

International Occupational Health Research on an "Invisible" Workforce

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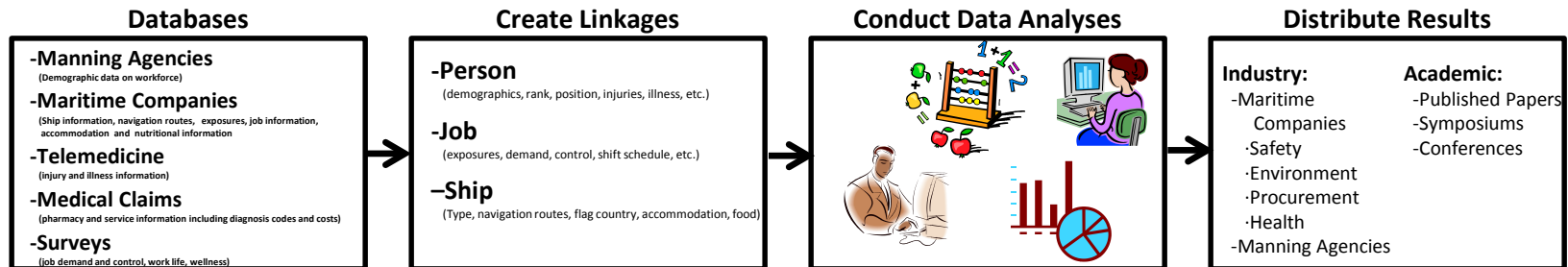
International Occupational Health Research on an “Invisible” Workforce

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ABSTRACT:

There are many professions in which employees are located in remote locations. International maritime workers make up one such occupation. They are a vulnerable, underserved and neglected population of approximately 1.2 million people with high rates of disease and injury. During their typical nine month deployments, they live in relative isolation with no health care professional on board. To understand the root causes of disease and injury among this remote workforce, strategies to collect information, analyze data, and report results and recommendations have been developed. These strategies, which include gathering of data through an alliance of companies involved in seafaring, have yielded initial results as to the predictors of serious illness and injury on board vessels requiring the repatriation of the employee. These same methods should be applicable to other isolated international workforces.

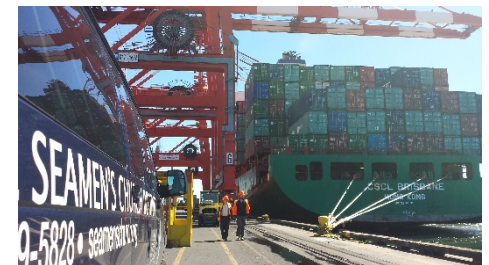


EXAMPLES OF COMPLETED RESEARCH:

- Risk Factors for Injury and Illness Among Seafarers: Linking of Maritime Companies and Telemedicine databases allowed researchers to reveal that there are twice as many illness as there are injury cases and this was consistent across age, nationality, work site and rank. Additionally, work restriction varied by age, rank and work site, with odds ratios greater than 2 observed for deck workers as compared to those in the galley.
- Predictors of Repatriation of Seafarers due to Medical Illness: Linking of Manning Agencies and Maritime Companies databases showed that higher BMI and higher creatinine levels (marker of kidney disease) are associated with increased likelihood of medical repatriation. Overweight and Obese seafarers were 1.5 times as likely to be repatriated as compared to those with normal BMI. Seafarers with creatinine levels greater than 85 $\mu\text{mol/L}$ were 1.6 times as likely to be repatriated.

CONCLUSIONS:

- Use of Manning Agency’s pre-employment medical examinations are useful for understanding personal risk for occupational illness and injury in an “invisible” workforce
- Companies, and their subsidiaries, maintain a large number of administrative databases for specific purposes
- Linking of administrative databases creates a breadth and depth of useful information to study a broad array of research and service-related questions
- Both academic and service related questions can be answered using epidemiologic methods
- Underserved and “Invisible” workforces can be studied efficiently utilizing “big data” concepts by linking already available information



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