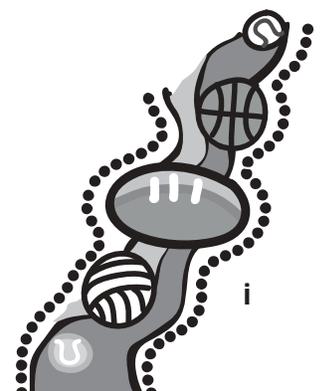


# Investigating indicators for measuring the health and social

## impact of sport and recreation programs in Indigenous communities

Mary Beneforti and Joan Cunningham



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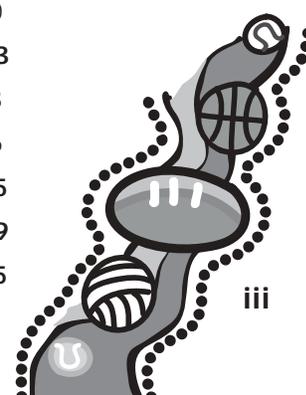
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## FOREWORD

Having lived and travelled in the Northern Territory all of my life I have seen the positive difference that sport and recreation can make to people's lives. As such, I have been a long-time advocate of sport and recreation programs, particularly in remote communities.

This report highlights the potential benefits from participation in physical activity and the importance of viable and sustainable programs to support involvement in sport and recreation.

With more than 35 per cent of the Indigenous population of the NT under the age of 15 years, sport in particular offers an avenue for engaging young indigenous people in community activities.

As the Northern Territory's Sport and Recreation Minister, I am keen to develop partnerships with bodies like the Australian Sports Commission and the Aboriginal and Torres Strait Islander Commission. We should work together to deliver more structured sport and recreation programs to isolated communities and encourage community ownership of the programs and processes. Following successful initiatives in the regional delivery of primary health care and housing, I am particularly interested in ways this might be delivered at regional as well as community levels.

Concomitant with program implementation and resourcing is the need to develop measures to assess effectiveness and the impact on various community health and social outcomes. This report identifies a range of variables that can be used to assess potential benefits from delivery of sport and recreation programs, such as reduced levels of criminal behaviour, truancy, domestic violence, substance misuse and self-harm. Although further development of these indicators and other outcome measures are required, communities and funding agencies need to ensure that evaluating effectiveness and monitoring community impact are an integral aspect of the program planning and delivery process.

Much work is still to be done but this report gives encouragement to those who seek to improve our community's health profile by increasing participation in physical activity.

I encourage all Australians to work together to find the best methods for delivering improved health and social conditions for our people.

John Ah Kit MLA  
Minister for Sport and Recreation

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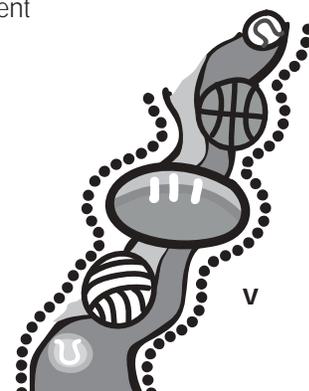
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# ACRONYMS

AFLNT	Australian Football League of the Northern Territory
ASC	Australian Sports Commission
ATSIC	Aboriginal and Torres Strait Islander Commission
CDEP	Community Development Employment Program
CRCATH	Cooperative Research Centre for Aboriginal and Tropical Health
ISP	Indigenous Sports Program
MSHR	Menzies School of Health Research
SHAPES	Sport Health and Physical Education School

# DEFINITIONS

## Indigenous

In this report, the word 'Indigenous' is used to refer to Aboriginal and Torres Strait Islander people. In some cases, 'Aboriginal' is used instead of 'Indigenous'. This is because a title or a particular piece of work being referred to uses this term or refers specifically to Aboriginal people.

## Outcomes/impact

These terms are used interchangeably in this report and can be defined as follows: 'Outcomes reflect the net effect of the program on the target population. They show the impact the program has on the original problems or identified need, who receives assistance, and the impact of the program on people's well-being' (Department of Premier & Cabinet Victoria 1988, p.16).

## Sport and recreation programs

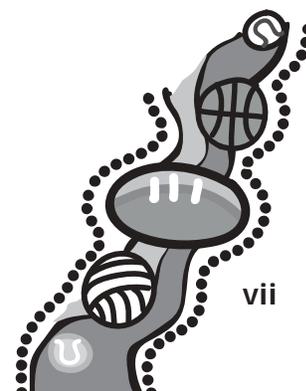
In this report, sport and recreation programs refer to all organised physical and recreational activities. In an earlier report (Cairnduff 2001), the term 'sport and recreation' was restricted to all organised physical activities but for this report, the definition has been extended to include organised activities that do not have or that have only a small physical component. The definition includes activities of both a competitive and non-competitive nature and can include activities such as community sporting competitions, community carnivals, recreational swimming, after-school activities, and discos. This is because it is often difficult to separate physical activity outcomes from recreational outcomes. The sport and recreation officer in a community is responsible for both physical and non-physical activities. Health and social outcomes may be just as likely to be achieved through a sporting competition as through having the sport and recreation hall open at night for videos and playing pool. Health and social outcomes can also be achieved through 'non-playing' participation such as volunteering.

## Community sport and recreation officers

Community sport and recreation officers are based in Indigenous communities. Their positions are funded by State/Territory governments, community councils and other agencies.

## Indigenous Sports Program (ISP) officers

ISP officers are funded by the Australian Sports Commission through the Indigenous Sports Program. There is one ISP officer for every Aboriginal and Torres Strait Islander Commission (ATSIC) region. ISP officers liaise with and assist community sport and recreation officers.



# EXECUTIVE SUMMARY

This report presents the findings of a project to identify potential indicators of health and social outcomes from sport and recreation programs in discrete Indigenous communities. An earlier report identified this as a research priority (Cairnduff 2001).

As a result of the project, a number of indicators are proposed for immediate testing and refinement, and others are recommended for future development. These indicators are presented in the table on page xi.

The indicators are intended for use for the routine monitoring of sport and recreation programs in discrete Indigenous communities.

## Methodology

A project management group was established to oversee the project. A reference group was also convened to provide expertise and guidance.

