

Implementing a Sleep Health Education and Sleep Disorders Screening Program in Fire Departments

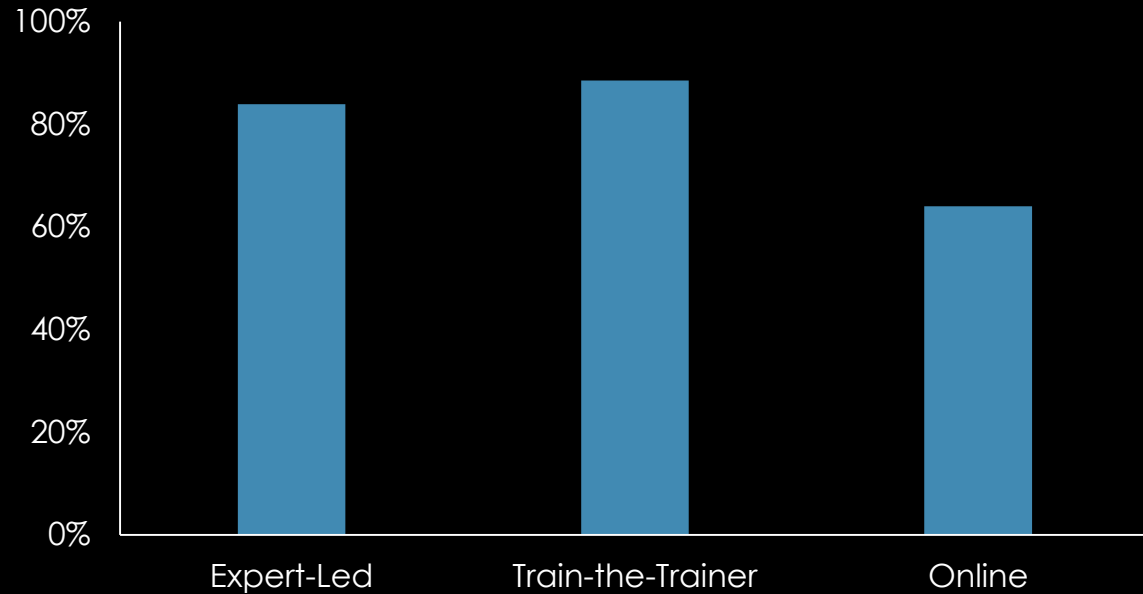
Barger et al. (2016) JOEM

Presented by Cassie J. Hilditch, Ph.D.

