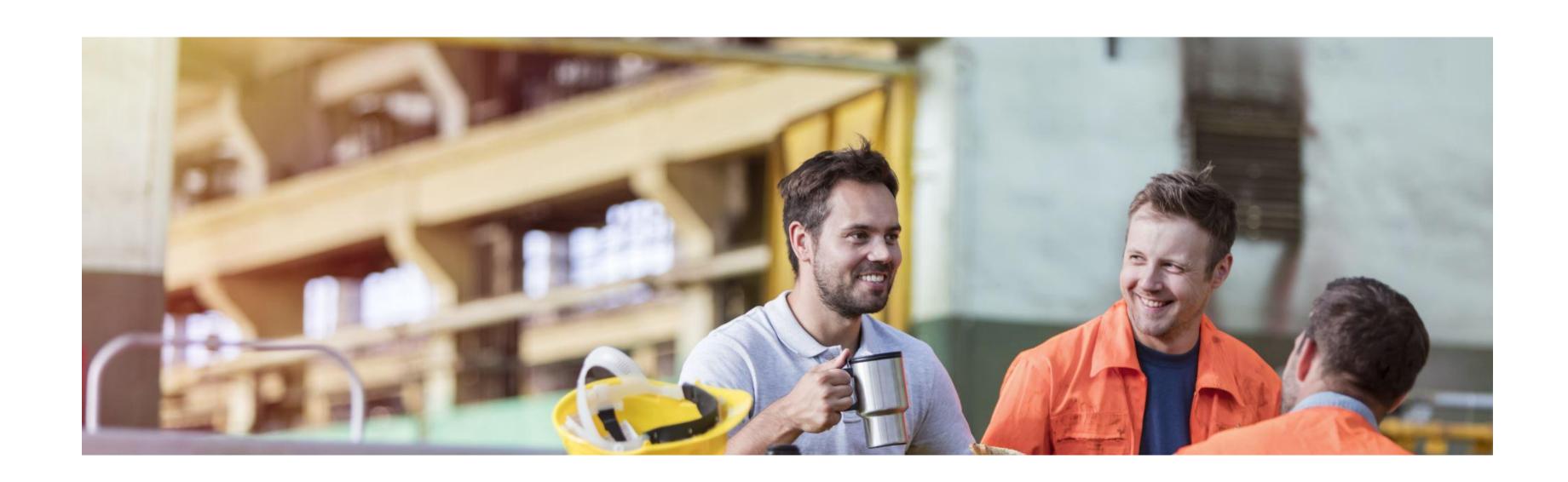
# Meet the Carolina Center for Healthy Work Design and Worker Well-Being





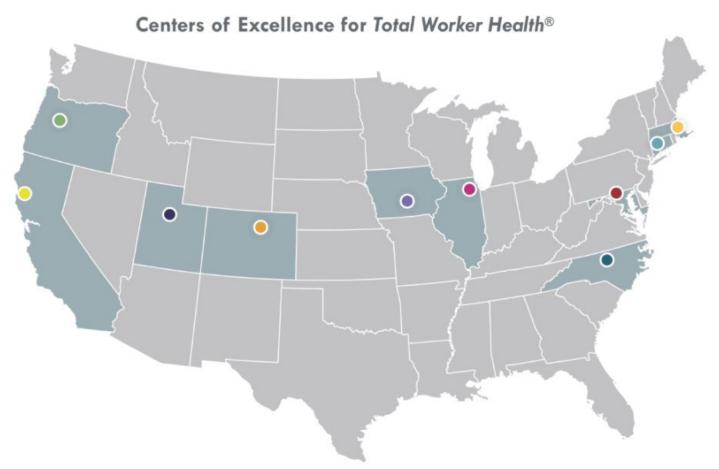
#### **Our Goal**

To generate new knowledge and improve worker health, safety and well-being in North Carolina, the southeast region, and the nation. We have a special focus on essential workers and the impact of working conditions on health outcomes.





## The NIOSH Centers of Excellence in Total Worker Health



- California Labor Laboratory (CALL Center)
- Carolina Center for Total Worker Health® and Well-being
- Center for Health, Work & Environment
- Center for the Promotion of Health in the New England Workplace (CPH-NEW)
- Healthier Workforce Center of the Midwest

- Johns Hopkins P.O.E. Total Worker Health®
   Center in Mental Health (POE Center)
- Oregon Healthy Workforce Center (OHWC)
- The Harvard T.H. Chan School of Public Health Center for Work, Health & Well-being
- UIC Center for Healthy Work
- Utah Center for Promotion of Work Equity (U-POWER)



#### Definition of Total Worker Health®

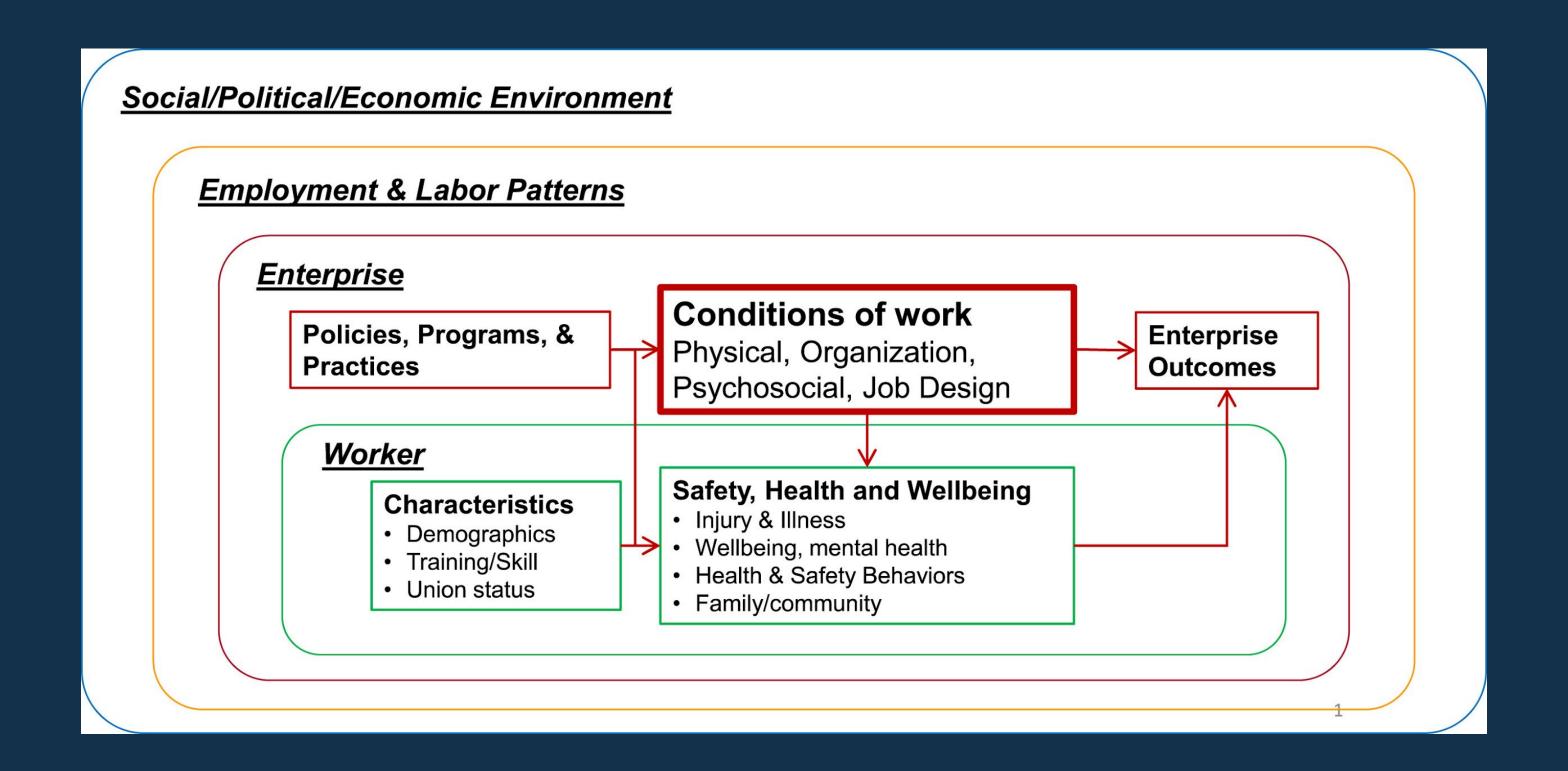
Policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.



