

# A Worksite Wellness Coaching Component of a Total Worker Health Intervention in a Manufacturing Setting



**1<sup>st</sup> International Symposium to Advance TOTAL WORKER HEALTH**

Bethesda, MD, October 6-8, 2014

**Presented by:**

Cassidy Branch, MA, ATC, LAT

# Healthier Workforce Center for Excellence

- Comprehensive Evaluation of an Integrated Health Protection and Health Promotion Program
  - Four year controlled trial
  - Examine effects of a TOTAL WORKER HEALTH™ intervention on:
    - Exposure to ergonomic hazards and musculoskeletal health outcomes
    - Indicators of modifiable health risks

# Project Team

Nathan Fethke, PhD	(PI)
Fred Gerr, MD	(Co-I)
Linda Merlino, MS	(Study Coordinator)
Cassidy Branch, MA	(Wellness Coach)
Mark Schall, MS	(Graduate Fellow)

# Chronic Conditions in the Workplace

- Majority of chronic conditions caused by modifiable risk factors



- 25% of companies' medical costs are spent on employees with chronic conditions
- Hourly workers are at higher risk

# Health Promotion in the Workplace

- Comprehensive health promotion programs provide opportunity
  - Ideal setting
  - Coaching programs to alleviate risk factors
  - Reduce health care cost
  - Address work conditions
- 7% of employers offer comprehensive programs

# Wellness Coaching with Motivational Interviewing

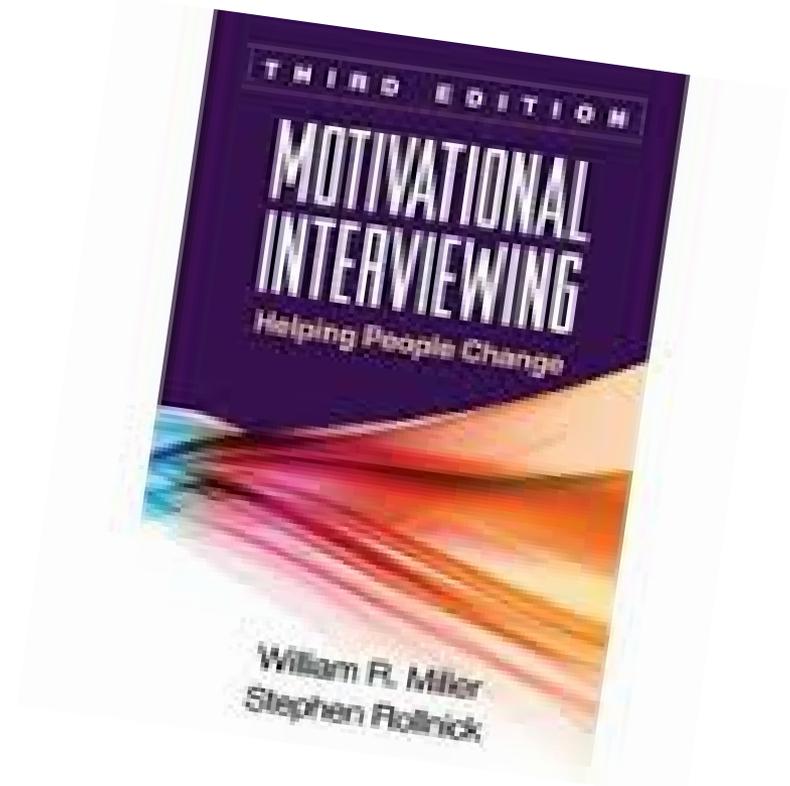
- Evidence-based approach to behavior change
  - Weight loss
  - Tobacco cessation
  - Medication adherence
  - Managing chronic conditions
  - Mental health
- Effective in a variety of settings
  - Medical clinics
  - Hospitals
  - College campuses



# Motivational Interviewing

“...a collaborative, person-centered form of guiding to elicit and strengthen motivation for change.”

