BIGGER BETTER SAFER 2014-15

WESTERN AUSTRALIAN AQUATICS INDUSTRY REPORT

LEISURE INSTITUTE OF WA AQUATIC (INC.)

Royal Life Saving

THE ROYAL LIFE SAVING SOCIETY - WESTERN AUSTRALIA INC.

AUTHORS

Report prepared by the Royal Life Saving Society of Western Australia Health Promotion and Research Department and The Leisure Institute of WA Aquatics.

ACKNOWLEDGMENTS

Thank you to the 78 aquatic centres across the state who completed the industry profile survey. A special thank you to the 23 aquatic centres who supplied incident and patronage data for the 2014-15 season.

- Altone Park Leisure Centre
- Aqualife Centre
- Bayswater Waves
- Beatty Park Leisure Centre
- Belmont Oasis Leisure Centre
- Broome Recreation and Aquatic Centre
- Cannington Leisureplex
- Claremont Aquatic Centre
- Craigie Leisure Centre
- Geographe Leisure Centre
- Geraldton Aquarena
- Goldfields Oasis
- Karratha Leisureplex
- Kununurra Leisure Centre
- Leisurepark Balga
- Leschenault Leisure Centre
- Margaret River Recreation Centre
- Newman Aquatic Centre
- Riverton Leisureplex
- South Hedland Aquatic Centre
- South Lake Leisure Centre
- Terry Tyzack Leisure Centre
- Wanneroo Aquamotion

PROJECT PARTNERS

LIWA
LEISURE INSTITUTE OF WA AQUATIC (INC.)

FRESH WATER THINKING

WATER CORPORATION

lgis
WORKING TOGETHER

GOVERNMENT OF WESTERN AUSTRALIA

Department of Sport and Recreation

A MESSAGE FROM OUR CEO

AQUATIC CENTRES PROVIDE significant benefit in terms of community development, sport, recreation, health and fitness. They also make an important contribution toward creating a water safe community when you consider:

- Children get the opportunity to safely explore the water under the watchful eye of a lifeguard,
- Parental behaviours in relation to supervision are modelled and influenced by lifeguards and the Watch Around Water program. Skills that are inevitably transferred to everyday life and the home,
- Opportunities are provided for all ages and all communities to learn personal water safety and survival skills,
- Training is provided in Bronze Medallion and CPR, developing skills that could one-day save a person's life.

The Royal Life Saving Society WA and Leisure Institute of WA has collaborated for more a decade on this unique research project that seeks to;

1. Better understand the aquatic industry as a collective and to quantify key outputs,
2. Monitor risks to patron safety and identify trends,
3. Evaluate compliance to industry benchmarks and standard operating procedures,
4. Be a catalyst for discussion and an evidence base for ongoing program development.

Highlights of this year's report include:

- Annual patronage at public aquatic centres has increased to 10.4 million visits (an extra 280,000 visits compared to last year),
- The sector employed more than 3,500 people in full time, part time and casual positions,
- Continued improvement in industry practice and compliance,
- A new section analysing water safety program provision.

Most importantly the report includes recommendations and opportunities to achieve even better outcomes in the future.

Many people have made a significant contribution to this report. In particular I would like to acknowledge Lauren Nimmo for coordinating the research project, Tony Head for his support and Amanda Juniper for collating the data and preparing the report.

PETER LEAVERSUCH
CEO
ROYAL LIFE SAVING SOCIETY WESTERN AUSTRALIA


LIFEGUARD

PART 1: STATE OF THE INDUSTRY

The survey collects data from public aquatic centres regarding the patronage, expenditure and staffing in the aquatic areas of the centres for June 2014 to July 2015 (see Appendix 1). The most recent data provided is used to estimate results; however if an aquatic centre has never participated in the survey estimates are made based on similar sized facilities.

More than half (61%) of the 127* public aquatic centres in WA completed the 2014-15 Aquatic Industry Profile, 18 more than the previous year (Figure 1) and the highest response rate to date. The combined annual patronage at these centres represents nearly 80% of the total annual patronage for the State. While the response rate was again much higher amongst metropolitan pools (81%), the number of regional pools participating increased to 55% from 38% last year.

The survey has been conducted 6 times since 2007 and nearly all public swimming pools have participated at least once in this time. A total of 10 pools participated in the survey for the first time in 2014-15 reducing the number that have never participated to only 13 (10%).

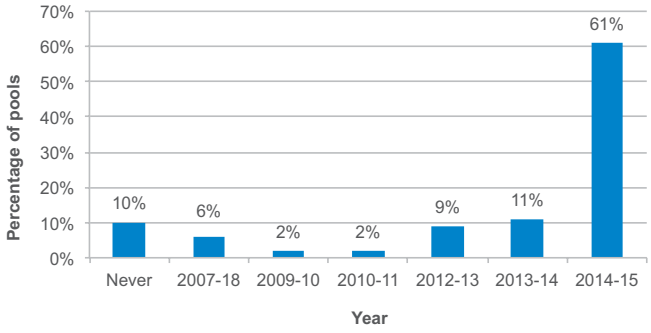

Figure 1: Year of last participation in the Industry survey for all public swimming pools

*Number has reduced from 128 last year as one aquatic centre that is not classified as public was included in the analysis.

Patronage

In 2014-15 there were an estimated 10.4 million visits to public swimming pools in WA; an extra 280,000 visits compared to the previous year which is an estimated 6% increase since 2009-10 and is 4% higher than the 5 year average (10M visits). However, this growth in patronage has not matched the 15% increase in the WA population during this time resulting in the rate of patronage declining slightly from 4.4 visits for every person in WA to 4.0 in 2014-15. (Figure 2)

Visits per head of population vary somewhat throughout the State, ranging from 3.7 in the Kimberley region to 5.6 in the Pilbara region. Generally, regional areas have higher patronage rates than the metropolitan area which sits just below the average at 3.9.

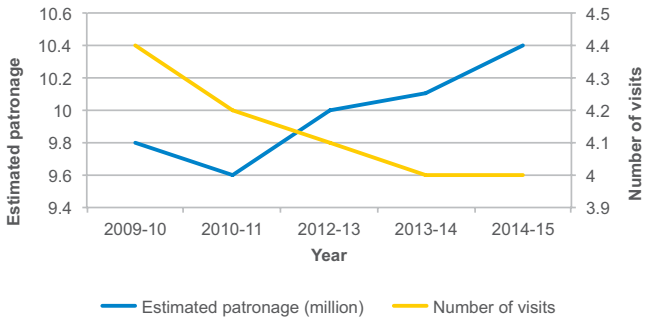

Figure 2: Estimated annual patronage for all aquatic centres in WA

Programs

Public aquatic centres play an essential role in teaching WA children to swim and participate in water activities safely with 95% of all centres surveyed delivering swimming and water safety lessons. The most common types of swimming and water safety lessons at aquatic centres are coordinated by the Department of Education with 82% and 81% of centres running in-term and vacswim lessons respectively (Figure 3).

Nearly 70% of centres have their own swim school and just over half delivered infant swimming and water safety classes in 2014-15. The 2012-13 LIWA survey also included questions about swimming and water safety classes offered and proportions have not changed considerably in this time.

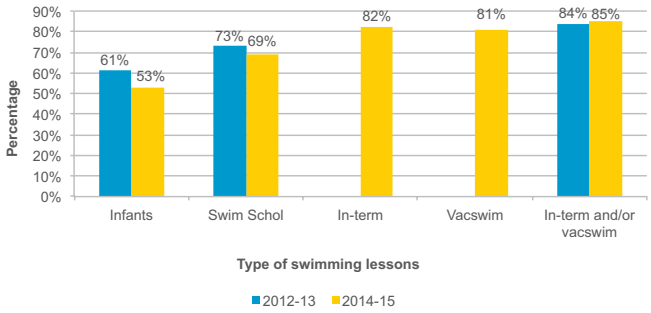

Figure 3: Percentage of aquatic centres providing swimming lessons by type

Nearly half (46%) of all centres surveyed reported offering at least one specialised program that targets at-risk groups including people with disabilities, Indigenous Australians and culturally and linguistically diverse (CALD) groups. In 2012-13 only a third of aquatic centres reported providing swimming and water safety classes for one or more of these target groups (Figure 4).