-NIOSH

#### How We Conceptualize Our Work

from Harvard Center for Work, Health & Wellbeing





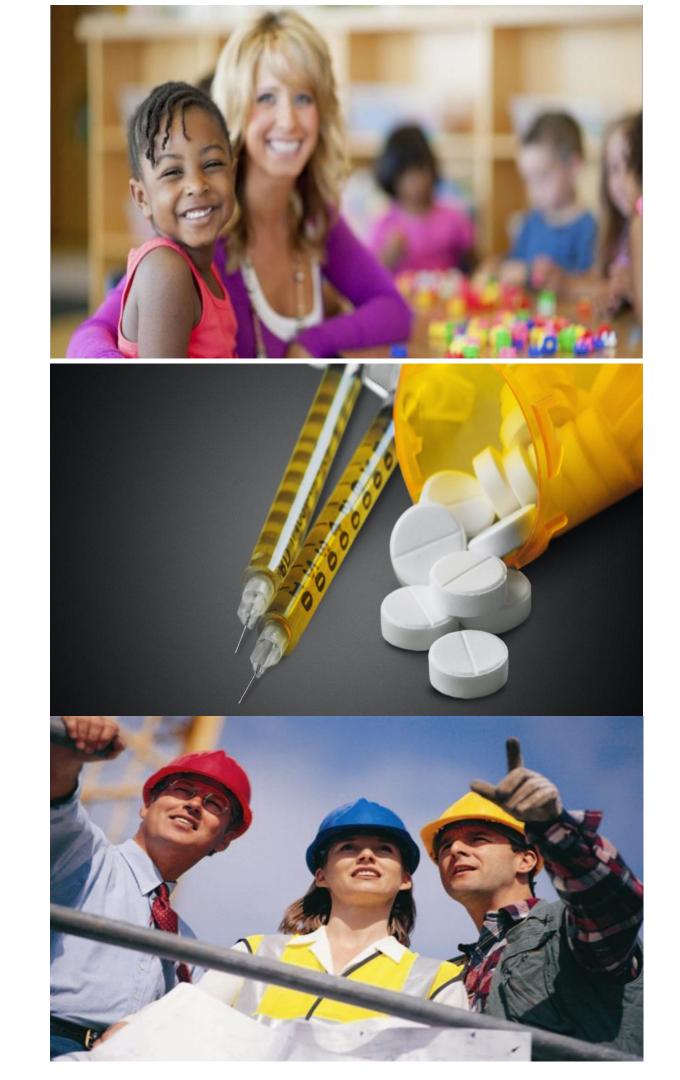
#### **Our Research**

- Rural and Urban Clinician Well-being and Targeted Improvement Interventions during COVID-19 (Meltzer-Brody, Baernholdt, Mazur)
- Total Worker Health® Approach to Reduce Falls and Advance Fall Protection in Firefighters (Ryan)

### Pilot Projects

- Supervisor Support and Psychosocial Safety in the Workplace: A Feasibility Study with Socioeconomically Disadvantaged Mothers (Salomon)
- Integrating NIOSH TWH Elements into a Conceptual Model for Opioid Misuse among Workers in Industries with High Risks for Injury and Opioid Dispensing (Weaver)
- Job Stress and Construction Workers: Gender Differences (Chen)

Announcing our new RFA this week!



#### Connect with the Carolina Center!

 Go to <u>https://healthywork.unc.edu/</u> <u>contact-us</u> to be added to our listserv

 Follow us on socials for updates and resources:

@thecarolinacenter





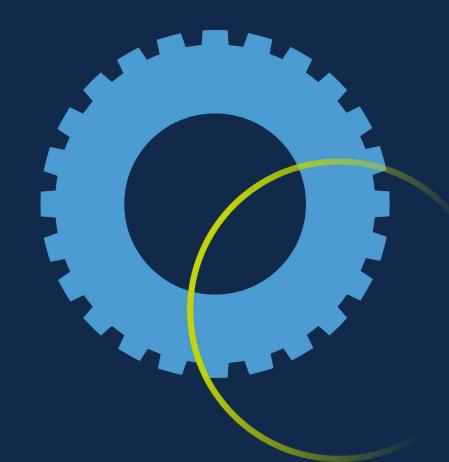


Challenges in Studying New
Hire-Supervisor Interactions: Lessons
Learned in the *NC Works 4 Health*Study











### Shawn M. Kneipp, PhD, ANP, APHN-BC

Professor UNC-CH School of Nursing

#### **Gregory Raymond**

NC Works4Health Recruitment Coordinator

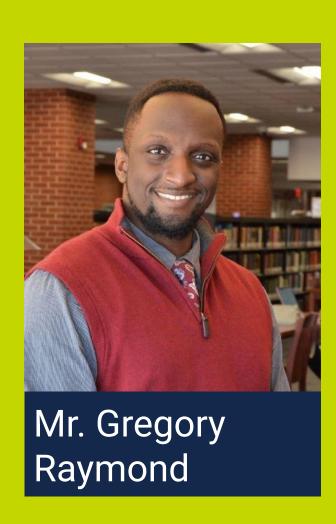
May 14, 2024

# Meet our Speakers

Dr. Shawn Kneipp



NC Works 4 Health



Shawn Kneipp is the study Principal Investigator. Her research has focused on the intersections of employment/unemployment, chronic health conditions, and socioeconomic disadvantage.

Greg Raymond has a background in providing employment services to job seekers and employers through state-level career centers. He is currently the recruitment coordinator for NC Works4Health, and has redesigned the employer recruitment strategies for the team.





## Presentation Overview

- NC Works 4 Health Study Background, Aims
- Supervising 4 Success (S4S) Employer-Level Intervention
   Foundation, Development
- Pre- vs. Post-COVID Employer Engagement
- Employer Recruitment Strategy & Study Design Changes
- Current Status & S4S Preliminary Findings
- Recommendations for Future Research, Practice







# Learning Objectives



- 1. Learn about the *NC Works4Health Supervising 4 Success* program, which trains supervisors to create a supportive environment for new workers.
- 2. Compare strategies for recruiting employers into research trials.
- 3. Describe challenges to cluster randomization in studies that test support programs for unemployed people starting new jobs.



