

PROJECT REPORT

Water safety in the bush: strategies for addressing training needs in remote areas

N Beattie, P Shaw, A Larson

*Combined Universities Centre for Rural Health, University of Western Australia,
Geraldton, Western Australia, Australias*

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Beattie N, Shaw P, Larson A

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ABSTRACT

Context: This article describes a unique, remote, water safety-training program delivered to 11 remote Australian communities during 2006-2007. The program, known as 'Water Safety in the Bush', was developed by Combined Universities Centre for Rural Health in Geraldton Western Australia in consultation with the Commonwealth Government Department of Health and Ageing, and the Royal Life Saving Society of Australia.

Issue: Program description: Drowning and near drowning are major causes of childhood death and injury in rural and remote Australia, making improved water safety awareness and skills a public health priority. Water Safety in the Bush employed a flexible, community development model to meet the special requirements of remote and isolated communities. The model had three elements: coordination by a local organisation; a water safety instruction program based on a Royal Life Saving Society of Australia curriculum adapted to meet local priorities; and strategies for sustainability. Program evaluation: In the delivery of the program a total of 873 children and 219 adults received swimming and water safety instruction; 47 adults and older children received first-aid training; and 38 community members became AUSTAWIM (the Australian Council for the Teaching of Swimming and Water Safety) accredited instructors. Project evaluation showed parents and community organisations were very satisfied with the program which met a real need. Parents and instructors gave evidence of children's increased skills in water safety, swimming ability, life-saving and water confidence. Training programs with greater contact hours showed greater skill gains. Sustainability strategies included accreditation of local AUSTSWIM instructors, the erection of water safety signs, sourcing of continuing funding, and the introduction of water safety theory into the school curriculum.



Lessons learned: Flexibility was the major success factor. Within the parameters of minimum guidelines, communities were encouraged to choose the timing, venue and delivery mode of the training to ensure the program was best suited to the local community. Community ownership was achieved by requiring that local organisations design and implement the projects. Designing programs that addressed local constraints ensured high participation rates. A number of challenges were also identified. Not all community organisations had the capacity to take on the coordinating role, and struggled to effectively deliver a sustainable program. Other models may be needed for these communities. Accessing appropriately qualified water safety instructors in local areas also proved difficult at several of the sites. Further, designing standardised outcome evaluation strategies that could be implemented across all participating sites was problematic.

Implications: Remote and isolated communities have a pressing need to gain the knowledge and skills necessary for water safety and survival. Standard training programs, which in the case of swimming and water safety instruction are generally run in two-week blocks, are often not feasible. Models for delivering training, which give resources and power to local organisations to find innovative ways to meet their priorities, build capacity and ensure high participation rates.

Key words: community development, training, water safety.

Context

Water Safety in the Bush (WSB) was an innovative water safety-training program delivered to remote communities across Australia that has implications for the design of other remote-area training programs. This article outlines the background and context of the program; describes its design and implementation; and reviews key findings that emerged from the evaluation. Finally, the article summarises the lessons learned and ongoing challenges identified through the delivery and evaluation phases.

The WSB program was developed by the Combined Universities Centre for Rural Health (CUCRH) and the Department of Health and Ageing (DoHA), in consultation with the Royal Life Saving Society of Australia (RLSSA). The CUCRH managed national implementation of the project, worked with local communities to develop appropriate and context-specific delivery strategies for each site, and was responsible for the evaluation.

Several years ago a research team from CUCRH conducted focus groups with women about safety on sheep and cattle stations in a remote West Australian shire. Participants raised concerns about their children's drowning risk and

more general water safety. They cited their own poor water safety skills and limited access to appropriate water safety instruction as barriers to ensuring their children's water safety. What, they asked, could be done?

What indeed? Drowning and water safety are real safety concerns in Australia. In 2007, 277 people drowned throughout Australia; 20% of these were children aged 0-14 years¹. Drowning is the principal cause of death for children aged 0-14 years living on farms and accounts for approximately 41% of all child deaths on farms².

