

Surveillance and Prevention of Occupational Injuries in Alaska:

A Decade of Progress, 1990-1999

Introduction

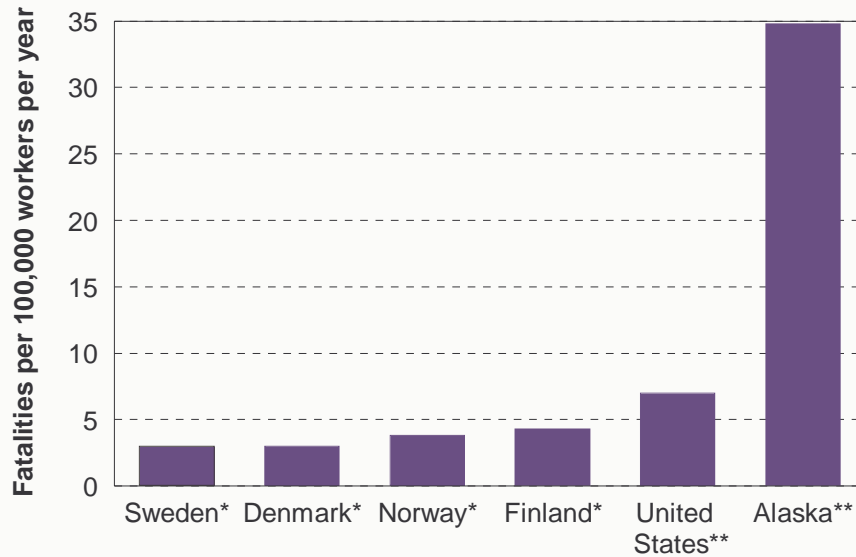
During the 1980s, it became apparent that Alaska had the highest occupational fatality rate of any state (34.8/100,000/year, for the 10-year period 1980-1989, 5 times higher than the U.S. average of 7.0/100,000/year).¹ The State of Alaska Department of Labor (AKDOL) estimates that almost 320,000 Alaskans were employed in the workforce by the end of the year 2000. The heightened risk of occupational injuries to these workers, as compared to other U.S. workers, may reflect to some extent the unique physical and demographic features of Alaska. Its northern latitudes, vast mountain ranges, large areas of marshy tundra, and extensive coastline create diverse climatic zones and associated harsh and unpredictable weather. According to the State of Alaska Department of Community and Economic Development, Alaska's economy is "driven by oil, tourism, and fishing. Other important industries include timber, mining, and agriculture. Nearly 85 percent of the state's budget is supplied by oil revenues."² The majority of activities in most of these industries take place outdoors, where workers are subject to Alaska's highly variable and often harsh weather.

However, the high mortality rate for Alaskan workers is not necessarily wholly attributable to northern locale, weather conditions, or the prominence of resource harvest industries (fishing, petroleum, logging) and nonroadway transportation. The Nordic Nations share many similar conditions, but have substantially lower occupational injury mortality rates than the U.S. overall,



Photo 1: An aerial view of Alaska's rugged terrain

and Alaska. (See Figure 1.) For example, Norway, which has a similar industrial makeup to Alaska, with commercial fishing, petroleum, tourism, logging, and small-airframe aviation all prominent as industries, experienced an occupational injury mortality rate of 3.8/100,000/year for 1980 through 1989, below that observed for the U.S., and much lower than that for Alaska.³



* Source: Arbejdstilsynet, The Danish Working Environment Service, 1980-1989, Copenhagen, 1993.

** Source: Fatal Injuries to Workers in the United States, 1980-1989: A Decade of Surveillance, NIOSH, CDC, 1993.

**Figure 1: Occupational Fatality Rate Comparison:
Nordic Nations vs. United States and Alaska, 1980-1989**

In response to the high occupational injury rates in Alaska, the National Institute for Occupational Safety and Health (NIOSH) established the Alaska Field Station (AFS) in Anchorage in May 1991. The purpose of the AFS is to address the urgent problem of work-related fatalities by developing surveillance and prevention programs. Program activities are conducted in collaboration with the Alaska Department of Health and Social Services (AKDHSS), Alaska Department of Labor (AKDOL), U.S. Coast Guard (USCG), National Transportation Safety Board (NTSB), Federal Aviation Administration (FAA), Occupational Safety and Health Administration (OSHA), industry, labor organizations, communications media, health-care providers, universities and community colleges, and other individuals and organizations in the public and private sectors that are interested in public health. Since 1992, NIOSH has also funded the Fatality Assessment and Control Evaluation (FACE) program in the AKDHSS Section of Epidemiology.

The NIOSH Alaska Field Station addresses the following research questions:

- How many fatal and severe nonfatal occupational injuries occur in Alaska?
- In which Alaska industries and occupations do they occur?
- What risk factors are identifiable for these events?

- Which of these risk factors can be eliminated or mitigated?
- How can this most effectively be accomplished?

The objectives of the program are

- To characterize and reduce occupational risks in workplaces and industries by using epidemiologic surveillance and analytic methods and engineering hazard and task analysis techniques;
- To establish and refine statewide occupational injury and fatality reporting systems;
- To conduct prevention-oriented research addressing high-risk operations and populations (for example, commercial fishing, air transport, and logging);
- To use the on-site location as a “living laboratory” for conducting state-of-the-art injury surveillance, intervention trials, and demonstration projects; and
- To promote the transfer of worker injury prevention strategies to and from Alaska.

This document describes several programs that were developed toward meeting these objectives and summarizes efforts to prevent occupational injuries in Alaska by many agencies and organizations during the 1990s (with case-based examples for focal efforts). Preliminary evidence of this program’s effectiveness is presented. The information provided is also potentially useful in mounting similar efforts elsewhere.