that has spent billions to cure disease, it is a grim joke that our major health problems are often of our own creation. For the truth is that environmental and occupational health hazards are a common and often tragic part of 20th-century life and those hazards continue to grow.

The effects on our health of the tens of thousands of man-made chemicals in common commercial use are largely unknown. We know the "threshold limit values"--the levels at which substances begin to pose some health hazards--for only about 500 of the 12,000 or more toxic substances used in American industry. Little or nothing is known about the toxicity of the others, including the estimated 3,000 new substances

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/5

marketed every year. Further, no such thresholds have been established for any known carcinogens.

Laws exist to control harmful substances, but irrefutable evidence of adverse effects is necessary to translate those laws into action. It is therefore critical that we know where a substance is used, who uses it, how it is used, what effect it will have on exposed workers, and whose health will be the most seriously affected. Obtaining a full understanding of the health effects of workplace hazards will necessarily involve a great deal of careful entific investigation.

Screening

One aspect of the investigative process is health screening, a methodical testing of people believed to be at increased risk to a disease. Screening serves several purposes. It is a case finder--a way of alerting workers to health problems of which they may be unaware. In some instances, it may be possible to reduce the severity of those problems by catching them early. For a group of workers as a whole, the evidence derived from health screening may help to lay a foundation for regulatory action, for workers' compensation claims, for collective bargaining strategies, for better health care services, and for the research that is necessary to increase our knowledge of environmental hazards--how they interact with each other, and how they affect us at home and at work. Further, industries involved may benefit from the information gathered in the screening program.

To achieve these purposes, a screening program must be carefully planned. Publicity, education, choice and scope of tests, time and place, medical coordination and follow up are just some of the factors which

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/6

must be explored, designed, and orchestrated. Equally important, screening programs rarely occur in a political vacuum. Because screening can effect change, it may also meet resistance.

Screening is by no means a panacea, and participants must clearly understand what screening can and cannot accomplish. They must understand that screening is not diagnosis but only a first step and that a healthier workplace may require action on many fronts.

How BAASP Came About

In 1976, members of the Asbestos Workers Union at the Mare Island Naval Shipyard in California submitted 26 chest x-rays to Dr. Irving Selikoff of the Mt. Sinai School of Medicine in New York. Dr. Selikoff, one of the Nation's foremost industrial medicine specialists, interpreted 17 of those 26 x-rays as abnormal, and compatible with asbestos-related disease. The asbestos workers carried their findings to other shipyard unions, and soon the Federal Employees Metal Trades Council at Mare Island joined the Metal Trades Department of the AFL-CIO in seeking to discover just how severe the problem was.

The potential for asbestos disease was great because asbestos is the most common substance used in ship insulation and fireproofing. During World War II alone, 400,000 people worked in shipbuilding and ship repair in the San Francisco Bay Area, with 4.5 million employed in these jobs nationwide. Their trades included welding, shipfitting, pipefitting, boiler-making, painting, insulation, machining, and electrical installation. Also at risk were those who worked in the shipyards without directly handling asbestos, because the fibers floated in the air and into the offices and lungs of draftsmen, clerks, secretaries and security guards.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/7

And, in some cases, asbestos fibers were carried home in the hair and clothing of workers.

Dr. Selikoff conferred with the union groups and then recommended that they call in a Bay Area physician, Phillip L. Polakoff, who agreed to undertake a preliminary study. Dr. Polakoff felt that a screening program would alert the community to the problems of occupational health, encourage appropriate legislation on asbestos exposure, and enable workers whose asbestos disease was well-documented to obtain workers' compensation benefits. He also hoped that the project would influence the U.S. Navy and other shipyard operators to begin preventive health programs and to monitor more closely the exposure of workers to asbestos. Dr. Polakoff knew that the medical community also needed to learn more about asbestos-related disease and that patients with asbestosis were all too frequently told they had emphysema.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/8

BACKGROUND RESEARCH

The first step in laying the groundwork for the project was to gain a thorough knowledge of asbestos: what it is, how it's used, how it affects the human body, and how asbestos-related disease can be prevented or ameliorated.

A careful study of the literature yielded information on the history of asbestos, the quantities and types in use, the crafts and industries involved, and estimates of the numbers of persons potentially exposed. Research into the clinical studies available provided information on the effects of asbestos exposure, diseases related to that exposure, their latency periods, and methods of determining the extent of exposure in populations to be studied. Following is a summary of the background information accumulated by the staff.

Asbestos: What Is It?

Asbestos is a mineral, a generic term for about 30 different silicate compounds. After processing, it appears to be a white fluffy substance, but it is actually composed of thin strands of fiber. The longest of these fibers are about a foot in length, the shortest less than one-millionth of an inch in length. The most commonly used types of asbestos contain fibers which are about 4 microns long, or 1/25,000 of an inch.

These fibers are tiny, sharp-ended, and virtually indestructible. Asbestos is a fireproof mineral. It withstands heat caused by friction and insulates against heat, cold and noise. It has a high tensile strength and is corrosion-resistant.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 9 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/9

Uses

The list of products incorporating asbestos numbers in the thousands. Valve packings, ironing board covers, clutch and brake linings, toys, floor tile, plasterboard, insulation, roofing, and blow-on acoustical ceilings are but a few. In industry, asbestos is used in conveyer belts, fire and heat shields, protective clothing, electrical insulators, and binding materials.

