Multicultural Water Safety Projects: Evaluation Report 2012/2013

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Aquatic Risk and Research

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INTRODUCTION

As Australia's population has steadily increased over time, so has the diversity and makeup of the people within it. Drowning risk is reported to be increased in people from culturally and linguistically diverse (CALD) communities, due to a limited awareness of hazards and risks, as well as a lack of aquatic participation and skills.[1] However, there is limited information detailing these potential contributing factors in multicultural communities.

From 2000-2012 there were on average four drowning deaths per year in Victoria reported as being individuals from CALD communities, representing 10% of the total annual drowning deaths in Victoria. For the current financial year (1 July 2012 to 30 June 2013) nine (22%) individuals that drowned in Victoria were reported as being from CALD communities, more than double the average from previous years. However, the reported figures may be much higher as from 2000-2012 it is estimated that country of birth or ethnicity were either unknown at the time or are unlikely to be known in 75% of Victorian drowning deaths. Therefore, further work is required to determine the extent of aquatic injury in CALD communities in Victoria.

In Australia the crude coastal drowning rate is 0.43 per 100,000 population (Surf Life Saving Australia, 2012). It is estimated that from 2002-2007 an average of 53 people drowned each year at Australian beaches (Franklin et al., 2010). For every reported death there were over 260 rescues on Australian beaches in 2009/2010 (Surf Life Saving Australia, 2010). In Victoria, there were a reported 815 rescues per year by lifesavers and lifeguards on patrolled beaches from 2001-2011 (Life Saving Victoria, 2012). However, the characteristics of those rescued have not been explored and may help elucidate the coastal drowning risk for those from CALD communities.

While over a quarter of Victorian's were born overseas, evidence is lacking to determine the full extent of drowning risk for people from CALD communities. In addition, there is limited evidence on participation rates for people from CALD communities and therefore their level of exposure to aquatic activities and the aquatic environment. It is thought that people from CALD communities have limited exposure to water therefore increasing the potential risk of drowning. Therefore, providing a better picture of exposure to water or participation rates may illicit a more accurate rate of drowning than a crude rate by population.

Life Saving Victoria's Multicultural Projects continued commitment to CALD projects plays a vital role in improving opportunities for all Victorians to receive fundamental water safety messages and education. Evaluation of key drowning risk factors for people from CALD communities will assist with the further development and targeting of programs undertaken by Multicultural Projects, funded by the Department of Justice (DOJ). The proposed research fits within Priority Area A of the Victorian Water Safety Master Plan 2012-2015: *Reduce drowning deaths in at-risk communities.* [2]

[1] Australian Water Safety Council (2012) Australian Water Safety Strategy 2012-15. Australian Water Safety Council. Sydney

[2] Life Saving Victoria (2012) Victorian Water Safety Master Plan 2012-2015. Life Saving Victoria. Port Melbourne.

Objectives

1. Analyse the characteristics of those rescued by lifesavers (with a specific focus on CALD individuals) at Victorian beaches from 2007-2013 patrol seasons.
    a. Examine lifesaver understanding of key issues surrounding drowning and water related incidents for their club and surrounding area with a specific focus on multicultural communities.
2. Estimate drowning risk for those from CALD communities at Victorian beaches.
    a. Compare exposure (visitation rates) of those from CALD communities to those born in Australia.
3. Determine self-reported behaviour, knowledge, swimming ability levels and learn to swim participation of people from CALD communities.

METHODS

Objective 1: Analyse characteristics of those rescued by lifesavers at Victorian beaches from 2007-2013.

Rescues

Volunteer lifesaver and paid lifeguard rescue data from 2007-2013 patrol seasons was analysed. Incidents were identified from CommLog, the Life Saving Victoria (LSV) rescue and first aid reporting database and included the following variables: Date and time of incident, location of rescue (between or outside the patrol flags; between or outside patrolled areas), beach type and hazard rating; and demographic variables including age range, gender, and nationality.

The Australian Beach Safety and Management Program (ABSAMP) hazard rating was provided for each beach where a rescue occurred (Table 1). The beach hazard provides an overall rating of the beach on a scale from 1 to 10 according to its associated hazards, based on beach type and wave height.