A third of all aquatic centres (n=28) reported running programs for individuals with disabilities at an average of 6 sessions per week. These included adjusted swimming lessons and classes, wheelchair bound programs and private lessons. Notably, participating centres also recognised the importance of including seniors in swimming programs, tailoring programs to these individuals as a result. These included gentle exercise and aerobic classes, exercise groups and health programs. The true number of programs for individuals with disabilities delivered at WA aquatic centres may be even higher as other community organisations also run such programs at centres.

The number of aquatic centres who offer programs for Indigenous Australians was much smaller at only 18% (n=14) averaging one session run per week. Swim4Fruit was the most common program run by centres and a number also offered fitness classes, wheelchair bound exercises, swimming classes and swimming carnivals for this group.

Just over 10% of pools (n=10) reported running programs for CALD groups with an average of one session per week. The majority of opportunities provided were 'swimming and water safety' classes and women's only swimming groups. Some centres had also established relationships with immigration centres in WA and were offering individuals programs through this entity.

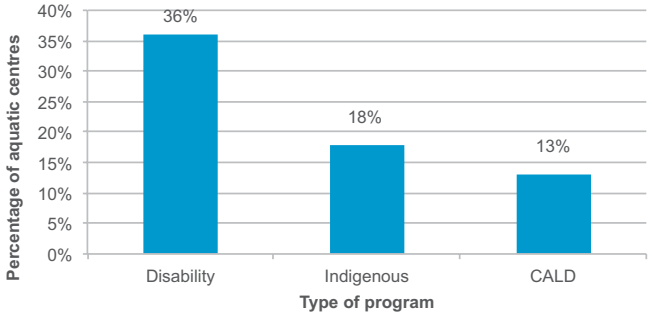

Figure 4: Percentage of aquatic centres offering specialised programs for at-risk groups

While it was positive to see many centres offering programs for minority groups, it was evident that many challenges were faced in delivering these activities. Primary issues included budget and funding restraints including the costs of running programs that were poorly attended. Centres also reported difficulty in securing the correct equipment and were often unable to source adequate numbers of qualified staff to support the programs. A number of centres also stated difficulties in regards to language barriers and transportation issues for patrons.

Expenditure

Annual expenditure at all aquatic centres combined has continued to increase over time and is now estimated to be around $72 million, 9% higher than the 5 year average of $65.4M (Figure 5). Since 2010-11, both total expenditure and patronage have increased by roughly 10%. This has led to expenditure per patron remaining fairly constant and increasing only slightly by less than 10c in this period.

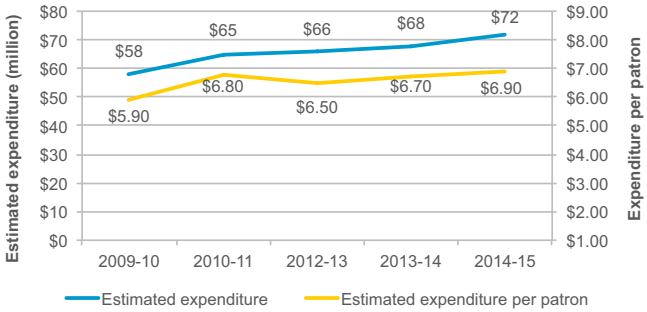

Figure 5: Estimated annual expenditure for all aquatic centres in WA

The long term marginal increase in expenditure per patron has been driven by three regional areas the Kimberley, Pilbara and Wheatbelt. Currently, estimated expenditure per patron in each of these areas is at least double the state average of $6.90. The remaining regions, including the metropolitan area, have all experienced decreases since 2010-11. The Perth and Mandurah metropolitan area still continues to have the lowest expenditure per patron visit (Figure 6).

Figure 6: Estimated average expenditure by aquatic centres per patron visit

Water Consumption

Each year, Water Corporation provides total water consumption figures for a sample of over 102* aquatic centres across the state. Extrapolating from these centres, total water consumption for all WA public swimming pools can be estimated at around 1.3 billion litres of scheme water each year. The data provided by Water Corporation are indicative only and may include consumption of other facilities on the site serviced by the same water meter. Figures provided do not include groundwater (bore) usage. Water consumption data from 2013-14 has been used here as the current usage figures were not complete at the time of preparing this report.

Similar to expenditure, estimated scheme water consumption per patron visit also varies greatly from region to region. On average 129 litres of water was used per patron visit to aquatic centres in WA in 2013-14. All but two of the regional areas (Albany and Bunbury regions) had water consumption rates greater than the state average, with some as much as 4 times higher. Metropolitan water usage per patron visit is nearly half the State average with only 72L/patron visit (Figure 7)

Total water usage at the 102 tracked pools appeared to be on a downward trend from last year's report, however 1,072 megalitres of water was used by these centres in 2013-14. This is very similar to the 2007-08 amount (1,076 ML) and equates to a 9% increase from last year (Figure 8). While much of this increase in the last 12 months could be attributed to two large centres undergoing refurbishments, there were still a total of 14 pools who recorded a more than 50% increase in water usage in this time. Furthermore, even when these two centres with the largest absolute increases in water consumption are removed from the sample, there is still a 7% increase on 2013-14 figures. Exploring reasons behind the long-term trends in annual water consumption at these centres is difficult as information on closures, refurbishments, leaks and so on over these years have not been compiled.

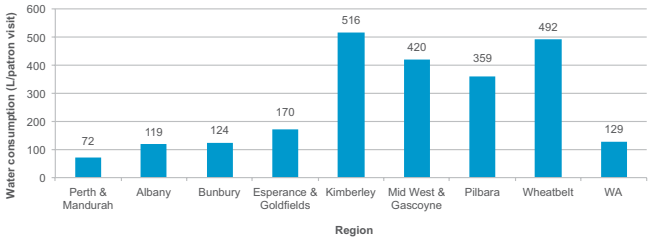

Figure 7: Estimated scheme water consumption in litres per patron visit by region for 2013-14

*Number has reduced from 103 last year as one aquatic centre in the original sample has now closed.

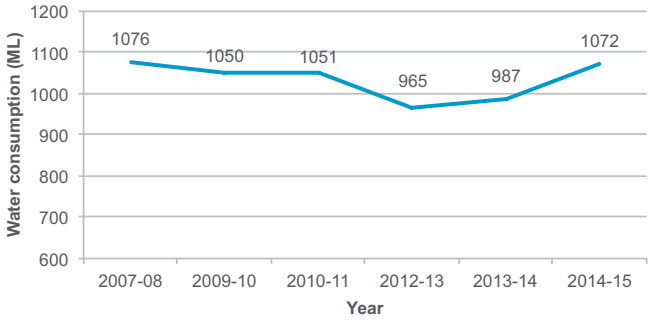

Figure 8: Annual scheme water consumption at a sample of 102 public swimming pools for 2007-08 to 2013-14

Labour Force

There are over 3,500 positions in the WA aquatics industry and more than two thirds of these are casual positions.

An estimated 520 pool operators are required by the WA aquatics industry and at June 2015 there were 493 people accredited for this role through LIWA Aquatics. Just over 50% of both the total positions and qualified personnel reside in the metropolitan area. Overall there appears to be a small shortfall of qualified pool operators compared to the number of positions required, with the ratio for the state being 0.9 (shown as WA in Figure 9). Four out of the seven regional areas have a ratio of less than 1. The Albany (Great Southern) region has the highest ratio with 1.5 qualified pool operators for every position required (Figure 9).

Overall there were roughly 60 (14%) more qualified pool operators in WA at June 2015 compared with the same time last year. Nearly three-quarters (72%) of pool operators who were accredited at June 2015 had maintained their qualification from the previous year; however 76 people allowed their qualification to lapse. Around 20% of pool operators were either new to the industry in 2014-15 or had not been qualified in the previous two years. The remaining 6% renewed their qualification that had lapsed in 2012-13 (Figure 10 and 11).

The WA aquatics industry requires an estimated 930 pool lifeguards and at June 2015 there were 1,363 people qualified through the Royal Life Saving Society. Of these, 62% of the required positions and 68% of the qualified personnel resided in the metropolitan area. Overall in WA there appears to be a 50% surplus of qualified pool lifeguards compared to the number of positions required (ratio 1.5). All regions, with the exception of the Kimberley and Wheatbelt, have ratios of greater than one, appearing to have a sufficient numbers of qualified people to meet demand. Again, the Albany (Great Southern) region has the highest surplus of qualified pool lifeguards with nearly twice the number required (Figure 12).