Estimates vary, but the U.S. Department of Health and Human Services (formerly the Department of Health, Education, and Welfare) has reported that since the beginning of World War II, from 8 to 11 million workers probably have been exposed to asbestos, and today over 2½ million workers are employed in environments with significant asbestos exposure. Knowledge of past and present patterns of industrial use of asbestos was essential for designing a screening project which would reach the most appropriate groups within the general target population of all asbestos-exposed workers.

How Asbestos Affects the Body

Asbestos fibers are invisible to the human eye. They are tasteless, odorless, and virtually weightless, and can float in the air for hours. Lung tissue is delicate, and asbestos fibers are sharp. When the fibers are breathed in, they tend to lodge in the lung tissue. The body reacts to isolate the fibers by forming a shell of scar tissue around them. With continued exposure, more fibers settle in the lungs and more scar tissue is produced, until the lungs gradually become infiltrated with scar tissue. This condition is called asbestosis. The diminished lung capacity results in difficult breathing, restricted physical activity, and increased susceptibility to respiratory infections.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/10

Asbestos fibers are also carcinogenic (cancer-causing). In the lungs they can cause both lung cancer and mesothelioma, which is a rare cancer of the membrane lining. The fibers also can cause cancer of the larynx, esophagus, stomach, large intestine, rectum, and kidneys.

Asbestos fibers do not cause disease right away. They act quite slowly, triggering cancers which seldom show up until anywhere from 15 to 40 or more years after the initial exposure. While asbestosis is usually associated with exposure to asbestos over a period of years, mesothelioma is triggered by levels of asbestos so low that there is no known safe exposure. Dr. Selikoff estimates that as little as half a day's heavy exposure to asbestos can start mesothelioma. Also, unlike asbestosis, mesothelioma appears in persons who had only indirect contact with asbestos, and a study of former shipyard workers has revealed instances where the wives and children of asbestos workers developed mesothelioma.

Extent of Asbestos Health Effects

Records of the health effects of asbestos appeared in the medical literature as early as 1924. Since then, more than 1,000 scientific papers have been written on the subject, but the knowledge remained in the domain of medical specialists and did not become generally known, even in the medical community, until the 1970's. For the most part, persons who worked with asbestos before that time were totally unaware of its toxic nature.

While uncertainties accompany much of the available data, even the most modest estimates imply that the risks are very serious for the persons involved. Epidemiological studies showed that 20 to 25 percent of heavily-exposed workers die of lung cancer, and that cancer of the respiratory

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/11

system is eight times as common among asbestos workers as in the general population. Asbestos workers who smoke run a greatly increased risk of lung cancer in contrast to a non exposed non smoker.*

Of the workers heavily exposed to asbestos since the 1940's, some 1.6 million may die of asbestos-related disease. This figure would far exceed the number of American soldiers killed in war since 1940. The number of cancers attributable to asbestos could average as high as 67,000 per year for the next 3 decades; that would represent about 8 percent of all cancers detected annually in the U.S. Thus, while not everyone exposed to asbestos develops mesothelioma or lung cancer, background research on asbestos clearly pointed to the existence of a public health problem of major proportions.

A good, current discussion of asbestos-related disease is found in a chapter of Public Health and Preventive Medicine, 11th Edition, edited by John M. Last (1980, Appleton-Century-Crofts), entitled "Asbestos-Associated Disease," by Irving J. Selikoff, M.D.

---

* Selikoff, I.J.; Churg, J.; and Hammond, E.C.: "Asbestos Exposure and Neoplasia," JAMA, vol. 188: 1 (April 6, 1964): 22-26.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 12 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/12

THE PILOT PROJECT

Undertaking a pilot screening project was the next step in the development of the Bay Area Asbestos Surveillance Project. This relatively simple and straightforward pilot study served as a vital link between the preceding background research and other preliminary activities and the major screening to follow, thus giving direction and shape to the subsequent larger-scale study and providing a rationale for proceeding with that work.

The direct involvement of organized labor was a critical factor in successfully carrying out the pilot project. The Metal Trades Department, AFL-CIO, and its local affiliate, the Federal Employees Metal Trades Council (FEMTC) at the Mare Island Naval Shipyard in Vallejo, provided funding to support the study. The leadership of the Mare Island FEMTC also took responsibility for selecting the participants for the project.

Explicit rules governed the selection of the voluntary participants. Limitations in funding and other resources and the long latency period between first exposure to asbestos and the subsequent onset of disease symptoms made it absolutely necessary to establish restrictions on eligibility for participation. Hence, eligibility was limited to those shipyard workers for whom 10 years had passed since their first exposure to asbestos. A second guideline used in choosing participants was the inclusion of all major shipyard occupations in the group being screened. This was done to help create a representative sample of the overall shipyard population. Establishment of clear-cut eligibility rules and strict adherence to them is imperative in this type of difficult situation where limited resources are available to meet immense needs.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/13

The pilot study took place in March of 1977 at Herrick Memorial Hospital in Berkeley, California. The participants were 359 current and former workers at the two Bay Area naval shipyards, Mare Island and Hunter's Point (San Francisco). The screening consisted of taking a single chest radiograph (posterior-anterior view) for each worker. This work was performed by Dr. Polakoff and other physicians on the Herrick staff.

At a later date, the screenees completed a self-administered, mailed questionnaire. This covered occupational history, smoking history, respiratory symptoms, and general medical history. The questionnaire was returned by 311 of the 359 participants, an 87 percent response rate.

