



Active and passive tobacco smoke exposures: a construction workplace health assessment pilot study

The "Lunch Truck" Experience

30th International Congress on Occupational Health, Cancun, Mexico
Monday, March 19, 2012 | Xcaret 1 | ID1069

^{1,2}Alberto J. Caban-Martinez, ¹David J. Lee, ¹Tainya C. Clarke, ¹Evelyn P. Davila, ¹John Clark III, ¹Manuel Ocasio, & ¹Lora E. Fleming
¹University of Miami Department of Epidemiology & Public Health & ²Department of Environmental Health, Harvard School of Public Health, USA

Research Support


- NIOSH's **Deep South Center for Occupational Health & Safety** – University of Alabama (Grant: 000286477-010; PI: Caban-Martinez, Alberto)
The Deep South Center for Occupational Health & Safety

- NIOSH's University of Miami **Occupational Research Group**. (Grant: OH003915; PI: Fleming, Lora)


- National Institute of Arthritis and Musculoskeletal and Skin Diseases**. 1F31AR057687-01; PI: Caban-Martinez, Alberto


Background

US Construction Industry




- Largest hazardous industry in US
- >11 million workers = 8% total US labor force
- 10% construction workers do not return to work after an injury
- More likely to retire on disability than workers with same conditions in less physically demanding work




Background

US Construction Industry




- Work includes
 - material handling, awkward posture, strenuous physical demands
 - At-risk for musculoskeletal disorders
- More likely to be chronically uninsured
- 43% construction workers overweight vs 35% all workers
- Highest rate of smoking among all occupations
 - 38% vs 22% national
 - Occupational secondhand smoke exposure




Background

Workplace Health Promotion



- Work ability
 - measure of the balance between work & personal capacity
- Physical work load & illness
 - important determinant of work ability
 - predictive of disability
- Reducing negative behaviors, workplace organization can keep workers successfully employed

How do we reach construction workers??



Background



Lunch Truck Service




Study Objectives

Study Objectives



- **Examine the feasibility and acceptability of using a lunch truck intervention delivery method in a convenience sample of 50 construction workers invited to complete:**
 1. 10 minute language-sensitive worksite interview
 2. Salivary & hair samples
 3. Breath analysis CO assessment
 4. Disseminate educational materials
 5. Call Back Survey

Measures

Measures – Survey Instrument



- **Survey Instrument Domains**
 1. Smoke Exposure & Behavior Questions
 2. Smoking Cessation Questions
 3. Environmental Exposure History
 4. Health Care Access and Health Status
 5. Worksite Health Promotion Questions
 6. Musculoskeletal Conditions
 7. Demographics

Measures

Measures – Biological

- **Biological Samples collected**
 - Hair Samples – Nicotine Protocol
 - Saliva Samples – Cotinine Protocol
 - Breath Carbon Monoxide – CO
- **Anthropometric Measurements**
 - Height
 - Weight
 - Waist Circumference

Assessment Procedure

Assessment Procedure

- **Steps to Participation**
 - Recruitment at Lunch Truck
 - Invitation to Participate
 - Verbal Consent
 - Survey Instrument (44-items)
 - Hair Collection
 - Saliva Collection
 - Breath Analysis