The total number of qualified lifeguards in WA has decreased by 6% (104) since last year. Of those lifeguards qualified at June 2015, 64% had maintained their accreditation from the previous year; however 586 had let their qualification lapse. Just under one third of pool lifeguards were either new to the industry in 2014-15 or had not been qualified in the previous 2 years. The remaining 5% renewed their qualification that had lapsed in 2012-13. (Figure 13 and 14)

Swim instructor positions in WA are almost all casual (85%) and total close to 1,600. At July 2015 there were 4,176 swim instructors qualified through the Royal Life Saving Society WA and AUSTSWIM. Half of the positions reported were in the pools own Swim School with remainder evenly split between Department of Education in-term and vacswim lessons. Around 70% of both the total positions and qualified personnel resided in the metropolitan area.

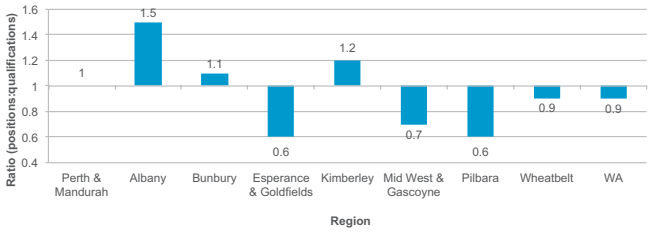

Figure 9: Ratio of pool operator positions to number of people qualified by region

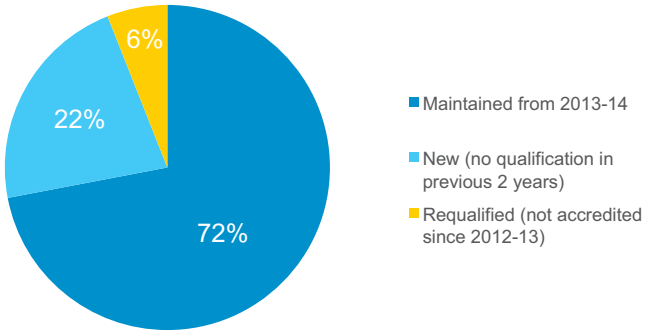

Figure 10: Date of renewal of pool operator qualifications current at June 2015

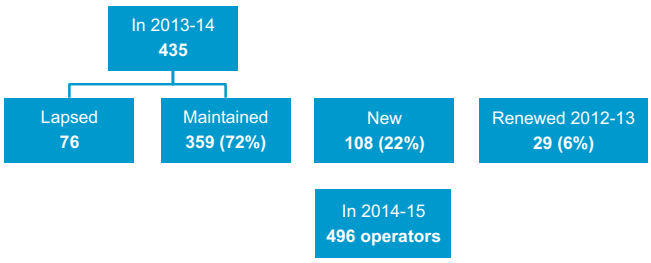

Figure 11: Flow chart of pool operator qualifications, 2014-15

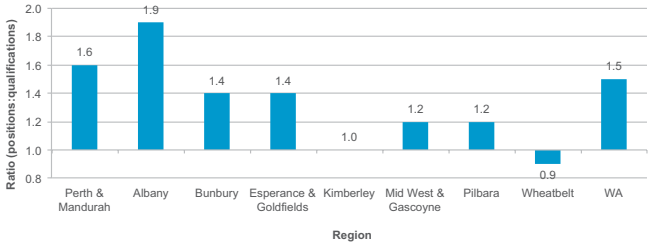

Figure 12: Ratio of Pool Lifeguard positions to number of people qualified by region

Based on total figures for the state, it is estimated that there are roughly 2.5 times the number of required qualified swim instructors required. Furthermore, neither the metropolitan area or any of the regional areas appear to have any shortfalls in supply of qualified swim instructors with ratios ranging from 1.4 in the Esperance & Goldfields region to 4.6 in the Albany (Great Southern) region for every position required (Figure 15).

Additional employees such as volunteers, trainees and work experience students make up a significant proportion of the aquatic labour force in WA with just under half of all centres surveyed (45%) reporting employing or hosting a total of 175 of these types of workers. Altogether, 17 centres (60%) reported hosting on average five work experience students in 2014-15, while 12 (34%) had taken on an average of one trainee. Volunteer workers were common with 18 centres (51%) reporting receiving assistance from 79 volunteers (average of 4 per pool). Only a very small number of pools had utilised either community service or 'work for the dole' workers in 2014-15. (Figure 16)

Work experience students mainly participated in organisational and administration duties, while a number of centres provided opportunities for students to assist with lifesaving responsibilities. Some organisations also enabled their work experience students to conduct tasks across a range of areas, rotating them through fitness, aquatics, supervision, administration and centre maintenance.

Volunteer staff undertook a range of responsibilities but centres reported them primarily assisting with special events, building and centre management and involvement with swimming clubs and coaching.

The roles fulfilled by individuals undertaking traineeships were highly varied. The majority of tasks corresponded with the certificate or program the individual was enrolled in, for example fitness, business and lifeguarding. A number of individuals also partook in administrative duties or a variety of roles that expanded their knowledge of the aquatic industry.

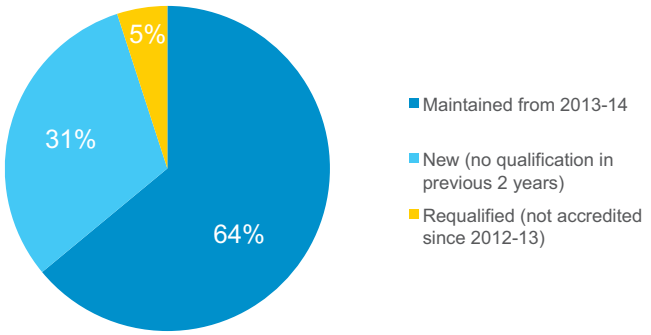

Figure 13: Date of renewal of pool lifeguard qualifications current at June 2015

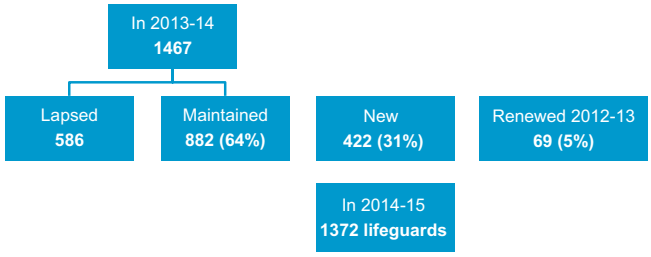

Figure 14: Flow chart of pool lifeguard qualifications, 2014-15

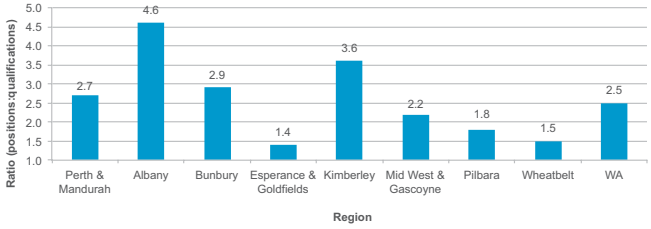

Figure 15: Ratio of Swim Instructor positions to number of people qualified by region

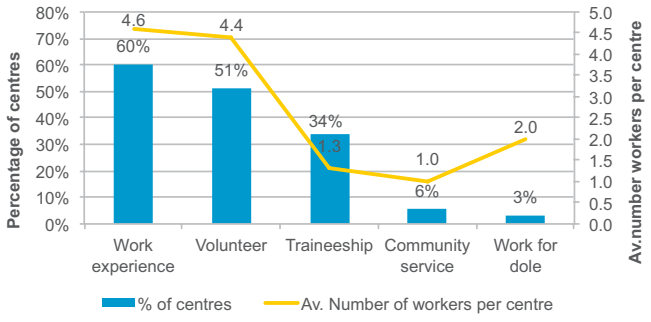

Figure 16: Aquatic centres (n=35) with additional workers by type and average number of workers

Evacuations and first aid equipment

Of centres surveyed, metropolitan pools reported undergoing an average of 2.1 practice evacuations per year. This was slightly higher at regional pools where the annual average was 2.8 practice evacuations (Figure 17). The Australian Standard, Planning for Emergencies in Facilities AS 3745-2010 states it is important for all workplaces to complete and record at least one fire/ evacuation drill every 12 months. Of course, these drills do cause some disruption to work productivity levels yet they are an important and crucial aspect of workplace safety.

