BIGGER BETTER SAFER

2013-14

WESTERN AUSTRALIAN AQUATICS INDUSTRY REPORT

LEISURE INSTITUTE OF WA AQUATIC (INC)

Royal Life Saving

THE ROYAL LIFE SAVING SOCIETY WESTERN AUSTRALIA INC.

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Thank you to the 60 aquatic centres across the state who completed the industry profile survey.

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- Altone Park Leisure Centre
- Aqualife Centre
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- Bay of Isles Leisure Centre
- Bayswater Waves
- Beatty Park Leisure Centre
- Belmont Oasis Leisure Centre
- Cannington Leisureplex
- Claremont Aquatic Centre
- Craigie Leisure Centre
- Exmouth Swimming Pool
- Geraldton Aquarena
- Goldfields Oasis
- Gosnells Leisure World
- HBF Arena
- HBF Stadium
- Kwinana Recquatic
- Leisurepark Balga
- Leschenault Leisure Centre
- Mandurah Aquatic and Recreation Centre
- Margaret River Recreation Centre
- Newman Aquatic Centre
- Riverton Leisureplex
- South Lake Leisure Centre
- Swan Park Leisure Centre
- Terry Tyzack Leisure Centre
- Wanneroo Aquamotion

PROJECT PARTNERS

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GOVERNMENT OF WESTERN AUSTRALIA
Department of Sport and Recreation

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WORKING TOGETHER

WATER CORPORATION

A MESSAGE FROM OUR CEO

Public aquatic centres provide significant benefit in terms of community development, sport, recreation, health and fitness. The Royal Life Saving Society WA and Leisure Institute of WA (LIWA) have collaborated for a number of years on this unique research project in order to;

1. Better understand the industry, its drivers and to quantify key characteristics,
2. Monitor risks to patron safety and identify trends,
3. Evaluate compliance to industry benchmarks and standard operating procedures.

The report format has three parts corresponding with the above. It has been prepared with an intended audience that includes;

- Pool managers,
- Government both Local and State,
- Local Government Insurance Service.

This project underpins Royal Life Saving's knowledge and expertise. It guides the ongoing development of programs and services ensuring they remain both effective and relevant. It also provides the intelligence both LIWA and Royal Life Saving need to credibly perform their respective leadership and advocacy roles.

Highlights of this year's report include;

- Annual patronage at public pools exceeded 10 million visits,
- Annual expenditure of $68 million,
- Over 3,000 full time, part time and casual positions,
- Continued improvement in industry practice and compliance.

The need for this information will grow into the future. Stakeholders, in particular Government (both State and Local), will expect a demonstrable return on investment. Future decisions for funding will also be linked to the capability of the industry to deliver results more effectively than alternatives.

Many people have made a significant contribution to this report. I would like to acknowledge Amanda Juniper in particular.

Peter Leaversuch
CEO
Royal Life Saving Society Western Australia

SUMMARY OF FINDINGS AND RECOMMENDATIONS

STATE OF THE INDUSTRY

- **Aquatic centres are an important resource for the WA community with over 10 million visits each year.** However, growth in patronage has not matched the growth in the WA population.
- **Water usage is trending down with a sample of 103 pools recording a 9.5% decrease in consumption since 2007-08.** However, annual reductions in water usage are becoming smaller and water saving initiatives need to continue to be implemented.
- **Train pool operators and lifeguards locally to meet shortfalls in qualified personnel.**
- **Promote swim instructor employment opportunities.** Particularly in regional areas, to encourage instructors to take up positions and remain in the industry.
- **Explore reasons behind high staff turnover rates.** Nearly 40% of both pool operators and lifeguards do not maintain their registrations after 12 months and strategies are needed to retain them.
- **Participation in the LIWA Industry Survey is high but more regional aquatic centres are needed to ensure a good representation of the industry in non-metropolitan areas.**

INJURIES AT PUBLIC AQUATIC CENTRES

- **Participation in the aquatic injury research project has doubled since last year but more regional pools are needed to ensure an accurate representation of these pools.**
- **Most injuries occur in a swimming pool.** Scanning strategies need to be adapted to identify both drowning and non-drowning related injuries.
- **Types of incidents and injuries vary by age.** Training should highlight differences across the age groups to allow better identification of patrons at risk and appropriate responses.
- **Three quarters of all injuries occur to children aged 0-14 years.** Promotion of carer supervision for the prevention of all types of injuries needs to be continued.
- **Major injuries are rare but require specialised skills.** Aquatic staff need to have regular training in advanced first aid to maintain these essential skills.
- **More thorough reporting of injury data is needed.** Improvements in data collection would reduce the need to exclude reports and would increase the accuracy and quality of information reported.

SAFETY ASSESSMENTS AT PUBLIC AQUATIC CENTRES

- **Safety Ratings are high at participating centres with an average score at 88.6%.** Assessment components with the lowest average scores were Chemical Safety, Special Features and Water Slide and should be the focus of future industry professional development.
- **Ratings at lower scoring centres have improved with 10 pools increasing their rating from below 80% to above in the last year.** Pools with ratings below 80% should continue to work with RLSSWA to improve their ratings in the coming year.
- **Assessments should be done at least every 3 years to maintain Safety Ratings at 90%.** Pools that have not had assessments in the last 3 to 4 years should be encouraged to undergo assessments in the next year.

STATE OF THE INDUSTRY

A total of 60 (47%) aquatic centres participated in the 2013-14 Industry survey. (Figure 1.) The combined annual patronage at these centres represents around 70% of the total annual patronage for the State. The response rate was much higher for metropolitan than regional pools (77% vs 38%).

The survey has been conducted 5 times since 2007 and 82% of the 128 public swimming pools in WA have participated at least once in this time. The survey collects data from leisure centres regarding aquatic patronage, expenditure and staffing from June 2013 to July 2014 (See Appendix 1). The most recent data provided is used to estimate results and if no data is available estimates are made based on similar sized facilities. The next survey will target in particular those pools who have never participated (18%) in order to increase the accuracy of the State of the Industry report.

PATRONAGE

Patronage to public swimming pools has increased by an estimated 3% since 2009-10. There were around 10.1 million visits to public swimming pools in the 2013-14 season equating to 4 visits for every person in WA. The growth in patronage however has not matched the large increase in the WA population which has grown by 12% since 2009-10.

Visits per head of population vary slightly throughout the State with the highest rates of participation being seen in the Esperance & Goldfields and the Pilbara regions which have rates over 1.5 times the State average of 4. Participation rates in the metropolitan area sit just below the average while most regional areas are higher. (Figure 2.)