#### Research Team

Dr. Shawn Kneipp – Principal Investigator
Dr. Laura Linnan – Co-Investigator
Dr. Deb Tate – Co-Investigator
Dr. Michael Kosorok – Co-I / Statistician
Dr. Nisha Gottfredson – Co-I / Statistician
Drs. Will Cox & Patricia Devine – UW-Madison
Dr. Joe Himle – University of Michigan

Grant Berry – Project Manager Crystal Cao - Assistant Project Manager

Robert Gilmore – DSS Partner/Employer Support Gregory Raymond - Recruitment Coordinator Elizabeth Fraser – Lifestyle Coach

Shelly Skeen - Recruitment/Data Collection

Jennifer Lesniak - Data Collection

Karen Vellacott-Ford - Data Collection

#### **Student Team Members**

Chata Chovatiya (SOB)
Anna Matthews\*\* (SON)
Randi Mcarthur\*\*(SON)
Shilpa Shrestha\*\* (SON)
Hanna Barker (SoPH)
Ariana Gales (SON)
K. Derezinska-Choo (SON)
Lindsay Patterson (SON)
Caroline Ford (SoPH)
John Sperger\*\* (SoPH)

Anne Henderson\* (SON)

Janet Idol\* (SON)

Binqin Huang\*\* (SON)

Sonja Richard (UNC-G SON)

Ben Roddy\* (SON)

#### NC Works 4 Health







#### **Community Partners**

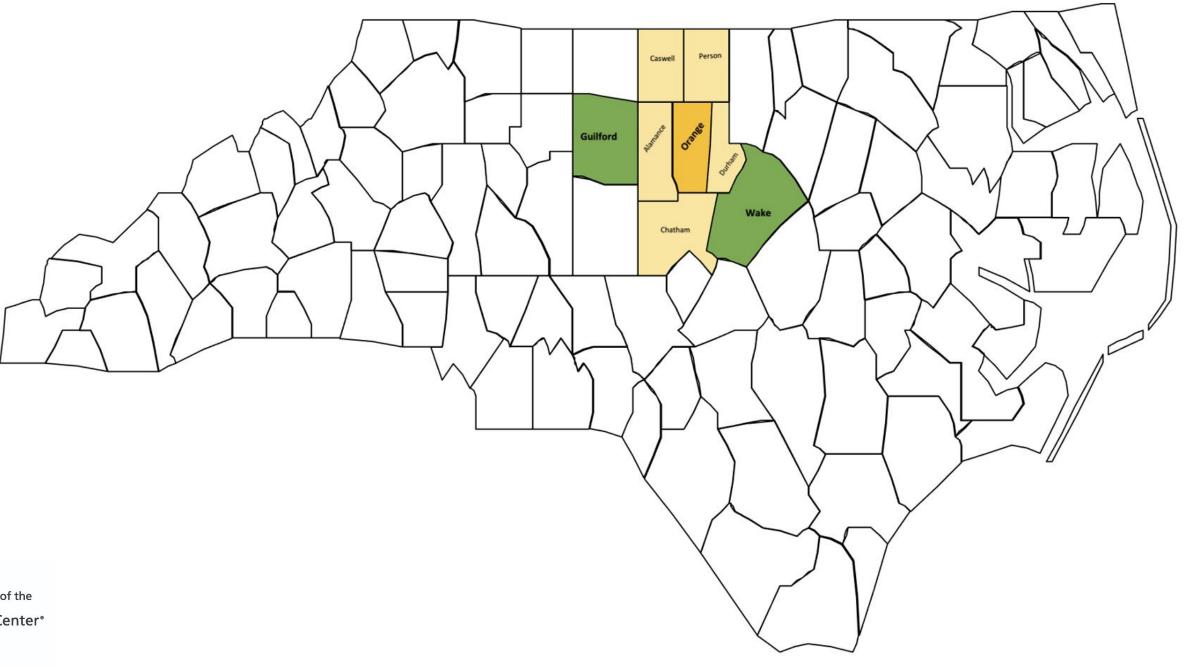
Departments of Social Services

NC Works Career Centers / Workforce Boards

NC Department of Commerce

**County Health Departments** 

Other Community-Based Organizations

















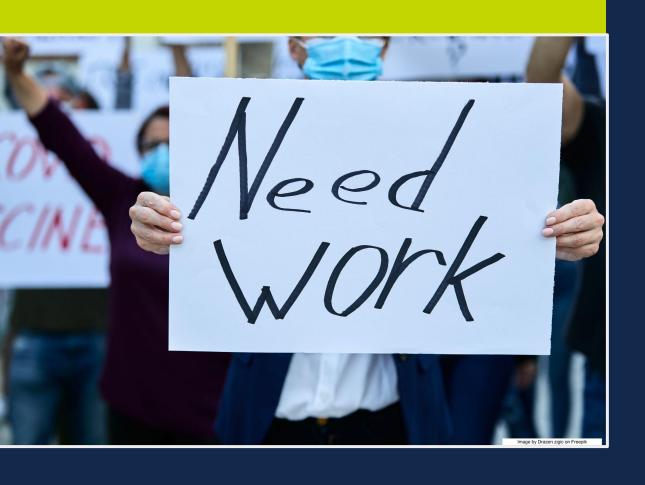
## Overall Study Goal & Aims



To adapt (Phase I) and test (Phase II) the effectiveness of a multilevel intervention to reduce chronic disease risks in socioeconomically disadvantaged (SD), unemployed populations that can be readily adopted by both agencies serving this population and employers.

## Background & Significance:

Unemployment Episodes & Chronic Disease Risk



- Unemployment episode = ↑ chronic disease risk through stress¹ and less healthy coping² and health behavior pathways
- Less healthy behavior changes persist up to 5 years post-job loss.<sup>3</sup>
- Results in accelerated weight gain of 15-20 lbs.<sup>4</sup>
- Job loss ↑:
  - the odds of developing new chronic disease by 43%<sup>5</sup>
  - stroke-specific mortality by nearly 4 (OR=3.54)<sup>6</sup>
  - o risk of death by 73-77%.
- † in socioeconomically disadvantaged (SD)
   populations, such as those using Department of
   Social Services-Employment and related program
   services (DSS-E).