Interpretation of the x-rays by Dr. Irving J. Selikoff, Dr. Phillip Polakoff, Dr. Barry Horn, and Dr. Oscar Scherer provided findings which made much clearer the seriousness of the problem of asbestos-related disease among the Bay Area shipyard workers. Almost three-fifths (59 percent) of the x-rays revealed abnormalities consistent with asbestos-related disease.*

TABLE 1

	Number	Percent
Normal x-ray	147	40.9
Abnormal x-ray	212	59.1
Mild abnormality	(130)	(36.2)
Moderate abnormality	(71)	(19.8)
Other abnormality	(11)	(3.1)
	359	100.0

Screening participants were notified of the results of their x-rays.

* For a more thorough discussion of these findings, see Phillip L. Polakoff et al., "Prevalence of Radiographic Abnormalities Among Northern California Shipyard Workers," Annals of the New York Academy of Sciences, 330 (1979): 333-339.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/14

When combined with the information from the questionnaires, the data from the chest radiographs offered a grim picture of the health effects of asbestos exposure among shipyard workers. In this regard, the pilot study corroborated the view that asbestos-induced disease was a major health problem and validated the choice of shipyard workers as the appropriate primary target population for study. Of greater immediate value was the delivery of important diagnostic services to workers who needed this warning about their health status.

The disturbing findings of the pilot project thus served to justify a larger and more detailed screening project and demonstrated to the shipyard workers and their union representatives the strong commitment of the medical team involved in the screening. Thus, in a variety of ways this initial study paved the way for further investigation. In this light, inclusion of a pilot study component in the overall design of a community screening project is strongly recommended.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 15 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/15

CREATING AN ORGANIZATION

Based on the findings of the pilot project, Dr. Polakoff initiated discussions with a group of Bay Area labor leaders on the subject of further screenings. The decision to administer another screening study which would involve a larger number of workers and employ a more sophisticated methodology marked the beginning of a difficult and intricate process of mobilizing diverse resources. An essential requirement for successfully acquiring these resources was the creation of an organizational structure to make effective use of them.

In recognition of the need for establishing such a structure, the Western Institute for Occupational and Environmental Sciences (WIOES) was incorporated in November 1977 as a nonprofit research and education institution. Founded by Dr. Polakoff and three associates on the medical staff at Herrick Memorial Hospital, WIOES was conceived of as a tool not only for planning and administering the screening study itself but also for pulling together the many kinds of support critical to the success of such an endeavor.

Formation of WIOES facilitated resource gathering for BAASP in a number of ways. Setting up an organization represented a further statement of commitment by Polakoff and his colleagues, an expression of determination to see this project through. The association of WIOES with Herrick Hospital helped to lend credibility to the new organization. The Institute's non-profit status also aided in fundraising efforts.

Beyond its role in obtaining support for the screening project, WIOES had as its basic tasks the planning and execution of the BAASP. In this area as well, the establishment of an ongoing, independent organization

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/16

proved to be an indispensable ingredient in BAASP's success. WIOES came to occupy a unique position, enabling it to surmount barriers of mistrust and misunderstanding which separated workers from the medical community, the Federal Government, and other potential sources of assistance. As an autonomous entity, WIOES was free to approach a wide array of organizations for support and free to enter into diverse collaborative arrangements. Thus, setting up a separate research and education organization led to a strong predisposition toward a flexible, multi-disciplinary approach to the problems of asbestos-related disease.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/17

MOBILIZING RESOURCES

In order for WIOES to carry out its asbestos screening project, it was necessary for the Institute to acquire a substantial body of resources. These resources can be divided into four major categories--funding, staff, facilities and other in kind contributions, and credibility. The difficult and time-consuming nature of the process of bringing together these essential project building blocks must be emphasized.

Just as every screening project will utilize a unique package of resources, each project also will pursue the acquisition of those resources in a unique way. Nonetheless, recounting the BAASP experience is instructive in suggesting the types of obstacles and opportunities to expect in this phase of developing a community screening project. The underlying theme in our treatment of this particular subject is the value of sheer persistence.

I. Gaining Credibility

In several ways, obtaining credibility for BAASP and for WIOES was not only the necessary precondition for acquiring other types of resources for the project but also an ongoing concern from the very inception of the project. In this light, a comprehensive treatment of the efforts involved in gaining credibility for BAASP is beyond the scope of this work. It is, however, worthwhile to focus on one salient facet of the credibility-building process which occurred during the period immediately following the pilot study.

The pilot study laid the groundwork of concrete, practical accomplishment on which the credibility of BAASP was built. The pilot project, by

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 18 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/18

delivering needed services, showed asbestos-exposed workers and the unions which represent them that the team of professionals who formed WIOES was "for real." Following the successful completion of the pilot project, WIOES then mounted a campaign to secure endorsements for BAASP from a wide range of labor organizations.

In a July 1977 press conference at which the results of the pilot screening were made public, Dr. Polakoff appeared along with John F. Henning, the executive officer of the California Labor Federation. This joint public appearance with the top leader of the AFL-CIO's state body immediately provided some legitimacy to BAASP in the eyes of workers and their unions. Shortly thereafter, in August 1977, the Metal Trades Department of the AFL-CIO (a national umbrella organization for unions involved in metalworking which includes unions representing approximately 130,000 shipyard workers) sponsored an asbestos meeting in San Francisco to which all Bay Area labor leaders were invited. Dr. Polakoff addressed this meeting to present the Mare Island findings and to urge further study of this problem.