Every metropolitan pool surveyed indicated that they had a defibrillator on site. This compared with only 83% of surveyed regional pools (Figure 18). One regional pool did have access to a defibrillator with a neighbouring community centre, but this was not included in the analysis.

Nearly all (88%) of metropolitan pools and 76% of regional pools surveyed provided information on both the age and condition of their oxygen resuscitation equipment. It was not clear whether the remaining pools do not have such equipment or whether this section of the survey was not completed.

Resuscitation equipment was estimated on average to be 2 years older at regional pools compared to their metropolitan counterparts with the average being 7 years and 5 years respectively (Figure 19).

The self-reported status of onsite oxygen resuscitation equipment was highly varied. Responses were categorised as 'average,' 'good,' 'very good' and 'excellent.' For both metropolitan and regional pools, the majority of equipment was described to be in good condition (46% and 41% respectively). On average, metropolitan pools reported equipment to be in a better condition than those at regional pools (Figure 20).

In 2015 LIWA Aquatics provided 70 defibrillators and 79 Oxy Soks to regional aquatic facilities with funding made available through Royalties for Regions.

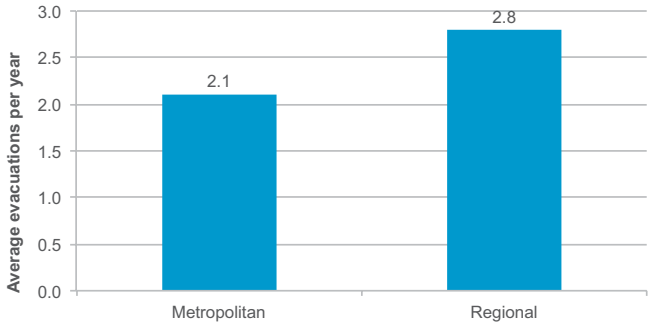

Figure 17: Average practice evaluations per year by region, 2014-15

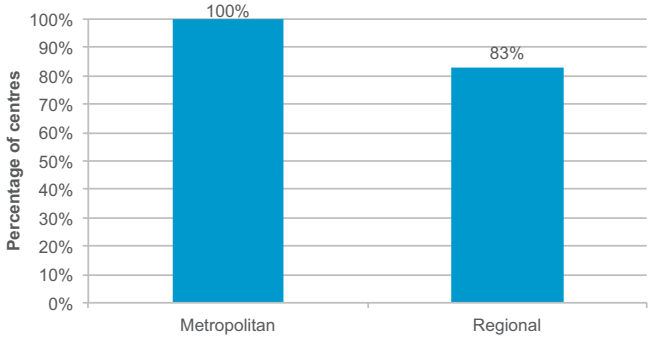

Figure 18: Centres with defibrillator on-site by region, 2014-15

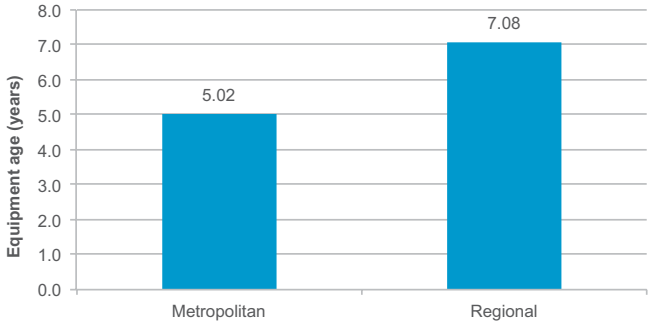

Figure 19: Self-reported age of oxygen resuscitation equipment, 2014-15

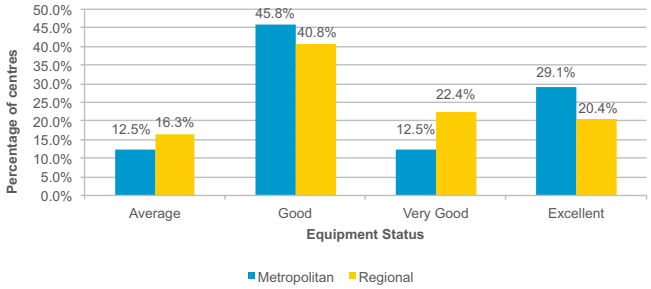

Figure 20: Self-reported status of oxygen equipment, 2014-15

Findings and Recommendations

1. Aquatic centres are an important resource for the WA community. Patronage at public aquatic centres continues to increase, however not at a rate that matches growth in the WA population.

   In addition to strategies that increase repeat visitations, consideration should be given to the identification of local groups that do not currently visit centres (for example new migrants, disabled) and the development of targeted programs.

2. High number of pools deliver swimming and water safety programs. Public aquatic centres play an essential role in teaching WA children to swim and participate in water activities safely with 95% of all centres surveyed delivering swimming lessons. Centres need to continue to promote the importance of ongoing participation in swimming and water safety lessons, particularly amongst high risk groups including CALD, low socio-economic and Aboriginal communities. A better understanding of those who currently access swimming and water safety lessons is also required to ensure that no child misses out on gaining these important skills.

3. Are CALD communities accessing programs? Only 10 aquatic centres reported offering targeted programs for CALD groups. With nearly one third of the WA population born overseas this presents an important area, particularly in locations with high numbers of new arrivals.

4. Specialised programs are important. Addressing challenges to delivering specialised programs such as cost, lack of equipment and suitable staff is essential. Strategies to engage and recruit CALD and Indigenous people into the aquatics workforce should be developed to assist in overcoming some cultural and language barriers to participation. Strategies to improve support to centres and improve their capacity to run specialised programs should also be developed including the provision of grants and equipment.

5. Water usage is beginning to trend upwards. Total water usage increased by 7% at the 102 tracked pools compared to last year and is now close the total amount consumed in 2007-08. In order to better understand the reasons for these increases it is strongly recommended that pools become part of Water Corporation and LIWA Aquatics' Waterwise Aquatic Centre Program which closely monitors each area of an aquatic centre. Participation in this program may be particularly beneficial to regional pools were rates of water use per patron are estimated to be much higher, thus potentially leading to a reduction in expenditure in water for these centres.

6. Newly qualified staff make up a considerable proportion of aquatics industry employees. Approximately 20% of pool operators and 30% of pool lifeguards were either new to the industry in 2014-15 or had not been qualified in the previous 2 years. Strategies to ensure that centres have the resources to support new staff should be developed.

7. Aquatic centres continue to face challenges meeting staffing needs. While the labour force figures in this report suggest the number of trained aquatic staff is enough to fill the number of positions, aquatic centres continue to report challenges in recruiting sufficient staff to deliver programs. This is attributed to factors such as availability at peak times, mobility, career development and pathways. To maximise the size of the labour force and choices available to employers, a workforce development approach is recommended that takes advantage of VET in high schools, traineeships, volunteers, and employment programs. Case studies and local approaches should be shared amongst the industry.

8. Participation in the LIWA Industry Survey is high, however some centres have never participated. This year's survey had the highest response rate ever with 61% of pools participating. This represented nearly 80% of the total annual patronage for the State. The response rate amongst regional pools has also improved and was more than 50% in 2014-15. The majority of pools have participated at least once since the survey began, however 10% have never participated and a further 10% have not participated in the last 3 years. These pools should be encouraged to take part next year to improve the accuracy of the report. The roll-out of new first aid equipment highlights the importance of the information included within this report to identify current issues faced by the aquatics industry and implement strategies to overcome these issues.

PART 2: INJURIES AT PUBLIC AQUATIC CENTRES

Injury data was collected from a total of 23 public swimming pools in 2014-15 with these pools representing over half (52%) of the total patronage for WA. Of these, 13 were metropolitan and 10 were regional swimming pools, representing 56% and 40% of the total annual metropolitan and regional patronage respectively. Information regarding who was involved in an incident, where the incident happened, the type of injury sustained, how the injury occurred and the type of rescue or first aid response was recorded.

Collection of injury data changed significantly in 2013-14 to more closely align with current pool record systems and included more detailed information particularly around the type of incident and type of injury (see Appendix 2). This year all pools used the new data collection tool with the 23 participating aquatic centres submitting their data in one of three ways: 1) provided summary spreadsheets of the data (56%), 2) supplying copies of their own incident report forms (30%), or 3) a RLSSWA staff member attending the centre to collect and enter the data (13%).