Assessment Procedure

Assessment Procedure

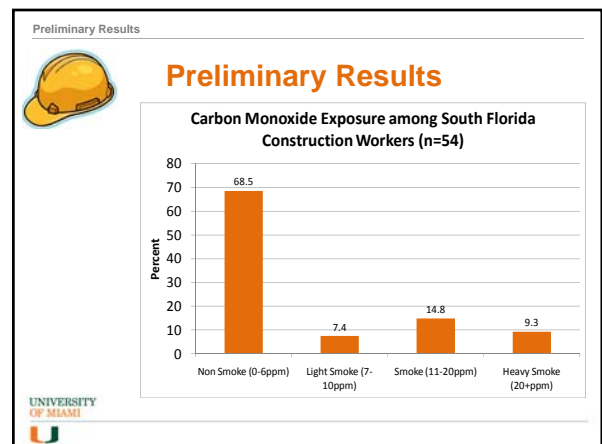
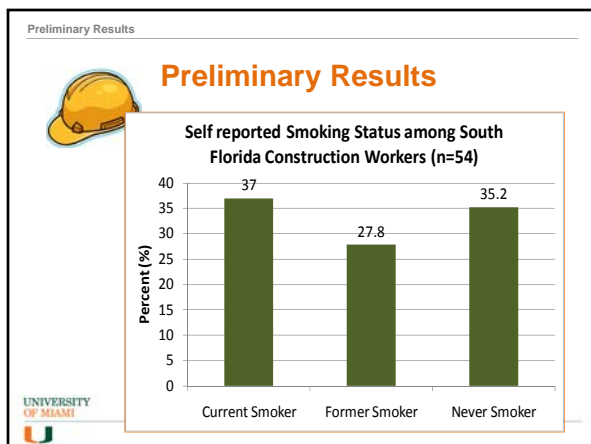
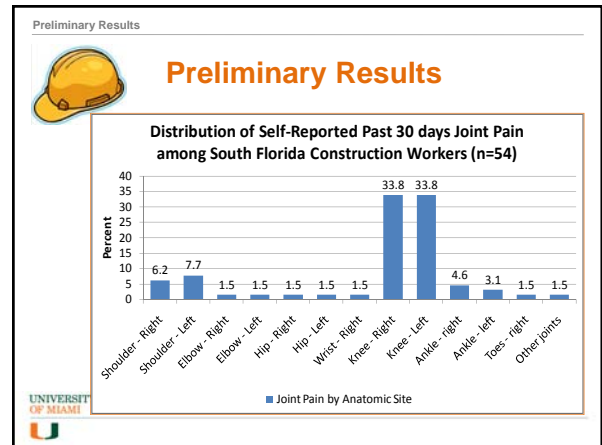
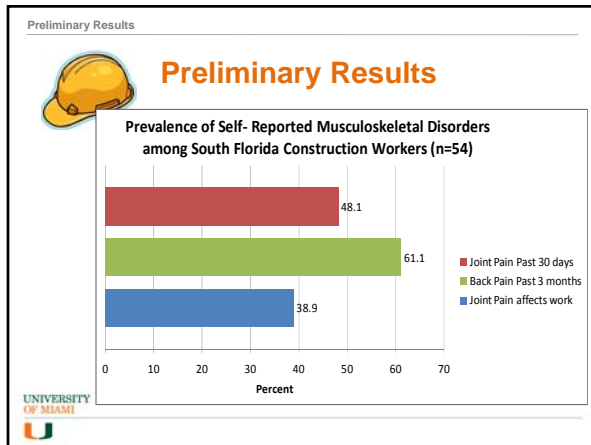
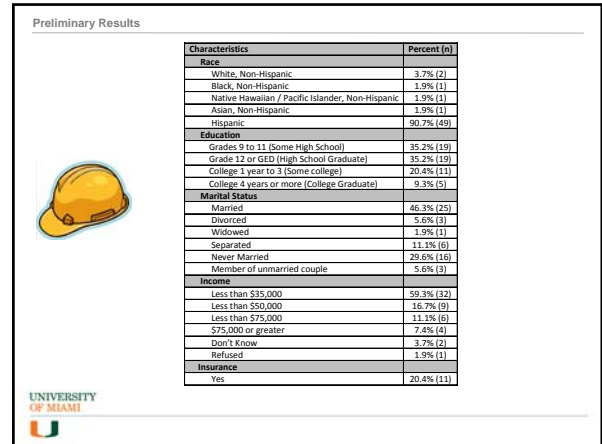
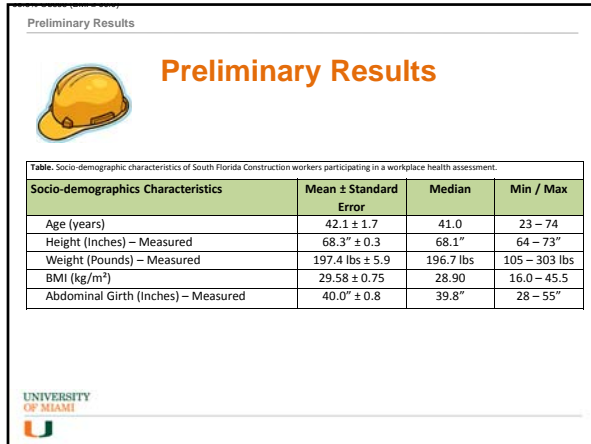
- **Steps to Participation**
 - Height & Weight Measurement
 - Abdominal Waist Measurement
 - Educational Material Distributed
 - Cancer Risk & Screening
 - Smoking Cessation
 - Workplace Safety & Injury
 - Physical Activity, Diet, & Nutrition
 - Incentive Provider
 - Invitation to Call Back Survey