These activities proved to be very fruitful. Two months later, both the California Labor Federation and the Metal Trades Department came forth with wholehearted endorsements of BAASP. These key endorsements maintained the momentum which the Mare Island pilot project had generated. They opened the door to further support, both moral and material, from the labor movement.

In November 1977, under the sponsorship of the Bay Cities Metal Trade Council, Dr. Polakoff made a lengthy presentation, featuring slides and a film, on asbestos and asbestos-related diseases at an assemblage of union representatives and shipyard employers. Shortly thereafter, WIOES'

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/19

director addressed the national convention of the Metal Trades Department, AFL-CIO, in Los Angeles, reaching an audience of several hundred labor officials from a broad spectrum of unions.

In January 1978, the systematic attempt to secure endorsements escalated. Letters soliciting endorsements of BAASP and financial backing for the proposed screening were sent to scores of labor leaders throughout the Nation. Both the national Metal Trades Department and the regional Pacific Coast Metal Trades District Council put their authority behind this effort by circulating letters to all their affiliates recommending support. This "blessing" from top leadership legitimated WIOES' appeals incalculably.

The response to this campaign was strongly positive. Endorsements and contributions arrived from a wide variety of labor groups, both local unions and larger organizational units. Included among these were organizations representing pipefitters, auto workers, carpenters, electrical workers, maritime trades, longshore and warehouse workers, painters, insulators, and a number of other kinds of workers. These expressions of support did a great deal to confer legitimacy on the project and to catalyze further support for BAASP.

Put in the proper perspective, gaining and maintaining credibility is based on delivering services that help people, not on procuring endorsements. Nevertheless, the process of obtaining statements of support from key organizations was an integral part of the progress of the screening project.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 20 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/20

II. Acquiring Funding

We have separated the different aspects of the process of gathering resources only for purposes of analysis. In reality, the efforts to acquire one type of resource, e.g., credibility, were inextricably bound together with the attempts to obtain the other types of resources. This was very clearly the case with regard to securing financial support for BAASP. The two primary funding sources which emerged for the project were the labor movement and the Federal Government.

Unions donated a large share of the money that helped make BAASP possible. Donations came from all organizational levels of the labor movement, as well as from the full breadth of jurisdictions covering asbestos-exposed workers. Thus, contributions were received from local unions, intermediary divisions within unions (e.g., district councils, regional offices), international* union headquarters, and coordinating bodies involving a number of different unions. Similarly, the range of union jurisdictions included building and construction trades, shipbuilding trades, maritime trades, and manufacturing.

In contrast to the procedure employed in obtaining endorsements, which involved initially approaching a relatively small number of key decision-makers, the strategy implemented in fundraising was, of necessity, much more broadly focused from the outset. It was necessary to appeal for funds not only to the state labor federations and other federated bodies but also to the local and international levels within unions because these are the places to which the lion's share of union members' dues money is allocated within each union.

* The term "International" is used by unions with members in both the U.S. and Canada.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 21 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/21

Although fundraising was a continuing preoccupation of BAASP's organizers and funding restraints did impose limitations throughout the study, one sizeable early contribution singularly altered the development of the project. A grant of $50,000 from the International Association of Heat and Frost Insulators and Asbestos Workers enabled WIOES to begin to pay its previously unpaid staff and to hire a secretary for the project.

The Federal Government was the other principal source of monetary resources for BAASP. In securing this assistance, WIOES's strategy was just the opposite of that used in soliciting union aid. Instead of a "shotgun" approach to a large number of organizations which involved basically a general appeal for funds, narrowly focused proposals were made to a few Government agencies. These proposals were kept within the bounds of the agency's particular mandate. This approach reflects a good general rule of thumb in dealing with the Federal bureaucracy: proposals should be as precisely targeted and fully detailed as possible.

Negotiations with the Occupational Safety and Health Administration led to a contract in April 1978 which funded the salary of a labor educator for BAASP. Further, OSHA's mandate to conduct worker education on occupational health issues allowed the agency to help support the three follow up educational sessions held after the screening. The National Cancer Institute agreed to underwrite a smoking cessation component of BAASP. The National Institute for Occupational Safety and Health also contributed substantial funding to the screening to pay the radiologists who interpreted the BAASP x-rays and to hire a commercial telephone survey firm to handle "hotline" services.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/22

In every instance involving Federal support, the mechanics of fund-raising involved extended negotiations, refinements of specific proposals, and follow up communications. In the case of the NIOSH assistance, the first meeting between Dr. Polakoff, the NIOSH director, and five labor leaders was held in September 1977; a contract was awarded to WIOES by NIOSH in May 1978, fully 8 months later. In designing a screening program, these delays should be expected, given the need of public agencies to restrict public expenditures to those projects which demonstrate a clearly specified plan of action to fulfill existing objectives under limited mandates.

III. Obtaining In Kind Contributions

BAASP received many different in kind contributions. Two types among these were of particular importance--use of union facilities for staging the screening sessions and use of a NIOSH mobile van for taking x-rays.