Throughout the country, swimming and water safety training is usually provided to children through schools and local aquatic centres. While this reaches most children, those living in isolated areas often do not have access to these organised water safety programs. Presently, in excess of 2500 children are enrolled in schools of distance education across Australia, and most are unable to attend formal and regular water safety instruction. Additionally, many small towns and dispersed communities have local school facilities but lack accredited swimming instructors or public pools. Only 11% of swimming and water safety teachers live in rural and remote areas, home to approximately 25% of Australians³.



Two recent national plans have called for more strategic approaches to water safety and injury prevention. The 2004-2007 National Water Safety Plan states that 'quality water safety education must be made available to every Australian', specifically identifying children and those living in rural and remote areas⁴. The 2004-2014 National Injury Prevention and Safety Promotion Plan recognizes the importance of achieving a 'positive safety culture' and creating safe environments through attention to the 'the social and physical surroundings or conditions that support the prevention of injury'⁵. The WSB program was a trial of a service delivery strategy to address the goals in these national plans for remote and isolated areas.

Issue

Program description

The WSB program aimed to provide a community-based water safety program to children in remote areas across Australia without access to formal water safety and swimming instruction. The flexible training program had three elements:

1. Coordination by a local organisation.
2. A water safety instruction program based on Royal Life Saving Society of Australia curriculum and delivered by AUSTSWIM (the Australian Council for the Teaching of Swimming and Water Safety) accredited swimming instructors but adapted to meet local priorities.
3. Strategies for sustainability.

The swimming and water safety instruction program was based on the AUSTSWIM *Swim and Survive* program, targeting children 5-14 years, and *Infant Aquatics*, for parents and infants. These programs have been developed by the RLSSA, the Australian leader in the provision of swimming and water safety education programs for infants and children, and are delivered by accredited AUSTSWIM instructors around Australia. The *Swim and Survive* program

has seven levels of graduated skills. Most children attend the courses during school term or school holidays in age-appropriate groups, progressing through a number of levels over 10 sessions.

Strategies employed to ensure the sustainability of WSB included: the installation of water safety signage in and around local water hazards; the provision of RLSSA teaching resources to participants and local libraries, schools and/or shire offices; and training of local community members as AUSTSWIM *Teachers of Swimming and Water Safety* to further build on the skills established within the WSB program.

To be eligible for funding communities had to meet three criteria. First, they had to be classified as remote or isolated, as defined by the Accessibility/Remoteness Index of Australia (ARIA)⁶. Second, a local organisation was required to coordinate the project, including managing funds, reporting on project activity and expenditures, sourcing the accredited instructors and arranging insurance. Finally, the community did not have any existing ongoing programs of water safety instruction delivered locally or by visiting instructors.

The WSB program was promoted nationally with articles in targeted media, direct emails to over 200 shires classified as rural or remote, and circulation of information through relevant health, education and community networks, such as Isolated Children's Parents' Associations, Country Women's Association and Farmsafe Australia Incorporated. This promotion resulted in 90 email inquiries, 180 telephone inquiries and 175 hits on the website.

The project officer assisted 29 community organisations to complete expression-of-interest forms; this resulted in 14 completed forms and ultimately 11 successful applications endorsed by the project's national steering committee and funded to deliver the project. Participating communities were located in the states of Queensland (three sites), Northern Territory (one site), South Australia (two sites) and Western Australia (five sites; Fig1). No



applications were received from the remaining states; this was not unexpected as relatively few communities within these states are classified as remote.

By the end of the program, WSB provided swimming and water safety instruction to 887 remote and isolated people (668 children and 219 adults), 47 adults and older children received specialised first aid training, and 38 community members became accredited AUSTSWIM instructors. Approved RLSSA water safety signage was installed at local water hazards in all the participating communities.

