

Open Water Drowning Prevention Policy Strategy: Surveillance – Washington Healthy Youth Survey (HYS)

BACKGROUND

- We can learn from data among youth how to prevent fatal and nonfatal drownings.
- The Washington Healthy Youth Survey (HYS) is a collaborative effort of the Office of the Superintendent of Public Instruction, the Department of Health, the Department of Social and Health Service's Division of Behavioral Health and Recovery, the Liquor and Cannabis Board, and the Department of Commerce. The HYS provides important information about youth throughout Washington State that county prevention coordinators, community mobilization coalitions, community public health and safety networks, and other groups use to guide policy and programs that serve youth, and can identify trends in behavior patterns over time.

STRATEGIES/OBJECTIVES

- Add questions on swimming ability and maintain questions on life jacket use in the Washington Healthy Youth Survey.

SUMMARY OF ACTIVITIES

A. Washington Healthy Youth Survey: Prior to 2014, the Washington Healthy Youth Survey only had one question related to drowning prevention, which was regarding the use of life jackets when in small boats. This may be the only state to have a life jacket question included. Seattle Children's and the Washington State Department of Health sought to assess the swimming ability of youth.

To develop the swim questions for the HYS, the team conducted evidence-based research. One sentinel study showed that a history of formal swimming lessons was associated with a lower risk of drowning among young children¹. This study formed the basis for one question on swim ability. A second question was based on "best hunch" and evaluated (see below). The following questions were added to the HYS in 2014:

1. **Have you ever taken formal swimming lessons at a beach or pool?** (Answer Options: Yes, No, Not Sure)
2. **How comfortable are you playing or swimming in water over your head?** (Answer Options: Uncomfortable, Slightly Uncomfortable, Comfortable and Very Comfortable)

¹ Brenner R, Taneja G, Haynie D, et al. Association between swimming lessons and drowning in childhood: a case-control study. Arch Pediatr Adolesc Med 2009;163:203–10.

SUMMARY OF ACTIVITIES CONTINUED

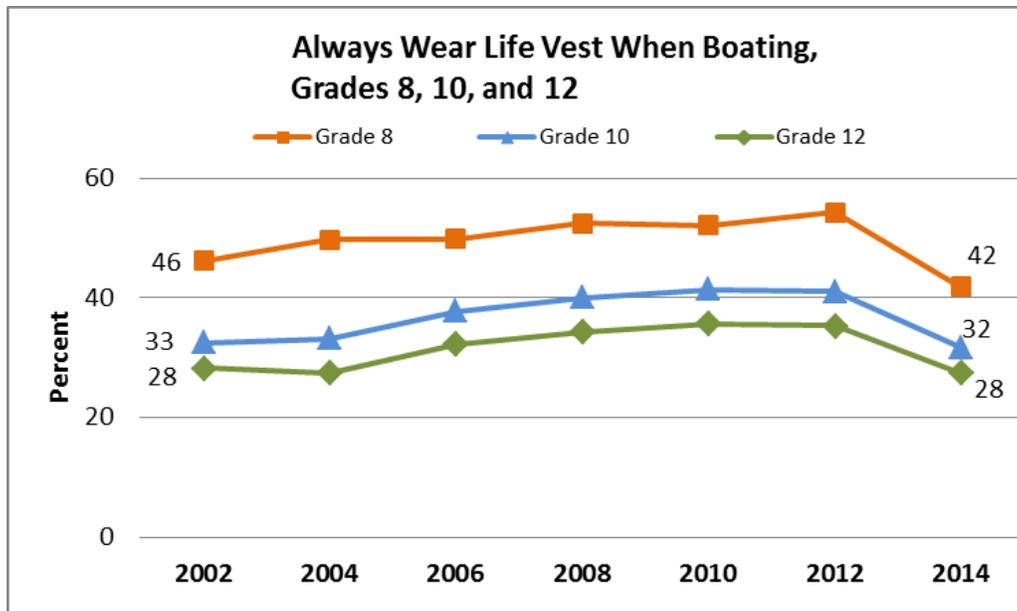
Healthy Youth Survey Data Results

Prevalence data from the 2014 Washington Healthy Youth Survey showed that:

- Between 60% to 66% of Washington State youth in grades 8, 10, and 12 had taken formal swim lessons.
- From 84% to 86% of Washington State youth in grades 8, 10, and 12 felt very comfortable playing in water over their head.
- Washington State youth in grades 8, 10, and 12 of lower socioeconomic status were less likely to have had swim lessons or feel comfortable in water over their heads compared to those of higher socioeconomic status.
- Non-white and Hispanic 10th graders had significantly lower rates of formal swim lessons compared to white/non-Hispanic 10th graders.
- White and American Indian/Alaska Native youth reported higher rates of comfort in water over their heads than other racial groups.

The 2014 HYS results will be further analyzed to assess the association between risk-related behaviors such as drinking alcohol while driving and not wearing life jackets.

The chart below illustrates how the percentage of youth reporting life jacket use decreases with age.



B. *Can You Really Swim? Study:* To validate the “comfort in water over your head” question added to the HYS, a study was conducted in 2014 among children and their parents attending public pools in two cities in Washington State. With support from the Centers for Disease Control and Prevention, children were swim tested following an assessment by the child and their parent on the child’s swim ability.

Participants were mostly white, children median age 9 years. Results validated “comfortable in water over your head” question but showed that a “history of formal swim lessons” did not correlate with passing the swim test.² The study also validated another question based on swim test passage, ‘How good of a swimmer do you think you are?’. The study population was mostly white but with annual incomes greater than \$100,000.

For 2016, there are 3 questions on the HYS:

1. Have you ever taken formal swimming lessons?
2. How good a swimmer do you think you are?
3. How often do you wear a life jacket when in a small boat?

Although the swimming lesson did not correlate to passing the swim test, we kept the question based on the original research by Brenner et al. and to help with programmatic and policy based efforts related to kids learning to swim.

IMPACT

- The HYS now includes questions related to two evidence-based drowning prevention protective factors among youth: use of life jackets and swimming ability.
- HYS data can direct planning prevention programs and public health strategies for drowning prevention to at-risk groups.
- The only study assessing and validating swimming ability questions of children and their parents was published in a peer-reviewed journal.²
- Two validated screening questions can be used to assess swimming ability reported by school-aged children or their parents.

CHALLENGES/LIMITATIONS

- The swim questions should be tested for validity in other populations since the Washington State sample was primarily white, high-income families.

² Mercado M.C., Quan L., Bennett E., Gilchrist J., Levy B.A., Williams C.L., Wendorf K., Gangan M.A. and Lee R. (2016). Can you really swim? Validation of self and parental reports of swim skill with an in-water swim test among children attending community pools in Washington State. *Injury Prevention*. 0:1-8

DISSEMINATION

- Multiple presentations were made including:
 - American Public Health Association National Meeting. 2014. New Orleans, LA
 - World Aquatic Health Conference. 2015. Scottsdale, AZ
 - World Conference on Drowning Prevention, Poster. 2015. Penang, Malaysia.

NEXT STEPS

- Continue to track life jacket use and swimming ability among youth using the Washington Healthy Youth Survey.
- Conduct this survey of life jacket use and swimming ability among other age groups, specific populations, nationally and internationally.

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