- Communication style
- Collaborative
- Evocative



# Agenda

- Description of study design
  - Preliminary results
- Description of Wellness Coaching Intervention using Motivational Interviewing
  - Preliminary results

# Study Sites

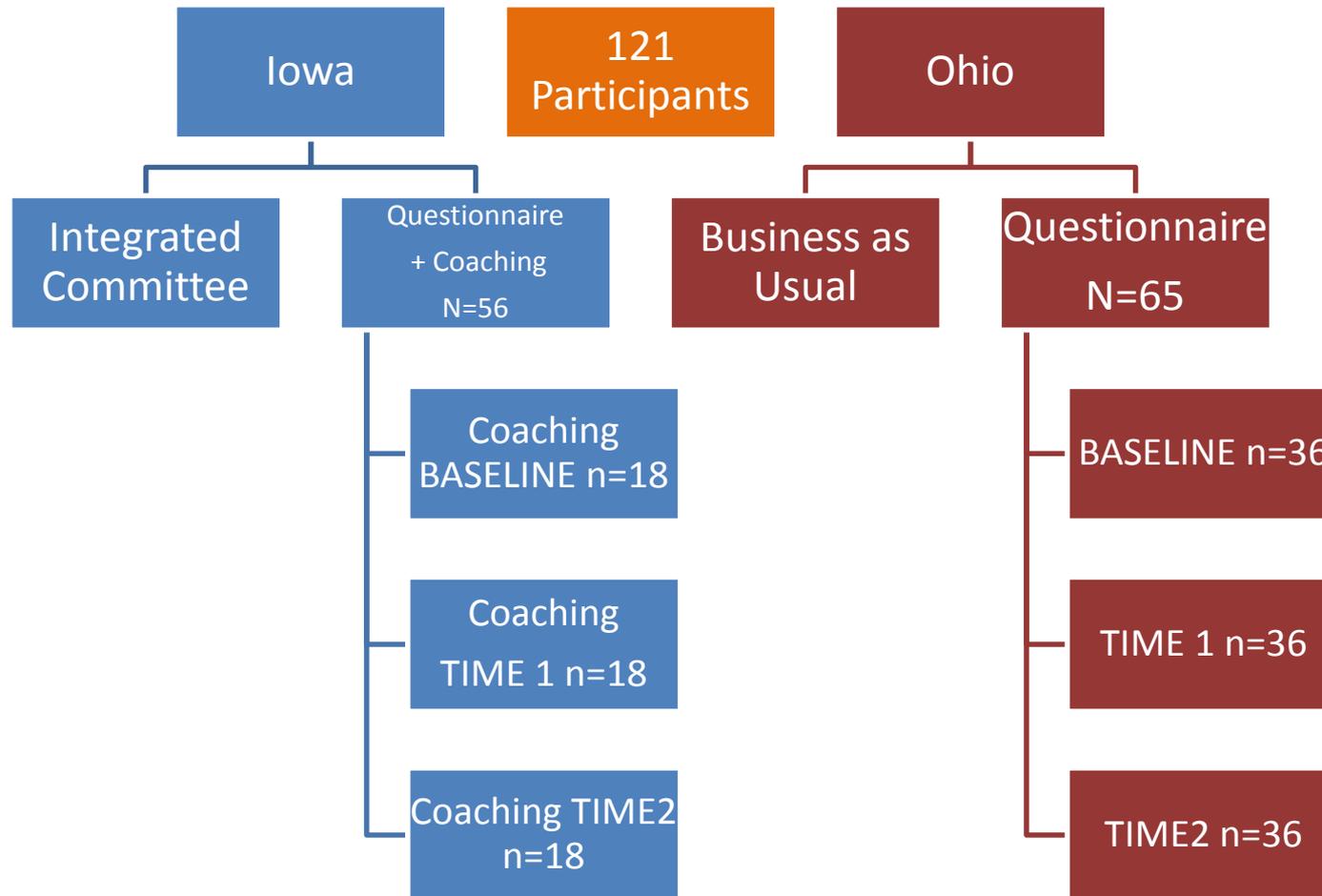
- Global window manufacturing company with regional facilities across the US
  - Intervention Facility: Iowa
  - Control Facility: Ohio



# Study Participants

- Permanent Employees
- 18-65 years old
- Enrolled in company-sponsored health insurance program
- Release of Information
  - HRA information
  - Employer-sponsored chronic condition management programs

# Design and Cohort



# Questionnaires

- Demographics
- Personal health
- Job Content Questionnaire
- SF-36v2
- Musculoskeletal Health
  - Neck/shoulder
  - Low back
  - Elbow/wrist/hand