Injuries were classified as major, moderate or minor. An incident was considered 'major' if emergency services were called or if CPR, defibrillation or a spine board or collar were used. An incident was considered 'moderate' if a water rescue was performed or if the patron was advised to seek immediate medical attention. All other incidents were considered 'minor'. Incidents were excluded if they occurred in a gymnasium or on a sports court or if the victim was a staff member.

Data records provided to RLSSWA were very thorough this year as no pool used the old data collection tool. Over 90% of incident reports provided information on the gender of the victim, the type of incident, the location where the incident occurred, the type of injury sustained and the type of aid that was provided. Key variables that continue to be less consistently recorded are time of incident (11% missing) and the specific age of the victim (17% missing). While many aquatic centres did submit data on who first recognised the incident, it was often not clear from forms if this actually referred to the person who administered the first aid. Regarding the final question about what actions could be taken to reduce the risk of a similar incident happening again, it was unclear as to whether these were real actions taken by the pool or only hypothetical responses. As a result, these latter two variables have not been included in the current analysis.

INCIDENT REPORT FORM 'MUST HAVES'

1. USE 24 HOUR TIME
2. RECORD GENDER RATHER THAN RELY ON NAME OF VICTIM
3. RECORD AGE OR YEAR OF BIRTH RATHER THAN USING AN AGE GROUP
4. DESCRIBE ACTIONS TAKEN TO REDUCE FUTURE RISK
5. WHO RECOGNISED THE INCIDENT AND WHO WAS INVOLVED IN THE PROVISION OF FIRST AID/RESCUE
6. TYPE OF INJURY
7. DETAILED ACCOUNT OF INCIDENT INCLUDING POSSIBLE CONTRIBUTING FACTORS

Annual Incident Rate

In the past 10 years the annual incident rate at WA public aquatic centres has decreased by 18% from 33 to 27 per 100,000 patrons in 2014-15. However while annual incident rates have been trending downwards since 2000-01, the rate did increase in the last 12 months from 23 per 100,000 patrons in 2013-14 (Figure 21). Based on current patronage estimates of 10.4 million visits in 2014-15, aquatic staff would have responded to over 2,800 injuries at WA public aquatic centres. Nearly all (87%) of these would have been minor requiring only very basic first aid. Around 90 incidents would have been major and roughly 270 moderate.

Incident rates were greatest during the warmer months from October to February and peaked in January at 49 per 100,000 patrons. More than half (57%) of all incidents were minor injuries that occurred to patrons aged 5-14 years. There appears to be a large disparity in incident rates between metropolitan and regional centres with the average incident rate at regional aquatic centres being nearly double that at metropolitan centres (22.3 vs 44.6 per 100,000 patrons). (Figure 22)

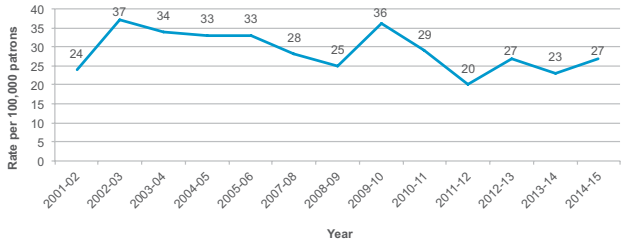

Figure 21: Annual Incident rates per 100,000 patrons: 2001-01 to 2014-15

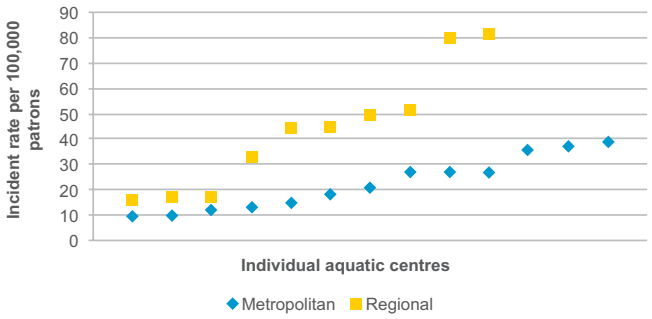

Figure 22: Incident rates for all participating aquatic centres: Metropolitan vs Regional

Results by severity category

The vast majority of injuries recorded were minor (86%) with only 9.7% of injuries classified as moderate and 3.2% as major. Major injuries were more common within the older three age groups; 15-24 (11%), 25-54 (7.2%) and 55+ (7.4%). Such injuries were relatively uncommon for those under the age of 15 years. Compared to 2013-14, a reduced proportion of major injuries were observed in patrons aged 55 years and over (12.5% last financial year). Injuries of all severity were most frequently observed in the 15-24 age group, making up 65% and 56% of all the minor and moderate injuries. Major injuries in this age group have almost doubled since 2013-14 with 33% of all major injuries occurring to these patrons (15% since last recorded).

Major incidents were most often a result of the exacerbation of a pre-existing injury or condition (44.2%), while moderate and minor incidents were generally due to collisions or falls. Suspected fit/seizure was the most frequently reported major incident (16%), doubling in prevalence since 2013-14. Other types of uncategorised injuries and asphyxia were the second and third most common major injury (14% and 12% respectively). The most common injuries across each of the three categories were highly varied, compared to previous years which have seen similarity of injury nature regardless of severity.

Pools (including, lap, leisure, dive and hydrotherapy) were the most common locations for injury and incidents regardless of category. Almost all (98%) major injuries required emergency services to be called. Three quarters of patrons with a moderate injury were advised to seek immediate medical attention while basic first aid was the primary treatment for minor injuries (86%).

KEEP WATCH FOR THESE TOP 3 INCIDENTS

MAJOR

- EXACERBATION OF PRE-EXISTING INJURY OR CONDITION
- THREATS TO BREATHING (E.G. ASTHMA)
- FAINTING

Results by age group

Collated injury data was analysed using a life-stages approach to align with the Australian Water Safety Strategy 2012-15. Five age groups were used: 0-4 years, 5-14 years, 15-24 years, 25-54 years and 55 years and older.

0-4 years

A total of 170 injuries were reported for the 0-4 age group. Of these, 2 were major requiring emergency services to be called. Falls and unintentional collisions were the most common incident in this group (48% and 31% respectively) resulting primarily in superficial wounds (40%) and blows to the head (26%). Factors identified as contributing to the injury were trips and/or slips (40%) and playing (13%). The majority of injuries occurred in or around a pool and basic first aid was performed in 65% of all cases.

TOP 3 INCIDENTS

- FALLS LESS THAN 1 METRE
- UNINTENTIONAL COLLISION WITH PERSON OR OBJECT
- CUTTING, PIERCING OBJECT

TOP 3 INJURIES

- SUPERFICIAL WOUND
- BLOW TO THE HEAD
- OPEN WOULD

TOP 3 LOCATIONS FOR INCIDENTS

- LEISURE POOL
- POOL CONCOURSE
- SLIDES

5-14 years

As per previous years, this age group comprised almost 70% of all injuries recorded (697 incidents). However as this age group represents the majority of swimming pool patronage, such observations are to be expected. Over 98% of injuries were classified as being moderate or minor, with only 1.6% of injuries classified as severe. In most major incidents for this age group, emergency services were contacted and/or oxygen was provided. Injuries sustained by those aged 5-14 were most frequently superficial wounds (33%) or open wounds (16%) associated with unintentional collisions (30%) or falls (19%). Trips and slips were the most commonly identified factors contributing to injury in 24% of cases. Over half of all incidents occurred in a pool and 70% of incidents required basic first aid.

TOP 3 INCIDENTS

- UNINTENTIONAL COLLISION WITH PERSON OR OBJECT
- FALLS LESS THAN 1 METRE
- CUTTING, PIERCING OBJECT

TOP 3 INJURIES

- SUPERFICIAL WOUND
- OPEN WOULD
- BLOW TO THE HEAD

TOP 3 LOCATIONS FOR INCIDENTS

- LAP POOL
- LEISURE POOL
- SLIDES

15-24 years

A total of 82 incidents were reported for this age group, the second lowest of any group for 2014-15. Yet of these, 11% were major, the highest proportion of any group. Unintentional falls and the exacerbation of a pre-existing injury were the most common incidents observed (19% and 14% respectively). Such incidents resulted in superficial wounds (21%) and dislocations or sprains (15%). Basic first aid was provided in 53% of incidents. Oxygen was administered in 14% of incidents, and oxygen in 14%, and emergency services were called in 8% of occasions. Trips and slips (18%) and entering/exiting the water (16%) resulted in the majority of recorded injuries. Again, the pool was the most common location of injury (65% of all cases).