The project consisted of three stages:

- A review of national and international literature was conducted to identify specific indicators that could be relevant to Indigenous sport and recreation programs. More general information on processes used to develop appropriate indicators was also sought. In addition, sport and recreation providers and researchers were contacted for information about any indicators currently used to evaluate programs.
- Discussions were held with key members of three discrete Indigenous communities in the Northern Territory that are implementing sport and recreation programs. The discussions helped identify the expectations that community residents have of sport and recreation programs and their beliefs about what makes programs succeed. Analysis of the information obtained during the visits was used to help select appropriate indicators.
- Consultation with the project management and reference groups as well as other interested parties was undertaken to help determine the potential usefulness and appropriateness of the identified indicators.

## Findings

### *The literature review*

It is evident from the literature review that indicator development on outcomes from sport and recreation programs (for the general population and even more so for Indigenous populations) is in its infancy. Research evidence on the links between sport and recreation programs and various health and social outcomes is also limited. To date, most research has focussed on exploring the links between physical activity and various health outcomes. However, this work has essentially been confined to the realm of targeted research and has not extended to routine monitoring and evaluation of service delivery. Where program evaluation has been attempted, the results have often been inconclusive. Anecdotal and qualitative evidence suggests that sport and recreation can directly or indirectly influence a number of areas of social concern in Indigenous communities such as crime, school attendance, substance abuse, self-harm, violence and social cohesion. More work is needed to provide stronger evidence of these relationships.

The lack of a strong evidence base does not mean that sport and recreation programs cannot or do not directly or indirectly influence certain health and social outcomes. It does mean that it may be premature to rely on health and social outcome indicators as a measure of the success of sport and recreation programs in Indigenous communities. A recurrent theme in the literature on program evaluation was the importance of recording meaningful information on why or why not programs achieve certain results. This suggests it would be useful, as a precursor to or concurrent with the measurement of outcomes, to monitor the processes that underpin sport and recreation programs in Indigenous communities.

### *The community visits*

When community members were asked about the outcomes that they were looking for from sport and recreation programs, youth issues were reported as a priority in all three communities visited. The importance of keeping young people busy and consequently out of trouble was a common theme. Sport and recreation activities were seen as one way of relieving youth boredom, although it was stressed that other factors also affect youth, such as poverty, hunger, overcrowded housing, peer pressure, family issues, and substance use. Sport and recreation activities were also seen as a source of fun and enjoyment and this appeared to take precedence over aspects such as skill acquisition.

Community members said that programs that form part of a 'whole-of-community' approach, and that are well-resourced, of high quality and accessible, are the most likely to succeed.

Many residents emphasised that sport and recreation programs are needed and wanted and that they would like to see sport and recreation play a greater role in community life. The sport and recreation officer was highly valued, but the job was seen as a stressful one, with many competing demands. Sport and recreation programs were also said to be expensive to provide and sustain with councils having to seek assistance through a number of grants as well as conducting their own fund-raising.

### *The indicators*

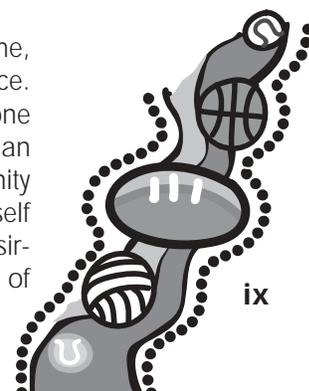
Findings from both the literature review and the community visits suggested that three types of indicators would together provide the most informative overview of program achievements. These are:

- Program viability and sustainability indicators
- Participation indicators
- Outcome indicators

Program viability and sustainability indicators measure aspects of program functioning including: turnover of sport and recreation officers; funding levels and stability; community consultation and support; involvement, employment and training of local people; succession planning; adequacy of facilities and equipment; and access to these facilities and equipment at critical times. These indicators enhance understanding of the processes which can lead to positive outcomes (and therefore how they could be repeated).

Participation indicators provide a summary measure of community participation in sport and recreation programs and physical activity, and where relevant, the participation of target groups (e.g. women, adults, juvenile offenders, petrol sniffers).

Outcome indicators provide insight into changes in health and social areas including crime, school attendance, employment, health status, substance abuse, self-harm and violence. These indicators are divided into two groups, as shown in the table on p. xi. Group one indicators are those where there is reasonable evidence in the literature and in practice of an association between the sport and recreation program and the outcome, where community members have stressed the importance of this outcome, and where the outcome lends itself to practical and culturally relevant measurement. The indicators in group two appear desirable to measure but their robustness is currently limited by the lack of strong evidence of



an association between the sport and recreation program and the outcome; by community doubt as to the relevance of such indicators to their communities; and by issues of practical and culturally relevant measurement. These indicators are recommended for further research and development.

#### *Important contextual considerations*

Developing a set of indicators demands consideration of the context in which Indigenous community sport and recreation programs operate. Discussions with stakeholders and community members revealed that high turnover of community sport and recreation officers and lack of stability of programs is a common situation that has existed for many years and that appears to be accepted as a 'fact of life'. Although stakeholders frequently mentioned the need for sport and recreation programs to function as part of a 'whole-of-community' approach to be successful, there seemed to be little integration of the sport and recreation program with other aspects of community life. Sport and recreation officers reported that they sometimes felt isolated as they tried to provide for the needs of many, with the support of few. This reportedly could lead to burn-out, sometimes eventuating in the sport and recreation officer cutting short his/her stay in the community. Although it may be possible to achieve health and social outcomes from sport and recreation programs in this unstable environment, it is clearly a challenging task.

The long-term sustainability of sport and recreation programs in Indigenous communities would ultimately seem to rest on the ability of communities to run programs without extensive support from outside - although a safety net of financial and human resources would be required to assist communities to maintain and build upon their success. Many stakeholders concurred on the importance of building the capacity of communities to the extent that local residents could deliver and manage the sport and recreation program themselves. This would enable non-resident sport and recreation officers to then move on to more needy communities. Working towards such an objective would necessarily broaden the role of the sport and recreation officer to include more community consultation, relationship building and skills transfer. As sport and recreation officers consistently reported the need for more assistance, government departments, community councils and other managing bodies would need to recognise and embrace such an approach by adopting systems and structures which would support the sport and recreation officer to work in this manner.