Table 1: Australian Beach Safety and Management Program Beach Hazard Ratings

Hazard Rating	Details
1 - 3	Least Hazardous: Low danger posed by water depth and/or weak currents; however, supervision still required, in particular for children and poor swimmers.
4 - 6	Moderately Hazardous: The level of hazard depends on wave and weather conditions, with the possibility of strong rips and currents posing a moderate risk.
7 - 8	Highly Hazardous: Experience in strong surf, rips and currents required, with beaches in this category considered dangerous.
9 - 10	Extremely Hazardous: Identifies beaches that are considered extremely dangerous due to strong rips and currents, and large breakers.

As the focus of this study was on multicultural communities, rescues where nationality was not recorded were excluded from the analysis. This represented 12% of the total sample of 4149 rescues. Therefore 3,670 rescues from 2007-2013 were included in the analysis.

Life Saving Club Feedback

Consultation with Life Saving Clubs (LSCs) in the City of Kingston and City of Frankston was conducted. These local government areas have collectively been recognised as a 'blackspot' due to the number of drowning incidents or rescues occurring at clubs within this region. Initial feedback was obtained via a regional meeting of all the clubs. Each LSC in the City of Kingston and City of Frankston was also invited to participate in a focus group session including the relevant committee or other members within the club. A standard set of questions were developed for the LSC sessions. Those attending the sessions were also invited to pass on the set questions to other interested members or key stakeholders to provide further feedback.

Participants were asked about the main issues facing their club or surrounding area in respect to drowning and other water related incidents; whether they felt any particular individuals or groups, types of activities or behaviours, environmental attributes, infrastructure, or other factors, would place people at greater risk of drowning or water related injury. Participants were also asked about what key strategies would be best to address the specific issues identified concerning drowning and water related incidents.

Data analysis

Summary statistics and tables were provided utilising IBM SPSS, results were considered statistically significant at the $p<0.05$ level. Qualitative analysis was also conducted identifying key themes discussed.

Objective 2: Estimate drowning risk for those from CALD communities at Victorian beaches.

The study included telephone surveys of Victorians (conducted by McNair Ingenuity Research) from different multicultural backgrounds as compared to those born in Australia. Focus group sessions with multicultural communities (conducted by LOTE Marketing) were used to verify results from the survey and further explore any emerging issues, such as barriers to aquatic participation and any differences for those newly arrived in Australia. Community/ language groups were selected to include a mix of established and emerging CALD communities as well as those that have been identified as at higher risk due to the number of drowning deaths.

Participants:

Participants included adults aged 18 years and over. Surveys and focus groups were conducted amongst six different community/ language groups: Italian, Sudanese, Vietnamese, Chinese (Mandarin and Cantonese), Indian and English (Australian). Additional focus groups were conducted targeting a further six language groups: Arabic, Burmese, Croatian, Khmer, Macedonian, and Somali.

Measurement:

Questions for the surveys were designed in consultation with LSV Multicultural Projects, to assess the level of exposure of multicultural communities to various water activities and self-reported swimming ability.

Data analysis

Summary statistics and tables were provided utilising IBM SPSS. Qualitative analysis was also conducted identifying key themes discussed.

Objective 3: Determine self-reported behaviour, knowledge, swimming ability levels and learn to swim participation of people from CALD communities.

This study included the methods, participants, analysis and reporting as described for Objective 2. Additional questions were asked to provide measures of: self-reported behaviour around water; self-reported swimming ability, and; level of participation in formal swimming lessons or learn to swim programs and barriers to participation. Differences in the level of exposure to water activities, participation in swimming lessons and barriers to participation, between people new to Australia (less than five years) were compared with those that have lived in Australia for a longer period of time.

In addition, participants in the DOJ/VicHealth funded CALD beach programs were surveyed at the conclusion of their program. Questions were developed to determine their water safety knowledge, level of swimming ability and participation in swim lessons, prior to program participation.

Participants:

There were a total of 229 beach program participants, from 22 different community/ language groups, that completed the surveys. Three in four of those surveyed had lived in Australia for less than 2 years.

Measurement:

Questions for the surveys were designed in consultation with LSV Multicultural Projects to assess participants' self-reported water safety knowledge, level of swimming ability and participation in swim lessons.

Data analysis

Summary statistics and tables were produced with IBM SPSS.

RESULTS

Objective 1: Analyse characteristics of those rescued by lifesavers at Victorian beaches from 2007-2013.

Rescues

There were over 3,670 rescues performed by lifesavers and lifeguards at patrolled Victorian beaches from 2007-2013. Of the average 533 rescues per year, 82 per year were of those identified as overseas-born Australians, that is, on average 13% of rescues (Table 2). In addition, those born overseas represented 24% of the total rescues in Port Phillip Bay compared to 11% of the total rescues at ocean beaches.