Children make up over half of the patronage at aquatic centres with survey respondents on average estimating that 56% of their patrons are children aged less than 18 years. This figure is much higher than what would be expected based on the proportion of the population that are children. Regional centres have the highest proportion of child patrons seeing on average twice as many children (63%) as adults. WA aquatic centres place a high importance of child safety with every metropolitan pool and 89% of regional pools currently registered with the Watch Around Water program.

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

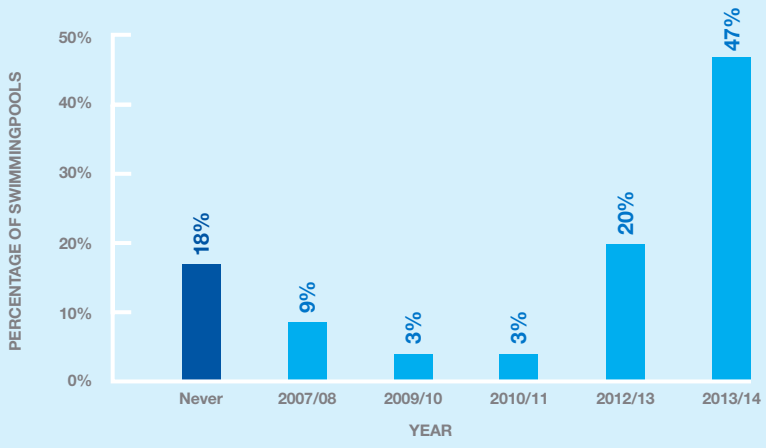


FIGURE 2: Number of visits to an aquatic centre per head of population

EXPENDITURE

Annual expenditure at aquatic centres has steadily increased over time and is now estimated to be around $68 million, 17% higher than in 2009-10. (Figure 3.) While expenditure has increased patronage has stayed roughly the same resulting in higher costs per patron.

Aquatic centre expenditure varies dramatically throughout the State with the most expensive being the Kimberley region where costs are more than 3 times the State average of $6.7 per patron visit. The regions of Mid West & Gascoyne, Pilbara and Wheatbelt also have very high costs per patron visit. (Figure 4.)

FIGURE 3: Estimated annual expenditure for all aquatic centres in WA

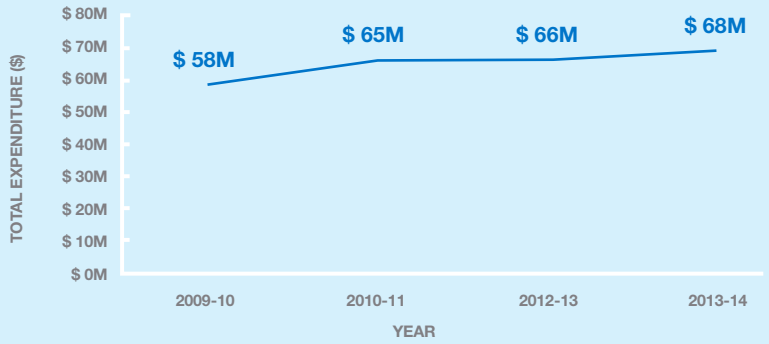


FIGURE 4: Average expenditure by aquatic centres per patron visit

WATER CONSUMPTION

Annual water consumption figures for 103 aquatic centres are collected by the Water Corporation each year. Extrapolating from these figures total water consumption for all public swimming pools can be estimated at around 1.2 billion litres of scheme water each year. This estimate excludes groundwater (bore) which is used by many centres (particularly in the metropolitan area) for irrigation of gardens and landscape so overall water use would be much higher. The water consumption data for 2013-14 was not complete at the time of preparing this report so has not been included.

Like expenditure, scheme water consumption per patron visit also varies greatly from region to region. On average 115 litres of water is used per patron visit to aquatic centres. Water usage rates are nearly half the State average in the metropolitan area (64L/patron visit) while some regional areas are 3 to 4 times higher than the WA average. (Figure 5.)

Total water usage at the 103 tracked pools has been reduced by 9.5% since 2007-08 which equates to a saving of 2.7 million litres of water. Usage in 2012-13 was higher than 2011-12 however the increase was only very small. (Figure 6.)

FIGURE 5: Scheme water consumption in litres per patron visit by region for 2012-13

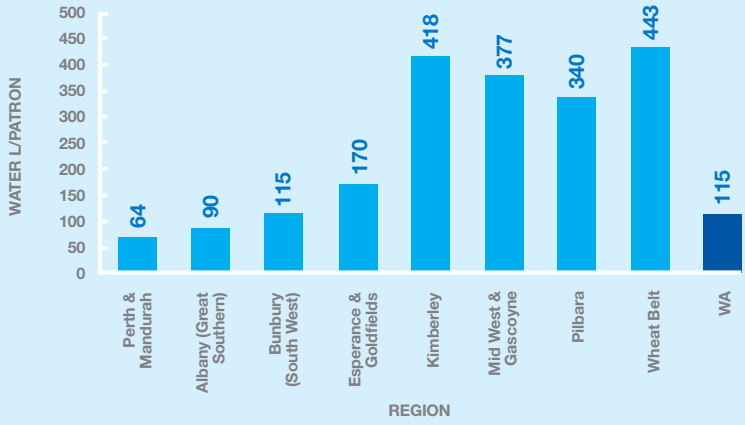
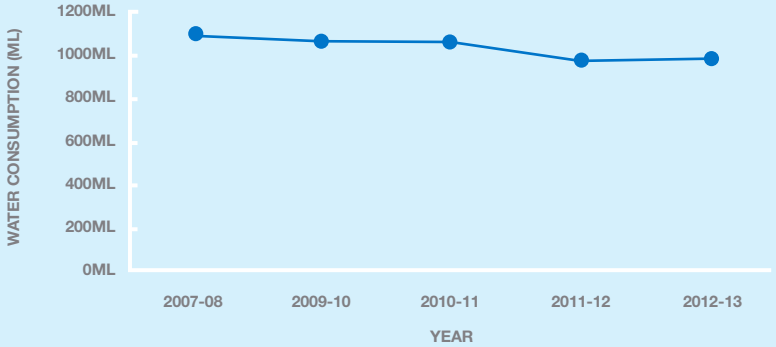


FIGURE 6: Annual water consumption at 103 public swimming pools for 2007 to 2013



LABOUR FORCE

There are around 3,000 positions in the WA aquatics industry the majority of which (83%) are casual positions.

