

**Evaluation of an Occupational Safety and Health Program
For the Small Business Wood Pallet Industry**

Supporting Statement Part B

Request for Office of Management and Budget Review and Approval
for Federally Sponsored Data Collection

December 2007

Robert Malkin, DDS, DPH

National Institute for Occupational Safety and Health
Education and Information Dissemination Division

Robert A. Taft Laboratories
4676 Columbia Parkway, MS P04-
Cincinnati, Ohio 45226

RYM8@cdc.gov

513-533-8375

513-533-8560 (fax)

Section B. Collection of Information Employing Statistical Methods

- B1. Respondent Universe and Sampling Methods
- B2. Procedures for the Collection of Information
- B3. Methods to Maximize Response Rates and Deal with Non-response
- B4. Tests of Procedures or Methods to be Undertaken
- B5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing
Data

References

Attachments

- Attachment A. - Authorization for the study
- Attachment B1.- 60 Day Federal Register Notice
- Attachment B2. - Public Comments
- Attachment C.- IRB Approval
- Attachment D1.- Initial Call, Treatment Group
- Attachment D2. - Follow Up Call, Treatment Group
- Attachment D3. - Initial Call, Control Group
- Attachment D4. - Second Call, Control Group,
- Attachment E. - Non Disclosure Agreement with Contractor
- Attachment F . - Posters that are used with Pallet Manual
- Attachment G . - Pallet Manual

B. Collection of Information Employing Statistical Methods

B.1 Respondent Universe and Sampling Methods

We will use a commercial list of 2,628 pallet manufacturers employing 100 workers or less. The initial list included all pallet manufacturers that could be identified. NIOSH considers a small business establishment to be one with fewer than 100 employees, only 90 businesses in the original list of pallet manufacturers employed greater than 100 workers. These 90 large companies were dropped from the sample. The remaining list will be stratified into three roughly equivalent groups based on the number of employees in each firm. Within each group (small, medium, large), sixty companies will be randomly assigned to either a treatment or a control group. Thus, there will be three treatment groups and three control groups with 30 companies per group. There will be a total of 180 companies in this study.

Pallet Company distribution-2005 N=2,628		
Group Number	# of Employees	Number of Companies in Group
1 (small)	1-6	924
2 (medium)	7-19	841
3 (large)	20-100	863

A power analysis was conducted and indicated that this study would have a statistical power of 0.90 for detecting an effect with 20% of the treatment group showing a progression in the stage of change and 5% of the control group showing a similar effect. Because the pallet

industry has been a partner in the planning of this study, it is expected that the response rate will exceed 80%.

A table detailing the statistical power for three strata of 30 companies each follows:

P_1	Power
	Based on 30 companies per stratum-3 strata
0.06	0.07
0.07	0.10
0.08	0.14
0.09	0.20
0.10	0.25
0.11	0.34
0.12	0.41
0.13	0.48
0.14	0.56
0.15	0.64
0.16	0.71
0.17	0.76
0.18	0.82
0.19	0.86
0.20	0.90
0.25	0.98

Potential members of the treatment group and the control group will be contacted in random order by telephone by a contractor to enroll them in the study and to administer the first questionnaire, one stratum at a time. Owners/managers will be enrolled for the treatment groups who are willing to complete the first questionnaire, express an interest in the project, and will complete a second questionnaire in 5 months. Recruitment will continue by telephone until 30 owners/managers from each stratum who are willing to participate are found. A

control group for that stratum will be selected using the same criteria as the treatment group. When the control group and treatment group are determined for a particular stratum, the next stratum will be filled. Hence, the study population is the subset of companies from the list who indicate their willingness to participate when contacted.

In order to be enrolled in the study, however, company owners/managers will have to agree to answer questions at the time of the baseline phone call, review a NIOSH educational/informational manual or agree to receive one within 6 months, and answer a second questionnaire phone call 5 months after the first call. The pallet trade association, the National Wood Pallet and Container Association (NWPCA) is part of an alliance with NIOSH researchers, and is interested in the project and has worked to get their members involved in the study. Except for limited pilot work, a study with this sector has not been conducted by NIOSH and there are no actual response rates to cite, but they are expected to be high.