Rescues were grouped according to the different regions in which the LSCs are located. A higher proportion of rescues of overseas-born Australians occurred in the Kingston and Port Phillip regions when compared with the overall average for Victoria. The proportion of rescues in the Kingston region of overseas-born Australians was on average 30% from 2007 to 2013 (Appendix, Table A.1). In addition, the proportion of rescues in the Port Phillip region of overseas-born Australians was 22% on average from 2007 to 2013.

Table 2: Rescues in Victoria by financial year and nationality: 2007-2013.

	Nationality					
	Australia		Overseas		Total	
Financial Year	Frequency	Percent	Frequency	Percent	Frequency	Percent
2007/2008	582	89.1%	71	10.9%	653	100.0%
2008/2009	441	85.5%	75	14.5%	516	100.0%
2009/2010	493	82.9%	102	17.1%	595	100.0%
2010/2011	567	93.0%	43	7.0%	610	100.0%
2011/2012	567	87.0%	85	13.0%	652	100.0%
2012/2013	548	85.1%	96	14.9%	644	100.0%
Total	3198	87.1%	472	12.9%	3670	100.0%
Average 2007-2013	533	87.1%	82	12.9%	612	100.0%

NB: 480 rescues had Unknown nationality or 12% of the total original sample (N=4149).

Over half of all rescues occurred at beaches rated as highly hazardous (7-8 ABSAMP rating'; Table 3). However, a greater proportion of people from overseas were rescued at beaches with a lower hazard rating compared with those born in Australia. Alternately a lower proportion of people of people born overseas were rescued at moderately hazardous beaches compared with those born in Australia. Both groups were equally likely to be rescued at highly hazardous beaches. In addition, those born overseas were also more likely to be rescued further from shore.

Table 3: Hazard rating of beaches where rescues occurred by nationality of patient rescued.

	Nationality						Significance*
	Australia		Overseas		Total		
Hazard Rating	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Least Hazardous (1-3)	444	13.9%	116	24.7%	560	15.3%	p<0.05
Moderately Hazardous (4-6)	1047	32.8%	118	25.1%	1165	31.8%	p<0.05
Highly Hazardous (7-8)	1705	53.3%	236	50.2%	1941	52.9%	
Total	3196	100.0%	470	100.0%	3666	100.0%	

*Significant difference between those born overseas compared with those born in Australia.

Life Saving Club Feedback

Seven of the nine LSCs in Kingston and Frankston participated in the focus group sessions as part of the blackspot project. A minimum of four people attended each session with most sessions including six members and one including 13 members. Of the two clubs that did not participate one club had extenuating circumstances making consultation difficult and one club did not respond to the various forms of invitations.

A total of 45 LSC members provided feedback on the beaches they patrol in Kingston and Frankston. Overall, lifesavers reported increased numbers of visitors and changing demographics of visitors from the various metropolitan growth corridors. They felt that there was increased accessibility for non-locals to visit the foreshore since the opening of the EastLink motorway which connects the north-east Melbourne suburbs (including Donvale, Ringwood & Mitcham), with the south-east (including Springvale, Dandenong and Frankston). In addition, public transport (buses and trains) provided improved accessibility with an increase in attendance of large groups of people by these modes of transport.

When asked about the main issues facing their club or surrounding area in respect to drowning and other water related incidents, five out of the seven clubs identified individuals from CALD communities, that were unfamiliar with the local conditions and water safety, that were accessing the beaches in Kingston and Frankston as the primary issue facing their club. Another club rated this second, with the general influx of visitors due to increased accessibility rated as the primary concern.

Particular issues identified were that many people lack sufficient water safety skills, enter the water fully clothed, are generally unprepared for water entry, and/ or underestimate bay beaches as they look benign. Lifesavers felt that for many people:

“There is no perception of risk [at bay beaches] compared to surf beaches.”

When asked to identify if any particular individuals or groups (such as particular age groups, gender, place of residence, country of birth or language spoken at home, swimming ability, socioeconomic status) were more vulnerable than others in relation to drowning and other water related incidents, all seven LSCs identified CALD communities as at increased risk.

It was further noted that children from CALD communities were at increased risk. This risk was not restricted to CALD communities, with one participant noting that many kids at the beach are overconfident. However, it was felt that there may be issues with children new to the community that have not had swimming lessons getting into difficulty in the water when playing with their Australian-born friends who are more likely to have established swim skills and greater confidence in the water.