An estimated 423 pool operators are required by the WA aquatics industry and at June 2014 there were 435 people accredited for this role through LIWA Aquatics. The Pilbara region and the Mid West & Gascoyne region have shortfalls in the number of pool operators required. (Figure 7.)

Only 62% of pool operators who were accredited in 2012-13 had maintained their qualification at June 2014 and overall the number has decreased by 107 people since last year. However there were an additional 96 new qualifications meaning that 22% of the current workforce are newly qualified.

The WA aquatics industry requires an estimated 958 pool lifeguards and at June 2014 there 1,468 people qualified through the Royal Life Saving Society. All regions, with the exception of the Esperance & Gold fields region, appear to have a sufficient number of qualified people to meet demand. (Figure 8.)

While the number of qualified lifeguards in WA has increased slightly from last year (1,468 vs. 1,427), only 64% of those registered at June 2013 maintained their qualification this year meaning that more than 500 people have let their qualifications lapse in this time. The overall increase in numbers has been achieved by 560 people completing new qualifications and these people now make up 38% of the current lifeguard workforce.

There are an estimated 1,042 swim instructor positions in WA and almost all are casual (95%). At July 2014 there were 4,205 qualified swim instructors, over 4 times the number required and based on these numbers no regions appeared to have any shortfalls in supply of swim instructors. (Figure 9.)

FIGURE 7: Number of Pool Operator positions compared with number of people qualified by region

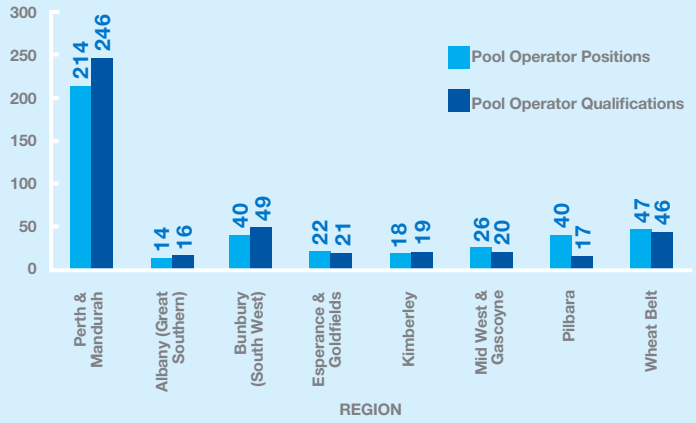


FIGURE 8: Number of Pool Lifeguard positions compared with number of people qualified by region

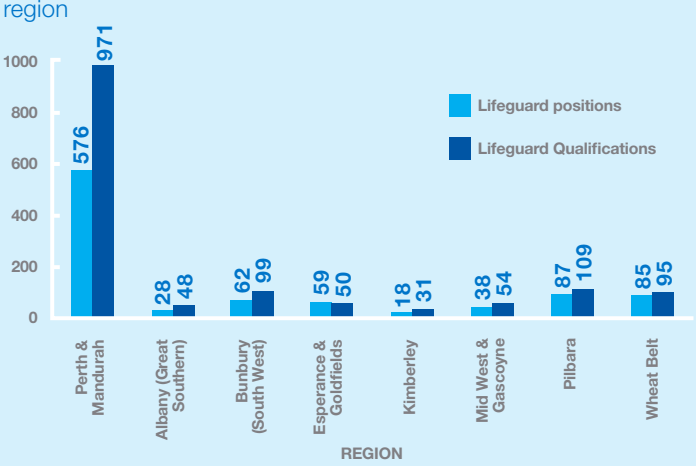
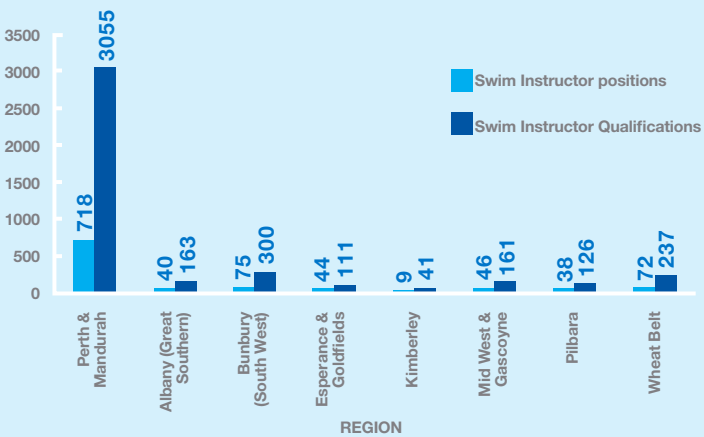


FIGURE 9: Number of Swim Instructor positions compared with number of people qualified by region



FINDINGS AND RECOMMENDATIONS

- **Aquatic centres are an important resource for the WA community.** While patronage at public swimming pools continues to be high, the growth in patronage has not matched the growth in the WA population. Aquatic centres estimate that more than half of their patrons are children.
- **Water usage is trending down but annual reductions are becoming smaller.** Total water usage has decreased by 9.5% at the 103 tracked pools which equates to a saving of 2.7 million litres of water and since its launch in 2013, 8 aquatic centres have joined the Waterwise Aquatic Centre Program. However water usage was slightly higher this year compared to last and further ways to reduce this, for example increased participation in the Waterwise Aquatic Centre Program, must be considered and implemented across the industry particularly at centres where water consumption is increasing.
- **Train pool operators and lifeguards locally.** While there appears to be sufficient numbers of qualified Pool Operators and Lifeguards in WA some regional areas experience shortfalls. The Mid West & Gascoyne and the Pilbara regions have shortfalls in pool operators and the Esperance & Goldfield region has shortfalls in both operators and lifeguards. Focused efforts need to be made in these 3 regions to promote the uptake of training locally such as working with schools to identify potential candidates for traineeships and organising local training courses.
- **Promote swim instructor employment opportunities particularly in regional areas.** While there appears to be sufficient numbers of qualified swim instructors in WA, particularly in the metropolitan area, pools continue to report difficulties attracting qualified personally. Ways of engaging these instructors to take up employment and remain in the industry need to be developed. Of particular importance is the need for strategies to overcome barriers to recruitment in regional areas.
- **Explore reasons behind high staff turnover rates.** Nearly 40% of both pool operators and lifeguards who were registered at June 2013 had not maintained their registration at June 2014. Efforts need to be made to understand why these pool staff are not renewing their qualifications so that strategies can be implemented to retain them.
- **Participation in the LIWA Industry Survey is high but more regional aquatic centres are needed.** A total of 60 aquatic centres participated in 2013-14 which represented around 70% of the total annual patronage for the State. Most pools have participated at least once since the survey began, however 18% have never participated and these pools should be encouraged to take part next year to improve the accuracy of the report. The response rate for regional pools is less than 50% and efforts should be made to include more regional pools to ensure a good representation of the industry in non-metropolitan areas.