# Demographics

## Average participant was...

- 42 years old
- BMI = 29
- 60% male
- 100% Caucasian

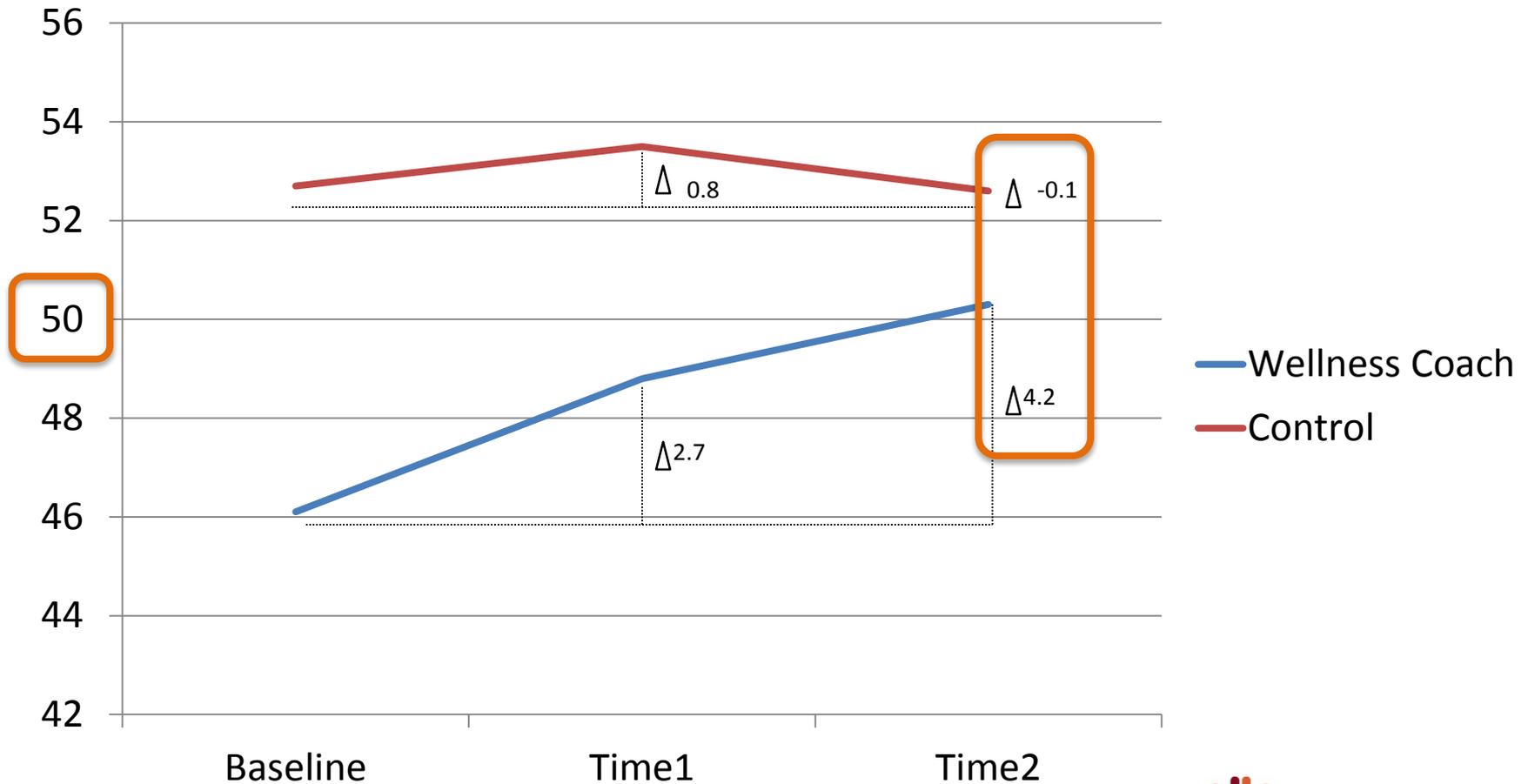
## Majority of Participants...