"Kids who can swim in the pool are overconfident at the beach, other kids who can't swim follow them."

This highlights issues of not only the need to teach children swimming and water safety skills but also their parents because children may be confident from lessons at the pool but may not be able to apply this to a beach situation and if parents are also unable to swim this may end in tragedy where a parent attempts to rescue their child and then gets into difficulty themselves and either or both drown.

Lifesavers noted that the ethnicity of beachgoers are constantly changing, however, current groups at high risk included those from Southern and Central Asia (India, Sri Lanka, Pakistan), North-East Asia (Chinese, Japanese), and North Africa and the Middle East (Sudan) and Sub-Saharan Africa.

The key strategies lifesavers felt would address the issue of drowning and other water related incidents for CALD communities included: targeted education and creating better linkages within communities (getting individuals involved at a club level); assistance for families to attend learn to swim lessons at the pool and beach sessions (addressing issues such as, transport and cultural issues); appropriate pictorial signage that could be understood by CALD communities; and improvements to or expansion of life saving service provision.

Objective 2: Estimate drowning risk for those from CALD communities at Victorian beaches.

Participant demographics

In total, 687 residents in Victoria were surveyed (Participants in the focus groups included six people from each different cultural/linguistic group as per the survey: Italian, Sudanese, Vietnamese, Chinese (Mandarin and Cantonese), Indian and English. Additional focus groups also included six people from each of the following cultural/linguistic groups: Arabic, Burmese, Croatian, Khmer, Macedonian, and Somali.

Beach program participants included people aged 10 - 44 years from 22 different community/ language groups. Two thirds (65%) were male and 77% had lived in Australia for less than 2 years.

Table 44), with no differences in gender of those surveyed. However, there were differences in the age groups of those surveyed with a greater proportion of those from the Italian cultural/linguistic group aged 55 years or over and a greater proportion of the Sudanese cultural/linguistic group aged 18-34 years.

Participants in the focus groups included six people from each different cultural/linguistic group as per the survey: Italian, Sudanese, Vietnamese, Chinese (Mandarin and Cantonese), Indian and English. Additional focus groups also included six people from each of the following cultural/linguistic groups: Arabic, Burmese, Croatian, Khmer, Macedonian, and Somali.

Beach program participants included people aged 10 - 44 years from 22 different community/ language groups. Two thirds (65%) were male and 77% had lived in Australia for less than 2 years.

Table 4: Demographics of participants surveyed.

		Frequency (n)	Percent (%)
Cultural/Linguistic Group	Italian	92	13.4
	Sudanese	101	14.7
	Vietnamese	99	14.4
	Chinese	99	14.4
	Indian	96	14.0
	English	200	29.1
	Total	687	100.0
Gender	Male	318	46.3
	Female	369	53.7
	Total	687	100.0
Age	18 - 34 years	174	25.3
	35 - 54 years	238	34.6
	55 + years	275	40.0
	Total	687	100.0

Participation in aquatic activities

The majority of those surveyed had been swimming at least once in the previous 12 months (Figure). Those overseas-born Australians, except Sudanese, were nearly twice as likely to have never gone swimming in the last year compared to Australian-born respondents. Older respondents (aged over 65 years) were more than three times as likely to have never gone swimming in the last year compared with younger respondents aged 18-24 years.

Overseas-born Australians were significantly more likely to have not been swimming in a home pool in the past year when compared with Australian-born respondents. This was because the majority of overseas-born Australians did not have access to a home pool (64%) or could not swim (18%). Between a third and half of all respondents went swimming at a public pool in the past year, except Italian respondents who were significantly more likely to have never gone swimming in the past year (95%).

Fewer overseas-born Australians went swimming at the beach in the past year compared with Australian-born respondents. In regard to specific locations:

- Patrolled surf beach- Italian and Chinese were less likely have been swimming at patrolled surf beaches (7-8%) compared to all other cultural/linguistic groups surveyed 20-36%.
- Unpatrolled surf beach- Indian and Australian-born respondents were more likely to swim at unpatrolled surf beaches (12-14%) versus the other cultural/linguistic groups (2-4%).
- Patrolled bay beach- Sudanese and Australian-born respondents were more likely to swim at patrolled bay beaches (21-23%) compared to the other cultural/linguistic groups (3-14%)
- Unpatrolled bay beach- Sudanese and Australian-born respondents were more likely to swim at unpatrolled bay beaches (17-20%) compared to the other cultural/linguistic groups (2-9%).