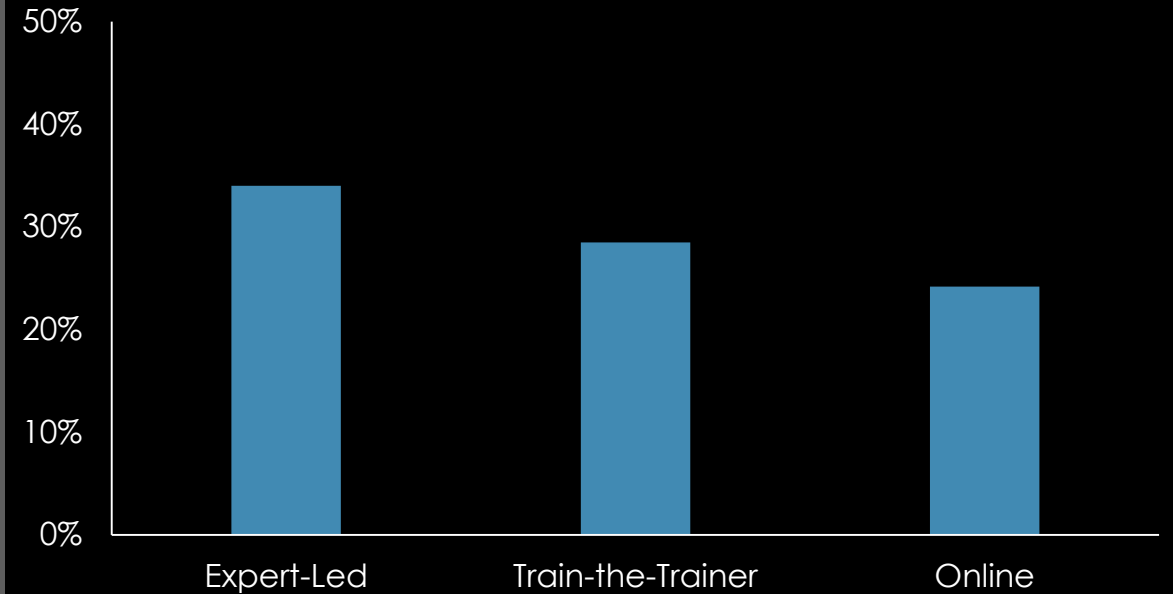
Study Design

- 8 fire departments; 244 stations; >6000 fire fighters
- Assigned to implementation method (not random)
 - Expert-Led
 - Train-the-Trainer
 - Online
- Knowledge assessed with surveys pre & post training
- Each training followed by voluntary sleep disorders screening program
- End-of-program follow-up conducted after ~1y with survey and focus groups