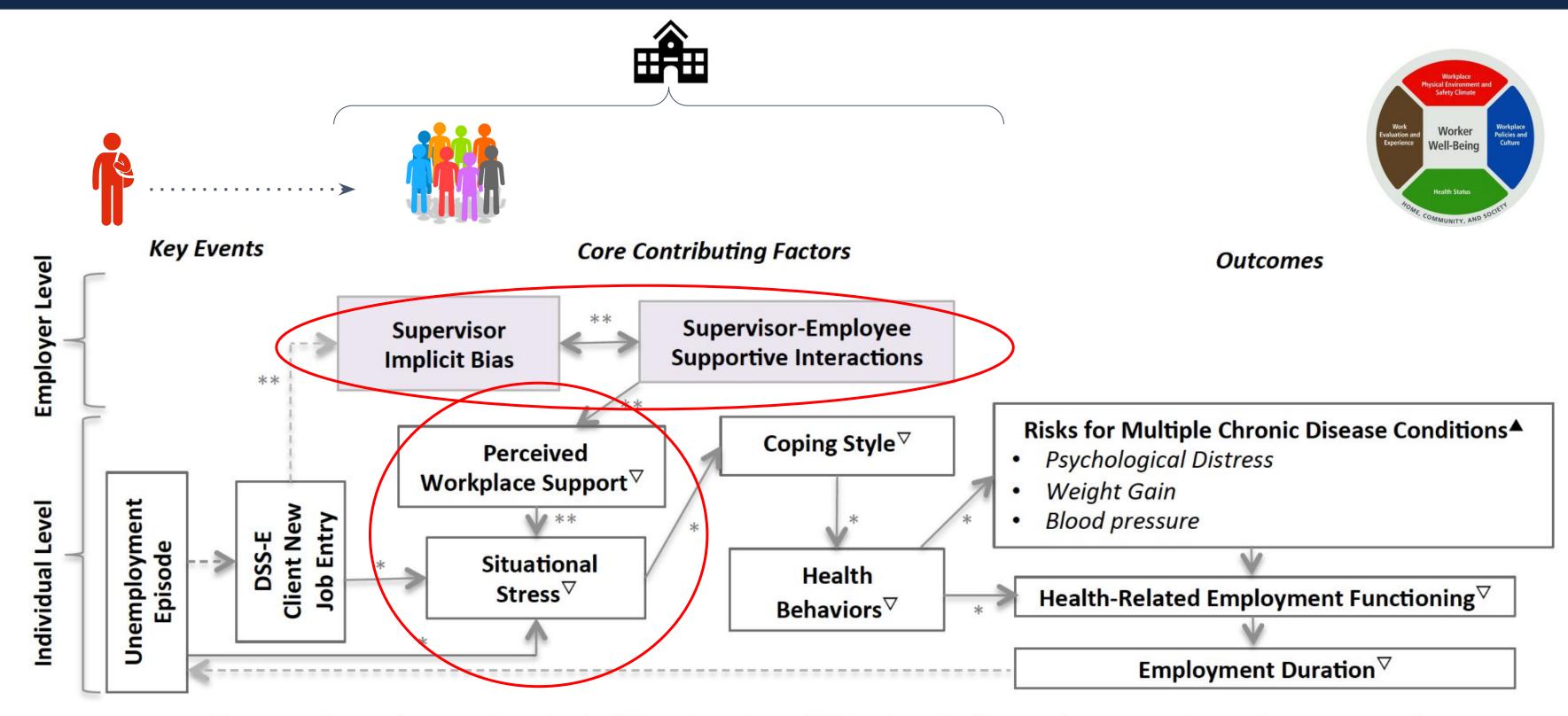
## Vulnerability, Bias, & Supervisor Support



- Discrimination, stressors in employment environments ↑ psychological distress & chronic disease risk.¹
- SD, unemployed adults = ↑ reliance on economic
   & job training programs that facilitate job
   placement.²
- 'Welfare bias' & auxiliary biases intertwine, shape job performance expectancies,<sup>3</sup> which drive actual performance.<sup>4</sup>
- Supervisor support ↓ employee stress<sup>5</sup>, likely facilitates job retention and ↓ recurrent unemployment episodes for SD workers.

<sup>1</sup> Okechukwu, Souza, Davis, & de Castro (2014). Rospenda, Richman, & Shannon (2009). Hughes & Dodge (1997). Fremstad, Parrott & Sherman (2004). O'Leary & Kline (2009). Um'rani & Lovell (2000). Stuber & Kronebusch (2004). Holzer, Stoll, & Wissoker (2004) Fremstad, Parrott & Sherman (2004). O'Leary & Kline (2009). Um'rani & Lovell (2000). Stuber & Kronebusch (2004). Holzer, Stoll, & Wissoker (2004) Fremstad, Parrott & Sherman (2004). O'Leary & Kline (2009). Um'rani & Lovell (2000). Stuber & Kronebusch (2004). Holzer, Stoll, & Wissoker (2004) Fremstad, Parrott & Sherman (2004). O'Leary & Kline (2009). Um'rani & Lovell (2000). Stuber & Kronebusch (2004). Holzer, Stoll, & Wissoker (2004). Holzer, Stoll, & Wissoker (2004). Stuber & Schlesinger (2006). Holzer, Stoll, & Wissoker (2004). Stuber & Schlesinger (2006). Holzer, Stoll, & Wissoker (2004). Stuber & Schlesinger (2006). Holzer, Stoll, & Wissoker (2004). Holzer, Stoll, & Wissoker (2004). Stuber & Schlesinger (2006). Holzer, Stoll, & Wissoker (2004). Holzer, Stoll, & Wissoker (2004). Holzer, Stoll, & Wissoker (2004). Holzer, Stoll, & Wissoker (2006). Holzer, Stoll,

### Study Framework, with Intervention Pathway Effects & Employee-Employer Design Challenges



Intervention effects on select pathway at the individual (\*) and employer (\*\*) level. Dashed line pathways ( --- ) are relevant to overall problem, but not examined within scope of proposed study aims.  $\triangle$  Primary study outcomes;  $\nabla$  secondary study outcomes.



#### Phase I: Employer-Level Intervention Development

#### "Break the Bias Habit" Training

Developed by University of Wisconsin-Madison social psychologists Patricia G. Devine, PhD and William Cox, PhD





#### **Intervention Components**

#### **5 Bias-Reducing Strategies**

**Strategy 1: Stereotype Replacement** 

**Strategy 2: Individuation** 

**Strategy 3: Perspective-Taking** 

**Strategy 4: Situational Explanations for Behavior Strategy 5: Increasing Opportunities for Contact** 

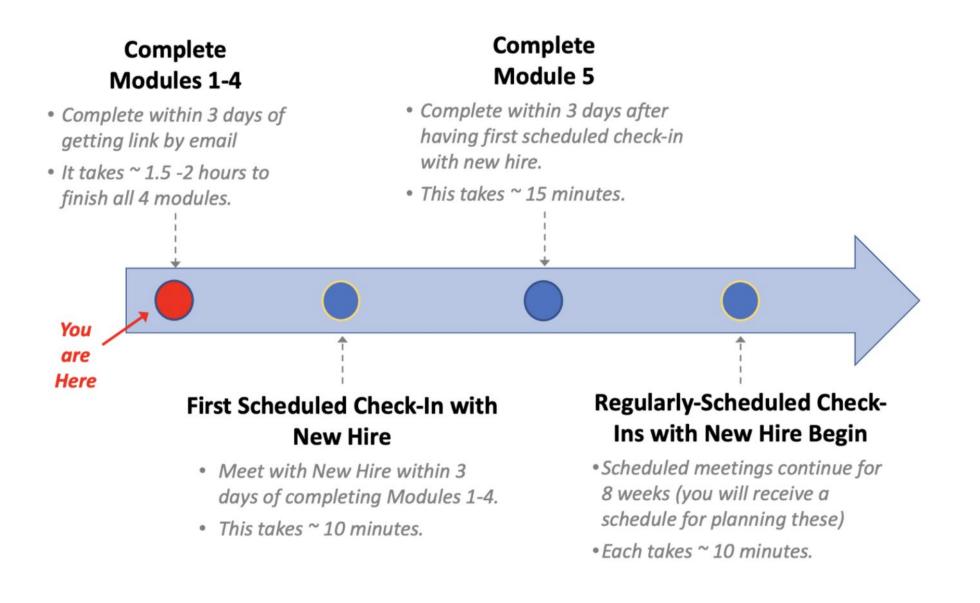
+ 10, 5-minute Check-Ins w/ scripted interaction prompts



#### **Supervising for Success Program Schedule**

This program includes 5 training modules that you will complete online, as well as scheduled time to check-in with newly hired employees who are participating in the *NC Works 4 Health Study*.

The program schedule is as follows:



## Employer Focus Group Findings

- Highly desirable, particularly small businesses.
- 'Unintentional bias' was accepted phenomenon.
- Interactive component and self-assessments throughout viewed positively.
- Recommended increasing number of recommended check-ins promptly after hiring.