#### *Future directions*

The proposed indicators are still in a formative stage. Each of the indicators needs to be tested before being recommended for routine use. The function of the indicators as an inter-related set also needs to be assessed. Preliminary work would involve:

- seeking stakeholder agreement on the final set of indicators to test
- refining the indicators to establish measurement methods and benchmarks
- finding out more about data availability and data quality
- and talking with communities, stakeholders and researchers to identify who would be involved in a testing program.

Priority should be given to the program viability and sustainability indicators, particularly those relating to turnover of officers and the length of time the officer has been in the position. Such information is not difficult to collect and will provide a better picture of turnover than that which currently exists.

Further research needs to be conducted into the relationships between sport and recreation programs and health and social outcomes, so that a stronger evidence base can be developed. This will assist in determining the validity of those indicators which have been recommended for future development so that they may ultimately be used for the routine monitoring and evaluation of sport and recreation programs in Indigenous communities.

*Proposed indicators by type and priority category*<sup>1,2</sup>

**Program viability and sustainability indicators**

---

Prerequisite	1. Turnover of sport and recreation officers in the community
	2. Length of time the current sport and recreation officer has been working in the position in the community
Critical	3. Scheduling of activities at appropriate times
	4. Assistance given by local community residents
	5. Funding for the sport and recreation program
High	6. Qualifications and/or past experience of the sport and recreation officer
	7. Satisfaction that the community council or other community leadership group expresses with the sport and recreation program provided
	8. Confidence that the sport and recreation officer expresses in the current capacity of local community residents/assistants to organise and run activities themselves
	9. Confidence that the sport and recreation officer expresses in current working relationships with key groups in the community
Medium	10. Succession planning for sport and recreation
	11. The sport and recreation officer's assessment of the adequacy of current facilities and equipment

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**Participation indicators**

High	12. Participation rate for community sport and recreation programs
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**Outcome indicators - Group 1**<sup>3</sup>

High	13. Episodes of 'minor' (youth) crime
Community-specific	14. School attendance

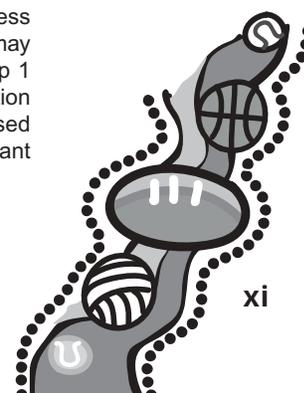
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**Outcome Indicators - Group 2**<sup>4</sup>

Community-specific	A. Employment of local community members in sport and recreation or related work
	B. Health clinic attendances
	C. Episodes of family violence
	D. Arrests and apprehensions for alcohol or other drug-related offences
	E. Night patrol client interactions
	F. Number of (petrol) sniffers
	G. Episodes of self-harm

---

1. A standard reporting period, e.g. 12 months, is implied. 2. The priority categories 'critical', 'high' and 'medium' have been assigned according to the relative importance of each indicator to the overall success of the sport and recreation program, based on the project's findings. 'Community-specific' indicators may not have relevance in all settings. Within each priority category, indicators have equal status. 3. Group 1 indicators are those where there is reasonable evidence in the literature and in practice of an association between the sport and recreation program and the outcome, where community members have stressed the importance of this outcome, and where the outcome lends itself to practical and culturally relevant measurement. 4. Group 2 indicators are potential indicators that require further development.





# 1. INTRODUCTION

## Background

Sport is recognised as a potentially powerful force in Indigenous community life. The Royal Commission into Aboriginal Deaths in Custody (RCIADIC) described sport and recreation as an important antidote to boredom that was a key factor in the prevention of Aboriginal juvenile crime (Johnston 1991). Tatz (1995) suggested that sport can provide a 'centrality' to Indigenous communities, an essential ingredient for their political and cultural survival.

Sport and recreation has also been noted in the literature as having the potential to reduce levels of substance use and self-harm, and to improve social cohesion in Indigenous communities (Cairnduff 2001; Cameron & MacDougall 2001; Walker & Oxenham 2001).

Physical activity is recognised as important to maintaining good physical and mental health and preventing the onset of chronic diseases (Bauman et al. 2002). The Australian Indigenous population suffers high rates of illness and mortality due to chronic diseases such as heart disease and diabetes (ABS & AIHW 2001). It has been estimated that physical inactivity causes seven per cent of the total disease burden in Australia (Mathers et al. 2000).

Little is known about the current levels of participation in physical activity by Indigenous Australians. (although participation levels at the national and state levels will become available through the Australian Bureau of Statistics' Indigenous Social Survey to be conducted in 2002). Little is known also about the impact of sport and recreation on Indigenous people and on Indigenous communities. A recent report furthered knowledge in this area. At the request of the Australian Sports Commission (ASC), the Cooperative Research Centre for Aboriginal and Tropical Health (CRCATH) conducted a project in the Northern Territory (NT) to identify potential areas of research in the Indigenous sport and recreation sector (Cairnduff 2001).

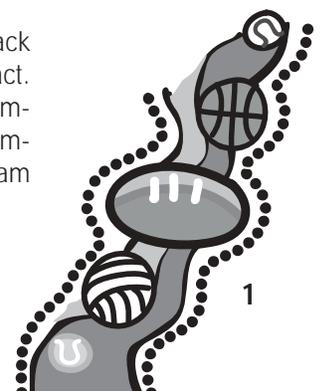
Cairnduff (2001) explored the reported links between sport and recreation and health; identified the main stakeholders in sport and recreation delivery in the Northern Territory; elicited information on programs in Indigenous communities such as their objectives and expected outcomes; and developed a proposal for further research in the area.

The project found that the greatest research priority was to provide more evidence of the impact of sport and recreation programs. A wide range of expected outcomes of programs was identified by agencies in the Northern Territory, including:

- increased Indigenous participation in sport and recreation activities
- improved educational outcomes
- improved physical and emotional health
- provision of diversionary activities for young people
- and provision of employment opportunities for Indigenous people.

Evidence of achieving such outcomes, however, is to date largely anecdotal. There has also been little analysis of the long-term impacts of sport and recreation programs.

It was found that central to the need for evidence of the outcomes of programs was the lack of appropriate indicators to monitor programs and to measure their social and health impact. The project also highlighted the very limited information on the expectations of remote communities of sport and recreation programs. It was recommended that discussions with communities be conducted to elicit community views on what constitutes a 'successful' program in order to determine indicators that reflect community expectations.



