

Arne Navarra and John Connolly

According to the World Health Organization (WHO), accidents are the most common non-natural cause of death and injury for travellers [1]. Within the European Union (EU), tourists are 15 times more at risk of injury than local residents [2], and US tourists are ten times more likely to die as a result of an injury (23 %) than from infectious disease (2 %) [3]. Drowning has a very high death rate among children with case fatality reported for the Philippines at 99 per 100 drowning incidents [4] while those who survive drowning may suffer neurologic or respiratory complications or disabilities of varying magnitudes [5].

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### 34.1 Statistics

A scarcity of tourist drowning statistics exists because of a big disparity of available recreational drowning information between high-income countries (HIC) and low- and middle-income countries (LMIC). LMIC collect none or inadequate drowning [6, 7]. Drowning can comprise between 5 and 14 % of all tourist deaths in EU countries and up to 25 % of such deaths in Australia [2, 8]. In Portugal over two-thirds of children admitted to the hospital for submersion incidents are foreigners [9], and more United Kingdom (UK) children drown in swimming pools while on holiday abroad than in the UK itself [10]. Some LMIC data is available such as from Phuket Lifeguard Club Thailand which revealed a total of 1,350 recorded rescues in 10 months from 2010 to 2011 with 1,064 (79 %) being visitors and only 21 % from

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A. Navarra (✉)

Philippine Life Saving Society Inc.,  
202B Philsport Complex, Meralco Avenue, Pasig City, Metro Manila 1605, Philippines  
e-mail: [syncercraft@gmail.com](mailto:syncercraft@gmail.com), [philippinelifesaving@gmail.com](mailto:philippinelifesaving@gmail.com)

J. Connolly

Lifesaving Foundation,  
11 Iveragh Close, Lismore Lawn, Waterford City, Ireland  
e-mail: [john@lifesavingfoundation.ie](mailto:john@lifesavingfoundation.ie)

Thailand [11]. An estimated 71 % of those who drown in resort areas in the Philippines in 2009–2010 were tourists [12].

The Royal Society for the Prevention of Accidents (RoSPA) established that between 2000–2005 475 UK citizens died by drowning while holidaying abroad [10]. RoSPA analysis revealed the following details:

- Most died during the months of July and August, which are the peak holiday months in the UK.
- Over half of those who drown are males.
- A third of deaths occurred while the person was recreationally swimming.
- The majority of those aged over 15 years drowned in the sea and often in rip currents.
- The majority of those aged under 15 years drowned in swimming pools.
- Around 20 % were adults aged between 20 and 40 years taking part in adventure sports.
- Alcohol consumption was a factor especially with males aged between 18 and 30 years.

Surf Life Saving Australia recorded that 20 % of those who drown on Australian beaches are foreigners. An overwhelming majority of rescues are of persons swimming or wading, with over four-fifths occurring in rip currents [13, 14]. Aside from inability to swim, reasons for drowning are inexperience with surf, a lack of knowledge about rip currents and a failure to use patrolled areas in beaches. It is estimated that lifeguards take between 49 and 61 preventative actions per single rescue [9, 13, 14]. Results of interviews with 1,000 swimmers at Australian beaches discovered the following:

- The swimming location was selected primarily by convenience with beachgoers choosing the beach closest to their accommodation.
- Beachgoers who use unpatrolled beaches did not know that a patrolled one is safer.
- Mostly young persons are observed swimming at risky locations.
- Young swimmers on unguarded beaches showed the least knowledge of rip currents and other beach hazards.
- Swimmers living near the sea were twice as likely to assess the swimming conditions before entering the water than visitors [15].

Surf Life Saving Australia National Coastal Safety Report in 2009 concluded that of 46 people who died by drowning in 2008–2009 at New South Wales beaches, 40 (87 %) occurred at unpatrolled beaches where no ‘on-duty’ life-saving services were immediately available [16].