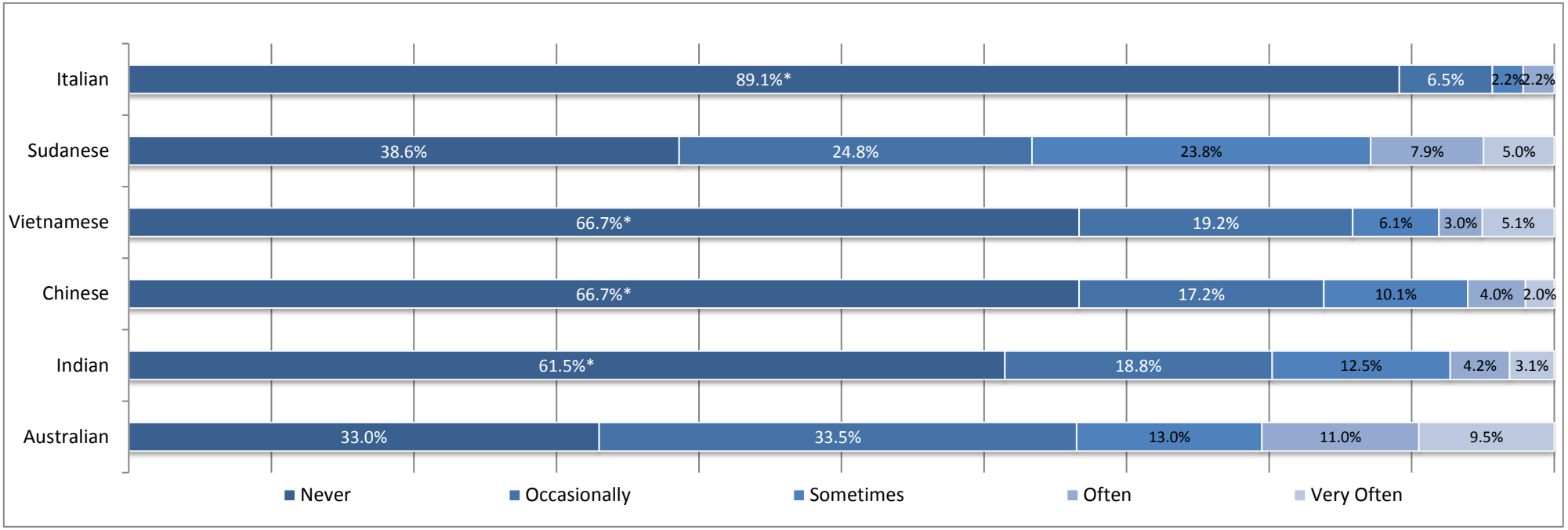

Figure 1: Participation in swimming in the past year by cultural/linguistic group.

The primary reason overseas-born Australians reported they did not go swimming was that they could not swim, followed by a lack of time. Other reasons for not swimming differed by the aquatic environment, for home pools it was a lack of access; for rivers or lakes, a lack of interest in swimming in these locations; for unpatrolled surf beaches, that they were too dangerous. Similar barriers to participation were reported by focus group participants, in particular, a fear of water and cost.

Participation of overseas-born Australians in fishing was between 5-14% with those from the Vietnamese community most likely to have gone fishing (14%), followed by the Indian community (13%) and the Chinese community (8%). Over a quarter of Australian-born respondents (29%) had been fishing in the last year.

Participation levels in boating varied, with 0-14% of overseas-born Australians going boating in the last year. No respondents from the Vietnamese community had been boating in the last year while 14% of respondents from the Indian community had been boating. Almost a quarter of Australian-born respondents (23%) had been boating in the last year.

Lower levels of participation were also reported by overseas-born Australians in surfing/ body boarding, canoeing/kayaking, windsurfing/jet boating and snorkelling/ SCUBA diving, ranging from 0-5% for these activities compared to 6-14% for Australian-born respondents.

Objective 3: Determine self-reported behaviour, knowledge, swimming ability levels and learn to swim participation of people from CALD communities.

Behavioural patterns

Telephone survey respondents described certain behaviours around water. Australian-born respondents were more likely to have swum after drinking alcohol (16%) compared with overseas-born Australians (0-6%). They were also more likely to not swim between the flags at a patrolled beach (17%) compared with overseas-born Australians (0-5%).