Training participation rate



Improvements in knowledge



○ Online

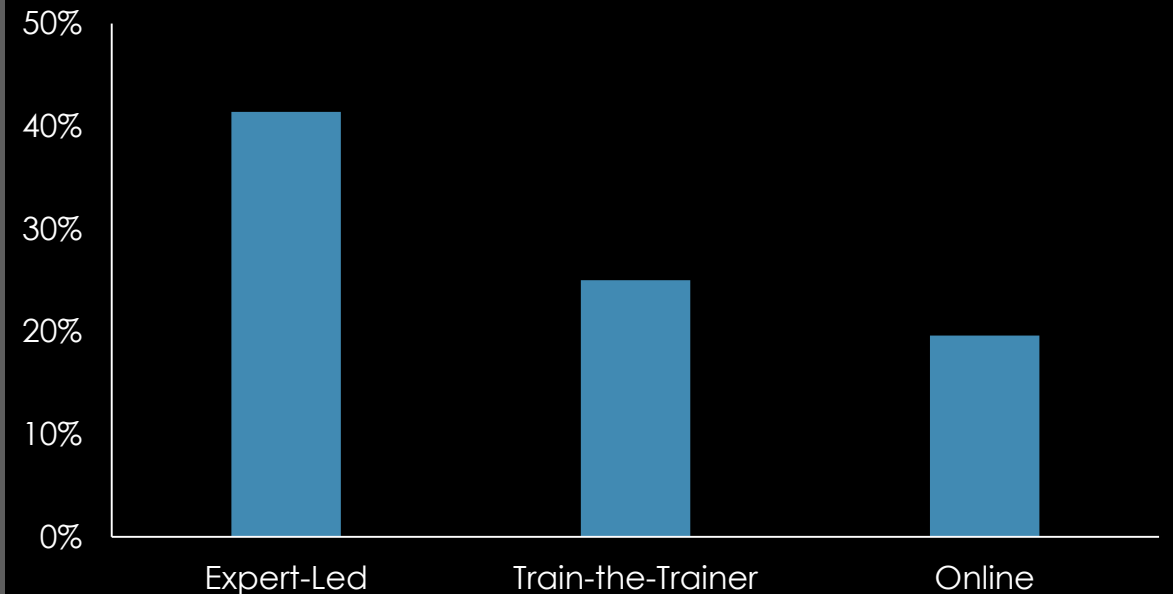
- lower participation rates

○ Expert-Led

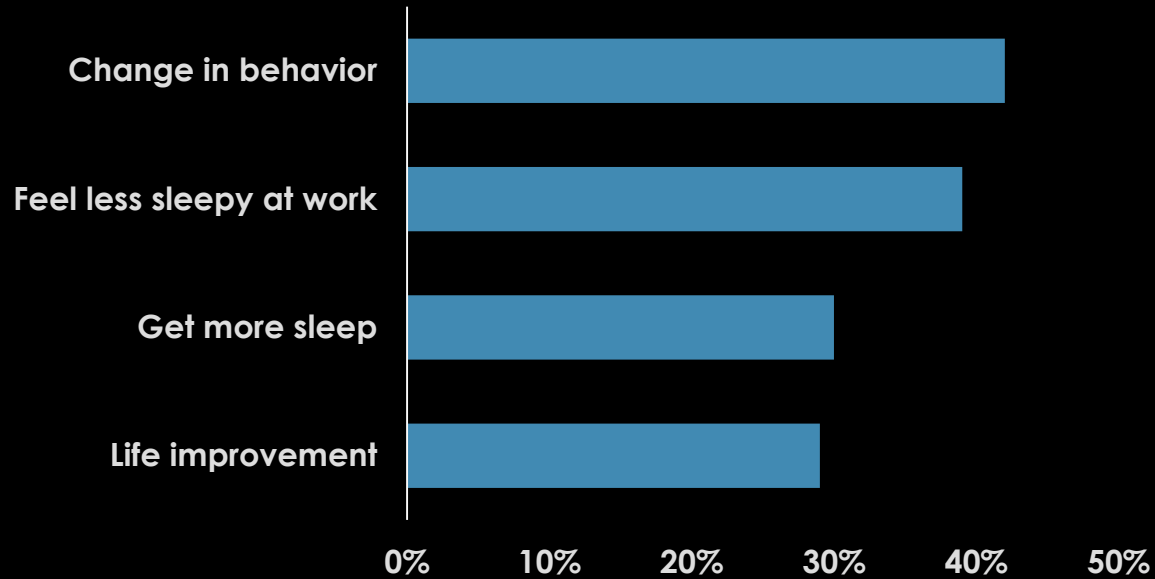
- higher knowledge retention

- more likely to follow up with a sleep doctor

Sought clinical sleep evaluation

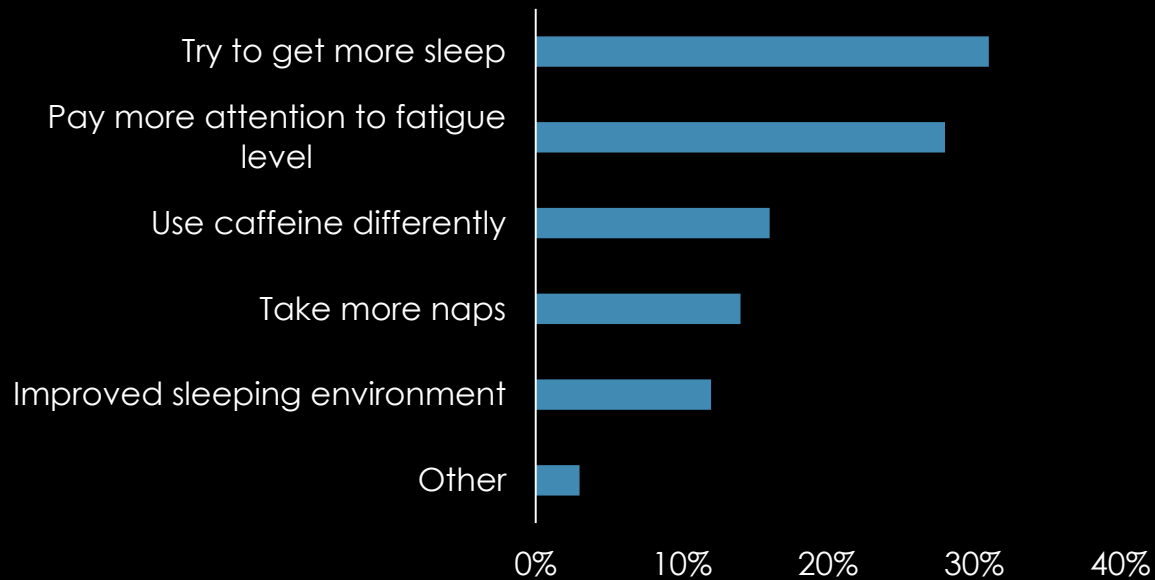


% of participants reporting program effects



“Knowing now that it is much more important, sleep is precious to me”

% of participants reporting behavior change



“Station-wise it has [changed]. The guys will do half caffeine per coffee”

Keys to success

- Transparent and effective communication (in person)
- Involve unions
- Management support
- Identify a local champion
- Establish a contact person
- Ensure confidentiality, non-punitive
- Ensure training is evidence-based, state-of-the-science
- Choose an implementation style that best fits your organization
- Tailor training to industry, company, department
- Follow up to assess success, barriers, new risks