A Philippine sample survey stated that 35 out of 49 drowning deaths in 2009–2010 were tourists in resort pools and beaches [12]. Coastal drowning deaths are significant particularly among foreign tourists and students with 44 % due to scuba diving, 11 % to snorkelling and 22 % to parasailing activities. The majority of those who drown were inexperienced or beginners to these water activities. Additionally, tourist-related swimming pool deaths involving young children continue to be of concern [17]. Phuket Lifeguard Club Thailand reported the rash practices of visitors swimming immediately upon arrival and prior to their departure at the nearest beachfront ignoring warnings on flags, no lifeguards and poor visibility at dusk. Tourists regularly drown or are rescued in the evening when lifeguards are off duty.

Language difficulties leading to accidental or deliberate non-compliance with safety warnings is a major reason for drownings [11].

Drowning risk is not confined to international visitors. It is clear that familiarisation with coastal water and prior experiences in surf are important safety considerations to foreign or national visitors. Hawaiian drowning statistics showed that national and foreign visitors are equally at risk if they are not experienced in surf. In 2000–2009 nearly half of those who died by drowning in Hawaii were residents [18]. Pounding from large waves during swimming, surfing and wading are causes of drowning among domestic tourists in the United States [19]. The 2010 Surf Life Saving Australia National Coastal Safety Report revealed that 49 % of Australian coastal drowning casualties lived more than 50 km from the drowning location. Although one-fifth of those who drown on surf beaches are foreign visitors, over double that number are nationals who have travelled some distance to the coast for recreation. In the Philippines, 45 % of those who drown are local tourists recreating in resorts [12]. Kenya has encouraged its citizens to support local tourism initiatives which resulted in first-time travellers drowning in hotel pools, lakes and beaches. The Royal Lesotho Lifesaving Association, in serving a totally landlocked population, has chosen to promote surf awareness in response to beach drowning deaths among citizens visiting family members in South Africa.

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## 34.2 Drowning Vulnerability of Tourists

Drowning is a prime concern in tourism. Greater risk is associated with high exposure to water activities by tourists. Holidaymakers are more likely to drown because they are close to water for longer periods than local residents whose adults are at work while local children are in school [20]. The European Child Safety Alliance established that 70 % of European tourists spend their holidays at a water-side location [9]. Conversely, both national and foreign visitors are vulnerable to drowning because of two factors:

### 34.2.1 Persons Exposed to Water Hazards Not Present in Their Normal Place of Abode

Without realising the dangers, many inexperienced tourists from high-income countries engage in adventure water activities such as water rafting, windsurfing, parasailing and scuba diving. The same situation holds true for domestic tourists who live far from the shore yet they pursue recreation in surf which is unfamiliar to them.

Surf Life Saving New Zealand has identified the following casual factors associated with drowning deaths relating to lack of understanding and disregard of hazards [21]:

- Unawareness of changing depths of water associated with ebbing and flooding tides
- Lack of knowledge on currents especially on how to escape rip currents
- Inability to assess surf condition before entering the sea

- Unfamiliarity with the meaning of flags flown on beaches
- Gross disregard of safety advice due to travelling excitement or fatigue

### **34.2.2 Mindsets of Persons on Holiday**

The Lifesaving Foundation cautions that the attitudes and assumptions of holiday-makers may cause drowning [22]:

- Tourists may exercise a lower level of risk awareness
- Visitors may wrongly assume that lifeguard skills or safety provisions are similar to those in their home country
- The high-level of supervision required for children may lower gradually over a number of continuous days as parents relax into a holiday
- An increased level of alcohol consumption lowers safety awareness
- Visitors may choose or be encouraged to indulge in untried adventure sport
- An increased likelihood of risky behaviour among young men compounded by under-estimation of skill level needed to cope with risk [23]

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### **34.3 Examples of Programmes to Prevent Tourists from Drowning**

Tourist drowning is an occurrence worldwide. Collaboration between the tourism industry and life-saving organisations to promote drowning prevention must be formed akin to initiatives done in Australia, Philippines and Thailand.