Access to three union halls was of great value. These were offered by the United Brotherhood of Carpenters and Joiners in Vallejo, the International Longshoremen's and Warehousemen's Union in San Francisco, and the Internation Brotherhood of Teamsters in Oakland. The facilities were convenient, comfortable, and familiar to the screening participants, and suitable for conducting many of the steps in the screening procedure.

NIOSH's provision of a mobile x-ray unit was an indispensable element in the development of BAASP. This contribtuion included radiologic machines and sufficient supplies for a mass screening, as well as x-ray and darkroom technicians to administer and process the chest x-rays.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/23

NIOSH also provided in kind assistance in the production of two educational materials used in BAASP. In April 1978, Robert Fowler traveled to NIOSH's Cincinnati offices to develop the pamphlet "Asbestos Dust--Everyone's Problem" and to work along with Dr. Polakoff on a videocassette introduction to the project to be shown to participants at the screening sites.

IV. Assembling a Staff

In carrying out BAASP, WIOES was able to bring together and make use of a wealth of human resources. The essential arrangement was that of a small, core professional staff directing the activities of a large contingent of volunteer workers. This staffing formula was the outcome of a vigorous effort to recruit labor for the project.

In an important sense, everyone involved in BAASP was, at one time or another, a volunteer. During the long period between the pilot project and the arrival of the first financial contribution, no one working on the project received any remuneration from it. Early additions to the nucleus of a full-time staff, Elena Berliner and Lauretta Higgins, both served on the project without pay for many months. Thus, the small number of organizers who were the backbone of the staff were themselves for various lengths of time unpaid volunteers.

The press conference in May 1978, during which the upcoming screening was publicly announced, included a request for staff volunteers for a variety of jobs. This widely publicized event generated many responses from concerned individuals. Additional recruitment efforts solicited assistance from medical and nursing students, from community activists such as the Grey

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/24

Panthers, from community groups such as members of the Retired Senior Volunteer Program, and from the staff of voluntary agencies such as the American Cancer Society. Within a month over 60 people had contacted WIOES to offer to help in BAASP.

A staff member was assigned the responsibility of training and supervising this group of workers. At an orientation session in June, to which the volunteers were all invited, a set of job descriptions was distributed. WIOES needed people to do scheduling and general office work, to take histories and to facilitate the movement of participants through the steps of the screening. The minimum time commitments required in accepting each job were also made clear at this meeting.

A training session for those people who expressed an interest in taking histories took place in July. At this session approximately 40 volunteers met the WIOES staff, learned about asbestos and the health hazards associated with it, gained an understanding of the occupational history questionnaire and specific instructions on how to administer it, and received information on the overall plan for administering the screening. Thus prepared for the task ahead, the volunteers were asked to sign up to work specific time slots, with a minimum requirement of two 4-hour shifts per week for this job.

The heterogeneity of this group of volunteers was remarkable. In addition to students, local occupational health and safety activists, and others from outside the target population of the study, the volunteers included a number of men and women who were retirees from the Bay Area shipyards. These former shipyard workers were uniquely qualified to put the screening participants at ease in this potentially very stressful situation.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 25 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/25

ADMINISTERING THE SCREENING

Having brought together the resources necessary to carry out a large scale community screening, WIOES set in motion the final processes which made the Bay Area Asbestos Surveillance Project a reality. This flow of activities was, like that which preceded it, exceedingly complex, encompassing a myriad of tasks and problems. Our limited purpose here is to distinguish the major activities involved and to touch on some of the lessons of the screening itself which have some general applicability.

I. Announcing the Event

Beyond the appeal for volunteer staffing assistance, the central purpose of the May 1978 press conference was to bring to general public attention for the first time the plans for the surveillance project. This event succeeded in drawing a great amount of publicity for BAASP from a variety of media. Coverage of this press conference and other BAASP activities by Bay Area television, radio, and newspapers informed both the general public and the people in the community who had worked with asbestos of the hazards of the substance.

Once the issue of occupational asbestos exposure had been placed before the public, a sizeable number of news items quickly followed which further raised public awareness. In addition to the publicity which news and feature coverage provided for BAASP, public service announcements briefly outlining the project regularly ran on local radio and television stations. Thus, BAASP gained access to a great deal of free media time and space in the weeks following the press conference.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 26 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/26

The timing of the announcement of BAASP benefited from then Health, Education, and Welfare Secretary Joseph Califano's major statement on asbestos only a month earlier. This widely publicized warning about the threats to health posed by asbestos exposure was combined with initiation by the National Cancer Institute of a nationwide, multifaceted asbestos alert campaign. These efforts undoubtedly served to increase the receptivity of both potential BAASP participants and the local media to asbestos-related news.



The NIOSH mobile x-ray van was located at Longshoremen's Hall, San Francisco, to aid in the screening program. It included radiologic machines, supplies, and x-ray and darkroom technicians to administer and process the chest x-rays.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 27 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/27

WIOES attracted continuing media attention in large part because of the objective characteristics of the issue involved: asbestos-induced disease was emerging as a serious and widespread problem in the community. In addition, BAASP organizers pursued a persistent and diversified effort to obtain coverage, approaching not only radio and television news departments but also their public affairs departments about making public service announcements. The labor press offered yet another extremely important forum for creating awareness of and interest in the screening.

II. Selecting Participants

At the press conference announcing BAASP, criteria were outlined for potential candidates for participation in the project. Eligibility was restricted to women who had worked in the shipyards during World War II and male longshore and shipyard workers who were exposed to asbestos prior to 1963. The researchers were planning to screen a total of 2,000 people who fell into these categories. Individuals who met these criteria and wished to participate were encouraged to call a toll-free telephone number.