The majority of all respondents were likely to tell someone where they were going before they swum. Indian and Vietnamese respondents were significantly more likely than other groups to always go swimming on their own. Most respondents checked the weather and water conditions before going swimming. In the case of an emergency situation, overseas-born Australians were less likely to report that they would know how to do resuscitation (11-59%) compared to Australian-born respondents (72%).

Beach program participants from a variety of CALD communities also described their water safety knowledge prior to participating in the program. Almost two thirds (64%) rated their knowledge as not very good or nil, with just over a third (36%) rating their knowledge as good.

Swimming ability

Respondents to the telephone survey who were born overseas were more likely to rate themselves as a 'poor swimmer' or 'cannot swim', whereas Australian-born respondents were more likely to rate themselves as an 'average', 'good' or 'very good' swimmer (Figure). These results were similar to those reported by CALD participants in the focus group sessions and beach program participants.

Just over half the beach program participants rated their swimming ability as poor or cannot swim (52%), while just over a third rated their ability as 'OK- I can swim 50m in any style without stopping' (35%) followed by good (13%).

Telephone survey participants were also asked to rate their swimming ability on a scale of 0 to 10 where 0 equalled 'cannot float or swim' and 10 'can confidently swim for over one hour and float as long as I wish'. The mean self-reported swimming ability of all CALD respondents was significantly lower than Australian-born respondents (Table 5). This was found across all conditions, in a swimming pool and in surf as well as overall. Australian-born respondents rated their swimming ability almost twice that of all the cultural/linguistic groups, except Sudanese.

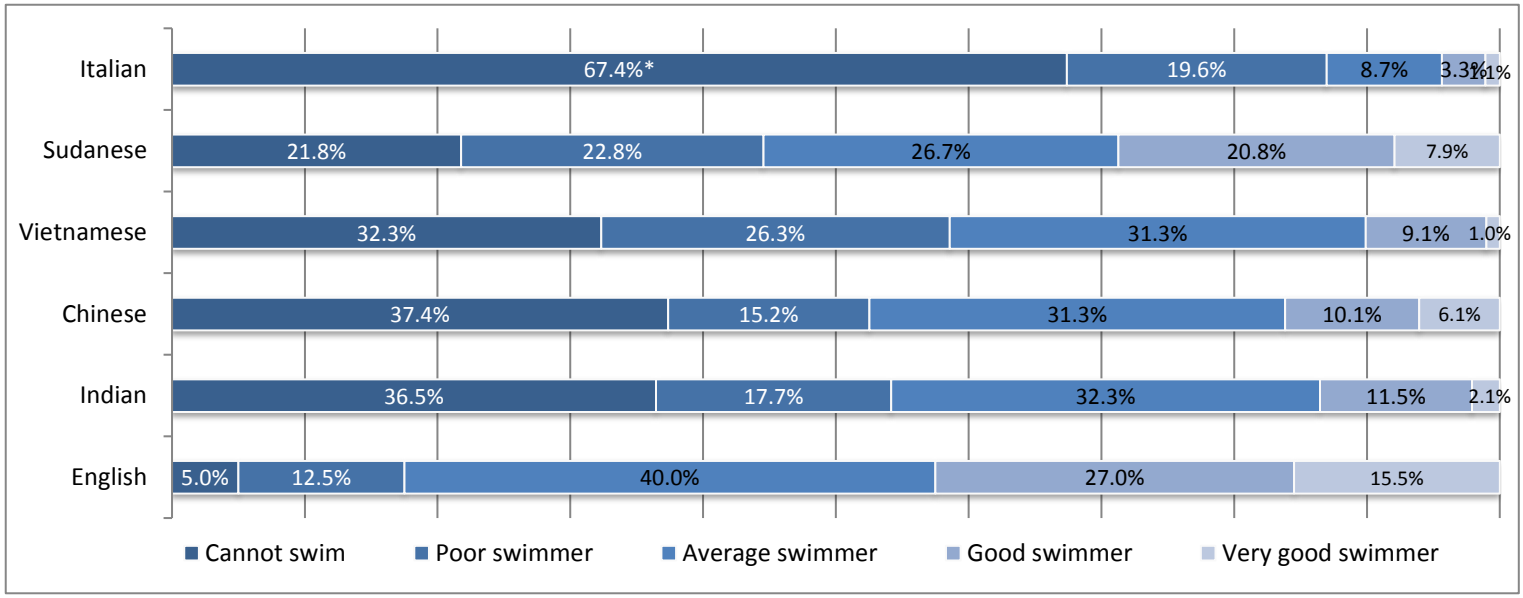

Figure 2: Self-rated unassisted swimming ability by cultural/linguistic group.