#### **34.3.1 Australia**

The National Visitor Program in Queensland, Australia, approaches water safety targeting both individual tourist and tourism operators aside from providing multi-lingual booklets and films on safety to inbound tourists [13]. Surf Life Saving Australia began working with Tourism Australia in 2009 on ways to communicate essential beach safety messages to visitors who may be unfamiliar with Australian beaches. It provides a balance of informative messaging and imagery that can be used by water safety practitioners, tourism providers and immigration services which includes film shown on aircrafts [24].

#### **34.3.2 Philippines**

The Philippine Drowning Prevention Council (PDPC) launched in 2011 the Philippine Drowning Prevention Plan 2010–2015, highlighting scuba divers, recreational boaters, surfers, rock fishers, tourists and foreign students as key target drowning sectors for immediate intervention [17]. Below are collaboration approaches made between resort owners, local government and the Philippine Life Saving Society in formulating initiatives to prevent tourist drowning [12, 17, 25]:

- The implementation of drowning prevention strategies for each community
- The creation of in-house water safety training facilities at resorts
- The introduction of best practices in lifeguarding and risk management based on standards recommended by the International Life Saving (ILS) Federation
- The adoption of lifeguarding best practices from Surf Life Saving Australia (SLSA) for the coast of the Philippines
- The introduction of red and yellow as the standard colours of lifeguard uniforms to enable ease of recognition by the public
- The tourism industry was called on to ensure implementation of water safety and risk management plans in resorts, hotels and parks based on Guidelines for Safe Pool Operation (GSPO) by the Royal Life Saving Society Australia (RLSSA)
- The introduction of clear signage, effective barriers and education programmes highlighting parental supervision of children and an intensive water safety campaign for adolescents, adult tourists and foreign students

The Zambales Resort Owners Association (ZROA) in partnership with the Philippine Life Saving Society officially raised the first red/yellow flags in October 2011 [18]. PDPC also lobbied for appropriate drowning prevention policies, legislation and enforcements from the tourism department of the Philippine government [17]. The adoption of the International Best Practice Standards on Water Safety and Lifeguarding from International Life Saving (ILS) Federation at the Bantayan Islands, and a municipal ordinance for strict implementation of water safety and life guard deployment in beach resorts has resulted in accountable tourism. Resorts will be fined or closed if they violate the ordinance [26, 27].

### 34.3.3 Thailand

Authorities in Phuket, Thailand, working in association with Phuket Lifeguard Club, have taken a number of definite steps to reduce the high number of tourist drowning incidents on the popular holiday island:

- Beaches are officially closed at 6 p.m. daily and “No Swim” warning signs and ropes strung up between red flags.
- Visitors upon checking in at resorts are given safety brochures with information about rip currents, the dangers of swimming between the monsoon months of April to October and lifeguard duty times and locations.
- Additional lifeguard stations are readied for installation should there be increased in number of holidaymakers [11].

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## 34.4 Recommendations

### 34.4.1 Safety Grading Scheme

Tourist destinations could be graded according to safety provision like hotels are classified according to accommodation facilities. Often tourists ask hotels about car parking rather than the presence of lifeguards. Travel companies could be legally required to include safety information on all holiday literature. The Blue Flag open

water certification programme has a water safety component requiring lifeguards on beaches [28]. Blue Flag accreditations were awarded to 3,650 beaches and marinas in 44 countries in 2011. Ireland has a White Flag scheme mandating indoor facilities to have trained staff for resuscitation and emergency care [29].

### **34.4.2 Timely Delivery of Water Safety Information**

Nationalities of visitors need to be identified and safety literature and messages provided in their native languages. Giving safety guidelines en route to holiday destinations is the best time for travellers to take note of them. Static signage and general safety information brochures will only be effective if they are drawn to the attention of visitors, ideally before arrival at the particular destination [26].