- Production employees
- < 50% education beyond high school
- 40% use tobacco
- 80% had insurance

### Differences in Participants of Coaching Intervention

	Baseline – Time2		
	Coaching	Control	P-value
Male	7 (38.9)	25 (69.4)	0.03
Female	11 (61.1)	11 (30.6)	

# Change in SF-36 Physical Composite Score



# Wellness Coaching

- Voluntary participation
- In-person encounters with certified wellness coach
  - Up to 4 encounters/year
- Conducted during work hours
  - 30 minute duration
  - Private room at worksite provided by employer
  - Audio recorded
- Format
  - Initial session
    - Description of intervention
    - Created vision
    - Discussed limitations
    - Set goals
  - Subsequent sessions
    - Progress and adjustments as needed
- Incentives

# Coach Fidelity

- Coach met with a certified mentor monthly
  - Ensure Fidelity
    - Score audio files
    - One Pass
    - Intraclass correlation coefficients (ICC) used to assess reliability of scores between coach and mentor
  - Improve skills

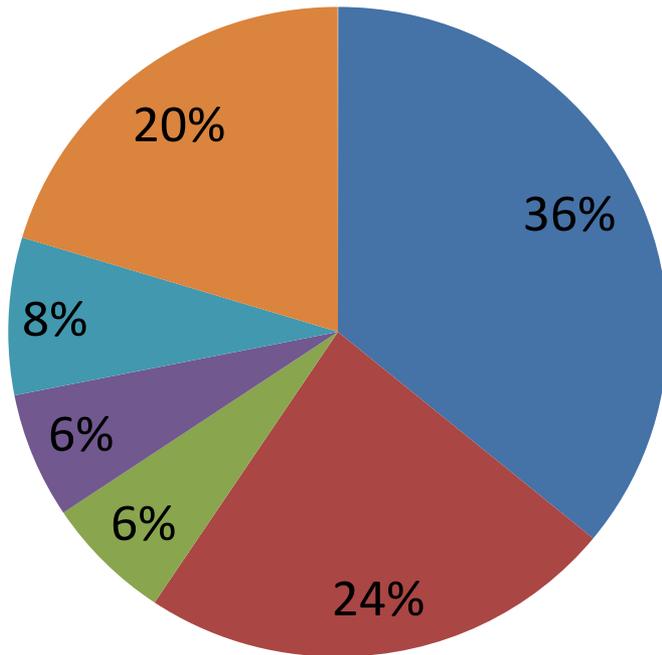
# One Pass

	Baseline*	Time 1	Time 2	Total
Number of encounters scored	4	16	11	31
	Mean (SD)	Mean (SD)	Mean (SD)	
Rater 1	4.25 (0.50)	5.06 (1.12)	4.73 (0.90)	
Rater 2	4.75 (0.50)	5.25 (0.86)	4.23 (0.68)	
ICC	0.09	0.79	0.66	0.68

Coaching encounters conducted = 161

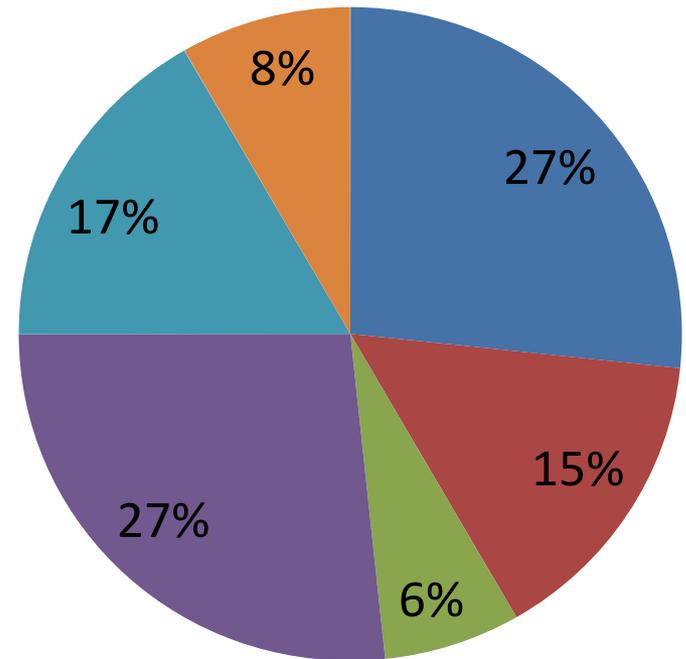
# Coaching Topics

## Topics at Baseline



- Physical Activity
- Nutrition
- Weight
- Stress
- Health

## Topics at Time 2



# Coaching Retention

	Baseline	Follow-up 1	Follow-up 2
	N (%)	N (%)	N (%)
Coaching participants	20	37	40
Withdrew from Coaching	0	0	3
Retention	100%	100%	93%