The initial invitation to participate offered at the time of the press conference was reiterated on innumerable subsequent occasions through public service announcements. Among those selected to participate in the study, a majority reported hearing about BAASP on television. Thus, the announcement of BAASP involved two steps in the process of selecting a sample of asbestos-exposed workers: the delineation of objective criteria and the use of various media which selectively reached some segments of the target population and failed to reach others.

Those persons who called the hotline were asked to respond to a short questionnaire, administered by a commercial survey firm with which WIOES

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 28 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/28



Participants checked in by appointment, and received informational materials on asbestos exposure and the surveillance program. Persons first had been screened for eligibility when they called a toll-free 'hotline' to sign up for the program.

had contracted for this specific service. This telephone questionnaire was designed to ascertain whether the caller met the aforementioned criteria for inclusion in the study group. The interviewers also asked how the caller had learned of the screening and gathered identification information on the caller.

Calls to the hotline yielded more than 2,000 individuals who qualified for participation under the established standards based on occupation, sex, and time of exposure. These individuals were offered an opportunity to take part in BAASP. Persons selected to participate were called by volunteers

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/29

and given a choice of appointment times for screening. Reminder cards confirming the time and place of the appointments also were sent to all those who agreed to participate.

Scheduling of appointments was arranged so that six people would arrive at the union hall per half hour. Use of these narrow time intervals in scheduling was designed to minimize waiting by participants.

III. Delivering Screening Services

The screening routine itself consisted of a straightforward sequence of steps. Upon arrival at the union hall, participants registered and had their heights and weights measured. After being informed further about the nature of the project, participants gave their written consent to the procedures involved in their study, with the understanding that they were free to withdraw at any time.

Each group of people being screened then was shown the videocassette which WIOES had prepared with the assistance of NIOSH. The cassette consisted of a history of the uses of asbestos, a discussion of the health hazards caused by asbestos exposure, and an outline of the objectives of the surveillance project. Staff were available to field questions raised by the material in the videocassette.

Other educational elements were integrated into the screening process. Every participant received copies of two WIOES pamphlets--"Plain Talk About Asbestos" and "Asbestos Dust--Everyone's Problem." Lists of community services for pulmonary function tests and respiratory therapy were made available on a county-by-county basis for the metropolitan area.

Taking the medical history of each participant entailed covering a wide array of subjects. Obtaining the individual's complete employment

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 30 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/30

history was facilitated by having asked during the scheduling phone call that each participant bring to the screening a chronological list of all the jobs he or she had held. In probing the work history and concomitant exposure to asbestos, the questionnaire included items on work practices, use of personal protective equipment, exposure to other workplace hazards, the causes of death of coworkers, and the participant's attitudes toward asbestos exposure. Other questions explored smoking history, respiratory function, and related medical conditions.



Program participants viewed an educational videotape which covered the uses of asbestos, and the objectives of the surveillance program. Staff members were available to answer questions from participants.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/31



Trained volunteer staff obtained detailed occupational histories from all participants. The questionnaire included items on work practices, use of personal protective equipment, exposure to other workplace hazards, smoking history, and the participants' attitudes toward asbestos exposure.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/32

After completion of the medical history, particpants entered the x-ray van, and had chest x-rays taken. Three different views were used (posterior-anterior, right anterior oblique, and left anterior oblique). Lack of funding prevented the use of sputum analysis and pulmonary function tests. On the average, each screening took about an hour and a half to administer.

Delivery of screening services began at the Vallejo site on July 17, 1978, and continued for 11 working days, ending on July 28. The study then moved to Oakland for 6 days of examinations from July 31 to August 5. The final phase of BAASP screening occurred in San Francisco from August 8



After the interview, participants entered the mobile x-ray van for chest x-rays. Nearly 2,500 persons were screened in the program, but careful attention to schedules avoided the feelings of impersonal treatment and lengthy delays due to bottle-necks.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/33

to 14. In all, a total of 2,294 people received services, with a participation rate exceeding 90 percent among those who had committed themselves to attend.

Given the fact that "clinic" is a term with sometimes pejorative connotations in American health care, the organizers of BAASP endeavored to strike a pragmatic balance between the need to handle a large number of people in a short time and the need to avoid both the appearance and the reality of a mass, impersonalized screening situation at which the participants would have felt herded through the screening process. The simple procedure of careful scheduling at precise (half hour) time intervals and tight supervision at each step of the screening meant that relatively small and manageable groups of participants flowed throughout the BAASP routine without either impersonal treatment or lengthy delays due to bottlenecks.

The BAASP arrangement also avoided an opposite tendency in delivering health care--the utter isolation of the patient from others who share similar problems. Reinforced by the presence of many asbestos-exposed workers on the project's volunteer staff, a situation was created in which the participants could observe that they weren't alone in a stressful event, could share experiences with other people of the same background, and could lend each other some support. Thus, an atomizing individual experience was transformed into an experience at which feelings of community and mutual support predominated.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/34

FOLLOWING UP

Administering the screening generated a tremendous demand for follow-up services of many kinds. Beyond the imperative to notify all BAASP participants of the results of their x-rays, WIOES took on a number of other activities designed to contribute to meeting some of these pressing needs.