INJURIES AT PUBLIC AQUATIC CENTRES

Injury data was collected from a total of 20 metropolitan and 7 regional swimming pools in 2013-14. These pools represent 65% of the total patronage for WA which is more than double the patronage sample for last year's report. This sample of pools represents 77% of the total annual metropolitan patronage but only 29% of the regional.

This year the data collected was more closely aligned with what pools already record and included more detailed information particularly around the type of incident and type of injury (see Appendix 2). Aquatic centres submitted their data in one of three ways: 1) Supplied copies of their own incident report forms, 2) provided summary spreadsheets of the data or 3) a RLSSWA staff member attended the centre to collect and enter the data. 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.

Generally, data records were very thorough with over 90% of incident reports providing information on the gender of the victim, the type of incident, the location where the incident occurred, and the type of aid that was provided. Variables that were not completed quite as consistently were; time of incident (15% missing), specific age of victim (17% missing) and type of injury sustained (13% missing). The majority of aquatic centres do not appear to record data on who first recognised the incident and what actions will be taken to reduce the risk of a similar incident happening again so we were not able to report on these two areas.

ANNUAL INCIDENT RATE

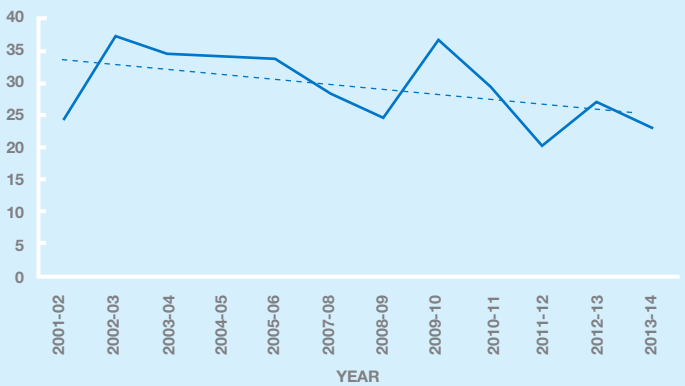
Overall, annual incident rates are trending downwards with a rate of 23 per 100,000 patrons in 2013-14. (Figure 10.) Based on these rates and patronage estimates of 10.1 million visits a year, aquatic staff would have responded to over 2,300 injuries at WA public aquatic centres. Nearly all of these would have been minor, requiring only basic first aid. Around 70 incidents would have been major and roughly 400 moderate. Incident rates are highest between November and April. More than half (55%) of all incidents were minor injuries that occurred to patrons aged 5-14 years. Comparison of annual incident rates at metropolitan and regional pools suggests that rates may be higher in regional areas however only 7 regional aquatic centres participated in the research project this year and more need to be recruited in future years to better explore this difference.

RESULTS BY SEVERITY CATEGORY

The vast majority of injuries are minor (80%) or moderate (17%) with only 3% being major. The proportion of major injuries per age group increases with age. Of the incidents that occurred to patrons aged 55 years and older, 12.5% were major which is nearly 10 times the proportion seen in the 0-4 years age group (1.5% major). Patrons in the 5-14 years age group made up 69% and 55% of all the minor and moderate injuries respectively but only 15% of all major injuries.

Major injuries were most often a result of exacerbation of a pre-existing injury or condition (40.5%), while moderate and minor injuries were most often due to collisions or falls. The most common types of major injuries were loss of consciousness (32%). Blow to head was the leading type of injury for moderate incidents (37%) and superficial wounds (29%) were the most common minor injury. Blow to head was a top 3 injury for each of the three severity categories. Pools (including, lap, leisure, dive and hydrotherapy) were the most common locations 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 medical attention that day while basic first aid was the primary treatment for minor injuries (94%).

FIGURE 10: Annual Incident rates per 100,000 patrons: 2001-01 to 2013-14



Major injuries: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	25 – 54 year olds (27%)	15 – 24 year olds (27%)	55 years and older (24%)
Incidents	Exacerbation of pre-existing injury or condition (41%)	Fainting (17%)	Hot conditions (17%)
Injuries	Loss of consciousness (32%)	Blow to head (24%)	Injury to spinal cord (suspected) (12%)
Location	Pool (42%)	Cafe (9%)	Change room/ Bathroom/ Toilet (7%)
Aid	Call emergency services (98%)	Oxygen therapy (66%)	Basic first aid (27%)

RESULTS BY AGE GROUP

The 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 135 injuries were reported for the 0-4 years age group of which only 2 were major. This age group experienced the largest proportion of moderate injuries. Falls are very common in this group (43%) and roughly half of all injuries resulted in a blow to the head (49%). Most injuries occurred in a pool and involved a wall or edge. The most common type of treatment given was basic first aid. Lack of carer supervision contributed to 15 incidents (10%) and a total of 14 water rescues were performed (10%).

0-4 years: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	Minor (61%)	Moderate (38%)	Major (1.5%)
Incidents	Fall (43%)	Collision (26%)	Trip or slip (24%)
Injuries	Blow to head (49%)	Open wound (39%)	Superficial wound (21%)
Location	Pool (37%)	Concourse (11%)	Slide (9%)
Aid	Basic first aid (88%)	Advise seek medical treatment (27%)	Advise follow-up care (12%)

5-14 YEARS

This age group made up nearly two-thirds (758 in total) of all injuries reported as part of this project. This is to be expected as this age group represents the bulk of patronage at swimming pools. However, the injuries in this group were almost all minor or moderate with only 0.7% being major; the lowest proportion of all age groups. Unintentional collisions were the main cause of incidents (32%) with blows to the head again very common (26%). As with the 0-4 years age group most injuries occurred in a pool and often involved a wall or edge. Again the most common treatment was basic first aid.

5-14 years: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	Minor (85%)	Moderate (15%)	Major (0.7%)
Incidents	Collision (32%)	Fall (19%)	Cutting or piercing object (18%)
Injuries	Superficial wound (30%)	Blow to head (27%)	Open wound (25%)
Location	Pool (53%)	Concourse (10%)	Water Slide (7%)
Aid	Basic first aid (91%)	Advise follow-up care (13%)	Advise seek medical treatment (12%)

15-24 YEARS

There were 121 injuries reported for this age and the proportion of major incidents was much higher than in the youngest 2 age groups at 7.4%. Exacerbation of a pre-existing injury or condition was a major source of injury (15%) topped only by collisions (16%). Pre-existing injuries tended to be previous wounds re-opening and the most common condition were seizures. The most common injuries were either superficial (18%) or open wounds (17%). The pool was again the most common site for an injury to occur (66%) and basic first aid was provided to 79% of victims in this age group.