## Characters with Relatable Situations & Stories











- Bias between supervisor & new hire characters takes many forms (age, race, gender, social/economic status and roles).
- Opportunities to assess interactions, rate them, and view more constructive communication, where applicable.

#### MEET OUR SUPERVISORS



Reggie is a supervisor for O'Reilly's Heating and Air. Let's listen to him introduce himself and his experience as a supervisor/manager thus far.

► 0:00 / 0:50 **-----** •) :

"Hi, I'm Reggie. I was hired four years ago into an entry-level position at O'Reilly's Heating and Air. After two years, my supervisor was being promoted and asked if I was interested in his position. I liked the idea of having more decision-making power and making extra money, but I quickly realized how stressful supervising could be. Dealing with employees was hard! I wasn't prepared to handle all the issues that employees brought to my attention, and I didn't always respond well. I was ignoring some employees that I considered more difficult to deal with, and I got upset with employees that frequently brought issues to my attention. I lost two employees who told others I was the reason they left. That was hard to hear. In the first few months, I even thought about quitting."



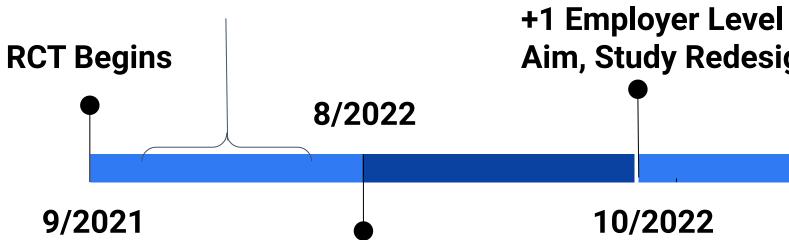
#### **Employer & Supervisor/New Hire Challenges**



**Employer Specialist** unable to contact 18+ employers who hired study participants to discuss enrollment; contacted & enrolled 2

- Adaptive biased coin randomization (2) group: IG, CG) to Stepped wedge randomization (1 group)\*
- Randomized to 0, 3, 6 month intervention receipt
- Supervisor anonymity/consent

- 75 employers expressed interest; 35 on webpage
- 28 enrolled
- 90 supervisors within employers completed
- 2 direct supervisors of IL participants



**Aim, Study Redesign** 12/2022 **Supervisor-New Hire Challenges Remain** 

**Employers Enrolling**;

12/2023

#### **Employer Summit**

- 10 Employers Participated
- Desire for intervention available to all employers = study design change\*
- High cost, no or low evidence DEI
- Bypass CEO

#### Recruitment **Strategy Change**

- Focus on all employers in study counties
- LinkedIn, NC Works Career Center employer networks in 8 study counties (in person, email listservs), Chambers of Commerce

#### **Chambers of** Commerce

**Chambers of Commerce** pilot: Paid service for distribution of study info in 1 county; 2 in-person events; now w/ some data.

3/2024



<sup>\*</sup>Sperger, J., Kosorok, M., Linnan, L. & Kneipp, S. M. (in press). Multilevel stepped wedge designs (MLI-SWDs). Prevention Science.





## Revised Supervisor & Employer Engagement



Strategies

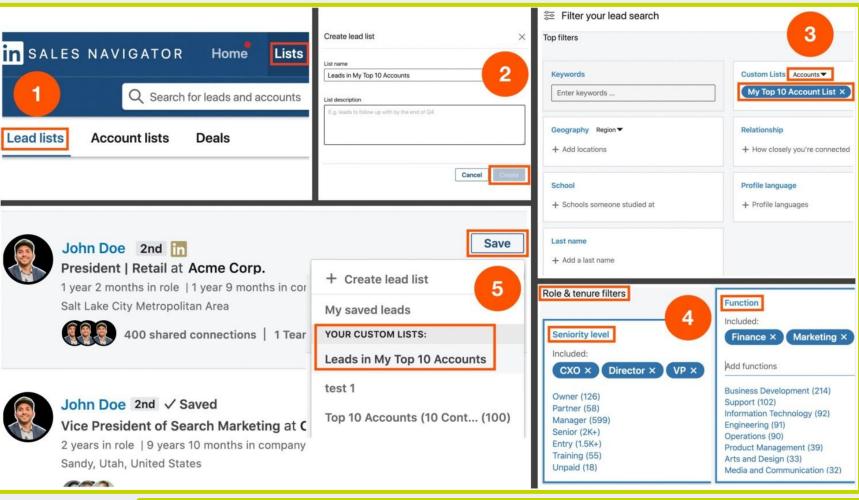


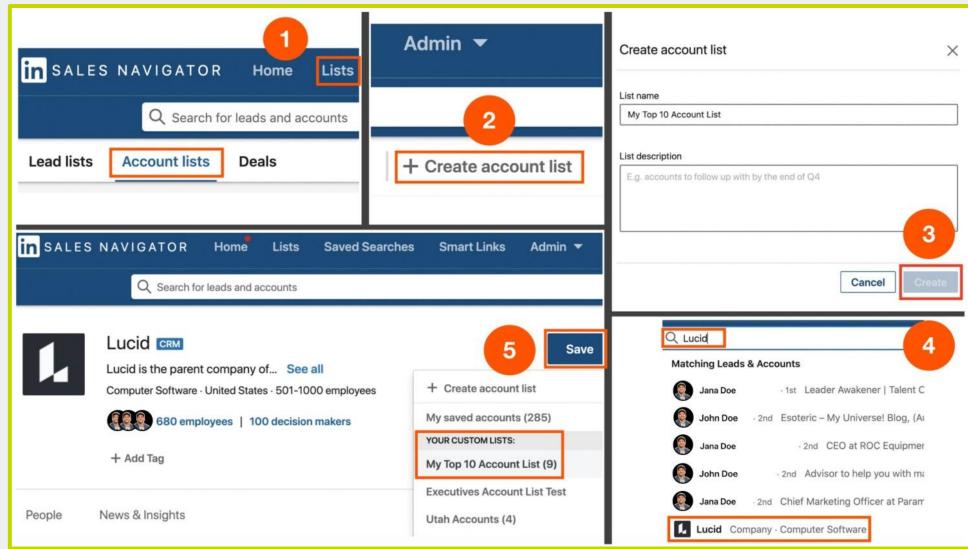
#### Revised Strategies for Employer Engagement

- Social Networking Platforms
  - LinkedIn (Navigator)
  - ZoomInfo
  - o Apollo
  - LeadIQ Inc.
- Highly Networked Agencies
  - NC Works Career Centers
  - Depts of Social Services
  - NC Dept of Commerce (+)
  - Chambers of Commerce (+)