I. Notification of Participants

Needless to say, WIOES's primary obligation involved notifying all the participants in the study of their examination findings as quickly as possible. Accordingly, the nearly 7,000 x-rays were immediately taken to Los Angeles to be interpreted independently by each of the three



Nearly 7,000 x-rays were taken and then read by NIOSH-paid radiologists (government-certified 'B' readers) at the University of Southern California. All program participants or their physicians were notified of the findings as soon as possible.

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/35

NIOSH-paid radiologists (government-certified "B" readers) at the University of Southern California. As their work progressed, these radiologists were in almost daily contact with WIOES to inform the Institute of cases involving extremely serious findings. In these instances, Dr. Polakoff would immediately call either the participant's physician, for all those who had designated a physician to be contacted, or the participants themselves, where no physician had been designated.

When all of the x-rays had been interpreted and returned to WIOES, the data for each participant were combined with the other information obtained in the screening process. The resulting interpretation of each participant's status was categorized by Dr. Polakoff into one of three classifications--"no abnormality," "questionable abnormality," and "potential serious abnormality."

Overall, a large majority of the BAASP participants had x-ray evidence of abnormalities compatible with asbestos-related diseases. Of the 2,270 persons who underwent the chest x-rays, only 553 (24 percent) had x-rays which were interpreted as normal. A total of 690 individuals (30 percent) displayed "questionable" abnormalities. A group of 1,027 participants (45 percent) had significant radiological findings consistent with asbestos-induced diseases.

After dividing the findings into the three broad categories, the WIOES staff in February 1979 sent notification letters to all BAASP participants and to all physicians designated by participants to receive reports of the findings. Of necessity, these were "form" letters, standardized for each of the three classifications of findings. Those participants who had not yet named a physician to receive a copy of the examination

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/36

report also were urged to contact WIOES to do so. A second notification effort was undertaken in November 1979 for those individuals who had never provided WIOES with the name of a physician to receive a report.

One lesson of this phase of the project was the value of obtaining complete and accurate information from all study participants on two items--their doctor's name and address and their own exact address. Verbal reporting of this information at the screening clearly led to inaccuracies which, in turn, led to some loss of participants to follow up. Participants should have been requested before the screening to bring certain vital pieces of information with them to the session, written down on a card.

II. Educational Programs for Participants

Educational activities had been an integral part of the planning and administration of BAASP. Support for the project had been solicited in large part by substantive educational presentations. The screenings themselves had included a significant informational component. Nonetheless, the deluge of telephone and written requests for information and other assistance which followed the screenings demonstrated a clear need for further educational activities to augment the information being given out in response to individuals' questions.

Beyond the problem areas revealed by the calls WIOES received, educational needs were identified systematically. Shortly after the conclusion of the screening examinations, WIOES sent a letter to all BAASP participants to gauge interest in holding educational meetings. A "mail-back" coupon allowed participants to indicate interest in a number of different subject areas. The replies by over 700 individuals

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/37

helped determine the content of the seminars.

Working from this information, WIOES organized day long programs in each of the three communities which had been screening sites. These were scheduled for three Saturdays in March 1979, i.e., closely following the notification of x-ray results. A brochure describing the sessions had been enclosed with every notification letter, thereby assuring that participants would be informed of this upcoming event.

The community information meetings were attended by well over 1,000 persons, the vast majority of whome were BAASP participants and their families. Besides revealing the aggregate results of BAASP, the sessions included formal presentations followed by question-and-answer periods on a variety of subjects. Medical experts discussed asbestos-related diseases. Legal authorities outlined compensation claim procedures and other courses of legal action. Government officials and representatives of voluntary associations explained the relevant activities of their respective agencies. Among the informational materials made available at these meetings was a specially prepared WIOES booklet, "Asbestos Disease--Are You Covered?," which delineated the types of compensation for which persons suffering asbestos-induced disease might be eligible.

III. Other Follow Up Activities

Two further sets of tasks were immediate outgrowths of the educational activities. Based on recruitment efforts at the Vallejo conference, a smoking cessation program was organized by WIOES and administered by the American Cancer Society. The first such program for a shipyard community, this series of sessions was conducted in April and May of 1979 at Vallejo General Hospital. The second set of tasks involved analysis

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 38 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/38

of the evaluation forms which had been completed by individuals attending the educational meetings.

The follow up work of responding to requests for many different kinds of information continued. A constant flow of such requests for help involved WIOES in referral work, dissemination of information, and research into the availability of community resources for assisting persons either suffering or concerned about asbestos-related disease. To carry on these and other related tasks, WIOES sought Federal funding. In September 1979, WIOES received a major contract from the National Cancer Institute to establish a Bay Area Environmental Cancer Resource Center, focusing on the problems of asbestos.

CONCLUSION

The basic lesson of the Bay Area Asbestos Surveillance Project is that it is possible to put together a community screening project "from scratch." Although the difficulties involved in acquiring necessary resources--labor, funding, facilities, and credibility--are considerable, the experience of BAASP is that with persistence and flexibility these resources can be acquired. With careful planning and great collective effort, these resources were transformed into services which were of value to a large group of people who clearly needed them.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 39 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/39

APPENDIX: AVAILABILITY OF ASSISTANCE

For workers who are union members, the logical starting point for organizing a screening project is the resources available within their own union. Many unions have set up occupational health and safety departments or have added job health professionals to their staff, usually at the international headquarters. Local union health and safety committees often can provide the nucleus of a larger staff to conduct a screening project for the local. Health and safety committees are in a unique position to mobilize other rank and file union members to become actively involved in the project.