The implementation of the project was characterised by diversity. Different strategies and solutions were employed by the community organisations. While all sites used the RLSSA curricula, modifications were required to take into account the local context; mixed ages of participants (from infants to secondary school students and adults); existing swimming and water safety skills; availability of local training venues; distances participants needed to travel to attend training and the time they had available; local weather conditions; cultural groups within the local community; available timeframe for project delivery; and capacity and willingness of parents and caregivers to participate with their children. With limited time, only a set of skills associated with each *Swim and Survive* level could be taught. Communities had a strong preference for giving priorities to survival skills as opposed to swimming skills, such as stroke correction. The training programs offered could be divided into three types. Eight sites used a swim camp model, with several days of training provided often on two or three occasions and typically at a central point for families traveling long distances. Two sites restricted themselves to short intensive workshop style instruction; these were often delivered by instructors who traveled to sites. Only one site delivered a full *Swim and Survive* program, with 10 sessions over 2 weeks.

Evaluation

The project evaluation was undertaken by CUCRH as a requirement by the funding body, using a framework

developed at the beginning of the project. Evaluation indicators included coverage of eligible participants, parental satisfaction, standardised assessment of swimming skills and documented implementation of a sustainability strategy. The specific methods used to measure each indicator are described below. In addition, all records of interaction between the project officer and local coordinators were analysed to determine characteristics associated with project success and failure. The notes were reviewed by the authors, and hypotheses formed and tested by comparing and contrasting the experience across sites. These findings are presented in the form of lessons with implications for other training delivery in remote and isolated areas. In doing so we are influenced by a recent article on systematic reporting of non-experimental public health interventions⁷. The international panel of authors argues for context-rich descriptions of success factors to enable future meta-analysis that is sensitive to the complex factors that affect the impact of interventions.

Coverage: In their applications the 11 sites proposed that there would be a total of 519 children participating. This proved to be a very conservative estimate, with 873 children attending the modified *Swim and Survive* courses. Actual numbers exceeded the targets in all but two sites.

Parental satisfaction: Each project site was required to give all parents a participant evaluation form. Parents were asked to complete some information at the beginning and other information at the end of the training program. Unfortunately this was not rigorously enforced at the sites and only 10% ($n = 82$) of the expected number of forms were completed. Among those parents there was a high level of satisfaction with the program; 99% expressed satisfaction with the project and agreed that their child had enjoyed the training. A typical handwritten comment on the form was:

Unbelievable program! It has been very beneficial to my family. I have been wishing for something like this for years. Thank you so much for organizing it.
(North Queensland parent)

