

Increasing the Impact of NIOSH Heat Stress Products in Outdoor Worker Populations

CDC/ATSDR Formative Research and Tool Development

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Part B

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I.

B. Collection of Information Employing Statistical Methods

1. Respondent Universe and Sampling Methods

Convenience Sampling: Contractor will facilitate focus group sessions with outdoor workers and their employers about heat stress prevention. Contractor will conduct pre/post-test with employers of outdoor workers before/after they review a draft online training. The contractor will recruit potential participants from pre-existing lists of eligible individuals whom are affiliates of the organization. No new personally identifiable information (PII) will be collected.

For the worker/employee focus groups, the number of respondents who participate in each focus group session will not exceed nine (9) individuals. The contractor will make every effort to ensure that at least 6-9 individuals are available for each group. The contractor will determine whether the respondents meet the qualifications specified in the approved recruitment plan.

For the employer pre/post-test surveys, there will be 45 participants that will need to be able to access the training on their own computer with internet access to be eligible to participate. To minimize risks to participants completing questionnaires, no personally identifiable information (PII) will be collected. Previously existing member lists will be accessed by contractor for recruitment; and the contractor will be responsible assigning unique identifiers and matching pre- and post-tests.

2. Procedures for Collection of Information

For two phases of the study, at each geographic location of study interest (i.e., Houston, Chicago, San Francisco/Sacramento), focus groups will be held for: (1) employers in construction, (2) employers in landscaping, (3) workers in construction (English), (4) workers in landscaping (English), (5) workers in construction (Spanish), and (6) workers in landscaping (Spanish).

For the focus groups, virtual (or in-person)¹ focus groups will be conducted by the contractor at their own facility or office. Each focus group will consist up to 9 participants. All participants will be informed that participation in the focus group is completely voluntary and informed consent will be obtained from each individual prior to participation. Questions in the focus group guide ask participants to provide feedback on the following:

- barriers/facilitators to providing heat stress information,
- comprehension and efficacy regarding acclimatization, and
- participant impressions regarding various heat stress educational products, including the content and wording, and visuals.

For the employer pre/post-test surveys will be conducted by the contractor and consist of 45 participants who had not previously participated in focus groups. All participants will be informed that participation in the pre/post-tests is completely voluntary and informed consent will be obtained from each individual prior to participation. Outcomes include heat stress knowledge, behavioral intentions, self-efficacy, and attitudes. Open-ended questions will be analyzed by themes.

¹ NOTE: Depending on the pandemic situation at the time of data collection, changes to the protocol may be necessary per CDC, NIOSH, and IRB guidelines. Tentative changes may include conducting in-person, individual interviews in place of focus groups. Appropriate CDC recommendations for social distancing, cleaning, and wearing of cloth face coverings will be followed. When possible, interviews will take place outdoors. Most interviews would need to occur in-person, as these worker populations may not have access to available technology (computers, internet, printers) and need to view multiple products related to the questions being asked. When possible (i.e., with those participants who are able to access and print the documents to be reviewed for the interview), the interview will be conducted over the phone. For individual interviews, numbers of participants will likely be cut in half, to accommodate the increased cost and time involved.

3. Tests of Procedures or Methods to be Undertaken

The guide for the focus groups and pre/post-test questions were developed through extensive discussion with experts at CDC/NIOSH who have experience with focus groups or pre/post-testing, and/or expertise in the subject matter. NIOSH experts were asked to review the questions and were asked which questions should be deleted and what potential questions might be added. Reviewer comments were gathered and addressed by the research team and a number of changes were incorporated into the final version. The final questions were reviewed and approved by NIOSH experts and research staff prior to submission to OMB.

The contractor will conduct a qualitative analysis of the data from the focus group sessions and develop a summary of key findings for internal NIOSH use. The internal report will extract common themes that reflect the topics that will be relevant to updating heat stress products and educational materials. No statistical analysis of the focus group data will be conducted.

The contractor will report results used for a one-way repeated measures ANOVA of the data from the pre/post-tests. The pre/post-tests will be used to assess changes in outcomes across three time intervals: pre-test, post-test #1, and post-test #2 at 6 weeks. SPSS will be used to conduct quantitative analyses.

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

The project team will consult with the contractor on the qualitative analysis, which will examine themes or major topics mentioned by focus group participants. The project team will consult with the contractor and NIOSH colleagues on the quantitative analysis used for the pre/post-tests.

Consultation will be provided by the following individuals currently employed at CDC/NIOSH:

- Brenda Jacklitsch, PhD, MS; Health Scientist: 513-533-8369; gwe6@cdc.gov
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