15-24 years: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	Minor (82%)	Moderate (11%)	Major (7.4%)
Incidents	Collision (16%)	Exacerbation of pre-existing injury or condition (15%)	Cutting or piercing object (17%)
Injuries	Open wound (27%)	Superficial wound (17%)	Blow to head (15%)
Location	Pool (38%)	Change room/ Bathroom/ Toilet (12%)	Concourse (10%)
Aid	Basic first aid (78%)	Oxygen therapy (23%)	Advise follow-up care (16%)

25-54 YEARS

The second lowest number of injuries was seen in the 25-54 years age group with only 91 injuries reported. However 10% were major. The types of incidents were quite varied but exacerbation of a pre-existing injury or condition (19%) was at the top. The pre-existing conditions were often seizures, asthma or cardiac related. The most common location for an injury to occur was in a pool (38%) and basic first aid was the most common treatment given (78%).

25-54 years: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	Minor (71%)	Moderate (19%)	Major (10%)
Incidents	Exacerbation of pre-existing injury or condition (19%)	Collision (19%)	Exhaustion or exertion (12%)
Injuries	Superficial wound (18%)	Open wound (17%)	Loss of consciousness (13%)
Location	Pool (66%)	Spa/ Sauna/ Steam room (7%)	Concourse (4%)
Aid	Basic first aid (79%)	Oxygen therapy (26%)	Advise follow-up care (15%)

55+ YEARS

The 55 years and older age group reported the lowest number of injuries with only 64 in total however this age group had the highest proportion of major injuries at 13%. A third of all incidents were falls and 23% were exacerbation of a pre-existing injury or condition of which diabetes and blood pressure issues were most common. The most common injuries were superficial wounds (29%). As with all the other age groups most injuries occurred while the patron was in the pool (30%) and 77% of victims required basic first aid. A total of 16 incidents (26%) required oxygen therapy and 8 (13%) required the emergency services to be called.

55+ years: Keep watch for these top 3 incidents

TOP 3	1	2	3
Age	Minor (72%)	Moderate (16%)	Major (13%)
Incidents	Fall (30%)	Exacerbation of pre-existing injury or condition (23%)	Collision (17%)
Injuries	Superficial wound (29%)	Loss of consciousness (19%)	Blow to head (13%)
Location	Pool (30%)	Concourse (14%)	Spa/ Sauna/ Steam room (13%)
Aid	Basic first aid (77%)	Oxygen therapy (26%)	Advise seek medical treatment (15%)

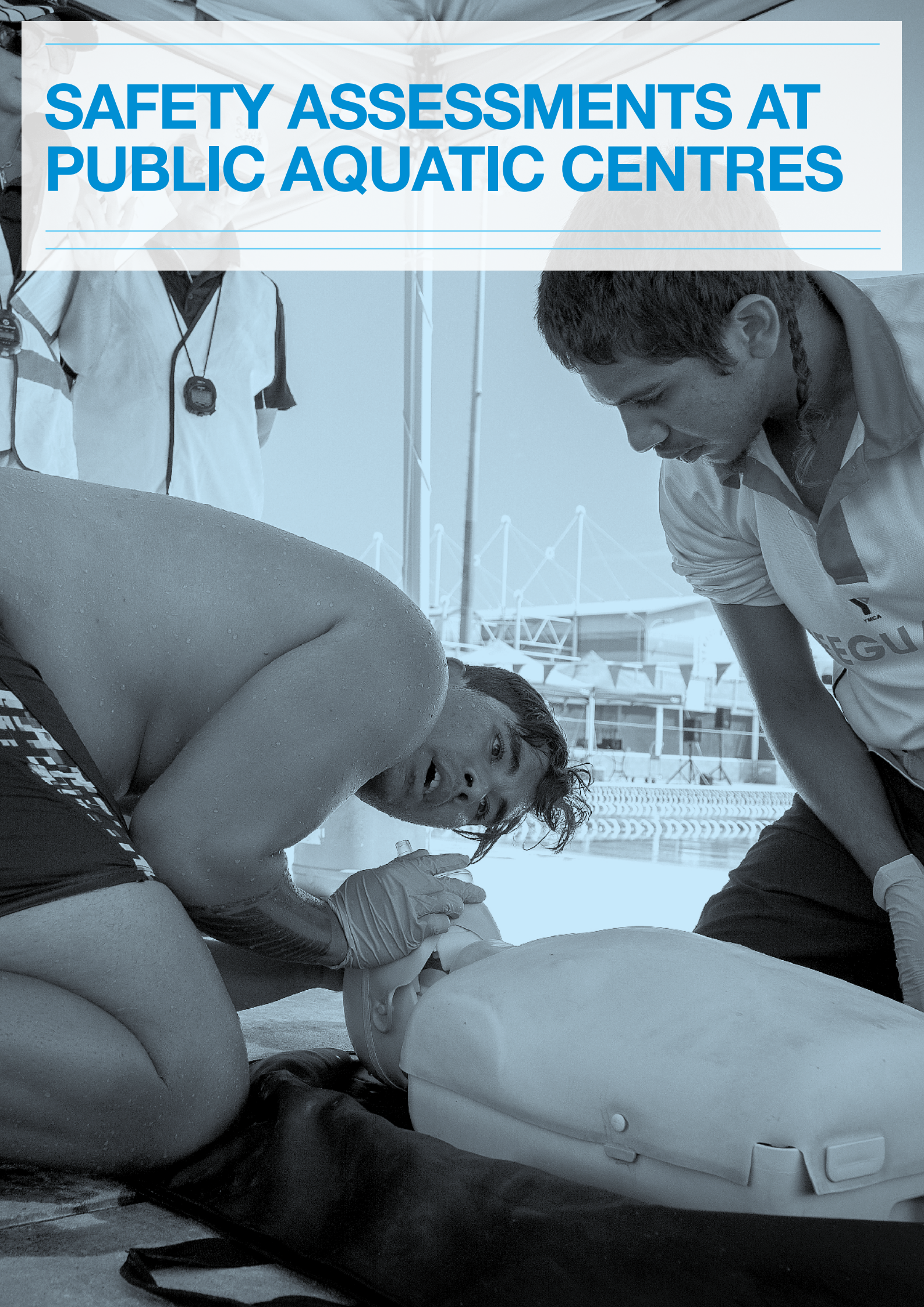
PATTERNS ACROSS AGE GROUPS

A number of clear patterns can be seen in the injury data when analysed by age. The proportions of injuries that involved an exacerbation of a pre-existing injury, fainting, loss of consciousness and call emergency services were highest in the oldest age group (55 years and older) and these reduce as age decreases. Reversely, the proportions of injuries that involved a blow to the head, immersion (possible) and an open wound were highest in the 0-4 years age group and these reduce as age increases. The middle age groups (15 to 54 years) see the highest proportions of asphyxia or other threat to breathing, blood nose and dislocations and other injuries to muscles and joints but have the lowest proportions of falls, trips and slips and swimmers requiring assistance.

