

## SOPHE 2015 Case Study Competition Portland, OR Scenario

### The Health Issue

According to the Centers for Disease Control and Prevention (CDC) drowning is the fifth leading cause of unintentional injury death for individuals of all ages, and it is the second leading cause of unintentional injury death for children between the ages of 1 and 14 years.<sup>1</sup> At the First World Congress on Drowning, the following definition of drowning was adopted: “the process of receiving respiratory impairment from submersion/immersion in liquid; outcomes are classified as death, morbidity, and no morbidity.”<sup>2</sup> Across the globe, 327,000 people die each year from drowning, and more than half of all deaths are among individuals younger than 25 years old ( p. 6).<sup>3</sup> In the United States between the years 2005 and 2009, approximately 3,880 individuals died of unintentional drowning with the highest death rate (per 100,000) among children four years or younger.<sup>4</sup> It was also reported that the unintentional drowning death rate (per 100,000) for males (2.07) was approximately four times higher than that for females (0.54).<sup>4</sup> Among adults 29 years of age and under, the highest rate (per 100,000) of deaths due to unintentional drowning (all settings) was highest among American Indians/Alaskan Natives (2.57), followed by Blacks (1.90), and Hispanics (1.37) from the years 1999 to 2010.<sup>5</sup>

According to Laosee, Gilchrist, and Rudd (2012), the highest percentage of non-fatal drowning incidences occurred in a swimming pool (57.7%), followed by natural water settings such as a lakes and oceans (25.2%), bathtubs (9.2%), and unspecified settings (7.8%).<sup>4</sup> However, the largest percentage of fatal unintentional drowning incidences occurred in natural water settings (51.1%), followed by unspecified settings (21.0%), swimming pools (17.6%), and bathtubs (10.4%).<sup>4</sup> Among adults 29 years of age and under, the highest rate (per 100,000) of deaths due to unintentional drowning in natural water settings was among American Indians/Alaskan Natives (1.22), Blacks (0.63), and Hispanics (0.57) .<sup>5</sup> While children four years and younger are more likely to drown in a swimming pool or bathtub, individuals ages 15 and older are more likely to drown in a natural setting.<sup>4</sup>

The CDC reports the following factors can increase the risk of drowning:<sup>6</sup>

- Lack of swimming ability
- Lack of close supervision
- Unfamiliarity with the location
- Failure to wear life jackets (either while swimming, boating, or water skiing).
- Being unaware of rip currents
- The use of alcohol
- Being unaware of weather conditions

In addition, the World Health Organization (WHO) also indicated risk factors such as low socioeconomic status, being a member of a racial minority, lower education level, and being a tourist unfamiliar with local water risks and features.<sup>3</sup>

Of the drowning deaths occurring in natural water settings during 2005-2009, nine percent were attributed to boating accidents.<sup>4</sup> According to the United States Coast Guard (USCG), boating accidents resulted in 2620 injuries and 560 deaths in the United States.<sup>7</sup> Among the 560 deaths resulting from boating in 2013, 272 occurred in an open motorboat, followed by 55 occurring in a canoe.<sup>7</sup> In 2013, more accidents and deaths occurred in lakes, ponds, reservoirs, dams, and gravel pits than in any other

type of body of water.<sup>7</sup> Furthermore, more accidents and deaths occurred in calm water conditions, light winds (0 to 6 mph), and with good visibility during the day than with rough water conditions, strong winds, or poor visibility.<sup>7</sup> Of the recreational boating accidents and deaths occurring nationwide in the year 2013, the top five types of accidents were as follows: collision with a recreational vessel, flooding/swamping, collision with a fixed object, grounding, and skier mishap.<sup>7</sup>

In terms of primary contributing factors in deaths resulting from boating accidents, alcohol use was the top contributing factor.<sup>7</sup> Additional factors included:

- operator inattention
- operator inexperience
- excessive speed
- improper lookout
- sharp turn
- drug use

## **The Community**

Lane County is located in the west central region of the state of Oregon.<sup>8</sup> The county's size is almost as large as the state of Connecticut.<sup>8</sup> The 2013 population estimate of Lane County is 356,212.<sup>9</sup> Its county seat, Eugene, has a population of 140,000 and is the second largest city in Oregon.<sup>10</sup>

While Lane County is home to the Eugene-Springfield metropolitan area, approximately 90% of its area is forest terrain.<sup>8</sup> Lane County has 72 recreation sites and receives three million visitors each year.<sup>11</sup> With its coast on the Pacific Ocean and numerous lakes, Lane County offers many water-based recreational activities such as swimming and boating.<sup>11</sup> However, residents and visitors alike must take measures to stay safe in lakes, rivers, and oceans. While the death rate (per 100,000) due to drowning is 1.72 for the state of Oregon, Lane County was one of only two counties with a drowning death rate (1.96 to 2.78) that exceeded that of the state.<sup>12</sup> Because drowning is a common cause of deaths due to unintentional injuries, it should also be noted that in 2014 Lane County had the second highest death rate due to unintended injury (168 of the 1,434 deaths in the state).<sup>13</sup>