These findings led to the current project, which is a joint project of the ASC and the CRCATH. The project's aim was to identify appropriate indicators to measure the social and health impact of Indigenous sport and recreation activities.

## **Project design**

A group consisting of the project managers from the ASC and the CRCATH and experts in the sport and recreation field was convened to oversee the project. A reference group of relevant stakeholders and interested parties was also formed and provided advice on Indigenous sport and recreation and related programs in the Northern Territory and elsewhere. (See the Acknowledgements for a list of management and reference group members). In addition, many people from around Australia and overseas, from the sport, physical activity, evaluation, and statistical arenas provided their thoughts on the project.

The first stage of the project involved a review of national and international literature in order to identify information on indicators relevant to Indigenous sport and recreation programs (see chapter 2). Sport and recreation providers and researchers were also contacted for information about any indicators currently used to evaluate program (see Chapter 3).

The second stage involved a series of discussions with three discrete Indigenous communities in the Northern Territory that are implementing sport and recreation programs. The discussions helped identify the expectations that community residents have of sport and recreation programs and their beliefs in what makes programs succeed (see Chapter 4). Analysis of the information obtained during the visits was used to help identify appropriate indicators.

The third stage involved consultation with the project management and reference groups as well as other interested parties to help determine the potential usefulness and appropriateness of identified indicators. The indicators are presented in Chapter 5. This report was also circulated back to the communities who participated to seek their feedback.

## **Project scope**

Health and social outcomes were explored in the context of discrete Indigenous communities. Such communities are mostly located in remote parts of Australia. Time and funding for the project allowed for visits to three Indigenous communities in the Northern Territory.

Early plans for the project also included the possibility of discussions with residents in communities in other states and territories. This did not occur due to the short timeframe for the project and a longer time than expected being required to set up and conduct the visits in the Northern Territory. However, the indicators were circulated to a number of stakeholders in other states and feedback has been incorporated into this final report.

## **Project Limitations**

Community visits were limited to three three-day visits within the Northern Territory. This cannot be considered representative of all Indigenous communities in the Northern Territory, although considerable overlap was found in the themes raised in the three communities. The time spent in each community was also brief and undoubtedly, some people who would have liked to have input were missed.

Visits were not conducted in other states therefore it is not known how well the findings in the Northern Territory represent the situation in other parts of Australia. However, the literature suggests that many remote Indigenous communities in other states experience similar issues to those of the Northern Territory.

## 2. THE LITERATURE REVIEW

The aim of the literature review was to examine the national and international literature for potential indicators that might be appropriate to measure the social and health impact of sport and recreation programs for Indigenous people.

There appears to have been little published work to date in the area of indicators for the evaluation of sport and recreation programs.

To date, most research has focussed on exploring the links between physical activity and various health outcomes. However, this work has essentially been confined to the realm of targeted research such as interventions and epidemiological studies and has not extended to routine monitoring and evaluation of service delivery. Little work was found in the area of indicator development, for either the general or Indigenous populations, to measure actual health outcomes (e.g. physical fitness) and broader social outcomes (e.g. crime prevention) from sport and recreation programs. The indicators identified in the literature measure inputs and outputs of programs rather than outcomes.

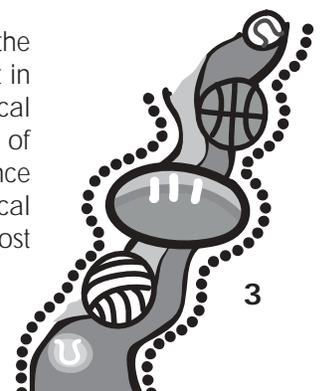
More recently there has been an increased demand for evaluation of sport and recreation programs and policies, and an increased focus on the need to understand more about the health and social impacts of these programs. Sport England (2001) noted 'the benefits sport brings to individuals and communities may be obvious to many. In the competition for scarce resources however, sport must face up to the challenge of justifying in more tangible ways, why public money should be invested in it' (Sport England 2001, p.4). Coalter (2001) wrote 'there is an urgent need for a more systematic approach to outcome evaluation to inform and improve practice' (p. viii).

It appears that most sport and recreation service providers believe evaluation of health and social outcomes is too complex. Reasons given for not measuring such outcomes include:

- the short-term nature of many projects
- the use of ill-defined concepts
- a lack of agreement among practitioners on standard measures for evaluation
- a lack of resources for evaluation
- and the difficulty of disentangling the specific effects of a program from other events and policy repercussions that may take place concurrently in a community (Coalter 2001; Coalter et al. 2000).

Currently, it appears that the theoretical basis for the positive effects of physical activity is used to justify programs and justify the lack of a need to evaluate. Anecdotal information also often lends support to this hypothesis.

However, simply participating in sport and recreation may not be enough to achieve the physical and other benefits of physical activity. The nature of the participation is important in determining whether conditions are sufficient to bring about the desired outcomes. Physical activity can take many forms and may affect different individuals differently. The salience of the activity relative to other factors in a person's life, such as peer associations, may influence the outcomes achieved through physical activity. Whether a person participates in physical activity at all may depend on certain characteristics of the individual, so that the people most in need of physical activity may be the least likely to take part (Coalter et al. 2000).



## Indicator development

### Background

The use of indicators to monitor and evaluate programs and policies is not new, particularly in the economic field. Health indicators are also commonly in use. Much is happening in the USA in the area of community indicators, designed to form a report card on a community's progress (Miringoff & Miringoff 1999). Entire websites have been set up to assist communities in the planning, delivery, and evaluation of programs (e.g. refer the United Way website: [www.national.unitedway.org](http://www.national.unitedway.org) and the Healthy Communities website: [www.healthycommunities.org](http://www.healthycommunities.org)). A number of social and community indicator projects also exist or are under development in Australia e.g. the National Citizenship Indicators, Tasmania Together project and the Victorian Government Social Benchmarks and Indicators. See Salvaris (2000) for a review of national and international indicator projects.

### Definitions

Definitions of indicators range from the dry and specific - 'a statistic or unit of information ...' (NHIMG 2000) - to the poetic - 'a metaphor ... a glimpse of a broader social context' (Miringoff 1999, p.16).