# LinkedIn Navigator & Employer Outreach: Highlights

#### **Features / Advantages**

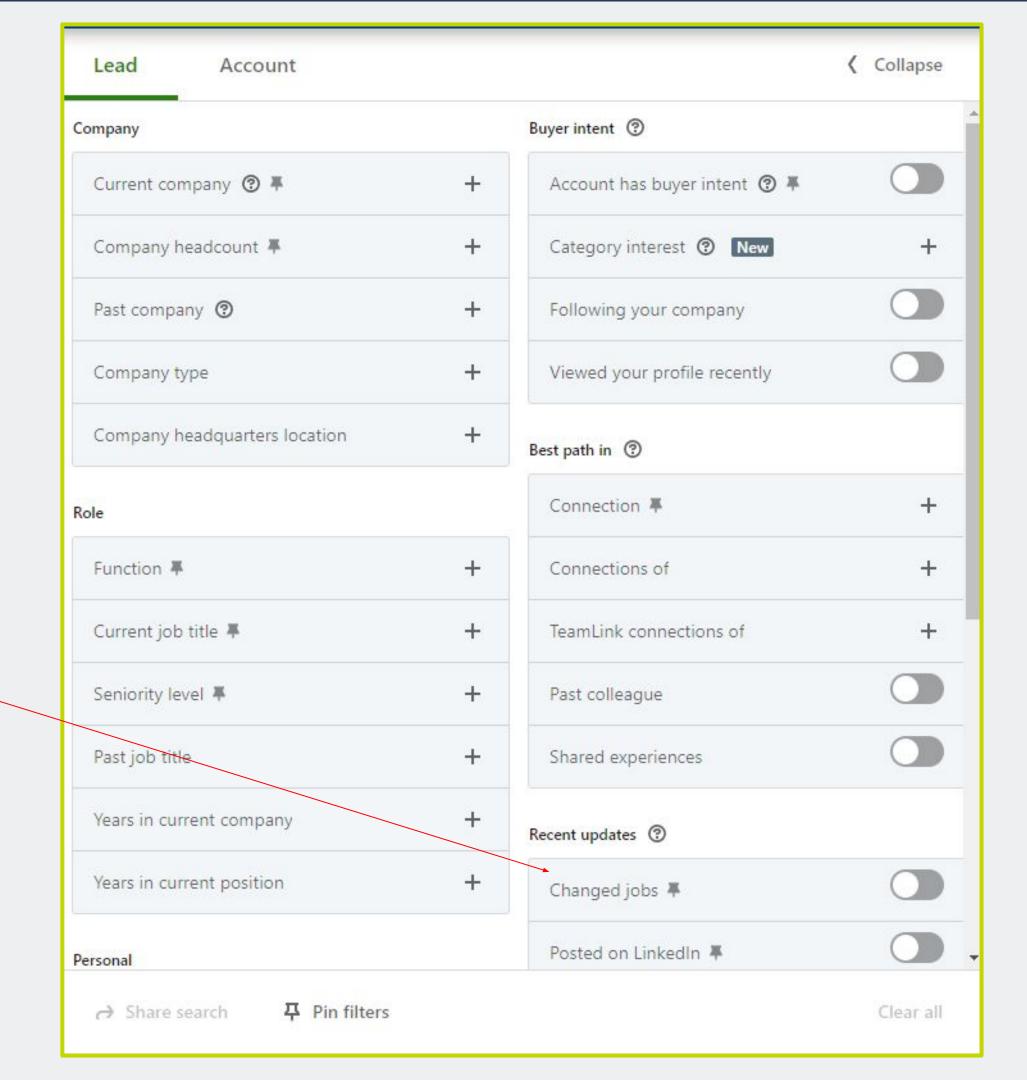
- Sending InMail directly
- Unlimited profile searches
- Connections: Shared interests, your network

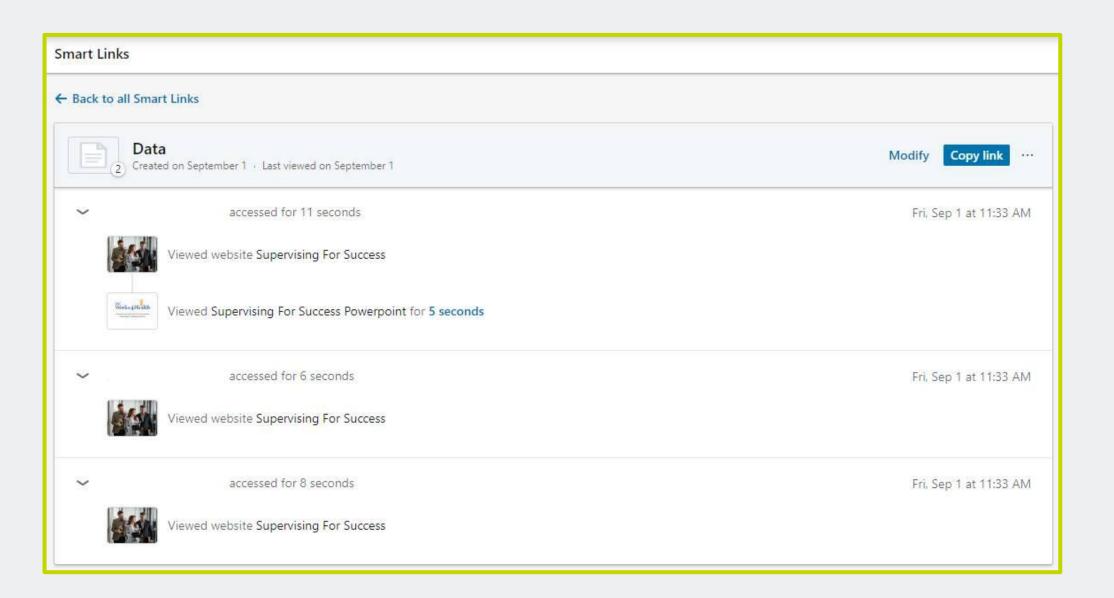


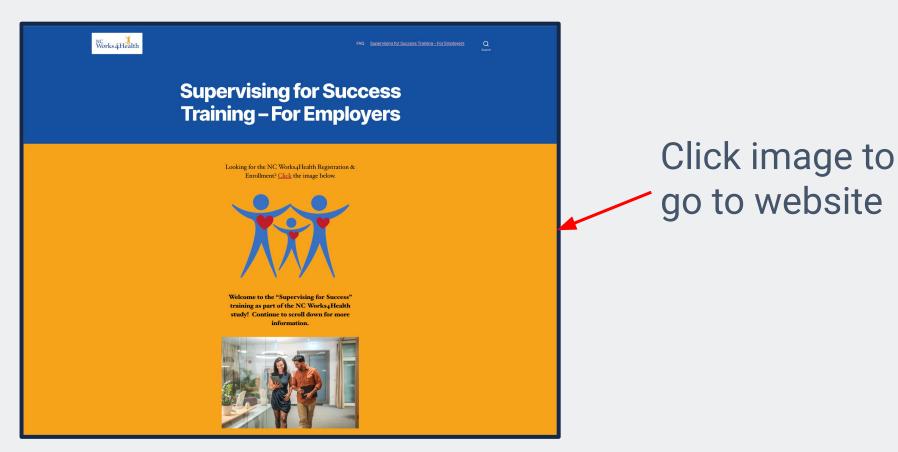
## LinkedIn Navigator: Highlights

- Recommended leads & tracking features
- Advanced filtering
- Job change alerts for over 630 million users









# LinkedIn Navigator & Employer Outreach: Highlights

#### **Features / Advantages**

- Links to NCW4H / S4S website designed for employers
- Tracks views of S4S / Employer website