FINDINGS AND RECOMMENDATIONS

- **Participation has doubled.** The number of aquatic centres participating in the aquatic injury research project has more than doubled since last year with 65% of total patronage being represented this year. Much more detailed information has been gathered allowing for more in depth analysis. More regional pools should be recruited for next year's project to ensure an accurate representation of injury at these pools.
- **Most injuries occur in a swimming pool.** Swimming pools are the primary location for injuries to take place across all age groups with half of all injuries reported happening in a pool. It is important for lifeguards to be aware of the risk of both drowning and non-drowning related injuries and to adapt scanning strategies to identify both.
- **Types of incidents and injuries vary by age.** Patrons of different ages are at risk of different types of injuries. For example patrons under 4 and over 55 are most likely to experience a fall. Lifeguard training should highlight these differences across the age groups to allow them to better identify patrons at risk of certain incidents and injuries and to respond appropriately.
- **Most injuries occur to children aged 0-14 years.** Three quarters of all injuries reported occurred to children aged 0-14 years. The high numbers of both patronage and injuries in this group highlight the need for aquatic centres to continue to promote carer supervision for the prevention of not just drowning but all types of injuries.
- **Major injuries are rare but require specialised skills.** Aquatic centres in WA are generally very safe with only 3% of all injuries being major. Major injuries are those that required CPR, defibrillation, or a spine board or collar to be used or when emergency services had to be called. Because of the rarity of these severe events, aquatic staff need to have regular training in advanced first aid to maintain these essential skills.
- **More thorough data reporting is needed.** On the whole, participating aquatic centres record very detailed information on incidents and injuries. However some variables such as time of incident, specific age of victim and type of injury sustained were either not provided or not completed properly meaning the reports had to be excluded from analysis. Other than blank fields, some examples of when data could not be used included; unable to determine whether a time was am or pm, gender not clear as patron's name could have been male or female, and no estimate of age when date of birth was unknown. Improvements to incident report forms and more thorough completion of forms by aquatic centre staff would reduce the need to exclude reports and would increase the accuracy of the analysis.

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 Guidelines for Pool Safety Operation and other relevant Australian standards.

The Safety Assessment is 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 13 years 379 public swimming pool assessments have been conducted at 128 pools; an average of 3 visits for every pool in this time and 29 assessments per year. All pools have been assessed at least once since 2006-07 and 79% (101) have had their most recent assessment within the last 3 years. (Figure 11.)

Only 7 pools have not yet been assessed against the updated 2010 Safety Assessment components. For these 7 pools only the Overall Safety Rating has been included in this report and they have been excluded from the analysis of the individual components that make up the Safety Assessment.

OVERALL SAFETY RATINGS

In 2013-14 a total of 33 pools were assessed with an average Overall Safety Rating of 90.6% and mean average yearly ratings have increased by 17% since 2001-02. (Figure 12). Last year's report identified 28 pools that had not had assessments in the previous 3 years and 19 of these pools were assessed in 2013-14.

When scores from the most recent assessments at all 128 pools are analysed, the average Overall Safety Ratings are very high at 88.6% and range from 64.5 to 99.3%. In the past 12 months 10 pools increased their rating from below 80% to above leaving only 19 pools with a most recent Overall Safety Rating below 80%.

A total of 121 pools have been assessed against the new components and the average for most recent scores is 80% or more for every component of the safety assessment. The three areas that score lowest on average are Chemical Safety (80.0%), Special Features (82.3%) and Water Slides (83.9%). (Figure 13.)

The first 7 components of the Safety Assessment are applicable to all aquatic centres and the yearly average for each of these components has increased since it was updated in 2010. The increases have ranged from 3% to as much as 14% for the General Administration component.

FIGURE 11: Number of pools assessed each year since 2001-02 and year of most recent assessment for all pools

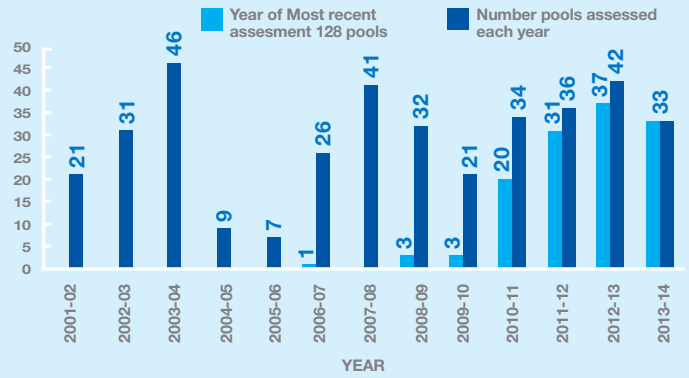
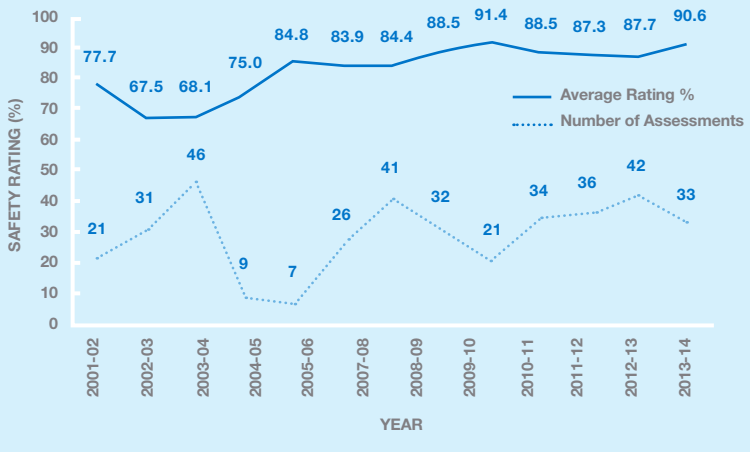


FIGURE 12: Average Overall Safety Rating by year



On average, results improve as more assessments are conducted. (Figure 14.) The average score achieved at the third assessment is 88.4% and 92.4% by the fourth assessment. Metropolitan pools tend to have had more assessments conducted and achieve higher overall scores than pools in regional areas. Two thirds of all pools have had at least 3 assessments since 2001-02.