Table 5: Self-rated unassisted mean swimming ability[β] by cultural/linguistic group.

Swimming Ability	Cultural/Linguistic Group	N	Mean
Overall	Italian	92	1.29
	Sudanese	101	4.27
	Vietnamese	99	3.13
	Chinese	99	3.19
	Indian	96	3.39
	Australian	200	6.08*
In a swimming pool	Italian	92	1.50
	Sudanese	101	4.64
	Vietnamese	99	3.20
	Chinese	99	3.31
	Indian	96	3.86
	Australian	200	6.52*
In surf	Italian	92	0.57
	Sudanese	101	2.45
	Vietnamese	99	2.75
	Chinese	99	2.18
	Indian	96	1.85
	Australian	200	4.72*

[β] Swimming ability rating on a scale of 0 to 10 where 0 equalled 'cannot float or swim' and 10 'can confidently swim for over one hour and float as long as I wish'.
*p<0.05

Learn to swim participation

The telephone surveys revealed that formal swimming lessons or learn to swim lessons were significantly less likely to be undertaken by overseas-born Australians (5-41%) when compared with Australian-born respondents (71%). These findings were reinforced in the focus group sessions with individuals learning to swim through family or friends or being self-taught rather than through formal lessons. This was due primarily to a lack of opportunity. Indeed nearly 70% of focus group participants stated they would be interested in swimming lessons if they were offered free of charge and 46% interested if they were subsidised.

The key reasons for respondents from CALD communities for not learning to swim were:

- Self-taught,
- Doesn't appeal/no interest,
- Lack of opportunity, and
- Lack of time.

When broken down into the number of years living in Australia those respondents that had lived in Australia less than 10 years were significantly more likely to cite a lack of opportunity as their main reason for not having swimming lessons compared with those that had lived in Australia for 10 years or more. The barriers cited by participants in the focus groups were similar to survey respondents; those that were more frequently mentioned by focus group participants compared with survey respondents were cost and fear for their safety.

Similarly, just one third (35%) of beach program participants had taken part in formal swimming lessons. Furthermore, of those who had received lessons, 41% had attended just five lessons or fewer. Those who had never had lessons also stated a lack of opportunity as well as having no need for lessons and high costs. Nevertheless, 86% would like to participate in lessons if they were available.

DISCUSSION AND CONCLUSIONS

Analysis of rescues conducted by lifesavers/lifeguards at Victorian beaches over a six-year period identified that 13% of rescues were individuals from CALD communities. This figure is comparable to the proportion of drowning deaths in Victoria over the past decade, reported as being individuals from CALD communities (10%).

The results indicated that for every coastal drowning death in Victoria there are another 44 known rescues by lifesavers and lifeguards. For every Australian/other/unknown person that drowns there are 16 rescues and for every individual from a CALD background that drowns there are another 19 rescues of CALD individuals. The higher ratio of rescues for individuals from CALD communities may also reflect the number of drowning deaths with an unknown country of birth.

A higher proportion of rescues of those born overseas occurred in the Kingston and Port Phillip regions when compared with the overall average for Victoria. This may reflect visitation to these areas, with potentially more people from CALD communities visiting these particular beaches. This possible explanation was also reflected in the responses by lifesavers from LSCs in the City of Kingston and City of Frankston regions, alluding to the development of roads and infrastructure to attract people to these bay beaches. Further research is needed to more accurately determine visitation of people from CALD communities at Victorian beaches.

Analysis of rescue statistics revealed a significantly greater proportion of people from overseas were rescued at beaches with a lower hazard rating. These results may be indicative of a greater number of people from CALD communities visiting bay beaches which typically have a lower hazard rating. However, the fact that a similar proportion of rescues at highly hazardous beaches were overseas-born Australians as well as Australian-born residents refutes this reasoning. The telephone survey results also refute this, with similar proportions of respondents from CALD communities swimming at bay and ocean beaches. In addition, those born overseas were also more likely to be rescued further from shore. This may be due to people going further out in the water at less hazardous beaches as they are unaware of the potential hazards at these beaches.

Of concern was the greater proportion of people from CALD communities being rescued at beaches with a low hazard rating. This may reflect a lack of swimming ability in those from CALD communities, which was identified through surveys and focus groups. People from CALD communities' reported level of swimming ability was approximately half that reported by Australian-born residents. The majority of respondents from CALD communities also reported that they could not swim or were poor swimmers.