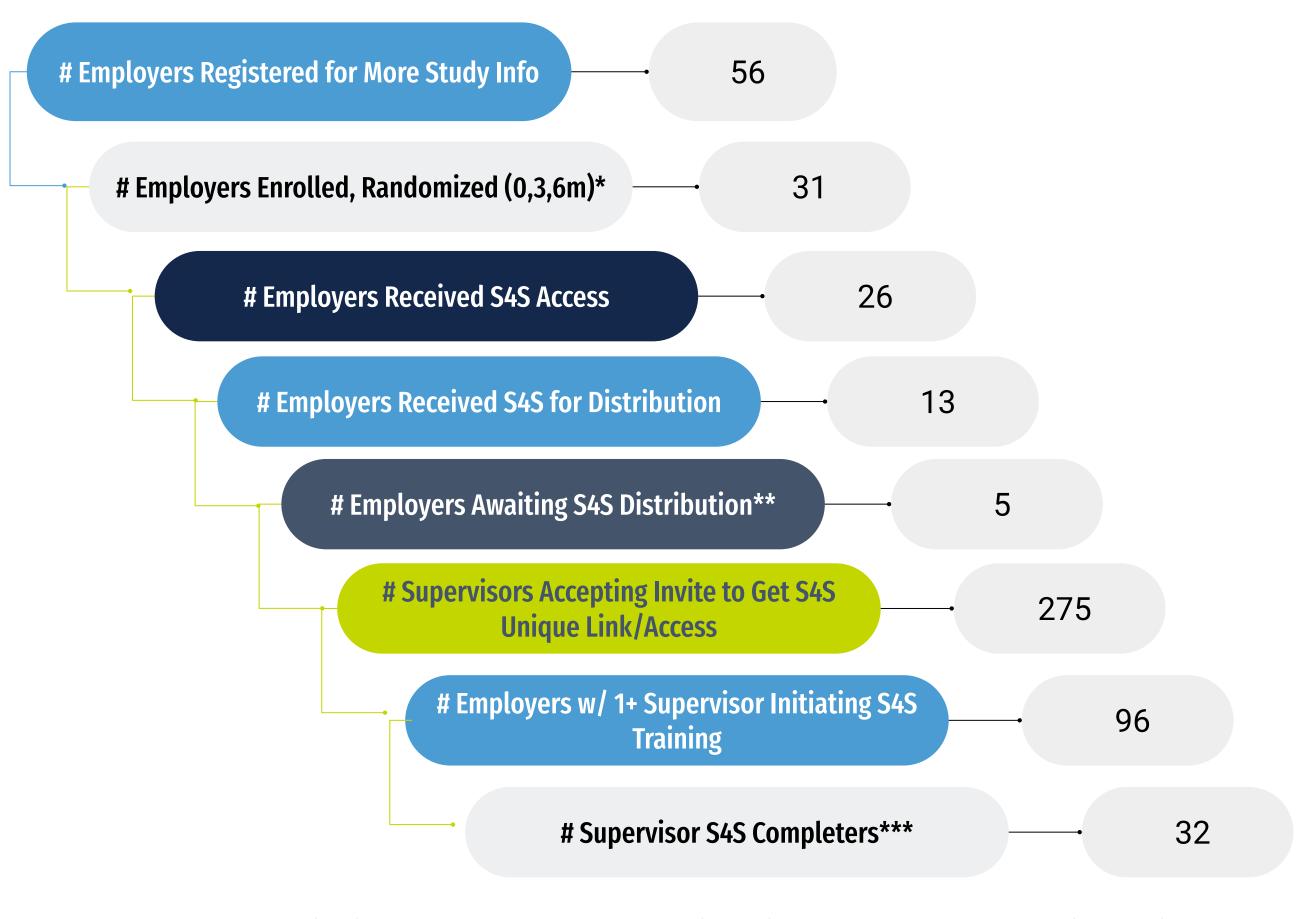


# Preliminary Supervisor Findings



# Employer & Supervisor Engagement: Overall





<sup>\*</sup>Stepped wedge randomization (SWR) - see Sperger, Linnan, Kosorok & Kneipp (in press). Multilevel stepped wedge designs (MLI-SWDs). <u>Prevention Science.</u> Invited manuscript submission from the NIH Office of Disease Prevention for the special issue "Design and analytic Methods to Evaluate Multilevel Interventions to Reduce Health Disparities."

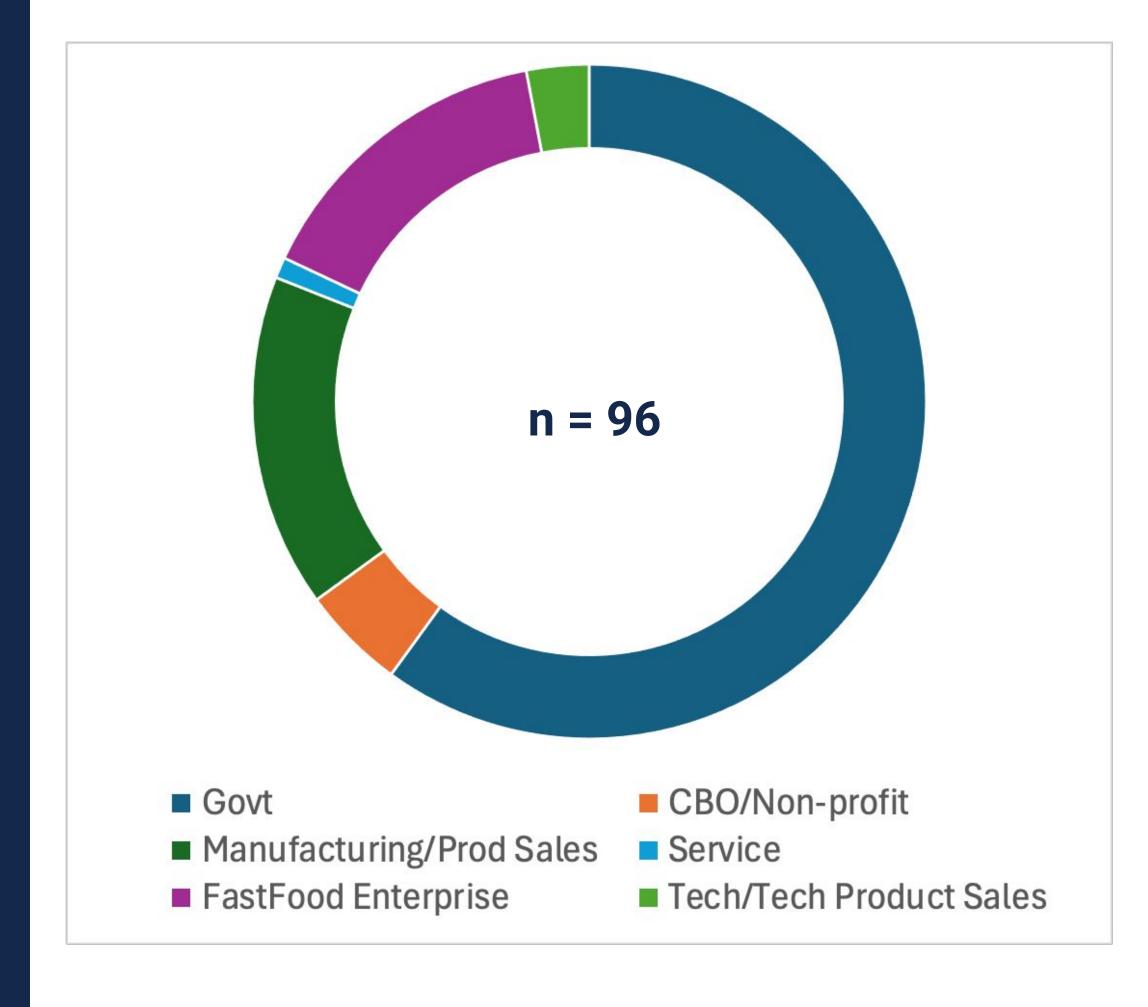


<sup>\*\*</sup>Due to SWD for receipt either immediately, at 3 months, or 6 months.

<sup>\*\*\*</sup>Based on completion of self-assessment questions at end of training.