B.2. Procedures for the Collection of Information

Pallet manufacturing companies will be stratified based on their size and individual companies will be randomly selected from each stratum. These companies will be called by a contractor and asked if they want a copy of NIOSH educational/informational materials and if they will be willing to participate in a study. If they consent to participate, they will be enrolled in the study and read questions over the telephone by interviewers who will receive training from NIOSH. Members of the NWPCA will have prior knowledge of the existence of the study from NIOSH researchers' participation in their conferences, but other possible respondents may not.

B.3. Methods to Maximize Response Rates and Deal with Nonresponse

While comparisons will be approached based on a random order of selection, only companies will be enrolled whose owner or manager states they will be willing to complete a baseline questionnaire, receive the materials, and complete a survey 5 months later. If they state that they are not willing to complete the study, they will not be enrolled and the contractor will be instructed to simply record the reason for non-participation, if one is given, and hang up. Failed attempts to make contact will be recorded. These data can be used to correct the number of active pallet companies on the list and the number in that population who are willing to participate. Therefore, since the population is selected based on their willingness to complete the surveys, it is expected that at least 80% of the companies who take the first questionnaire on the telephone will be willing to respond to the second questionnaire 5 months later, and complete the second survey.

B.4 Tests of Procedures or Methods to be Undertaken

The final questionnaire has been pilot tested on less than 10 pallet manufacturing companies that have participated in NIOSH site visits of pallet companies conducted during a preliminary formative stage. The test was conducted on the telephone to simulate the study and was conducted by Dr. Robert Malkin. If indicated, minor changes to the questionnaire or calling procedures may be made.

B.5 Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

Randall J. Smith Ph.D. (513-533-8378 RSmith@cdc.gov), a statistician for NIOSH/CDC, was consulted regarding the statistical aspects of the design of this study and the data analysis. The interview data will be collected by the Convergys Corporation, who has considerable expertise collecting phone survey data. The individual responsible for the contract is Kathy Renaker (513-784-4757). The data instrument was designed by NIOSH staff in consultation with the NWPCA and company partners. The analysis will be done by Dr. Robert Malkin and Dr. Randall Smith.

References

Bureau of Labor Statistics (2002). "Incidence rates (1) for nonfatal occupational injuries and illnesses involving days away from work (2) per 10,000 full-time workers by industry and selected natures of injury or illness, 2002." [Online] Available at <http://bls.gov/iif/oshwc/osh/case/ostb1272.txt> (Accessed November 17, 2003).

Lederman E, Ialomiteanu A, Parker L (2004): The Training Irony. The "real" Impact of Training May Not be Observable. *Canadian Learning Journal* , Spring 2004.

Lentz TJ, Sieber WK, Jones JH, Piacitelli GM, Catlett LR (2001): Surveillance of Safety and Health Programs and Needs in Small U.S. Businesses. *Applied Occupational and Environmental Hygiene Journal* 16(11):1016-1021.

Lentz TJ, Okun AH, Schulte PA, Stayner LT (1999): Identifying High-Risk Small Business Industries: The Basis for Preventing Occupational Injury, Illness, and Fatality. DHHS (NIOSH) Publication No. 99-107.

Okun, A., Lentz, T.J., Schulte, P., & Stayner, L. (2001). Identifying High-Risk Small Business Industries for Occupational Safety and Health Interventions. *American Journal of Industrial Medicine*, 39, 301-311.

Prochaska, J.O. & DiClemente, C.C. (1984). *The Transtheoretical Approach. Crossing Traditional Boundaries of Therapy*. Homewood, IL: Dow Jones-Irwin.

U.S. Department of Health and Human Services (2000). *Healthy People 2010: Understanding and Improving Health. 2nd ed.* Washington, DC: U.S. Government Printing Office.