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## INTRODUCTION

Skin cancer has become a rising concern, especially in the province of Saskatchewan which receives large amounts of sunlight. The most preventable risk factor for skin cancer is exposure to ultraviolet radiation (UVR) which can have a variety of health impacts including damage to the skin, eyes and immune system (World Health Organization, 2012). Outdoor pool workers such as lifeguards are of special concern as they are exposed to UVR for several hours a day. Intervention programs targeted to lifeguards such as the *Pool Cool Plus* program which has been widely implemented in the United States has shown to effectively reduce sunburns and increase sun safety behaviours in lifeguards (Hall, McCarty, Elliott, & Glanz, 2008). Although there have been no large scale interventions for lifeguards in outdoor pools in Canada, it is evident from prior research that a multilevel approach is required to influence the sun safety behaviours of lifeguards.

In order to understand lifeguards and their work environments, a provincial scan of outdoor pool managers and lifeguards was done in the summer of 2016 on behalf of Sun Smart Saskatchewan.

**PURPOSE:** To assess policies, knowledge, attitudes and behaviours of outdoor pool managers and lifeguards regarding sun safety in order to inform intervention efforts of Sun Smart Saskatchewan.

## METHODS

### Survey Design

- Separate and complementary online surveys were developed for the pool managers and lifeguards.
  - Pool Manager Survey:** Approximately 21 questions, mostly closed-ended, focused on sun safety policies
  - Lifeguard Survey:** Approximately 22 questions, mostly closed-ended, focused on sun safety attitudes/behaviours and tanning behaviours

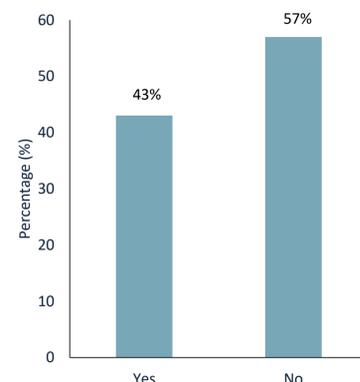
### Participant Recruitment

- Outdoor pool managers across Saskatchewan were contacted.
- Pool managers forwarded the surveys to the lifeguards.
- 21 pool managers and 48 lifeguards responded
- Response rate for pool managers: 68%

### Survey Implementation

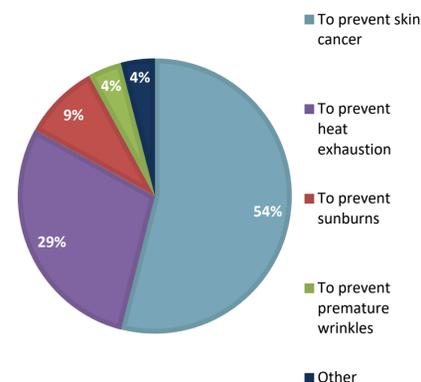
- Online survey software: FluidSurveys
- Data collection period: 10 days
- Pool manager incentive: portable shade structure
- Lifeguard incentive: Ray-Ban sunglasses

### Sun Safety Policy



**Figure 1. Presence of sun safety policy for lifeguards according to pool manager survey (n=21).**

### Sun Safety Attitudes



**Figure 2. Most important reason for practicing sun safety in lifeguards (n=48).**

## RECOMMENDATIONS

### Policy

- Encourage the development and implementation of sun safe policies at outdoor pools.
- Collaborate with municipalities and pool managers to make sun safety policies for outdoor pool workers mandatory.

### Intervention

- Develop intervention programs that integrate both skin cancer and heat illness prevention.
- Concentrate efforts on emphasizing the importance of wearing protective clothing.
- Strongly encourage the creation and use of shade structures.
- Provide sun safety resources for staff and pool patrons.

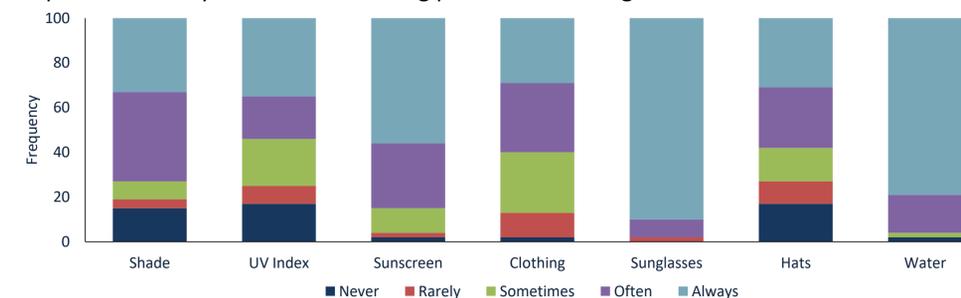
## CONCLUSIONS

- Sun safety is a priority at outdoor pools and a variety of sun protection behaviours are practiced by lifeguards across the province.
- The results of the surveys indicate that sun safety behaviours are more frequent at outdoor pools with sun safety policies.
- Certain sun safety behaviours are not practiced as frequently as others which indicates that there is room for improvement.

## RESULTS

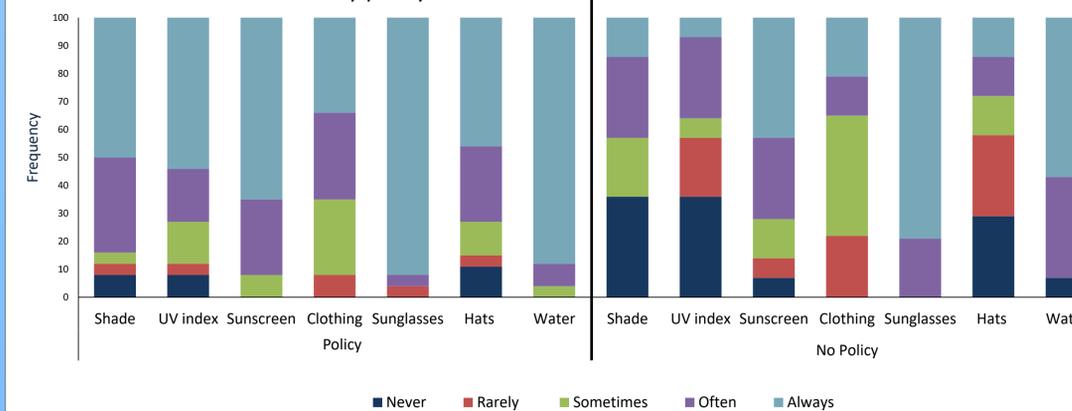
### Sun Safety Behaviours

- Most frequent sun safety behaviours: wearing sunglasses and consuming water regularly
- Least frequent sun safety behaviours: wearing protective clothing and hats



**Figure 3. Frequency of sun safety practices in lifeguards at the pool based on self-report.**

- The pools with a sun safety policy had a higher frequency of sun safety behaviours among lifeguards than those without a sun safety policy.



**Figure 4. Frequency of self-reported sun safety behaviours in lifeguards with sun safety policies (left) and without sun safety policies (right) in their pools.**

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## KEY REFERENCES

- Hall, D., McCarty, F., Elliott, T., & Glanz, K. (2008). Effectiveness of a Targeted, Peer-Driven Skin Cancer Prevention Program for Lifeguards. *International Journal of Aquatic Research and Education*, 2, 287-297.
- World Health Organization. (2012). *Ultraviolet radiation and the INTERSUN Programme – Health effects of UV radiation*. Retrieved from: <http://www.who.int/uv/health/en/>