### **34.4.3 Training**

Web-based training in drowning risk assessment is recommended. The ability to assess hazards and communicate risk to the public is important. Lifesaving organisations in developing countries should be aided financially aside from building capabilities in risk assessment. Promoting swimming at patrolled beaches is not sufficient as a misconception may arise that a beach itself is safe, when in fact, it is the patrolling by lifeguards that makes a difference. Surf Life Saving Australia reported that between 2005 and 2007, more than a half of beach drowning deaths occurred on lifeguarded beaches outside of lifeguard patrol hours [16]. In some countries there may be cultural gender barriers to lifeguard intervention and therefore both male and female lifeguards are needed at water locations.

### **34.4.4 Directions for Further Research**

Research in preventing tourist drowning is needed. For example:

- It is worth researching if the provision of water safety information increases or decreases visitor bookings. There is anecdotal evidence from newspaper reports that tourist deaths are hidden by tourism interests to maintain local visitor numbers. Research should be conducted to prove validity that providing safety and warning information does not reduce visitor numbers.
- Some research has taken place to find out whether tourists are at risk of drowning more than local residents due to longer exposure time to unfamiliar waters. Further research on this issue can help in prioritising resources for life-saving.
- Current research shows that many tourists swim at unguarded locations albeit knowing that travel to a patrolled beach is a safer option. Research would help in designing interventions to this unsafe practice.

## References

1. World Health Organisation (2011) Health Risks and Precautions: General Considerations. [www.who.int/ith/chapters/ith2011chap1.pdf](http://www.who.int/ith/chapters/ith2011chap1.pdf). Accessed 9 Oct 2011
2. Institut Sicher Leben (2001) Scope and patterns of tourist accidents in the European union (final report). [http://ec.europa.eu/health/ph\\_projects/2001/injury/fp\\_injury\\_2001\\_frep\\_10\\_en.pdf](http://ec.europa.eu/health/ph_projects/2001/injury/fp_injury_2001_frep_10_en.pdf). Accessed 15 Feb 2011
3. Sleet DA, Ballesteros MF (2012) Injuries and Safety. Center for Disease Control and Prevention. <http://wwwnc.cdc.gov/travel/yellowbook/2012/chapter-2-the-pre-travel-consultation/injuries-and-safety#2010>. Accessed 1 July 2013
4. Arcadio RL, Fajardo N, Agrasada MG et al (1992) Country report – childhood accidents in the Philippines. *Philipp J Pediatr* 41:42–61
5. Peden M, Oyegbite K, Ozanne-Smith J et al (eds) (2008) World report on child injury prevention. World Health Organization, Geneva
6. Lunetta P, Lu T-H, Smith GS (2011) Standard World Health Organisation (WHO) data on drowning: a cautionary note concerning undetermined drowning. World conference on drowning prevention 2011. [http://www.worldconferenceondrowningprevention2011.org/content\\_common/pg-drowning-research.seo](http://www.worldconferenceondrowningprevention2011.org/content_common/pg-drowning-research.seo). Accessed 1 July 2013
7. Franklin RC, Scarr J (2011) ILS drowning data and research survey. World conference on drowning prevention 2011. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven
8. Steffen R, DuPont H, Wilder-Smith A (eds) (2003) Manual of travel medicine and health, 2nd edn. BC Decker, Hamilton
9. EuroSafe (European Child Safety Alliance) (2007) Tourism and water-related injuries. [www.childsafetyeurope.org](http://www.childsafetyeurope.org)
10. Royal Society for the Prevention of Accidents (2007) Child Holiday Swimming Pool Safety. <http://www.rospa.com/leisuresafety/adviceandinformation/watersafety/child-holiday-swimming-pool-safety.aspx>. Accessed 1 July 2013
11. Morison A (2011) Killer Karon claims nine lives: lifeguards quit Phuket Beaches, Phuket Wan tourism news. <http://phuketwan.com/tourism/killer-karon-claims-nine-lives-lifeguards-quit-phuket-beaches-13746/>
12. Navarra A (2011) Collaboration with resort owners and the community – a leading advantage in the fight against tourist drowning in the Philippines. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 313
13. George P, Thompson M, Bradstreet A (2011) Beach safety for visitors to Australian beaches – tourist and immigrant drowning prevention in Australia. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 311
14. Thompson M, Bradstreet A (2011) What are we selling? – The knowledge to save your life. A public education strategy for rip currents. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 170
15. Williamson A, Hatfield J, Sherker S et al (2011) Why were you swimming there? Analysis of risky swimming behaviour on Australian beaches. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 165
16. Storey D (2011) Surf rescue emergency response system – a strategy to reduce coastal drowning deaths in New South Wales. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 187
17. Philippine Drowning Prevention Council (2011) Philippine drowning prevention plan 2010–2015, Philippine drowning prevention congress 2011. <http://www.drowningprevention.ph>
18. Argue R, Galanis D, Goto R (2011) Using the public health approach to prevent drowning in Hawaii. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 103