Indicators can be either direct or indirect measures of anticipated outcomes and are often imperfect measures of abstract constructs (Ministry of Health Manatu Hauora (NZ) 2001), a 'crude, fragmentary impression of a complex reality' (O'Shaughnessy 2001, p.52). Therefore, indicators should be just one element of a broader evaluation strategy. As some authors have cautioned, an 'over-emphasis on the use of indicators or measures can result in a partial rather than complete description of the impact of a program' (Owen & Rogers 1999, p.260).

### Terminology

The literature frequently employs terminology related to input, throughput or process, output and outcome indicators. These are described in more detail below:

#### *Outcome indicators*

Outcome indicators attempt to measure the effect or impact of programs or interventions. O'Shaughnessy (2001) found little evidence pertaining to outcome indicators in performance indicator systems or specific evaluation studies. Reasons for this included uncertain causal relationships between intervention and change; costs of establishing and maintaining outcome-monitoring systems; lack of know-how; and the fact that outcome indicators are harder to develop than output indicators (O'Shaughnessy 2001).

#### *Input, throughput and output indicators*

Input indicators can be used to reflect inputs such as financial and human resources. Throughput (activity or process) indicators describe the use made of these inputs, such as provision of training courses and number of participants registered in programs. Outputs refer to completed activities such as the number of people trained or the number of people completing a program (O'Shaughnessy 2001). In practice, the terminology of input, throughput and output indicators may not always be clear-cut as some inputs or activities may be outputs of other activities e.g. the development of a plan for a sport and recreation program may be both the output of one project and a necessary input to a new program.

### Frameworks

A conceptual framework can assist in interpretation of the indicators. For example, the project working group that refined a set of national performance indicators of Aboriginal and Torres Strait Islander health developed a conceptual framework to clarify the relevance of each indicator (Mackerras 2000). This was based on feedback from stakeholders that the existing indicators appeared to lack a conceptual basis for their selection.

The use of a framework also helped identify 'the level of development of existing indicators, draw attention to areas where indicators are lacking, highlight gaps and deficiencies in the organisation and availability of relevant information, and show where improvements to information systems are needed' (CRCATH 2000, p.21).

### Cultural values

Where indicators are for use in particular cultural contexts, it has been recommended that the indicators incorporate the cultural values of the people (Gadacz 1991). For this project, this meant finding out what is relevant to Australia's Indigenous people in the sport and recreation field, and how to collect data in culturally appropriate ways that are acceptable to Indigenous people. Walker et al. (2002) suggest that 'it is necessary for evaluations of programs and services in Indigenous contexts to assess whether the outcome contributes to Aboriginal self-determination and whether the process is participatory and empowering for the individuals and communities involved' (p.26).

### Selection

In identifying and choosing appropriate indicators, key questions include who are the indicators for?, how and where will they be used? and to whom will they be reported? (Sport England 2001). Indicators need to be closely linked to the key outputs and outcomes of the programs or policies they are designed to measure.

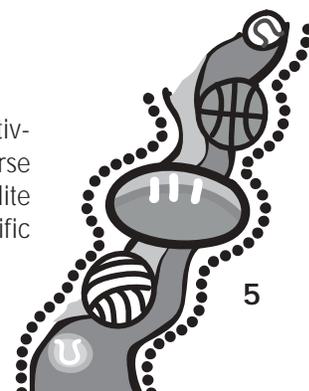
Through the literature review, a set of criteria to assist with selection of the final indicator set was identified. Broad consensus was found for the following criteria:

- Valid - the indicator must reflect the event or activity it purports to reflect
- Reliable - under identical conditions, the indicator should give the same answers
- Understandable - the indicator should preferably deal with a single clear idea and should be easily understood by users and stakeholders
- Relevant - the indicator should address major issues, measure something that people care about, be culturally relevant, and should be linked to desired outcomes
- Actionable - there should be actions that have been demonstrated to be able to alter the course of the indicator
- Measurable - there need to be data available and/or it must be feasible to collect the desired data; for Indigenous populations, data collection should be culturally appropriate and acceptable to Indigenous people
- Acceptable - there needs to be agreement among stakeholders as to the inclusion of the indicator (Chrvala & Bulger 1999; CRCATH 2000; Ministry of Health 2001; Salvaris et al. 2000; Walker et al. 2002).

Factors that may assist in selecting a final set of indicators include the number of indicators (less is better) and comprehensiveness (the set of indicators should attempt to 'tell the whole story') (Ministry of Health Manatu Hauora NZ 2001).

## Indicator development for physical activity/sport and recreation

The following examples of indicator development for the sport and recreation/physical activity fields were uncovered during the literature review. The examples highlight the diverse nature of sport and recreation programs from broad-based community programs to elite athlete development and the different forms that evaluation might take from program-specific performance indicators through to population surveys.



Since 1991, the Centre for Environmental and Recreation Management (CERM) in South Australia has conducted a performance indicator project to collect and manage reliable and valid data for sports and recreation centres. The indicators fall into the areas of efficiency, effectiveness and appropriateness (Crilley et al. 1998). In the area of efficiency, the two key indicators are 'visits per square metre' and 'expense recovery'. In the area of effectiveness, CERM has developed a customer service quality (CSQ) questionnaire to measure customers' perceptions of service quality. The questionnaire includes a number of core service quality attributes for sports and leisure centres such as 'facilities are always clean', 'offers a broad range of activities', 'staff experienced and knowledgeable'. Customers are also queried on any problems they have encountered. To measure appropriateness, which is described as the 'customer-community degree of fit', customer profiles obtained from the CSQ questionnaire are compared with equivalent ABS data on the local community (Crilley et al 1998).

While the major focus of CERM's work has been on evaluation at the macro level such as total facility evaluation, more recently the centre has also applied its work to individual program evaluation (Crilley et al. 1998; CERM website: <http://CERMPI.unisa.edu.au>).

Sport England (2001) has developed an evaluation framework for sport to measure and monitor performance in relation to achieving key inputs, outputs and outcomes, for the development of sport. Two groups of indicators are provided - a set of core indicators and a basket of other indicators from which appropriate indicators can be selected depending on local priorities. The evaluation framework is organised into three areas: resource commitment, effectiveness and efficiency, and impact.

*Resource commitment* covers service inputs such as capital and revenue expenditure and staff resources.

*Effectiveness and efficiency* incorporates process outputs such as satisfaction with staff and speed of response, and service outputs such as frequency of attendance and numbers of trained people.