TOP 3 INCIDENTS

- UNINTENTIONAL COLLISION WITH PERSON OR OBJECT
- EXACERBATION OF PRE-EXISTING INJURY OR CONDITION
- CUTTING, PIERCING OBJECT

TOP 3 INJURIES

- SUPERFICIAL WOUND
- DISLOCATION, SPRAIN OR STRAIN
- OPEN WOUND

TOP 3 LOCATIONS FOR INCIDENTS

- LAP POOL
- POOL CONCOURSE
- LEISURE POOL

25-54 years

Overall, 97 injuries were reported for the 25-54 age group with 7% being major and 9% moderate. Falls and unintentional collisions were most frequently observed (23% and 21% respectively) with the exacerbation of pre-existing injuries or conditions rounding out the top 3 (12%). Common injuries recorded were superficial wounds (18%), open wounds (17%) and insect bite (12%). Most injuries occurred in or around a pool and basic first aid was provided in 50% of cases.

TOP 3 INCIDENTS

- FALLS LESS THAN 1 METRE
- UNINTENTIONAL COLLISION WITH PERSON OR OBJECT
- EXACERBATION OF PRE-EXISTING INJURY OR CONDITION

TOP 3 INJURIES

- SUPERFICIAL WOUND
- OPEN WOUND
- INSECT BITE

TOP 3 LOCATIONS FOR INCIDENTS

- LAP POOL
- POOL CONCOURSE
- LEISURE POOL

55+ years

A total of 54 incidents were recorded for the 55 years and older age group and a reduced proportion (compared to 2013-14) of these were major (7%). Of all incidents, the majority were falls (19%), unintentional collisions (19%) and the exacerbation of pre-existing injuries or conditions (18%). These incidents primarily resulted in superficial wounds (26%) or feeling faint (16%). A trip or slip occurred in one third of all cases and most incidents occurred in the pool, pool concourse or spa. 35% of incidents led to basic first aid being performed and 15% required oxygen.

Patterns across age groups

The middle age groups (15 to 54 years) had the highest proportions of asphyxia, dislocations and strains and insect bites, yet as per 2013-2014 data, recorded the lowest incidence of trips/slips. While the proportion of injuries involving an exacerbation of a pre-existing injury and calls to emergency services were highest in the oldest age group (55 years and older) reducing as age decreases, they spiked in the 15-24 age group. This is suggestive of an increasing severity of incidents in this population. First aid was most frequently declined in the older age groups, and rarely so for those aged under 25, while drugs and alcohol contributing to injury was only observed in the 15-24 and 25-55 age groups.

TOP 3 INCIDENTS

- SUPERFICIAL WOUND
- FEELING FAINT/LIGHT HEADED/DIZZY
- OPEN WOUND

TOP 3 INJURIES

- SUPERFICIAL WOUND
- OPEN WOUND
- INSECT BITE

TOP 3 LOCATIONS FOR INCIDENTS

- LAP POOL
- POOL CONCOURSE
- SPA

Findings and Recommendations

1. **Most injuries occur in or around the swimming pool.**

   Over half of all observed injuries occurred in a swimming pool. Considering the hazards associated with threats to swimming ability whilst in the water, it is imperative that lifeguards are aware of the risks of both drowning and non-drowning related injuries and adapt surveillance and supervision strategies to identify both.

2. **Most incidents involve those aged 0-14.**

   Three quarters of all injuries reported occurred to children aged 0-14 years. This is a vulnerable age group dependent on supervision from parents and aquatic staff to remain safe. Aquatic centres must ensure that this age group are effectively supervised at all times.

3. **Increase in major injuries among young people aged 15-24 years.**

   In 2014-15, a higher proportion of major injuries were reported for those aged 15-24 years. Aquatic centre staff must be aware of risk taking behaviour amongst this age group, make sure that pool rules are clearly communicated and enforced and that close supervision is maintained.

4. **Pre-existing medical conditions are a risk.**

   Pre-existing medical conditions place a patron at a much greater risk of injury, with those over 55 years of age at the highest risk. Pool staff need to be aware of the risk and develop strategies to better engage and get to know patrons which will assist them to identify those at risk.

5. **Major injuries are rare but require specialised skills.**

   It is positive to observe that only 3% of injuries were major, suggesting aquatic centres in WA are generally very safe. However, major injuries requiring CPR, defibrillation, or a spine board/collar to be used requires prompt and effective attention. Because of the rarity of these severe events, aquatic staff must have regular training in advanced first aid to maintain these essential skills.

6. **Regional pools experience the highest rates of injury.**

   Regional pools in this sample observed a much higher rate of incidents compared to metropolitan pools. Staff need to be aware that they may be required to maintain emergency care for prolonged periods as external emergency support may take longer to arrive. Pools should consider developing an emergency chain of survival plan which utilises the skills of other community members to maintain care until further assistance arrives.

7. **Participation in the research continues to be high.**

   While the number of aquatic centres participating in the injury research project was slightly lower this year, the patronage represented was maintained above 50% of the state total. More regional pools participated this year increasing the regional patronage represented from 29% to 40% compared to last year. The change in data collection methods has allowed for more detailed information and analysis.

8. **Understanding actions taken to reduce future risks requires more thorough data reporting.**

   The detail of information reported by participating aquatic centres on incidents and injuries continues to improve each year and has reduced the need to exclude reports improving the accuracy of the analysis. Aquatic centres should consider updating their incident record forms and systems to ensure they include the items on the incident form ‘must haves’ list. In particular, pools should ensure new staff are trained in filling out forms and consider recording any actions taken to reduce the risk of a similar incident occurring again.

PART 3: SAFETY ASSESSMENTS AT PUBLIC AQUATIC CENTRES

Since 2002 RLSSWA has been conducting independent assessments of safety and risk at public aquatic centres based on the Department of Health Code of Practice for the Operation of Aquatic Facilities, the RLSSA Pool Safety Guidelines and other relevant Australian standards. Safety assessments are either funded by the aquatic centre themselves or are conducted by RLSSWA with annual financial support provided by Local Government Insurance Service (LGIS).

The Safety Assessment is very comprehensive and was updated in 2010 to cover the requirements listed below. The relevant scores for each item are added together and presented as a percentage to give an Overall Safety Rating.

1. General Administration (11 points)
2. Design & Construction (46 points)
3. Circulation & Water Treatment (26 points)
4. Chemical Safety (20 points)
5. Water Quality & Testing (10 points)
6. Qualification for Operators, Supervisors & Emergency Care Personnel (3 points)
7. General Sanitation & Operation (25 points)
8. Special Feature Pool (43 points)
9. Spa Pool (16 points)
10. Water Slide (14 points)
11. Hydrotherapy Pool (4 points)
12. Water Spray Grounds (19 points)

Over the past 14 years, more than 400 safety assessments have been conducted at the 127 public aquatic centres in WA, averaging approximately 30 assessments per year. All pools have been assessed at least once in the last 7 years (since 2008-09) and 94% have had their most recent assessment within the last 3 to 4 years (Figure 23).

Last year's report identified 7 pools that had not yet been assessed against the updated 2010 Safety Assessment components and 3 of these pools have since been assessed. For this report only the Overall Safety Rating of the 4 remaining pools has been included.

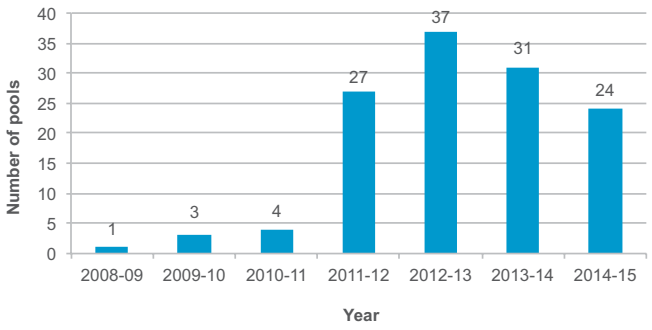

Figure 23: Year of most recent safety assessment

Overall Safety Ratings

A total of 24 pools were assessed in 2014-15 with an average Overall Safety Rating of 92.0%. These average ratings, based on a different cohort of pools assessed each year, have increased by 18% since 2001-02 (Figure 24).