19. Heggie TW (2009) Tourist injuries on U.S. national seashores. In: Proceedings of CMT2009, the 6th international congress on coastal and marine tourism. <http://coastalmarinetourism.org/congress.html>. Accessed 1 July 2013
20. Williamson A, Olivier J (2011) Calculating estimates of drowning morbidity and mortality adjusted for exposure to risk. In: Scarr J et al (eds) World conference on drowning prevention, Danang, Vietnam, International Life Saving Federation, Leuven, p 98
21. Florence G (2011) Risk management solution for drowning and injury prevention. In: Scarr J et al (eds). World Conference on drowning prevention, Danang, Vietnam, International Lifesaving Federation, Leuven, p 180
22. The Lifesaving Foundation (2011) Water Safety on Holiday. [http://www.lifesavingfoundation.ie/index.php/download\\_file/view/75/86/](http://www.lifesavingfoundation.ie/index.php/download_file/view/75/86/)
23. Moran K, Quan L, Franklin R et al (2011) Where the evidence and expert opinion meet: a review of open-water recreational safety messages. *Int J Aquatic Res Ed* 5:251–270
24. Surf Life Saving Australia (2013) The Beach Safe. <http://beachsafe.org.au/about>. Accessed 1 July 2013
25. Philippine Life Saving Society (2011) Media release: Philippine life saving raised the first red/yellow flags in 23 October 2011 Botolan, Zambales, Philippines. <http://www.philippinelifesaving.org>
26. International Life Saving Federation (2013) Moving forward towards accountable tourism 24 July 2013. <http://www.ilsf.org/news/24-july-2013-1255pm/moving-forward-towards-accountable-tourism>
27. Losorata JS (2013) Santa Fe trains life guards to boost tourism. <http://www.sunstar.com.ph/cebu/business/2013/07/22/santa-fe-trains-life-guards-boost-tourism-293849>
28. Citizens Information Ireland (2013) Blue Flag Beaches and Marines in Ireland. [http://www.citizensinformation.ie/en/travel\\_and\\_recreation/recreational\\_activities\\_in\\_ireland/sport\\_and\\_leisure/blue\\_flag\\_beaches\\_and\\_marines\\_in\\_ireland.html](http://www.citizensinformation.ie/en/travel_and_recreation/recreational_activities_in_ireland/sport_and_leisure/blue_flag_beaches_and_marines_in_ireland.html)
29. Citizens Information Ireland (2013) White Flag Recreational Facilities in Ireland. [http://www.citizensinformation.ie/en/travel\\_and\\_recreation/recreational\\_activities\\_in\\_ireland/sport\\_and\\_leisure/white\\_flag\\_recreational\\_facilities\\_in\\_ireland.html](http://www.citizensinformation.ie/en/travel_and_recreation/recreational_activities_in_ireland/sport_and_leisure/white_flag_recreational_facilities_in_ireland.html)