*Impact* is divided into three types of outcomes:

- process outcomes such as strategic and development plans, range and nature of partnerships developed, and satisfaction of users and stakeholders
- sporting outcomes such as levels of voluntary involvement, achievement of sporting success and attitudinal change
- and social, economic and environmental outcomes such as health and well-being, economic development and regeneration, environment and sustainability, community safety, educational attainment and lifelong learning, equity and inclusiveness and quality of life. Indicators for this last area are still under development.

A combination of qualitative and quantitative data collection methods will be used to measure performance including neighbourhood profiles, community and school surveys, facility and site-based surveys, case studies and management information. It is anticipated that much of the survey and case study work will be done by consultants.

According to Rowe (2002), principles guiding Sport England's performance measurement work include using a basket of indicators to provide balance; combining qualitative and quantitative evaluation methods; taking into account interdependence among performance indicators; putting performance into context; ensuring performance is constantly referenced against objectives; looking for practical responses; and learning from others.

The Canadian Fitness and Lifestyle Research Institute (CFLRI) monitors the physical activity behaviours of Canadians through its Physical Activity Monitor. This assists the Canadian government in tracking progression towards the goal of reducing the physical inactivity levels of Canadians by 10% by the year 2003. The 1999 survey monitored performance in the areas of availability of and access to sport and recreation activities, and the quality of sport and recreation delivery and facilities in Canada (Craig et al. 2001).

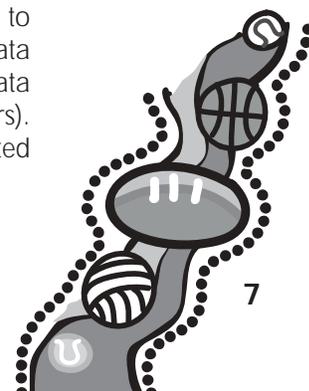
Badenoch (1998) described the desirable characteristics of effective wilderness adventure programs for youth at risk. He proposed a best practice performance indicators profile of an 'ideal' wilderness adventure program, based on certain highly desirable program characteristics. Badenoch suggested that this profile could be used to gauge the likely effectiveness and success of a specific program. The profile is categorised into five interrelated domains of program design and delivery; staff; funding and resources; management; and evaluation (Badenoch 1998).

In summary, the existing work on indicator development in the sport and recreation arena is not extensive. The evaluation framework developed by Sport England suggests that a balanced and multi-faceted approach is needed, with a focus not just on outcomes, but also on the inputs and outputs that produce those outcomes.

## Identifying potential indicators

As the literature did not provide clear direction, three questions were used to elicit potential indicators to measure the impact of Indigenous sport and recreation activities:

- 1) Which of the outcomes of sport and recreation have the strongest research base? There needs to be reasonable evidence that an established association (but not necessarily a direct or causal relationship) exists between the activity and the desired outcome. Much of the work in this area is to do specifically with exercise and physical activity rather than sport and recreation. Some areas of research in the sport and recreation field are still relatively under-developed. Consequently there is limited evidence for some relationships between sport and recreation and potential outcomes. The lack of evidence does not necessarily mean, however, that there is no relationship.
- 2) What appear to be the components of successful sport and recreation/physical activity programs? The basis for including this question is that something can be learnt from programs that are working. The components of successful existing programs could provide guidance as to the essential components for new programs. Indicators could then be identified to measure whether these components have been put in place. Information about 'success' has been obtained through examples in the literature of qualitative evaluations and reviews of programs. Anecdotal evidence often forms the basis of such work.
- 3) Which of the above outcomes and program components are likely to be most relevant to Indigenous people and measurable in an Indigenous context? The basis for this question is that it cannot be assumed that, just because an outcome is desirable from a health or social perspective for the general population, it will be considered by Indigenous people to be relevant to them. On the other hand, some outcomes may not seem relevant to Indigenous people but may be highly relevant to government or other funding agencies. Outcomes do need to be measurable in the context of Indigenous communities, however. Certain data collection and measurement techniques may not be culturally appropriate. Data availability and quality may be influenced by the setting (e.g. small numbers). The literature can only provide a partial answer and needs to be complemented by speaking to Indigenous people themselves.



## The research evidence linking physical activity with health and social outcomes

Although each of the outcome areas is considered separately below, it is likely that there are complex interactions between them. For example, physical health and mental health are interrelated. Mental health, self-esteem and psychological wellbeing are also closely related.

The literature review revealed very few instances of work in these areas for Indigenous populations in Australia or elsewhere. The conclusions reached through the research are assumed to apply to all people regardless of background, but this may be a simplistic assumption. Because physical activity may influence outcomes through a number of indirect mechanisms, it is probable that people's values, including the values of cultural groups, will impact on the final outcomes.

Economic indicators such as predictions of money saved by preventing chronic diseases have not been explored in this literature review. The area was considered to be highly complex and not able to be covered adequately within the time frame.

### Physical health

There is wide consensus based on extensive research that adequate amounts of moderate to vigorous-intensity physical activity has certain physiological benefits such as increased cardiovascular fitness, improved blood pressure, improved insulin sensitivity, weight control, stronger bones, long-term prevention of chronic disease and reduced mortality (refer US Department of Health and Human Services 1996 for a summary of research findings in this area). It is unclear in many cases what 'doses' of physical activity are necessary and how this may vary with the individual (Craig et al. 1994; Bouchard & Rankinen 2001). However, Active Australia currently recommends at least 30 minutes of moderate-intensity physical activity on most days, increasing the amount of movement in everyday activities, and regular, vigorous exercise (<http://www.activeaustralia.org/facts/>).

It has been suggested that the greatest population health benefits would come from getting the most sedentary members of the population to engage in some physical activity rather than trying to increase the physical activity levels of those who are already active (Blair & Connelly 1996).

Indirect physical health benefits may also be attributable to physical activity. For example, the introduction of swimming pools into remote Indigenous communities (together with safety precautions such as adequate supervision and proper water maintenance) appears to have reduced ear and skin infections in children (Lehmann et al. 2002; Lyford 2001).

### Mental health/psychological wellbeing

There is considerable research to support the claim that physical activity reduces certain types of anxiety and depression and increases self-esteem and self-efficacy (Craig et al. 1994; US Department of Health and Human Services 1996; Collingwood et al. 2000; Fox 1999; Mason & Wilson 1988).