Study strengths and limitations

This study provided an analysis of the characteristics of rescues in Victoria not previously assessed, in particular a differentiation of rescues in overseas-born compared with Australian-born residents. However, while an estimate of exposure was provided through a public survey, the rescue data did not have a concomitant direct assessment of exposure of CALD communities. In order to fully determine the level of risk of fatal and non-fatal drowning in CALD communities, further studies are recommended to elucidate the number of overseas-born and Australian-born individuals visiting Victorian beaches.

The rescue data provided a picture of those non-fatal drowning incidents occurring during patrol hours and in the patrol season (December to April). However, a broader picture of non-fatal incidents or rescues conducted by for example, surfers, the general public, emergency services personnel, outside patrol times is required.

The collection of information about cultural diversity has limitations when recording nationality versus country of birth, language spoken at home, and length of time living in Australia. Nationality can be subjective, relating to a person's sense of belonging to a particular nation. For example, some people born overseas that recently arrived in Australia may associate their national identity with feeling Australian despite legally being nationals of their country of origin. In addition, there remained 12% of the total rescues where nationality was unreported. Therefore, more work is required to improve both the collection of rescue (and fatal drowning) information and the type of information recorded.

Conclusion

This current study has identified the need for continued work to educate people from CALD communities about the potential hazards of beaches, including those beaches considered least hazardous, and the importance of learning to swim, and not swimming alone. The results also highlight the importance of the services provided by lifesavers/lifeguards.

APPENDIX

Table A.1: Rescues by life saving club region, nationality of patient rescued and year: 2007-2013.

Financial Year	2007/2008				2008/2009				2009/2010				2010/2011				2011/2012				2012/2013				Total			
Nationality	Australia		Overseas		Australia		Overseas		Australia		Overseas		Australia		Overseas		Australia		Overseas		Australia		Overseas		Australia		Overseas	
Region	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	Percent	n	Percent
Bass	128	90.8%	13	9.2%	88	77.2%	26*	22.8%	127	87.6%	18	12.4%	136	92.5%	11	7.5%	82	77.4%	24*	22.6%	136	84.5%	25	15.5%	697	85.6%	117	14.4%
Bellarine	128	90.8%	13	9.2%	106	86.9%	16	13.1%	126	82.4%	27	17.6%	103	88.8%	13	11.2%	117	91.4%	11	8.6%	118	90.8%	12*	9.2%	698	88.4%	92	11.6%
Gippsland	43	97.7%	1	2.3%	47	92.2%	4	7.8%	15	78.9%	4	21.1%	39	100.0%	0	0.0%	26	96.3%	1	3.7%	40	97.6%	1*	2.4%	210	95.0%	11*	5.0%
Kingston	12	100.0%	0	0.0%	5	33.3%	10*	66.7%	20	83.3%	4	16.7%	10	58.8%	7*	41.2%	49	73.1%	18*	26.9%	17	63.0%	10*	37.0%	113	69.8%	49*	30.2%
Peninsula	200	85.8%	33*	14.2%	143	91.7%	13*	8.3%	150	84.3%	28	15.7%	230	95.8%	10*	4.2%	198	91.7%	18*	8.3%	141	84.9%	25	15.1%	1062	89.3%	127*	10.7%
Port Phillip	15	88.2%	2	11.8%	15	100.0%	0	0.0%	19	76.0%	6	24.0%	2	66.7%	1	33.3%	18	69.2%	8*	30.8%	17	70.8%	7*	29.2%	86	78.2%	24*	21.8%
Surfcoast	51	86.4%	8	13.6%	28	82.4%	6	17.6%	21	60.0%	14*	40.0%	34	97.1%	1	2.9%	61	92.4%	5	7.6%	66	84.6%	12	15.4%	261	85.0%	46	15.0%
Western	5	83.3%	1	16.7%	9	100.0%	0	0.0%	14	93.3%	1	6.7%	10	100.0%	0	0.0%	15	100.0%	0	0.0%	12	75.0%	4	25.0%	65	91.5%	6	8.5%
Total	582	89.1%	71	10.9%	441	85.5%	75	14.5%	493	82.9%	102	17.1%	567	93.0%	43	7.0%	567	87.0%	85	13.0%	548	85.1%	96	14.9%	3198	87.1%	472	12.9%

*p<0.05