The Challenge

The construction industry is highly cyclical, decentralized, and dominated by small employers — roughly 4 out of 5 employ fewer than 10 workers. As a result, tracking national industry trends and the safety and health of the construction workforce is difficult. Although several government agencies and private organizations collect construction data, none generate the data at a level of detail or in a format that fully meets stakeholders’ and construction safety and health researchers’ needs. Some data sources are not publicly available, while others use complex structures, definitions, and jargon that are not meaningful to many industry users. A reliable source of construction industry data, presented in an easily accessible format is critical for identifying and addressing safety and health problems, tracking progress, and creating training programs and practical solutions for construction workers.

The Response

CPWR established the Data Center in the mid-1990s to serve as an effective information resource center with detailed, reliable, and timely construction data. Under the direction of Dr. Xiuwen (Sue) Dong, a research team provides insight on construction safety and health through publications and presentations, responds to information requests from industry stakeholders, and generates customized reports to advance construction safety and health.

The research team compiles and analyzes data from published and unpublished government and private sources to monitor demographic and industry trends, identify the impact of these changes on construction safety and health, and measure the cost of work-related injuries and illnesses. A multitude of large nationally representative data sources are used, including ones from the Bureau of Labor Statistics, the Census Bureau, the Internal Revenue Service, the Occupational Safety and Health Administration, and the National Institute for Occupational Safety and Health.

The Results

The Data Center provides information in formats that respond to the needs of industry stakeholders and supports the work of researchers within CPWR, the academic and labor communities, industry, and government agencies in the U.S. and internationally. The Construction Chart Book is CPWR’s most-recognized publication. First published in 1997 at the request of CPWR stakeholders, the Chart Book is now in its fourth edition. This publication summarizes the Data Center’s main findings using clear graphics and concise explanatory language. Data and charts included in this book are arranged within five categories: safety and health, education and training, industry summaries, labor force characteristics, and employment and income. Each edition of the Chart Book reflects emerging trends in the industry as well as new data sources. The fourth edition, for example, highlighted the dramatic growth of the Hispanic workforce in U.S. construction.

Longitudinal studies focus attention on safety and health challenges facing an aging construction workforce; while disparity studies examine particular issues and segments of the workforce, including Hispanic workers and other demographic groups. One study of injury data, for example, found disparities between reported fatalities and lost workday injuries among small contractors. The results suggest that roughly half of lost workday injuries among small employers go unreported – the share for Hispanic workers is even higher.

The Data Center’s participation on the U. S. Bureau of Labor Statistics’ Data Users Advisory Committee and collaboration with other federal agencies and labor organizations help improve existing surveillance data collection and measurement.
The Data Center’s work supports safety and health research, government policy and guidance documents, and worker training programs:

- The Chart Book is one of the most frequently referenced documents on CPWR’s website and the electronic Library of Construction Occupational Safety and Health (www.elcosh.org) with more than 46,000 page-views. Since 2008, CPWR has distributed roughly 2,600 print copies of the book.

- NIOSH used Chart Book data to establish its NORA National Construction Agenda.

- The Chart Book data is cited frequently in academic research in the Public Health Reporter, the American Journal of Industrial Medicine, the Journal of Safety Research, Applied Ergonomics, New Solutions, and other publications. Google Scholar shows the Chart Book referenced in roughly 250 professional publications and mentioned in 58 blogs. It is also found in more than 2,000 Google Books search references.


- Information from the Data Center and the Chart Book was used in developing a new training program in 2011, Preventing Sprains, Strains and Repetitive Motion Injuries. Developed by the Labor Occupational Health Program at UC Berkeley and the California State Building and Construction Trades Council, this train-the-trainer curriculum is reaching hundreds of building trades workers.

- The Data Center’s research on the Hispanic workforce is cited in studies and reports by institutions including The National Council of La Raza, the University of Massachusetts-Lowell, Rutgers OTEC Latino Construction Workers Safety and Health Project, the University of Nevada School of Nursing, and Duke University Medical Center.

What made it a success?

The CPWR Data Center is a trusted resource because it:

- Addresses specific needs voiced by industry stakeholders.

- Presents findings clearly and impartially. The Construction Chart Book, for example, is designed for use by construction workers and employers as well as by academics and policy-makers.

- Makes information readily accessible. The Construction Chart Book is included in the Library of Congress collection, on World Cat, and Yankee Book Peddler’s A-Plus list. It is referenced on academic and subject-matter listserves and in industry, union, and professional publications.

- Contributes to the goal of improving data collection and monitoring.

“…a vast source of reliable data for anyone who deals with workplace safety.”
— Sheet Metal and Air Conditioning Contractors’ National Association

“…a critical reference source for anyone...interested in the construction industry and its workers.”
— David Weil, Professor of Economics and Everett W. Lord Distinguished Faculty Scholar at Boston University School of Management. Co-director of the Transparency Policy Project at the Ash Institute at Harvard Kennedy School