Depression is a risk factor for self-harm and suicide. Tatz (1999), however, cautions that suicides of Aboriginal people may not always be explainable by a 'medical-psychiatric approach'. According to Tatz (1999, p.123), suicide is 'motivated or occasioned by many things other than the personal family histories of suicide, aggressive behaviour, substance abuse, "depression", and other mental illness'. There are suggestions from a study in progress in Western Australia that impulsivity is more strongly correlated with suicide risk than depression in Aboriginal youth, and that cultural identity is a protective factor for suicide risk (Tracy Westerman, Indigenous Psychological Services, personal communication).

In Yarrabah, an Indigenous community near Cairns, residents are successfully tackling what was an alarming rate of suicide in the early 1990s (Neill 2002). Strategies include training local people as suicide counsellors and intervention workers, reducing stigma about using mental health services, closing the local pub and restricting alcohol sales to take-aways, and setting up a Police Citizens' Youth Club. The club is open from 3 to 10 most afternoons, and over 200 young people visit each day. Two Indigenous community police officers and six other Indigenous employees manage the day-to-day coordination. Activities consist of football, basketball, boxing, film nights, alcohol-free discos, after-school care, vacation camps and driving lessons. Meals are also provided. This is a good example of a holistic approach, of which sport and recreation is a part, to tackling community problems. Since the centre opened in 1996, property crime has decreased by 16 per cent, offences against people have decreased by 72 per cent and there were no youth suicides between 1996 and 1999 (Neill 2002).

There is reasonable consensus that physical activity contributes to improved psychological wellbeing. Psychological wellbeing is characterised by positive emotions such as contentment, happiness and satisfaction. Impaired wellbeing is associated with psychological distress such as anger, depression and anxiety (Craig et al. 1994). Craig et al (1994) found that, despite different measures being used to assess psychological wellbeing, the majority of studies in this area supported a positive association between physical activity and psychological wellbeing. Similarly, Fox (1999) found that survey and experimental research do 'provide support for the well-publicised statement that "exercise makes you feel good" ' (Fox 1999, p.413).

The mechanisms through which physical activity is thought to influence mood include biochemical mechanisms (e.g. the release of endorphins), physiological mechanisms (e.g. increased fitness), and psychosocial mechanisms (e.g. increased self-esteem as a result of improved perceptions of body image, improved sense of mastery and control, and the social interaction and social support that accompanies participating in group physical activities) (Fox 1999).

### Self-esteem and self-efficacy

Self-esteem is closely associated with emotional stability, and low self-esteem is a feature of many mental illnesses as well as being a risk factor for poor health behaviours (Fox 1999). Self-efficacy concerns 'someone's beliefs in his/her capabilities to successfully execute necessary courses of action to satisfy situational demands' (McAuley & Blissmer 2000, p.85).

There is good evidence for an established association between physical activity and improved self-esteem (Craig et al 1994). Wilderness and adventure activities for youth and juvenile offenders have been found to bring about positive changes in self-esteem and self-efficacy (Mason & Wilson 1988; Hattie et al. 1997). Collingwood et al. (2000) found that all participants in a physical fitness drug prevention program showed significant increases in self-concept. Fox (1999), in reviewing the available literature, found that exercise can improve physical self-perceptions and self-esteem.

The relationship between physical activity and self-efficacy has been found to be reciprocal with those already endowed with greater self-efficacy more likely to participate in physical activity and participation in physical activity leading to increased self-efficacy (Craig et al. 1994). The relationship is complex and 'efficacy does not predict activity patterns at all times; similarly, not all physical activity stimuli have equal effects on self-efficacy' (McAuley & Blissmer 2000, p. 87).

### Crime prevention

There is promising evidence to support the notion that physical activity provided in certain contexts can help prevent crime or prevent offenders from re-offending. It is unclear whether all types of crime can be prevented or whether this is limited to particular types of crime.



The mechanisms by which physical activity is believed to assist in these outcomes are the provision of alternative role models to the negative peer role models that may influence juveniles, the relief of boredom, the development of self-discipline, and improvements in self-esteem and self-efficacy (Schafer 1969 ; Mason & Wilson 1988; Hattie et al. 1997).

Evaluation in the area of crime prevention has proved difficult. Much of the evaluation work has taken place overseas. In Australia, the success of recreational activities as a means of stopping crime has not been adequately assessed (Cameron & MacDougall 2001). Programs often have broad and ambitious objectives, the targeted types of crime are not always clearly specified, and it is often not clear whether the outcomes are attributable to the program (Coalter et al. 2000). In addition, the likely involvement of many intermediary variables in the relationship between physical activity and crime makes measurement of outcomes difficult. Coalter lists a range of other factors involved in predicting whether a person is likely to commit a crime such as 'hyperactivity, high impulsivity, low intelligence, poor parental management, parental neglect, offending parents and siblings, early child bearing, deprived background, absent father and maternal substance use in pregnancy' (Coalter et al 2000, p.3). Although physical activity may play a role in crime prevention and rehabilitation of offenders, it may be difficult to separate out this effect from other influences.

Pawson and Tilley (1997) believe that failure to quantify outcomes is not necessarily the result of programs not working. Rather it is the way in which programs have been evaluated which fails to reveal meaningful results and information about why a program has worked or not and the context in which it has been operating. In other words, absence of proof does not necessarily mean absence of effect.

Whatever the case, the sheer volume of documents on the subject and the wide use of sport and recreation activities as part of a broader diversionary strategy, dating back many decades, suggests strong support for using these programs in such a way, even without definitive evidence of their successes.

### Substance use and abuse

There is positive but not definitive research evidence that physical activity can reduce substance use and it is not clear whether it is successful for all types of users and all types of substances. Risk factors for substance abuse may include boredom, low self-esteem, depression, lack of self-control, poor school performance, poor parental and peer relationships, and a negative lifestyle (poor eating habits, stress and inactivity) (Craig et al. 1994; Reid et al. 1994).

Evaluation of a physical fitness drug prevention program in Illinois, U.S.A. was able to demonstrate significant reductions in the percentage of youth who used cigarettes and alcohol. There were also significant decreases in risk factors such as low self-concept, poor school attendance, anxiety, depression, and number of friends who used alcohol and drugs. The authors concluded that there was a strong relationship between increased fitness and lowered risk factors and usage patterns (Collingwood et al. 2000).