The more assessments an aquatic centre has, the closer they get to achieving a 100% Overall Safety Rating. The greatest improvements are seen between the 1st and 2nd assessments with scores on average increasing from 71.6% to 84.7%. From the third assessment onwards, scores are maintained at around 90% and above.

Frequency of safety assessments also appears to have an effect on overall ratings. Figure 15 shows a downward trend in scores with longer lengths of time between assessments. Where an assessment has been conducted one to two years since the previous, average scores are 93.9%. However when an assessment is done 3 to 4 years after the last the average score is lower at 87.7%. By 5 to 6 years between assessments the overall scores achieved are only 84.1%.

This trend suggests that in order to maintain scores above 90% pools should be assessed at least once every 3 to 4 years. The majority (79%) of aquatic centres in WA have had safety assessments conducted in the last three years however there are 26 that have not.

FIGURE 13: Average rating for each component based on most recent assessment at all pools

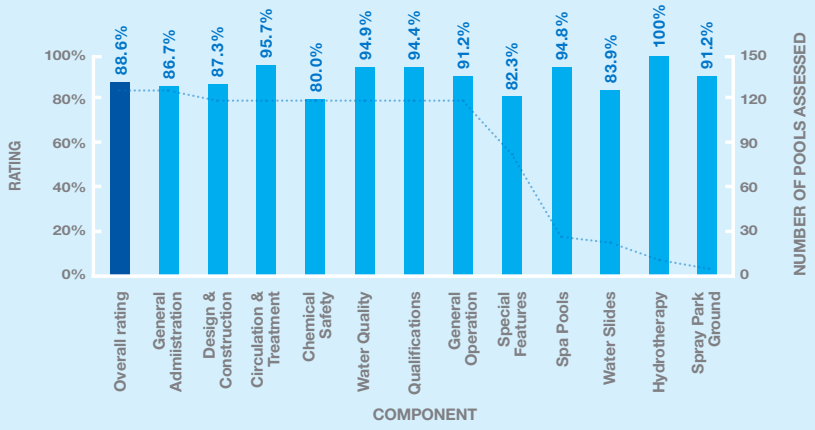


FIGURE 14: Average Overall Safety Rating at each assessment

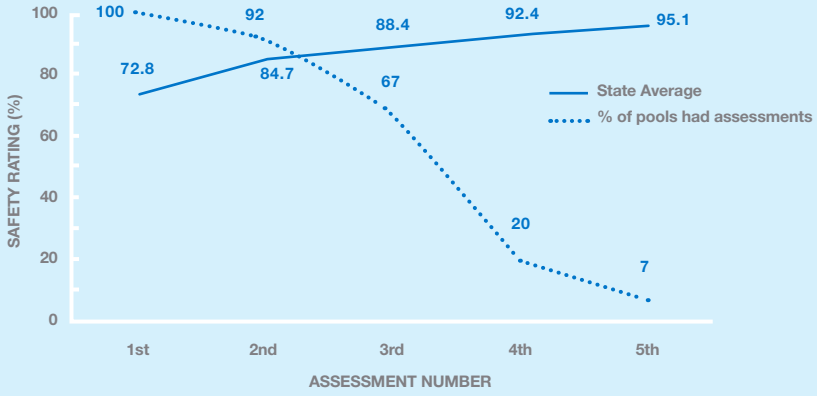
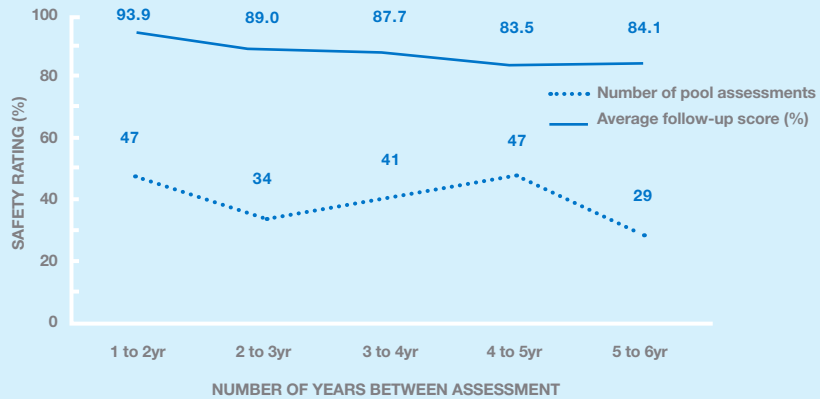