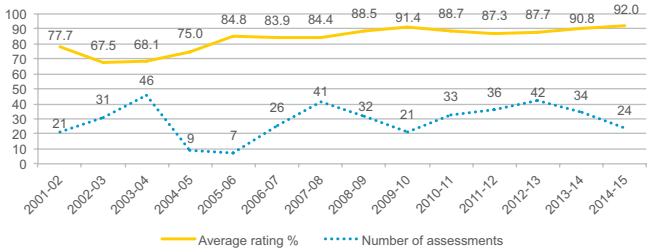

Figure 24: Average Overall Safety Rating for aquatic centres assessed each year

The average Overall Safety Ratings from the most recent assessment at all 127 pools continue to be very high at 89.4% and range from 64.5 to 99.4%. In the past 12 months, 3 pools increased their rating from below 80% to above leaving only 17 regional pools with a rating below 80%. Current ratings for metropolitan pools are considerably higher than those of regional pools, with average ratings being 94.0% and 87.8% respectively. (Figure 25)

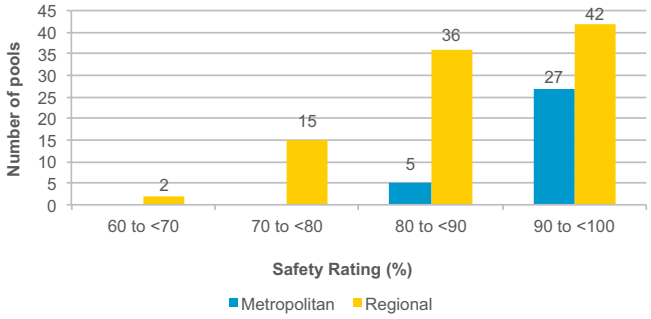

Figure 25: Most recent Overall Safety Ratings by location for all pools

A total of 123 pools have been assessed against the updated 2010 safety assessment components and the average scores continue to be 80% or more for each component. The three areas that continue to score lowest on average are Chemical Safety (81.1%), Water Slides (82.6%) and Special Features (85.3%). (Figure 26)

As has been found in previous years both the number and frequency of safety assessments affects the Overall Safety Rating.

The greatest improvements in the Overall Safety Rating are seen between the 1st and 2nd assessments with average scores moving from below to above 80%. From the third assessment onwards, scores are maintained at close to 90% and above (Figure 27).

Aquatic centres in WA have undergone an average of 3 assessments since the program began and this average is the same for both metropolitan and regional pools. Aquatic centres with current ratings above 90% have participated in an average of 4 assessments.

Average safety ratings tend to be lower at aquatic centres where assessments are conducted less frequently (Figure 27). Where an assessment has been conducted within 1 to 2 years since the previous, average ratings are very high at 93.9% and remain close to 90% even when an assessment is done 3 to 4 years after the last. When a follow-up assessment is left for 4 or more years the average Overall Ratings achieved drop lower.

These trends in number and frequency of assessments continue to suggest that in order to maintain scores at 90% pools should be assessed at least once every 3 to 4 years. There are currently only 8 aquatic centres in WA (6%, 4 regional and 4 metropolitan) that have not had safety assessments conducted in the last 4 years since 2011-12 (Figure 28).

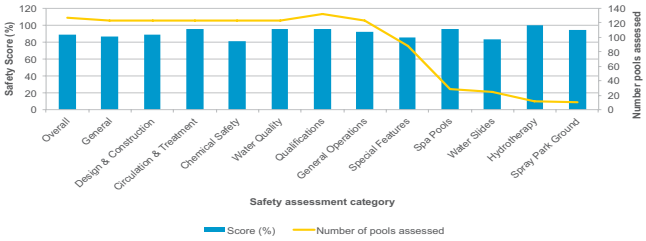

Figure 26: Average rating for each component based on most recent assessment

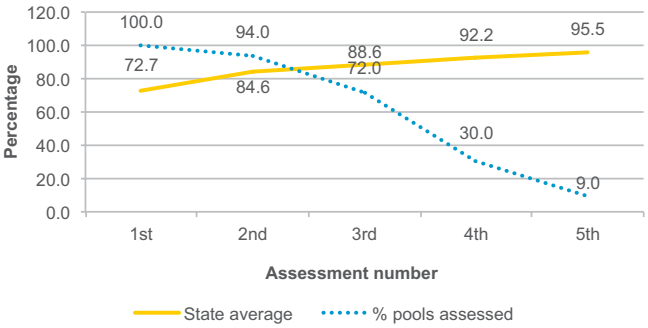

Figure 27: Average Overall Safety Rating at each assessment

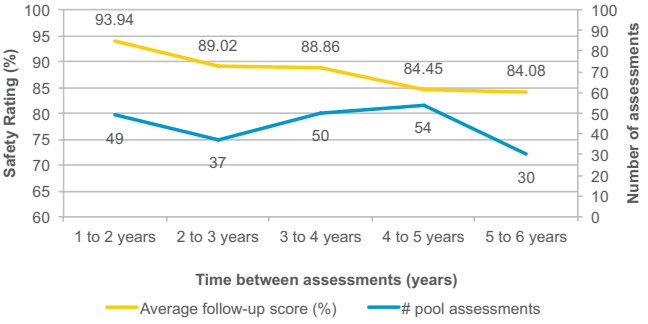

Figure 28: Overall safety ratings by number of years between assessments

Findings and Recommendations

1. **Target low score areas to improve safety.**

   Average ratings across each of the updated assessment components are also high with all but three above 85%. As was found last year Chemical Safety, Special Features and Water Slide had the lowest average scores and while the average scores for these are still quite high the challenges faced by aquatic centres in meeting these components should be further explored.

2. **Target regional centres to improve safety ratings in these areas.**

   In the last 12 months RLSSWA has worked with the aquatic centres who were identified as high priority last year. As a result, 5 centres have now been assessed against the updated criteria (3 centres) and/or increased their Overall Safety Ratings to more than 80% (3 centres). However, 3 regional pools and 1 metropolitan centre are yet to be assessed against the updated criteria and a total of 17 regional pools have a most recent Overall Safety Rating below 80%. RLSSWA should work closely with these pools primarily from regional areas to improve their ratings in the coming year.

3. **Assessments should be done at least every 3 to 4 years.**

   Regular safety assessments conducted every 3 to 4 years appear to maintain high safety ratings at around 90% with the biggest drop in rating occurring when assessments are conducted every 4 to 5 years. There are currently 8 pools that have not been assessed in the last 3 to 4 years and these pools should be encouraged to undergo assessments in the next year.

4. **Overall compliance and safety ratings are high.**

   The average safety rating in 2014-15 was 92.0% which is very high. Aquatic centres with high levels of compliance should focus on building their capability to implement documented safety and emergency plans. Activities such as mock-scenarios and facilitated workshops will allow procedures to be practiced, evaluated and will embed safety into the centres day-to-day operations.

APPENDIX 1: ANNUAL AQUATIC INDUSTRY PROFILE 2013-14

Annual Aquatic Industry Profile 2014-15

Research to increase knowledge and expertise in the aquatics industry

Each year LIWA Aquatics, with the financial assistance of the Department of Sport and Recreation, commissions Royal Life Saving Society WA to prepare a report on the State of the Aquatic Industry in Western Australia. This report not only ensures we measure and report on our successes but highlights areas in need of improvement and development.

This year's survey has a particular focus on workforce and inclusion programs for at-risk groups.

Survey instructions:

- Data collection is for July 2014 to end of June 2015
- If exact numbers are not known, please provide best estimates
- If possible, provide data for aquatic areas only (i.e. exclude gym, sport court etc.)
- Data will not be reported individually, your centre will not be named in any report
- Surveys are due by **Sunday the 19th of July**

Any queries, please contact Amanda Juniper at ajuniper@rlsswa.com.au or on 9383 8200

1. Centre name:_____

2. What was your total **patronage** for the 2014-15 year? If possible, please report for entire centre first then for aquatic areas separately.

	Patronage for 2014-15
Entire centre (include aquatics)	
Aquatic areas only (include LTS)	

3. What was your total **expenditure** for the 2014-15 year? I possible, please report for entire centre then for aquatic areas separately.