## **The Agencies/Initiative**

The Oregon State Marine Board (OSMB) has implemented several campaigns promoting boating safety (which can be viewed).<sup>14</sup> The OSMB works in collaboration with the National Safe Boating Council to promote their "Wear It" Life Jacket campaign.<sup>14</sup> The OSMB has also promoted its "Boating Under the Influence (BUI)" campaign for more than a decade.<sup>14</sup> However, to address the issue of drowning in Lane County, the Oregon Public Health Division is joining forces with the OSMB, the Lane County Department of Health and Human Services, and the Lane County Parks Commission to develop a public health and safety campaign to prevent drowning (both fatal and non-fatal) incidences due to swimming and boating accidents. Another organization, Safe Kids Oregon, a state affiliate of Safe Kids Worldwide, has focused on addressing unintentional injuries among children 14 years old and younger since 1995. Since last year, Safe Kid Oregon has expanded the target age from 14 and under to 0-19 with drowning prevention and water safety as one of its key areas. Thus, Safe Kids Oregon has become the most recent collaborator in the planning and implementation of the public health and safety campaign to prevent drowning from swimming and boating incidents.

## The Goal

Given that Lane County has a higher than state average drowning death rate and the second highest death rate due to unintentional injuries, your team represents a group of public health educators who have been charged to develop, implement, and evaluate a five-year health promotion program to prevent drowning incidences in Lane County. While addressing the judging criteria, your team should identify community assets and resources, and coordinate your efforts with the Lane County Department of Health.

## References

1. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. . Drowning risks in natural water settings [Web page]. <http://www.cdc.gov/Features/dsDrowningRisks/> Accessed March 2, 2015.
2. Maatschappij tot Redding van Drenkelingen, First World Congress on Drowning. *Final Recommendations of the World Congress on Drowning*. Amsterdam, Netherlands; 2002. <http://www.cslsa.org/events/ArchiveAttachments/Spr03Minutes/AttachmentG2.pdf> Accessed March 1, 2015.
3. World Health Organization. *Global Report on Drowning: Preventing a Leading Killer*. Geneva, Switzerland; 2014. [http://www.who.int/violence\\_injury\\_prevention/publications/drowning/en/](http://www.who.int/violence_injury_prevention/publications/drowning/en/) Accessed March 1, 2015.
4. Laosee OC, Gilchrist J, Rudd RA. Drowning-United States, 2005-2009. *MMWR* [serial online]. May 18, 2012; 61(19):344-347. <http://www.cdc.gov/mmwr/pdf/wk/mm6119.pdf> Accessed March 1, 2015.
5. Gilchrist J, Parker EM. (2014). Racial/ethnic disparities in fatal unintentional drowning among persons aged ≤29 years — United States, 1999–2010. *MMWR* [serial online]. May 16, 2014; 63(19); 421-426. [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6319a2.htm?s\\_cid=mm6319a2\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6319a2.htm?s_cid=mm6319a2_w) Accessed March 1, 2015.
6. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Statistics, Programming and Economics Branch. Unintentional drowning: get the facts [Web page]. <http://www.cdc.gov/HomeandRecreationalSafety/Water-Safety/waterinjuries-factsheet.html> Accessed February 21, 2015.
7. United States Coast Guard. *2013 Recreational Boating Statistics*. Washington, D.C.; May 13, 2014. <http://www.uscgboating.org/library/accident-statistics/2013ReportRevised.pdf> Accessed February 16, 2015.
8. Lane County, Oregon. Overview of Lane County [Web page]. Eugene, OR. <http://www.lanecounty.org/About/Pages/Overview.aspx> Accessed March 1, 2015.
9. U.S. Census Bureau: State and County QuickFacts, Lane County, Oregon. Population, 2013 Estimate [database online]. Washington, D.C.; February 5, 2015. <http://www.census.gov/quickfacts/#table/PST045214/00,41039> Accessed March 14, 2015.
10. City of Eugene Oregon . About Eugene [Web page]. Eugene, OR. <http://www.eugene-or.gov/index.aspx?NID=1383> Accessed March 8, 2015.
11. Everall T. *Lane County Parks*. Eugene, OR; October 28, 2008. [http://www.lanecounty.org/Departments/PW/Parks/Documents/LCP\\_Brochure.pdf](http://www.lanecounty.org/Departments/PW/Parks/Documents/LCP_Brochure.pdf). Accessed March 1, 2015.
12. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Statistics, Programming and Economics Branch . Injury Prevention & Control: Data and Statistics (WISQARS™). Fatal injury mapping [database online]. Atlanta, GA; August 7, 2013. <http://wisqars.cdc.gov:8080/cdcMapFramework/> Accessed March 1, 2015.

13. Oregon Public Health Division. Table 6-35. *Oregon Resident Deaths by Manner of Death and County of Residents: 2014 YTD Preliminary Data (Processing Month=December)*.  
<http://public.health.oregon.gov/BirthDeathCertificates/VitalStatistics/death/Documents/dman14.pdf> Accessed March 14, 2015.
14. Oregon.gov. Oregon State Marine Board. Marine Board's Public Service Campaigns [Web page]. Salem, OR. <http://www.oregon.gov/OSMB/Pages/campaigns/campaigns.aspx> Accessed March 3, 2015.
15. Safe Kids Oregon. Drowning prevention and water safety [Web page].Portland, OR; 2015.  
<http://www.safekidsoregon.org/safety-for-parents/drowning-prevention-and-water-safety/> Accessed March 5, 2015.