

Interventions mitigating health risks among shift workers:

Current knowledge and workplace practices

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Background

Nearly 13% of Canadian workers work a regular night or rotating shift schedule (1). Shift work, especially permanent or rotating night shift work, may be related to higher risks of harmful health effects such as breast cancer (2), cardiovascular disease (3), and injury (4). Ways to reduce these health impacts are not well known.

Objectives

1. To summarize studies that aimed to prevent chronic disease in permanent and rotating night shift workers by completing a **literature review**.
2. To determine what stakeholders know and need to know about preventing shift work-related injury and disease by conducting an online **knowledge and needs survey**.
3. To exchange information with researchers and stakeholders about prevention, generate ideas on how to move forward in workplaces, and to identify future research needs. The OCRC and IWH hosted a **symposium** on this topic on November 6, 2012.

Literature Review

- Four different types of interventions were done with nurses, police officers, miners, and manufacturing workers
- Results were weak and inconsistent, with limited applicability

How interventions may prevent chronic disease in shift workers:

- Promoting adaptation of the body's circadian rhythm to shift work
- Reducing risk factors for chronic disease (e.g. diet and physical activity)

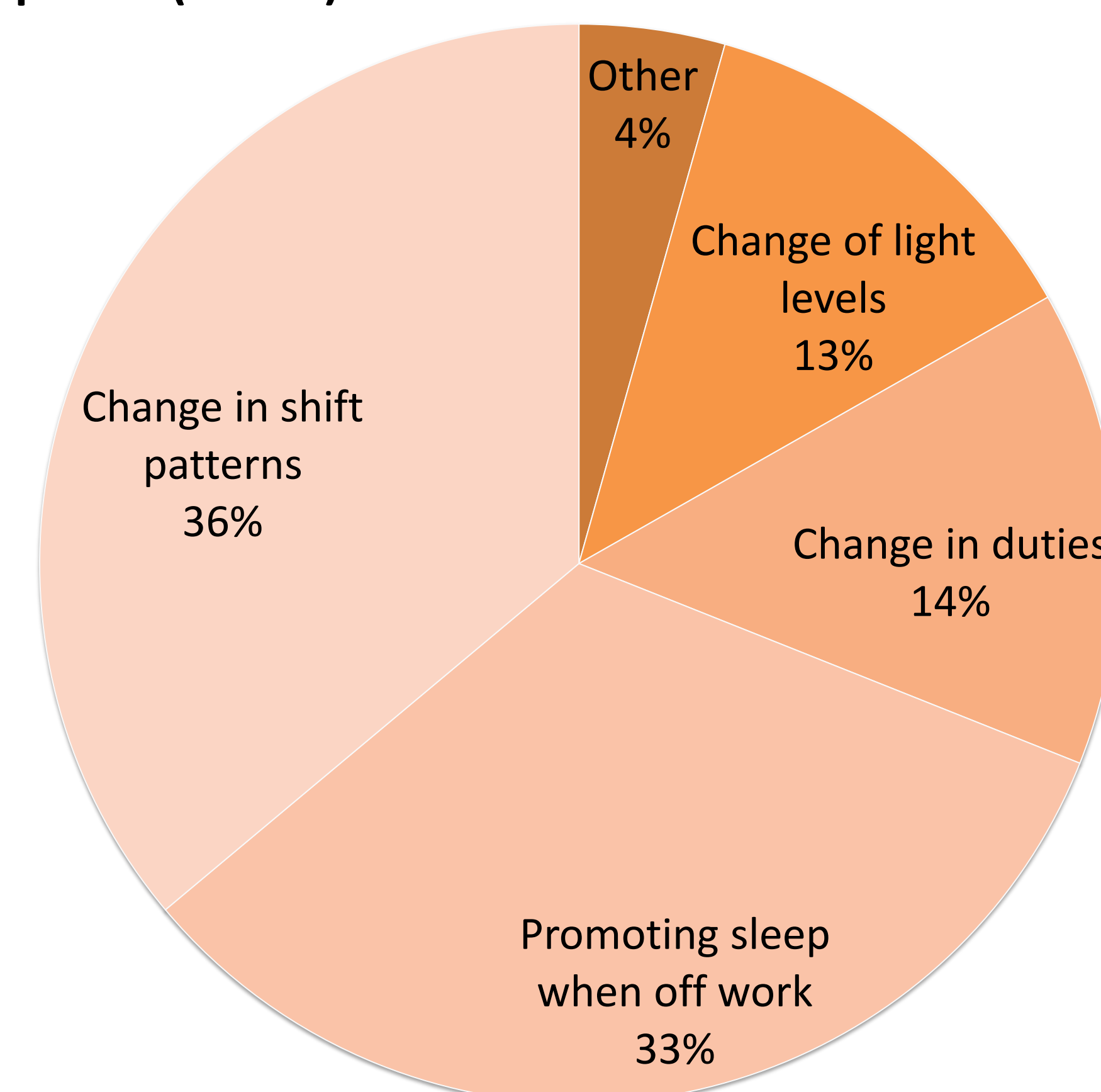
Interventions that have been tried with shift workers (5):

