

## NON-FATAL INJURIES IN THE ALASKA COMMERCIAL FISHING INDUSTRY

By Miss Paula S. Trapp

Mrs. Kathleen W. Johnson: The next speaker is Paula S. Trapp whose presentation is entitled *Non-fatal Injuries in the Alaska Commercial Fishing Industry*. Ms. Trapp is a registered nurse and is currently employed by the Alaska Health Project as an Industrial Hygienist. She is also a masters' candidate in the College of Nursing and Health Science at the University of Alaska Anchorage. Paula has 12 years of occupational health nursing experience in the Bristol Bay region. She is well-versed in occupational health issues and injury prevention, specifically in seafood harvesting and processing. Miss Paula Trapp:

The seafood harvesting industry in Alaska is dangerous. One half of the occupational deaths reported in this state occur in that industry.

But, what about non-fatal injuries? Are they important? How do we find out about them? And, last, but not least: What is known about non-fatal injuries to commercial fishers?

Experience has shown that injury events that result in death represent the tip of the iceberg in occupational injuries. Each fatality represents a large number of less serious injuries, which result from the same type of event. Intervention strategies, which impact fatality rates, also reduce the number of non-fatal injuries that occur.

The seafood harvesting industry is unique in this respect. The events that result in death to commercial fishers are, for the most part, those that cause vessel fatalities.

The deaths of the crew are secondary to the loss of a seaworthy vessel. Therefore, the study of fatalities will not provide information about non-fatal injuries occurring to commercial fishers. This lack of information will prevent the identification of causes and formulation of prevention strategies that would be effective against non-fatal injuries.

The first priority in the seafood harvesting industry is the prevention of fatalities. However, as this challenge is met, the need to identify, enumerate, and prevent non-fatal injuries will become more imperative. The unique nature of the seafood harvesting industry will demand research projects specifically designed to discover the character of the events that result in non-fatal injuries.

The development of effective interventions is based upon the collection and analysis of data. Complete, accurate, and accessible data on non-fatal injuries in the seafood harvesting industry is hard to find and difficult to obtain.

This lack of information will prevent the identification of causes and formulation of prevention strategies that would be effective against non-fatal injuries.

Commercial fishers in Alaska are, for the most part, considered self-employed because they work for a share of the catch. This classification excludes them from national injury statistics and workers' compensation data bases. Rare pockets of infor-

mation do exist in local clinic records and insurance claims.

The Alaska Trauma Registry may provide a rich source of information in the future. Currently, the Alaska Fishermen's Fund provides the largest, most complete amount of information on non-fatal injuries to commercial fishers. Analysis of this data base provides the best descriptive information on non-fatal injuries which occur to commercial fishers in

benefits. Fatalities are excluded from benefits.

The Alaska Fishermen's Fund provided data from 1982, 1983, and 1984. It was analyzed by fishery as defined by species and gear. As can be seen in Table I, spinal sprains and strains occurred the most frequently in most fisheries.

In two longline fisheries, lacerations to the upper extremity were the most frequent. In the longline fisher-

Table I. Leading Injuries by Fishery.

| Species and Gear           | Spine<br>Sprains<br>Strains | Upper<br>Extremity<br>Lacerations | Upper<br>Extremity<br>Infections | Lower<br>Extremity<br>Sprains<br>Strains | Upper<br>Extremity<br>Sprains |
|----------------------------|-----------------------------|-----------------------------------|----------------------------------|--|-------------------------------|
| King Crab Pots             | 18.7                        | 9.5                               |                                  |  | 8.2                           |
| Dungeness Crab<br>Pots     | 25.3                        | 12.6                              | 9.1                              |  |                               |
| Salmon Purse<br>Seine      | 17.0                        | 11.0                              |                                  |  | 8.9                           |
| Roe Herring Purse<br>Seine | 25.0                        | 12.5                              |                                  | 7.5                                      |                               |
| Halibut Longline           | 18.5                        | 19.5                              | 11.8                             |  |                               |
| Sablefish Longline         | 14.0                        | 22.1                              |                                  | 11.4                                     |                               |
| Salmon Drift<br>Gillnet    | 23.4                        | 10.6                              |                                  | 7.3                                      |                               |
| Salmon Set Gillnet         | 23.6                        | 10.4                              |                                  |  | 8.6                           |
| Unknown                    | 15.1                        | 12.4                              | 7.2                              |  |                               |

#### Alaska.

The Alaska Fishermen's Fund was established in 1952 to provide a financial resource for commercial fishers injured while working. The Fund pays up to \$2,500 per injury. Any person possessing a commercial fishing license in the state qualifies for benefits.

Alaskan residency is not a requirement for benefits. The system is passive, meaning that the recipient must file a claim before receiving

benefits, which showed upper extremity laceration to be the most frequent, infections to the upper extremity were second. It is possible that these two categories represent the same injury, the difference being when they were seen and diagnosed.

Incidence rates by fishery can be estimated from the number of successful claims recorded by the Fund, as shown in Table II. The rates range from 1 out of 100 in purse seining for herring and setnetting for salmon to 7

Table II. Incidence Rates by Fishery for 1983 per 100 Fishers.

| Fishery                  | Actual<br>Rate | Under Reported by |            |
|--------------------------|----------------|-------------------|------------|
|                          |                | 50 percent        | 90 percent |
| Salmon, Power Troll      | 7              | 13                | 69         |
| Dungeness Crab, Pots     | 5              | 10                | 50         |
| Salmon, Purse Seine      | 5              | 10                | 50         |
| Salmon, Hand Troll       | 4              | 8                 | 36         |
| Tanner Crab, Pots        | 3              | 7                 | 33         |
| Salmon, Drift Gillnet    | 3              | 6                 | 31         |
| King Crab, Pots          | 3              | 5                 | 28         |
| Halibut, Longline        | 2              | 4                 | 23         |
| Sablefish, Longline      | 2              | 4                 | 18         |
| Roe Herring, Purse Seine | 1              | 3                 | 14         |
| Salmon, Set Gillnet      | 1              | 2                 | 10         |

Denominator data from *Employment and Gross Earnings in Alaska's Commercial Fisheries: Estimates for All Participants and Residents of Washington, Oregon, and California, 1983-1984*. Prepared by Rick Focht, CFEC Report.

out of 100 for salmon power trolling.

These rates are based upon the actual number of recorded cases in the data base. If these numbers under-represent the actual number of non-fatal injuries the rates would change significantly.

Decreasing the number of non-fatal injuries to commercial fishers represents a unique challenge to injury prevention specialists. The development of collecting reliable and accurate data is a priority.

Sprains and strains of the spine are generally regarded as ergonomic problems. The development of interventions that account for the dynamic environment on board a fishing vessel are needed. If these challenges are to be met, all involved or interested in preventing these injuries must work together. □

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