	Expenditure for 2014-15
Entire centre (include aquatics)	
Aquatic areas only (include LTS)	

4. Which type of **swimming lessons** did your centre provide and how many participants were there in 2014-15?

	Tick applicable	No# Participants
Infants (Parent-baby classes)		
Swim school, private		
In-term, Dept. of Education		
Vacswim, Dept. of Education		

5. How many **swim instructors** worked at your centre to deliver lessons in 2014-15?

	Full time	Part time	Casual	Total
Swim school, private (inc infants)				
In-term, Dept. of Education				
Vacswim, Dept. of Education				

6. How many of the following **staff** were employed in your aquatic facilities during 2014-15?

	Full time	Part time	Casual	Total
Managers (supervisors, coordinators, operators)				
Lifeguards				
Other				

7. Did your centre employ or host any of the following types of **workers** in 2014-15, if yes please indicate how many and the type of work they conducted:

	Tick applicable	No# Workers/FTE	Type of work *
Volunteer staff			
Traineeship			
School work experience students			
Work for the Dole participants			
Community Service hours			

** for example, supervision/surveillance, deliver education programs, assist with special events, administration, other, please specify*

8. Did your centre provide any **programs** for the groups listed below in 2014-15? If yes, please complete the table below:

	Brief Description	Sessions/ week	No# Participants
People with a disability			
Indigenous Australians (ATSI groups)			
People from other Culturally and Linguistically Diverse backgrounds (CALD groups)			

9. Regarding the types of **inclusion programs** above, what challenges does your centre face in either setting up new programs or continuing the delivery of current programs?

10. How regularly does your aquatic centre hold practice **evacuations**?: _____

11. Do you have a **defibrillator** on-site at your centre? Yes / No

12. What is the age and condition of your onsite **oxygen resuscitation** equipment?

    Age:_____ Condition:_____

Thank you for completing this survey!

Please return surveys to: bpage@hellocs.com.au or Fax: 08 9761 2879 by **19th July 2015**

Any queries, please contact Amanda Juniper at ajuniper@rlsswa.com.au or on 9383 8200

To view last year's report click here or visit www.lifesavingwa.com.au/safe-venues/research

APPENDIX 2: INCIDENT DATA COLLECTION GUIDE

Incident data collection guide 2014-15

Most important variables highlighted yellow

1. Date of incident

2. Time of incident

3. Who was the victim?
   - Staff member
   - Patron
   - Other – please specify
   - Unknown/Not recorded

4. Gender
   - Male
   - Female
   - Unknown/Not recorded

5. How old were they?
   - Age in years
   - or year of birth
   - Unknown/Not recorded

6. Who first recognised the incident?
   - Lifeguard
   - Victim self-reported
   - Another patron
   - LTS teacher
   - Other staff member
   - Other – please specify
   - Unknown/Not recorded

7. Type of incident or accident (tick all that apply)
   - Act of aggression by another person
   - Cold conditions (natural origin)
   - Contact with animals/vermin/insects
   - Cutting, piercing object
   - Drowning, submersion
   - Electrocution
   - Exacerbation of pre-existing injury or condition (inc asthma, cardiac etc.)
   - Exhaustion/Exertion
   - Exposure to allergen
   - Exposure to chemicals/dust/gas
   - Exposure to fire/flame or hot fluid/gas/solid
   - Exposure to noise/pressure/vibration
   - Fainting
   - Fall, High - to diff level, more than 1m
   - Fall, Low - to same level, less than 1 m
   - Hot conditions (natural origin), sunlight
   - Lifting/pushing/pulling/stretching/over-reaching
   - Other threat to breathing (ex drowning)
   - Poisoning (inc drug or medicine)
   - Prevention of possible injury/Enforcement of safety guidelines
   - Struck by object
   - Swimmer in trouble
   - Unintentional collision with person or object
   - Other - please specify
   - Unknown/Not recorded

8. Nature of or suspected nature of injury/health issue (tick all that apply)
    - Amputation
    - Asphyxia or other threat to breathing (inc asthma, ex drowning)
    - Blood nose
    - Blow to head (no signs of concussion)
    - Burn - chemical, electrical, fire etc.
    - Dental injury
    - Dislocation, sprain or strain, injury to muscle or tendon
    - Drowning or immersion
    - Electrocution
    - Foreign body in natural orifice
    - Foreign body in soft tissue
    - Fracture (suspected or confirmed, ex teeth)
    - Injury to eye
    - Injury to spinal cord (suspected or confirmed, ex concussion)
    - Insect bite, Effect of venom
    - Intracranial injury (inc concussion)
    - Loss of consciousness
    - Open wound
    - Poisoning or toxic effect (ex venom bite)
    - Superficial wound (includes bruises)
    - Suspected cardiac event
    - Suspected fit/seizure
    - Suspected stroke
    - Other - please specify
    - No apparent injury
    - Unknown/Not recorded

9. Location in centre where incident occurred

a. Indoor or Outdoor?
    - Indoor
    - Outdoor
    - Unknown/Not recorded

b. Aquatic or non-aquatic area?
    - Aquatic
    - Non-aquatic
    - Unknown/Not recorded

c. Specific location (choose best one)

- Café
- Change room/bathroom/toilet
- Chemical storage room
- Crèche
- Dive/Deep pool
- Entryway/reception area
- External surrounds e.g. car park
- Flow rider
- Grandstand
- Grass area/Lawn
- Hydrotherapy/program pool
- Inflatable
- Lap pool
- Lazy river
- Leisure pool
- Off site
- Plant room
- Play equipment (wet)
- Playground (dry)
- Pool concourse
- Rapid river
- Room/Office
- Sauna/steam room
- Slide (dry)
- Spa
- Sports courts
- Spray park/Splash pad
- Starting block
- Toddlers pool
- Water polo pool
- Water slide
- Wave pool
- Whirlpool
- Other – please specify
- Unknown/Not recorded

10. Did the incident occur during a structured event or program?
    - Yes
    - No
    - Unknown/Not recorded

11. If yes, was the event/program run by centre?
    - Yes
    - No
    - Unknown/Not recorded

12. Was first aid required?
    - Yes
    - No
    - Yes, but declined
    - Not sure
    - Unknown/Not recorded

13. What aid was administered? (tick all that apply)

- Advise seek immediate medical treatment
- Bandage
- Basic first aid (includes band aid, cleaning, eye drops, ice etc.)
- Call emergency services
- Check for signs of spinal injury
- Check for symptoms of concussion
- CPR
- Defibrillation
- Facilitate medication e.g. epi-pen, ventolin
- Follow-up advice given
- Monitoring/Observation
- Other immobilisation
- Oxygen
- Patron indicated would seek further medical treatment
- Perform a rescue
- Spine board/collar
- Other - please specify
- Unknown/Not recorded

14. Who initially administered first aid?

- Aquatics Staff member
- Other Staff member
- Member of public
- Medical professional
- Other – please specify
- Unknown/Not recorded

15. What were the probable causes of the incident? (Free text answer)

Please consider level of supervision, swimming ability, victim behaviour, environmental factors, communication and understanding of safety protocols etc.

16. How could the risk of a similar incident happening again be reduced? (Free text answer)

Consider Personal Protection, Administrative, Engineering, Substitution, Elimination

FOR MORE INFORMATION

The Royal Life Saving Society WA Inc.
McGillivray Road, Mt Claremont WA 6010
PO Box 28, Floreat Forum WA 6014

T: (08) 9383 8200
F: (08) 9383 9922
E: info@rlsswa.com.au

Connect with us
Facebook.com/RoyalLifeSavingWA
Twitter.com/lifesavingwa
Youtube.com/TheRoyalLifeSavingSociety-WesternAustralia

Show your support
#savinglives
#everyonecanbealifesaver

lifesavingwa.com.au

Leisure Institute of WA (LIWA) Aquatics
PO Box 726, Hillarys WA 6923

T: (08) 9383 8238
F: (08) 9383 9922
E: info@liwaaquatics.org.au

Connect With Us
Facebook.com/LIWA-Aquatics
Twitter.com/liwaaquatics

liwaaquatics.org.au

Royal Life Saving
THE ROYAL LIFE SAVING SOCIETY - WESTERN AUSTRALIA INC.

LIWA
LEISURE INSTITUTE OF WA AQUATIC (INC.)

Supported By:

Department of Sport and Recreation
GOVERNMENT OF WESTERN AUSTRALIA