1. Schedule changes
 - Fast-forward rotating shifts are beneficial; inconsistent results were observed for the length and time of shifts
2. Controlled exposure to light and dark
 - The combination of exposure to timed bright light and the use of light-blocking glasses helped workers adjust to shift work
3. Behavioural changes
 - Physical activity and diet had modest effects on health
4. Pharmacological agents
 - Overall, melatonin, stimulants, or hypnotics did not significantly improve sleep quantity or quality

Knowledge and Needs Survey

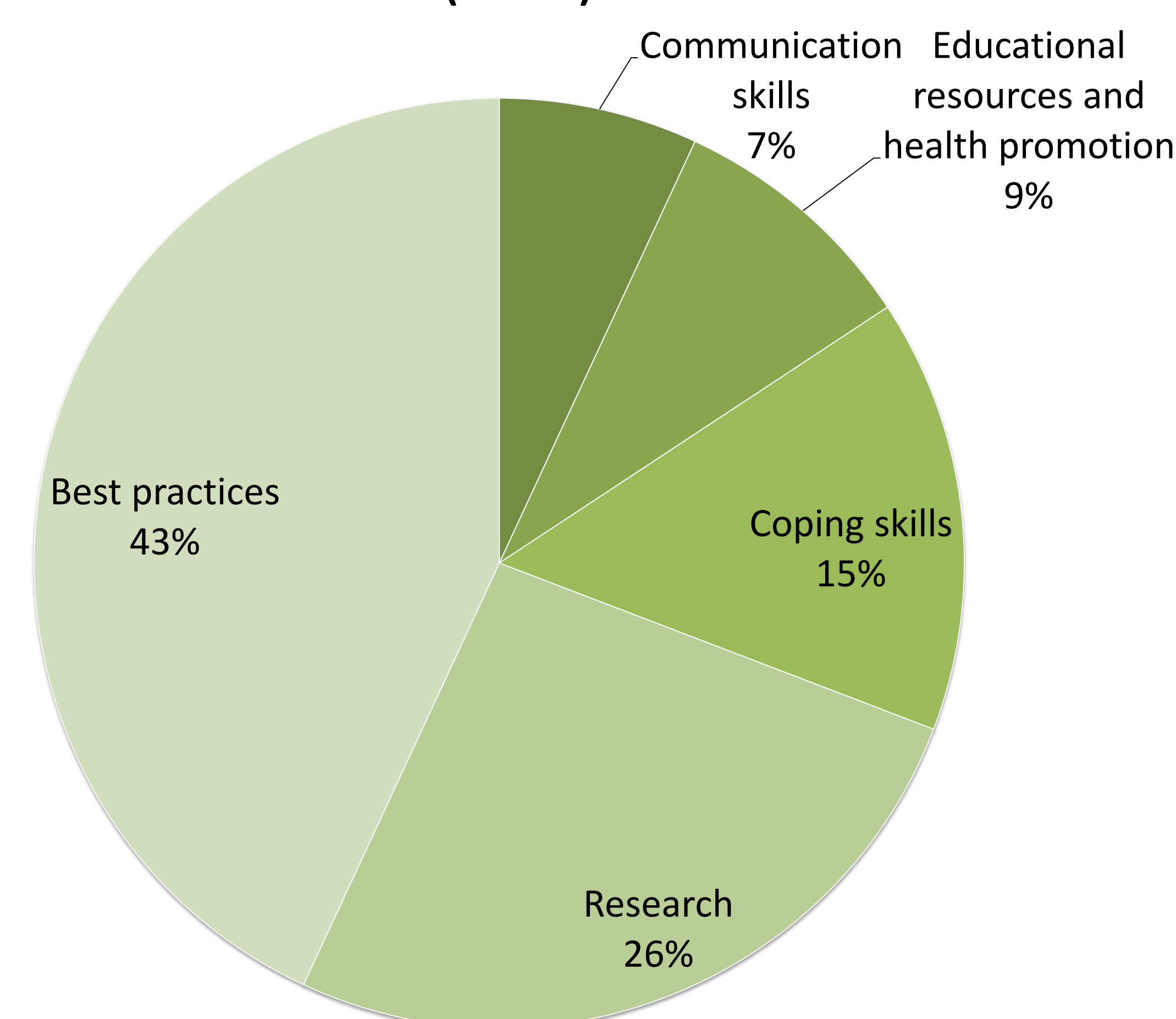
- 517 workers, employers, researchers, and others responded. One-third of participants were nurses.
- Health concerns ranged from quality of life (most frequent) to digestive problems (least frequent).
- There was a gap between high shift work prevalence and health concerns, and the lack of prevention efforts in workplaces.

Have any attempts been made to change shift patterns or in other ways to reduce the health impacts of shiftwork in your workplace? (n=435)



"We are at the very beginning of looking at developing a policy to encourage our staff to recognize fatigue as a health risk. I could use some help." - Manager

What would you like to receive from a one-day symposium on shiftwork interventions? (n=318)



"Presentation of evaluation from shift work interventions - so that we know what is effective." - Worker

Future Directions

High-quality studies of shift workers are needed to determine how different types of interventions, combinations of interventions, and innovative approaches affect workers' health. This information will be important for developing workplace practices that could prevent injury and disease related to shift work.

References

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