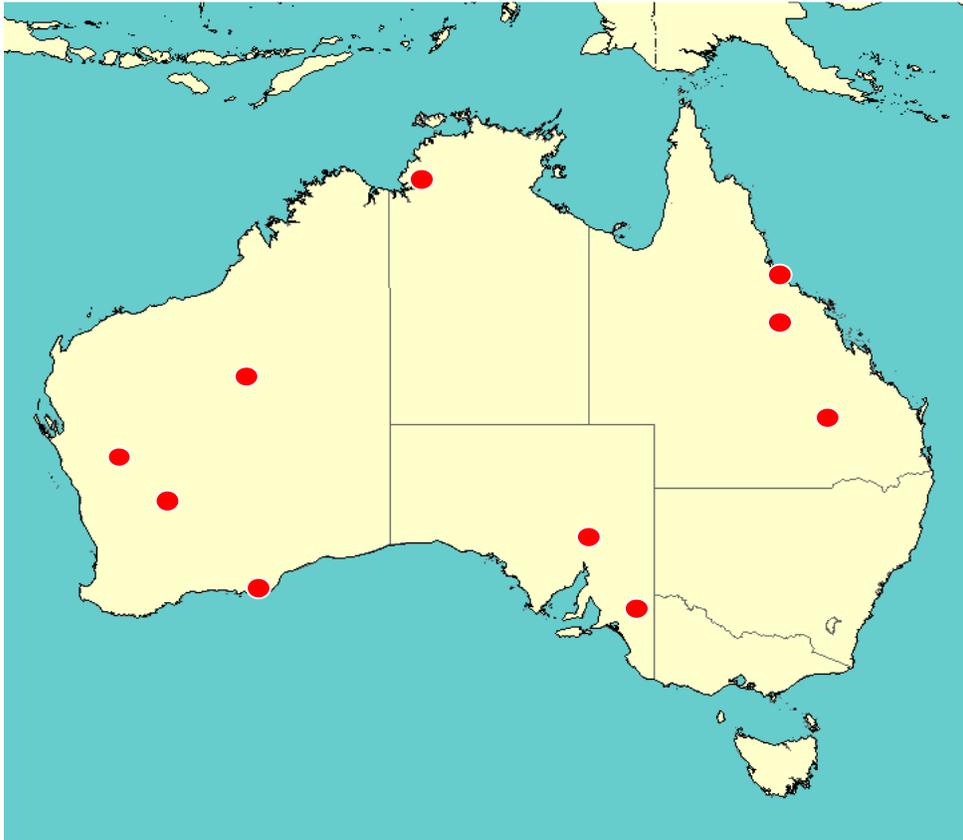


Figure 1: Locations of the eleven coordinating organisations for Water Safety in the Bush.

Progress in skill acquisition: Children's progress was measured in two ways. Parents, through the participant evaluation form, were asked to rate their children on a 10 point scale in water safety, swimming ability, life saving skills and water confidence before and after the training. Together these assessment methods describe the total gains made for the participants and enable comparisons between sites.

Although there were gains across all skills, parents perceived the most marked increase in skills for life saving and water safety (increases of a mean of 2.8 and 2.3 points, respectively) compared with swimming ability which exhibited the lowest perceived advancement (1.7 points increase). This reflected the focus of all projects on water safety, life saving and rescue skills.

The second method of measuring learning outcomes was a standardised training progress form given to all water safety instructors to record individuals' gain in specific knowledge and skills during the training. Because the length and focus of training and the ages and initial skills of participants varied so much, most instructors did not use the standardised form but did attempt to describe the progress made by each participant. This meant that the information provided could not be translated into a single scale of progress. Nonetheless, the notes that instructors provided do indicate that there was progress in all sites and that the extent of progress was a function of the amount of instruction time. Sites that delivered short intensive workshop-style instruction showed the least increase in participants' skills and knowledge. Sites that used the swim-camp model showed a moderate increase; and the one site that delivered the full *Swim and Survive*



program showed a dramatic increase in skills and knowledge.

Sustainability strategies

As part of the sustainability strategy, all sites installed water safety signage at local water hazards and received resources materials for the town or school libraries or shire offices. In six sites residents became accredited AUSTSWIM *Teachers of Swimming and Water Safety*, usually by being supporting to receive the training prior to the start of the project water safety program. The new instructors were then able to assist in the local training and gain their required practical training hours. Of their own initiative, several communities developed other sustainability mechanisms. At least three sites sourced continuing funding and five included water safety messages in ongoing school teaching and learning programs.

Lessons learned

The CUCRH considers the WSB project to have been a great success, based on the extensive geographic coverage of the project, the large number of participants and the accreditation of local community members. A number of elements of the flexible WSB model contributed to the success of the program, as well as posing a number of remaining challenges which need to be addressed in future programs.

Success factors

An analysis of the processes and outcomes for each site highlighted two important factors in the success of the project. The first was the flexible model of delivery and the second was the presence of community champions.

The first success factor was the focus on encouraging communities to deliver a water safety program that suited their local needs, while quality was maintained by requiring that the RLSSA curriculum was followed and by requiring

all instructors to be accredited through AUSTSWIM. The key areas of flexibility included: program timeframe and contact time; class size and composition; and the aquatic environment in which the training was delivered. Local modifications mean that the principle of increasing water safety knowledge and skills was achieved using a method that was significantly different from the mainstream model.