- Most literature cites high dropout rate
- Retention rates for lifestyle behavior change interventions range from 75-100%

# Summary

- Motivational Interviewing was delivered as indicated by One Pass scores
- Broad variety of topics discussed
- Retention rates are high

# References

- Emmons, K. M., L. A. Linnan, W. G. Shadel, B. Marcus and D. B. Abrams (1999). "The Working Healthy Project: a worksite health-promotion trial targeting physical activity, diet, and smoking." Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine **41**(7): 545.
- National Center for Health, S. (2012). Healthy People 2010 Final Review. Hyattsville, MD.
- Anderson, G. and J. Horvath (2004). "The growing burden of chronic disease in America." Public health reports (Washington, D.C.: 1974) **119**(3): 263.
- Carnethon, M., L. P. Whitset, B. A. Franklin, P. Kris-Etherton, R. Milani, C. A. Pratt, G. R. Wagner, C. American Heart Association Advocacy Coordinating, E. Council on, Prevention, D. Council on the Kidney in Cardiovascular, P. A. Council on Nutrition and Metabolism (2009). "Worksite wellness programs for cardiovascular disease prevention: a policy statement from the American Heart Association." Circulation **120**(17): 1725.
- Goetzel, R. Z., N. M. Kowlessar, R. Henke, R. Benevent, M. Tabrizi and A. M. Colombi (2013). "Six-year cost trends at PPG industries paralleling the introduction of health promotion programs directed at cardiovascular disease prevention." Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine **55**(5): 483.
- Sorensen, G., P. Landsbergis, L. Hammer, B. C. Amick, 3rd, L. Linnan, A. Yancey, L. S. Welch, R. Z. Goetzel, K. M. Flannery, C. Pratt and P. Workshop Working Group on Worksite Chronic Disease (2011). "Preventing chronic disease in the workplace: a workshop report and recommendations." American Journal of Public Health **101 Suppl 1**: S196.
- Partnership for, P., Ed. (2009). Healthy Workforce 2010 and Beyond. Washington, DC.
- Butterworth, S., A. Linden, W. McClay and M. C. Leo (2006). "Effect of motivational interviewing-based health coaching on employees' physical and mental health status." Journal of occupational health psychology **11**(4): 358.
- Olsen, J. M. and B. J. Nesbitt (2010). "Health coaching to improve healthy lifestyle behaviors: an integrative review." American Journal of Health promotion : AJHP **25**(1): e1.
- Rubak, S., A. Sandbæk, T. Lauritzen and B. Christensen (2005). "Motivational interviewing: a systematic review and meta-analysis." April: 305.
- Miller, W. R. and S. Rollnick (2013). Motivational Interviewing: Helping People Change. New York, The Guilford Press.
- Karasek, R., C. Brisson, N. Kawakami, I. Houtman, P. Bongers and B. Amick (1998). "The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics." Journal of occupational health psychology **3**(4): 322.
- Ware JE, K. M., Dewey JE. (2000). How to Score Version 2 of the SF-36® Health Survey. Lincoln, RI, QualityMetric Incorporated.
- Miller, W. R., C. E. Yahne, T. B. Moyers, J. Martinez and M. Pirritano (2004). "A randomized trial of methods to help clinicians learn motivational interviewing." Journal of consulting and clinical psychology **72**(6): 1050.
- Madson, M. B., A. C. Loignon and C. Lane (2009). "Training in motivational interviewing: a systematic review." J Subst Abuse Treat **36**(1): 101-109.
- McMaster, F. (2013). Motivational Interviewing in Clinical Settings.
- Resnicow, K. (2002). 1-PASS coding system for motivational interviewing: introduction and scoring, Atlanta: Rollins School of Public Health Emory University.