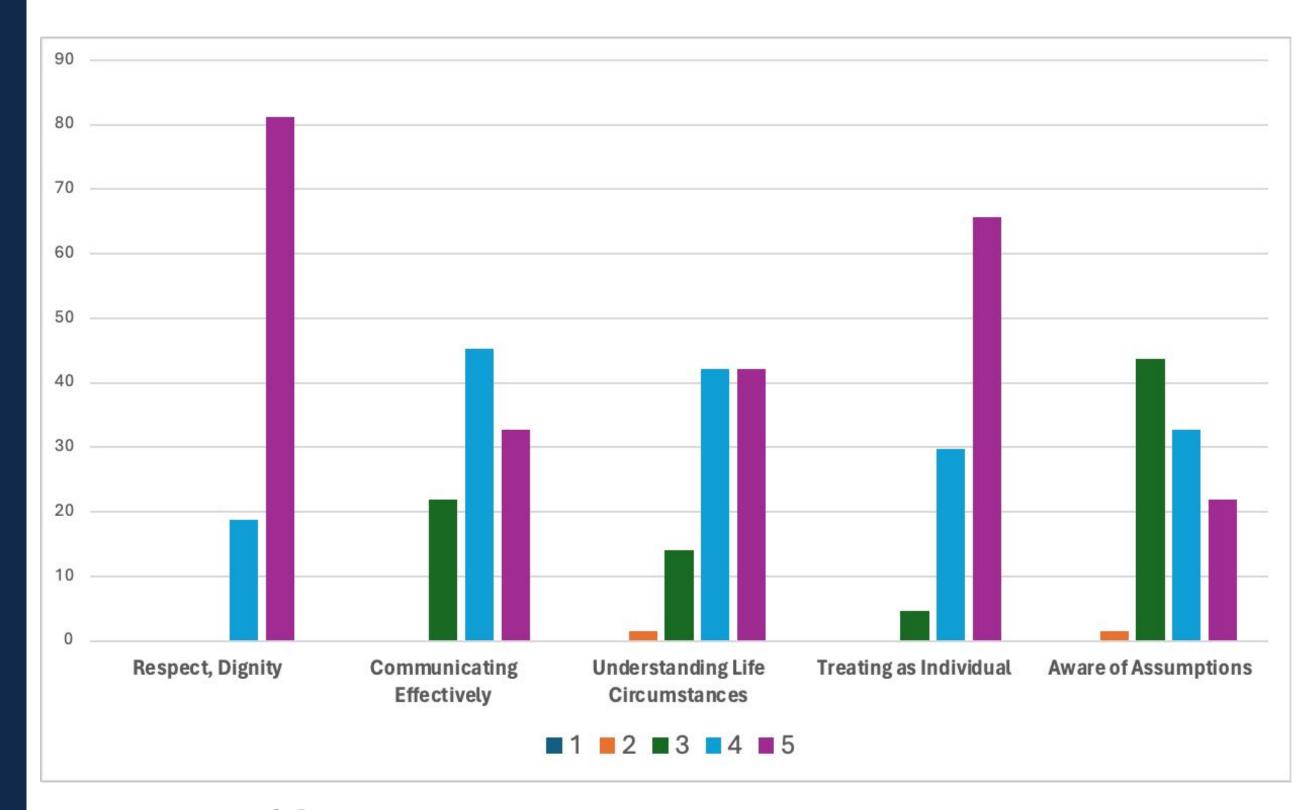
### Supervisor Participation

All Supervisors
within Employer, by
Employer Type



# Pre-S4S Intervention Self-Assessment

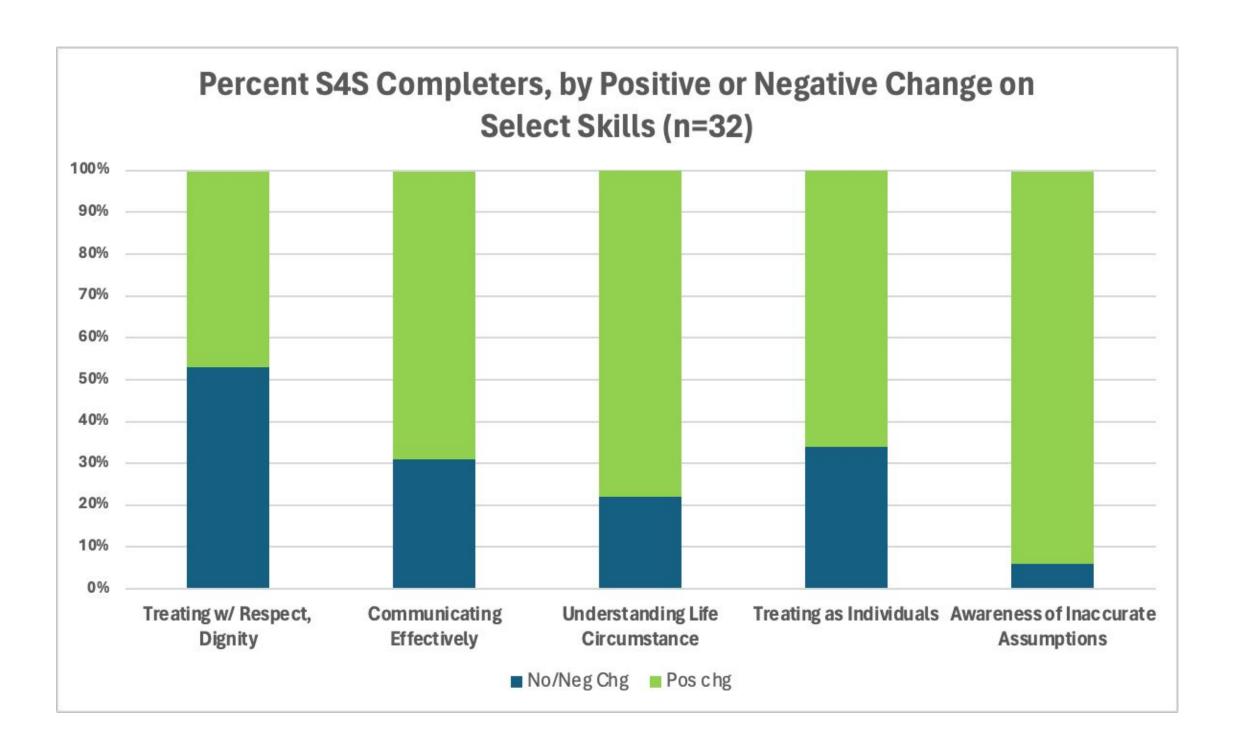
All Supervisors within Employer

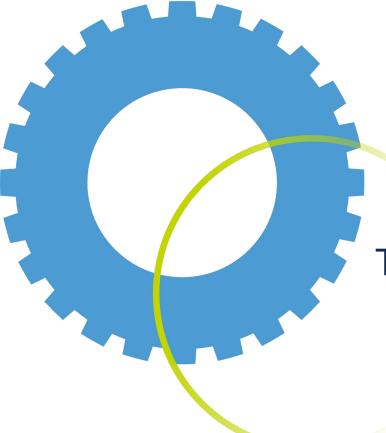


$$n = 64$$

# Pre-S4S Intervention Self-Assessment

All Supervisors within Employer





## Thank you!

The content from this presentation is from the Carolina Center for Healthy Work Design and Worker Well-being, one of 10 Centers of Excellence for *Total Worker Health®* funded by the National Institute for Occupational Safety and Health (NIOSH).

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