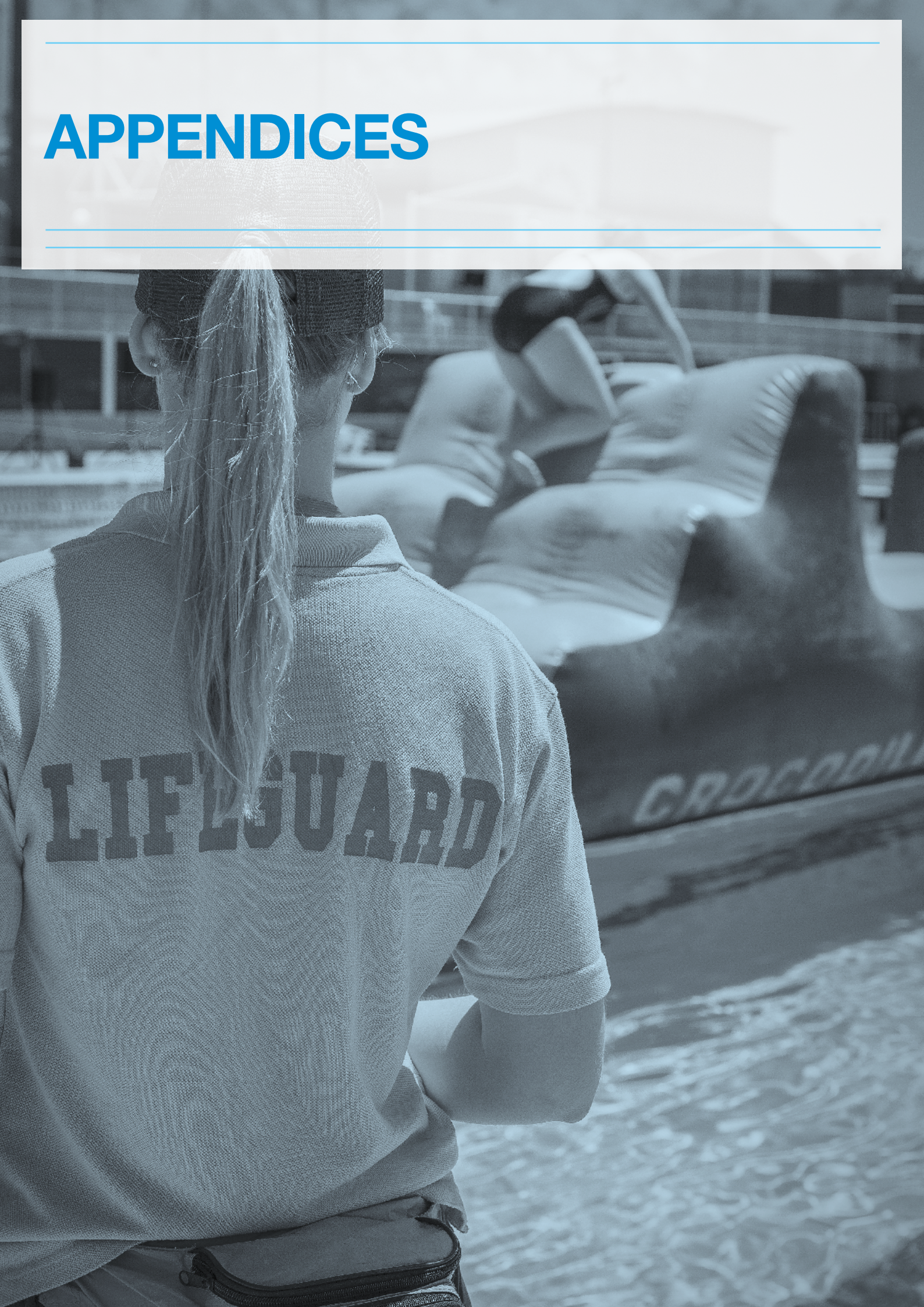
FIGURE 15: Overall Safety Ratings by number of years between assessments



FINDINGS AND RECOMMENDATIONS

- **Safety Ratings are high at participating centres.** The average score at the most recent assessment across all pools was very high at 88.6%. Average ratings across each of the components updated assessment are also high with all but three above 85%. Chemical Safety, Special Features and Water Slide had the lowest average scores and should be the focus of future industry professional development, for example the LIWA annual conferences.
- **Ratings at lower scoring centres have been improved.** In the 2013-14 season RLSSWA has worked with the aquatic centres who were identified last year as having Overall Safety Ratings of less than 80%. In the past 12 months 10 pools have increased their rating from below 80% to above leaving only 19 pools with a most recent Overall Safety Rating below 80%. These 19 pools should continue to work with RLSSWA to improve their ratings in the coming year.
- **Assessments should be done at least every 3 years.** Safety Ratings appear to be maintained above 87% when the length of time between assessments is between 3 to 4 years or less. Last year just over 20% of public aquatic centres had not had inspections within the previous 3 years but in 2013-14 19 of these 28 pools underwent assessments. Only 7 pools now remain who have not had assessments in the last 3 to 4 years and have not been assessed against the updated criteria. These pools should be encouraged to undergo assessments in the next year.

APPENDICES



ANNUAL AQUATIC INDUSTRY PROFILE 2013-14

Research to increase knowledge and expertise in the aquatics industry

Each year, Royal Life Saving WA on behalf of LIWA collects information in order to estimate the total patronage and value of the WA aquatic industry as a collective. The data you provide will not be reported individually.

Please report data for **July 2013 to end of June 2014**. If exact figures are not known please report best estimates.

If possible, please report data relating to your aquatic facilities **only** (exclude gym, sports courts etc.). If this is not possible please provide patronage and expenditure figures for the entire centre.

Centre name:		Manager name:	

Q1. What was your total patronage for the 2013-14 year? If possible please report for entire centre then for aquatics areas separately.

Patronage for **entire centre** (include aquatics):		
Patronage for **aquatic areas only** (include LTS):		☐ Same as above

Q2. Roughly what percentage of your annual aquatic patronage are children? ____ %

Q3. What was your total expenditure for the 2013-14 year? If possible please report for entire centre then for aquatics areas separately.

Expenditure for **entire centre** (include aquatics):	$	
Expenditure for **aquatic areas only** (include LTS):	$	☐ Same as above

Q4. How many staff are employed within your aquatic facilities?

Position	Full time	Part time	Casual
Managers (aquatic supervisors and coordinators)			
Lifeguards			
Swim Instructors			
Other			

*Please **return** completed surveys to: **Fax:** 08 9761 2879, or **Email:** bpage@hellocs.com.au*

Thank you for completeing this survey

To view last year's report click here or visit www.cat1.poolsafety.com.au

LIWA
LEISURE INSTITUTE OF WA AQUATIC (INC.)

Department of Sport and Recreation
GOVERNMENT OF WESTERN AUSTRALIA

INCIDENT DATA COLLECTION GUIDE 2013-14

1. Date of incident	
dd/mm/yy	

2. Time of incident	
24 hr time	

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

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

9a. Location in centre where incident occurred - Indoor or Outdoor?	
Indoor	Unknown/Not recorded
Outdoor	

9b. Location in centre where incident occurred - Aquatic or non-aquatic area?	
Aquatic	Unknown/Not recorded
Non-aquatic	

9c. Location in centre where incident occurred - Specific location (choose best one)	
Pool concourse	Playground (dry)
Lap pool	Spray park
Leisure pool	Café
Toddlers pool	Lawn
Dive pool	Sports courts
Hydrotherapy pool	Gym
Rapid river	Office/Training room
Inflatable	Plant room
Play equipment (wet)	Chemical storage room
Starting block	Crèche
Spa	External surrounds e.g. car park
Sauna/steam room	Off site
Change room/bathroom/toilet	Other – please specify
Entryway/reception area	Unknown/Not recorded
Grandstand	

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? (choose all that apply)	
Perform a rescue Basic first aid (includes band aid, cleaning, eye drops, ice etc.) Bandage Monitoring Check for symptoms of concussion Spine board/collar Other immobilisation CPR	Oxygen Facilitate medication e.g. epi-pen, ventolin Defibrillation Call emergency services Advise seek further medical treatment 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)
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 FURTHER INFORMATION PLEASE CONTACT:

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