Characteristically, RLSSA programs are delivered via a series of formal swimming lessons provided over 10 sessions in a two-week period. Within WSB programs the length and duration of instruction varied. Only one site was able to offer regular 'swimming lesson' sessions. Other sites delivered programs through swimming camp models or intensive workshops. The shorter period meant that greater emphasis was given to water safety and life-saving skills, as opposed to swimming technique.

Formal swimming lessons within a mainstream delivery model are generally provided at aquatic centres, in 25 m or 50 m swimming pools. While many of the WSB sites delivered the training in this environment, others opted for alternative venues such as lakes, backyard pools, local rivers and waterholes, or the ocean.

In mainstream swimming education children are grouped by skill level according to the RLSSA course structure and undertake instruction with children of similar skill level. With the exception of the *Infant Aquatics* course, instruction is relatively individual, with the focus on the child as opposed to the family group. Most WSB sites placed more focus on the family and community unit. In situations where families had to travel considerable distances to participate in training, parental involvement was vital for high participation, as well as enhancing the potential for sustainability.

The second success factor was the emergence of community champions. Local organisations that had an individual who could take on this role of 'community champion' had higher participation rates and greater up-take of sustainability strategies. Community champions took it upon themselves to



act as the key contact in the community, promoted the project within the community, and had the energy and commitment to overcome obstacles in the delivery of the program. In effect these champions knew the target group well and were able to encourage community ownership and community building. The champions held different positions in the community, in some cases they were accredited AUSTSWIM instructors with strong community investment, while in others they include a committed and small group of parents or an experienced teacher with an interest in the area. As a result of these figures, each project was distinctive and had high levels of participation.

Where the coordinating organisation took a more bureaucratic and process-oriented approach, participation was lower and measures to enhance sustainability were much less comprehensive. This shortcoming was particularly evident in the sites that targeted Indigenous children. There the coordinating organisations, that were often located in other towns or non-Aboriginal controlled, lacked connectedness with the community members.

Remaining challenges

Cultural security in Aboriginal settings: Other water safety programs have recognised the inappropriateness of mainstream programs for Aboriginal communities, families and children. For example, *Swimming Instructor Delivery Guide for Aboriginal Groups* by the Western Australian Branch of the RLSSA is a comprehensive document that describes the importance of following community protocols and alerting instructors to potential issues, such as appropriate age and gender behaviour, learning styles, and clothing⁸. Such resources are important for running effective training programs. However, they are not sufficient.

As noted above, the WSB model, which relied on community organisations that were embedded within the community, was not as successful for remote and isolated Indigenous communities. For example, these were the only sites not to achieve their expected number of participants. Non-Indigenous led organisations attempted to manage the

program but largely failed to engage the communities. The results ranged from an inability to implement the program to good implementation of only one or two aspects. A more appropriate model would rely on greater involvement of community leaders (particularly in the planning phases), following local protocols, identifying the priority given to water safety locally, and the preferred ways to deliver training and other water safety interventions⁹.

Another example of the cultural inappropriateness of traditional water safety instruction and the WSB program for many remote Aboriginal communities is the underlying assumption that parents are the children's exclusive caregivers. It also assumes that the parents are the most relevant ones to target for water safety messages, including swimming and survival skills and reinforcement of the importance of constant supervision. In an Aboriginal context this responsibility may be extended to other family members, such as older siblings. Effective training programs need to be adaptable to respond to these cultural differences.

Evaluation methods: The very attributes of flexibility that made WSB a success worked against the implementation of standardized evaluation tools and has been a limitation in its evaluation. In some cases the coordinating organisations were unfamiliar or non-compliant with evaluation processes, but in most cases the evaluation tools were simply inappropriate. Where instruction was not undertaken with direct parental involvement or over a number of intensive episodes, getting an acceptable response rate from the parent surveys was not achieved and may reflect the positive views of a minority.