Various kinds of organizations are potential sources of aid in planning and carrying out occupational health screening projects. Needless to say, local hospitals, county or city health departments, medical schools, and specialist medical societies are established centers of health care expertise which may prove helpful to project organizers. In addition, a national network of grassroots organizations called COSHs--Committees on Occupational Safety and Health--exists to provide local referral and other assistance in launching efforts such as screenings. Bringing together workers, unions, and health professionals, these COSH groups pursue a variety of activities centered around education and political action on job health issues. Beyond simply functioning as referral sources for screening information, the Brown Lung Association and the Chicago Area Committee on Occupational Safety and Health have gained considerable experience in conducting and evaluating screening projects.

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 40 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/40

COMMITTEES ON OCCUPATIONAL SAFETY AND HEALTH (COSH GROUPS)

California

Bay Area Committee on Occupational Safety and Health (BACOSH)
4135 Gilbert Street
Oakland, CA 94611

Santa Clara County Committee on Occupational Safety and Health
655 Castro Street
Mountain View, CA 94041
(415-969-7233)

Illinois

Chicago Area Committee on Occupational Safety and Health (CACOSH)
542 South Dearborn, #502
Chicago, IL 60605
(312-939-2104)

Maine

Maine Labor Group on Health
9 Green Street
Augusta, ME 04330
(207-623-1182 or 353-8002)

Maryland

Maryland Committee on Occupational Safety and Health (MaryCOSH)
P.O. Box 3825
Baltimore, MD 21217

Massachusetts

Massachusetts Coalition for Occupational Safety and Health (MassCOSH)
120 Boyleston Street, #206
Boston, MA 02116
(617-482-4283)

Massachusetts Coalition for Occupational Safety and Health (MassCOSH) - Western Region
323 High Street
Holyoke, MA 01040
(413-536-3736)

New Jersey

New Jersey Committee for Occupational Safety and Health (NJCOSH)
701 East Elizabeth Avenue
Linden, NJ 07036
(201-925-1030)

New York

Allegheny Committee on Occupational Safety and Health (ALCOSH)
Jamestown Labor Council
P.O. Box 184
Jamestown, NY 14701
(716-664-2590)

Central New York Committee on Occupational Safety and Health (CNYCOSH)
119 Sherman Street
Watertown, NY 13601
(315-782-3771)

New York Committee on Occupational Safety and Health (NYCOSH)
Box 3285
Grand Central Station
New York, NY 10017
(212-559-4599)

Oneida-Herkimer Committee on Occupational Safety and Health (OHCOSH)
Central New York Labor Agency
Mayro Building, Room 128
239 Genessee Street
Utica, NY 13501
(315-735-6101

Rochester Committee on Occupational Safety and Health (ROCOSH)
18 Wellington Avenue
Rochester, NY 14611

Western New York Council on Occupational Safety and Health (WNYCOSH)
343 Huntington Avenue
Buffalo, NY 14214
(716-842-4271)

The Bay Area Asbestos Surveillance Project: Case Study of a Community Health Screening Project (1981)
ACL Doc 25418 · Page 41 of 43
Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/41

North Carolina

Brown Lung Association
517 E. Kingston Avenue
Charlotte, NC 28203
(704-376-0426)

North Carolina Occupational Safety and Health Project (NCOSH)
P.O. Box 2514
Durham, NC 27705
(919-286-2276)

Pennsylvania

Philadelphia Area Project on Occupational Safety and Health (PHILAPOSH)
1321 Arch Street, #607
Philadelphia, PA 19107
(215-568-5188)

Rhode Island

Rhode Island Committee on Occupational Safety and Health (RICOSH)
371 Broadway
Providence, RI 02909
(401-751-2015)

South Carolina

Brown Lung Association
P.O. Box 334
Greenville, SC 29602
(803-235-2886)

Tennessee

Tennessee Committee for Occupational Safety and Health (TennCOSH)
c/o Center for Health Services
Vanderbilt Medical School
Nashville, TN 37235
(615-322-4773)

Washington

Washington Occupational Health Resource Center
Box 18371
Seattle, WA 98118
(206-762-7288)

Wisconsin

Wisconsin Committee on Occupational Safety and Health (WICOSH)
2468 W. Juneau
Milwaukee, WI 53233
(414-643-0928)

U.S. GOVERNMENT PRINTING OFFICE: 1981-341-132/3549

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/42

Educational Materials Available from WIOES

- "Are You Dying for a Job?"
  (30-minute slide-tape presentation)
- "Ionizing Radiation--A Guide for Workers"
  (a pamphlet on recognition, evaluation, and control)
- "Lecture Series on Occupational Health"
  (10 half-hour audio tape cassettes)
- "Plain Talk About Asbestos"
  (a question-answer pamphlet)
- "Asbestos Dust: Everyone's Problem"
  (a comprehensive review pamphlet)
- "Asbestos Disease--Are You Covered?"
  (a pamphlet on legal remedies)
- "Work and Health--Inseparable in the 80s"
  (a primer on worker health)
- Factsheets:
  25 p. Engineering Controls
  Worker Access to Records
  Respiratory Protection
  Protective Clothing

Published by AsbestosClaims.Law
asbestosclaims.law/library/25418/43