Alertness Management in Aviation Operations: Enhancing Performance and Sleep

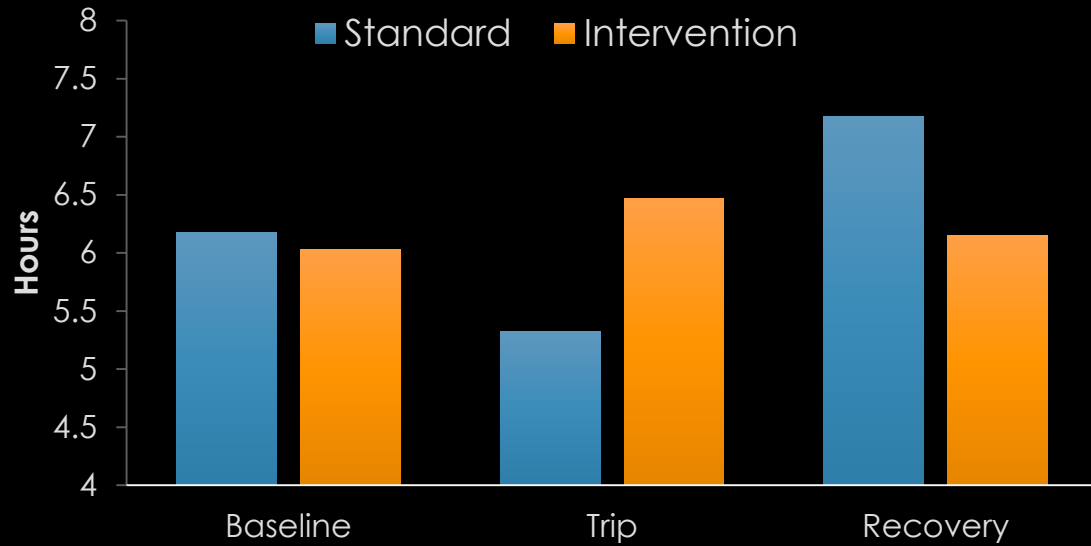
Rosekind et al. (2006) ASEM

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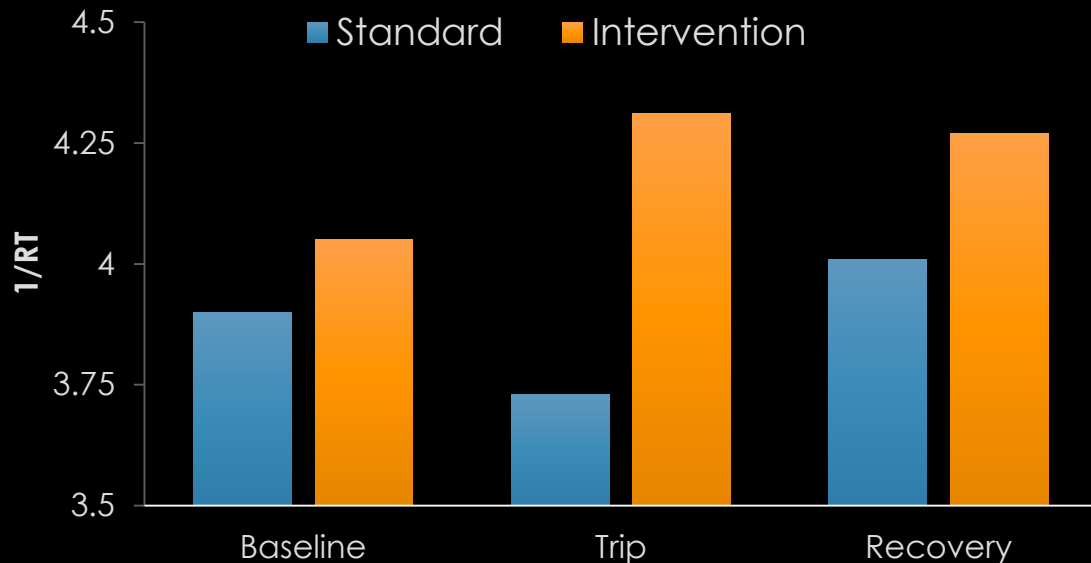
Study Design

- US domestic airline; ~1000 pilots
- 17min introductory video delivered by management, pilots
- Background survey of pilots (23% response rate)
 - 87% “little” to “some” knowledge; average <50% on quiz
- Sub-group of 29 pilots
 - 3.5h training CD and schedule intervention
 - Assessed sleep, performance, alertness strategies

Mean Total Sleep Time per 24h



Mean Speed on Vigilance Task



- Pre-post training quiz scores increased (74% to 98%)
- No changes in reported use of alertness strategies
- Can't determine relative contribution of training vs. schedule change
- Couldn't follow up on medical screening due to medical privacy issues
- Changing schedules can be logistically challenging; model options first
- Remember keys to success

Top ways to deal with fatigue in the workplace

○ Develop and maintain communication and trust

1. Measure baseline; Identify fatigue risk hotspots
2. Deliver intervention
3. Measure results
4. Repeat!