Inappropriateness was an even bigger factor in completing the individual participant skills record. Despite good intentions, instructors could rarely marry the very specific RLSSA templates with the modified programs that were delivered. While all sites were able to document individual progress using assessment strategies consistent with the national standards, the results were not comparable from one site to another.



Instructors: In the original development of the WSB model it was envisioned that community organisations would be able to form lasting relationships with water safety instructors residing in regional centres as a means of enhancing sustainability. During implementation it became clear that this could rarely be achieved. The first challenge was to recruit and retain instructors who often were fully committed closer to their regional or metropolitan home. Instructors were rarely available for multiple water safety camps or workshops, often scheduled several weeks or months apart. Also exceptional were instructors who were receptive and adequately skilled to modifying the standard curriculum to focus on specific water safety and lifesaving skills, and comfortable with simultaneously instructing children and adults of all ages and abilities. It was rare that programs were able to engage highly experienced AUSTSWIM instructors, such as those who helped CUCRH develop the original program, who had a sound understanding and experience of rurality and strong rapport with the community. Ultimately recruiting and supporting rural and remote residents to be AUSTSWIM instructors is the only sustainable option¹⁰.

Capacity of community organisations: Another assumption that was held in the development stage of WSB was that any community organisation could coordinate the program. At the first site, which was run as a pilot, the local organisation was a group of women who organised community events. A limitation of WSB was that it required a reasonable level of community capacity to apply for and implement the program. If the community did not have a local organization capable of generating community ownership and managing project administration, this model did not work as effectively. We can only assume that many remote and isolated communities are in this situation.

During the application and implementation phases of the national program, schools proved to be the most effective coordinating groups. Schools, usually those providing distance education to isolated children, were in constant contact with parents and children. They could engage parents, piggyback on existing plans for education and

travel, assess current skills, and undertake the administrative functions (including obtaining insurance) with relative ease. While the WSB team is reluctant to recommend that all future funding go through educational organisations, it did prove to be a very effective mechanism. Further evaluations are needed to define the advantages and disadvantages of using different types of coordinating organisations.

Conclusion: a model for remote and isolated area health promotion strategies

Effective health promotion requires going beyond simplistic models of delivering urban models in the bush. As a review of water safety programs in rural and remote Australia concluded, 'further work needs to be undertaken to these programs in a more strategic and coordinated approach so that all Australia and especially those living in rural areas have an opportunity to participate in aquatic activities safely'³. Water safety strategies, like most health promotion initiatives, need to take a behavioral-ecological model of change, which reinforces its message at a number of levels: community, family and individual¹¹. This is best achieved through a community development framework, by working with local organizations and involving the commitment, local pride and knowledge of community champions¹². We argue that this approach is relevant for other efforts to offer training programs to isolated and remote areas.

In urban centres, a water safety culture is achieved through safety-conscious management of public aquatic facilities, provision of school-based instruction and enforcement of private pool fencing regulations. Remote and isolated areas have different needs and require different solutions. School-based training is rarely available. There is a greater range of aquatic sites and dangers, such as dams and rivers. Issues of transport, traveling distances, and the availability of training venues all impact the success of programs in remote and isolated settings. Additionally, the specific needs of communities vary, based on local exposure to water and water hazards, and training requirements often focus on survival skills rather than swimming technique.



Programs like WSB are not 'second best'. They represent the best option for their communities, tailored to suit their priorities and delivered in a manner which makes gaining the skills possible. Other accredited training programs, ranging from senior first aid to chronic disease self-management, struggle to deliver programs to remote and isolated communities. Typical solutions are fly-in fly-out instructors or brief training encounters at farm shows and other gatherings but these frequently fail to achieve high participation or completion rates. Mainstream programs can and should be designed so that they can be modified to meet the needs of these communities, offering programs that involve the whole family at an appropriate time and place, and leave behind local trainers or other resources. Giving local organizations the resources and support to find their own training solutions will make a big difference. As one parent said:

Offering a water safety program to remote children, no matter how long or short is beneficial. Most of these children have no access to these programs. A little knowledge is better than no knowledge.

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