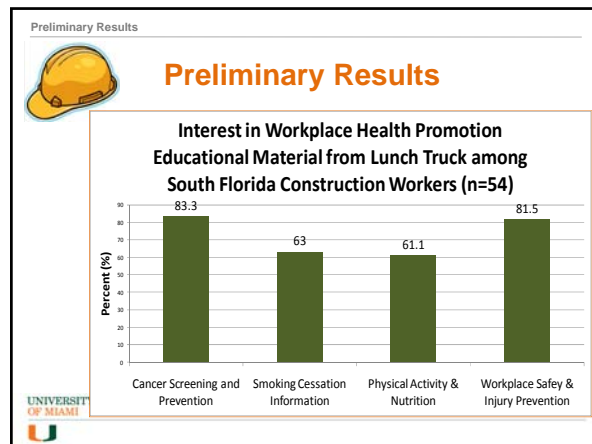
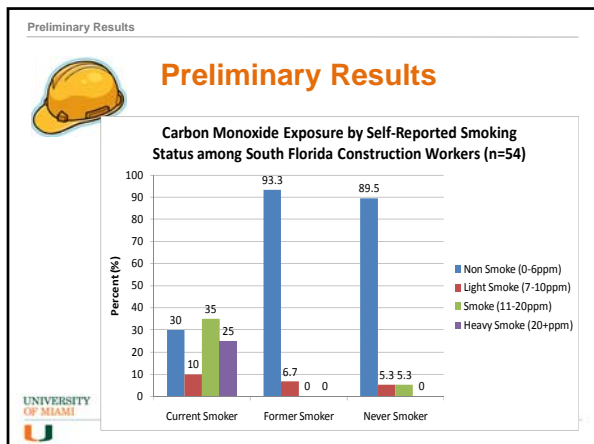













- Background
- 
- ### Summary
- South Florida construction workers are an underserved worker population
 - non-unionized
 - High prevalence of smokers
 - Significant burden of musculoskeletal disorders
 - Construction workers interested in receiving health promotion materials from lunch truck
- UNIVERSITY OF MIAMI

- Background
- 
- ### Next Step / Future Directions
- Process Hair and Saliva Samples to assess short & long-term exposure to smoke
 - Analyze Questionnaire & Call Back Survey data
 - Partner with lunch truck service to deliver
 - community resources
 - health information
 - work place safety to programs
 - to nomadic construction workers
- UNIVERSITY OF MIAMI

Thank You




The Deep South Center for Occupational Health & Safety

UNIVERSITY OF MIAMI

UNIVERSITY OF ALABAMA AT BIRMINGHAM & AUBURN UNIVERSITY

NIOSH National Institute for Occupational Safety and Health