An evaluation of a drug and delinquency prevention program for high-risk adolescents in the U.S.A., involving among other strategies the provision of sport and recreational activities after school, found that targeted youths associated less frequently with delinquent peers, and were pressured less often by peers to behave in antisocial ways. They were significantly less likely to use illicit drugs, sell drugs, or commit violent crimes in the year after the program ended (Harrell et al. 1999).

Few references to Indigenous people exist in the research literature for the area of substance use and physical activity, however Cameron and MacDougall (2000) report that sports carnivals organised by local Indigenous communities have succeeded in producing short-term prohibition of alcohol, cannabis and petrol sniffing. Such outcomes arise indirectly from involvement in sport and recreation and are usually achieved through tying participation to compliance with certain behaviours (e.g. not drinking alcohol). This would indicate the potential for sport and recreation to be a 'vehicle' for bringing about social change.

D'Abbs and MacLean (2000) reviewed petrol sniffing interventions in Aboriginal communities. Overall, their findings supported the view that recreation-based interventions could help to combat petrol sniffing, particularly among individuals who were potential or occasional sniffers rather than chronic sniffers. Aspects of successful recreation-based interventions included staff who were sensitive to community needs; exciting, daring, purposeful and educational activities provided at appropriate times (e.g. after-school, evenings, weekends, school holidays); training of Aboriginal people as youth and sport and recreation workers; and sustainability of programs.

Walker and Oxenham (2001) in an evaluation of the Australian Football League (AFL) Kickstart Program in the Kimberley region of Western Australia found 'substantial anecdotal evidence to suggest that young people participating in the Kickstart program were less likely to engage in substance abuse than those who did not' (Walker & Oxenham 2001, p. 42). This was based on interviews with key community members. Levels of substance use were not measured directly. Kickstart participants talked about stopping substance abuse during the football season, but also about their concerns of being unable to sustain this commitment after the football season finished because of boredom and peer pressure. They mentioned the importance of ongoing and alternative activities so that they could stay 'active and focused all year' (Walker & Oxenham, p. 42).

### Educational outcomes

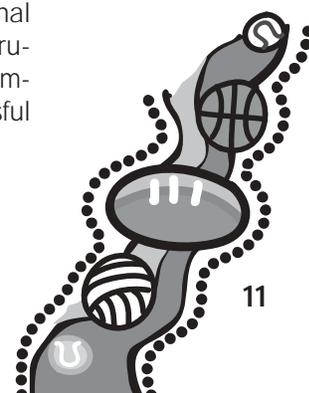
Education has been shown to be highly predictive of improved health (Caldwell 1993). Education is a pathway to employment which is essential to reducing poverty. Poverty is a major factor affecting Indigenous people. Remote communities experience the daily 'debilitating combination [of] low income plus extremely high prices plus inadequate services' (Devitt et al. 2001, p.7). Education also enhances people's life skills and increases their confidence and sense of control over their own lives (Tsey 1997).

Consensus has not been reached on whether physical activity can affect learning and academic progress. Reviews of a number of studies found the evidence so far to be equivocal (Craig et al. 1994; Coalter et al. 2000). This may be partly because of poor study designs. More work needs to be done in this area.

A two-year longitudinal study into the educational effects on African-American and Hispanic youth of athletic participation at school found that sports participation was generally unrelated to grades and test scores (Melnick et al. 1992). Athletic participation did, however, enhance popularity and contributed to greater involvement in extracurricular activities. The authors concluded that high school athletic participation was a 'social' resource rather than an academic resource for many African-American and Hispanic youth.

It seems that physical activity is more likely to be associated with education in the area of improved attendance and retention. For example, in the study mentioned above, the researchers found that athletic participation was significantly related to lower school dropout rates for some minority youth. The salience of sport may attract pupils to educational programs. If attendance and participation in educational activities is improved then it is possible that cognitive development will follow (Coalter et al. 2000).

In another example of how sport and recreation may impact on educational outcomes, the school principal at Warrego, a remote Aboriginal community in the Northern Territory, was able to increase school attendance by engaging students in horse-riding lessons. Educational activities to improve numeracy and literacy were developed around the riding program. Truancy rates dropped considerably (Active Australia 2000). Some other schools in remote communities have adopted 'no school, no pool' policies, a practice which is proving successful in increasing and maintaining school attendance (Lehmann et al. 2002).



## Social cohesion

There is currently little research evidence to support the claim that sport and recreation activities can increase social cohesion. This is partly because few studies have been conducted in this area, and the fact that 'social cohesion' is in itself a difficult concept to define and measure. Anecdotal evidence however suggests that sport and recreation can impact on social cohesion. The key probably lies in incorporating sport and recreation as part of a broader community strategy.

Sports carnivals organised by local Indigenous communities have been described as 'fulcrums' for social and traditional cohesion and a key factor is that the events are organised and managed by Indigenous communities. Crime prevention outcomes from such events are short-term and sustainability of programs is something that needs to be addressed for long-term outcomes (Cameron & MacDougall 2001). The potential for long-term outcomes exists in projects such as the Remote Swimming Pools Project where the swimming pool complex is promoted as the social hub of the community, through a variety of swimming and fitness classes, training courses, and social activities (Lyford 2001).

The potential of physical activity to influence individual states, behaviours and characteristics such as mental health, self-esteem, substance use and offending may mean that effects are likely to flow on to the community as a whole. For example, in the AFL Kickstart evaluation in the Kimberley, community members said that when youth were engaged in healthy lifestyle activities, they reduced their alcohol consumption. This reportedly led to reductions in alcohol consumption among families and a reduction in family violence (Walker & Oxenham 2001). Community members also saw football and related activities as helping to build 'community spirit', an important element of strong communities (Walker & Oxenham 2001).

Involvement in sport and recreation activities may also directly increase the employment potential of participants through the provision of training opportunities such as coaching and umpiring accreditation. In the Remote Swimming Pools Project, sport and recreation traineeships in aquatics are being offered to community members (Lyford 2001). Participants may also become more employable through the indirect effect of increased self-esteem (Coalter 2001). This may lead to flow on effects for communities.

Community cohesion may also be enhanced through residents volunteering their time to assist with activities such as coaching, umpiring, management, administration, and maintenance of equipment and facilities. Volunteering gives non-playing participants in sports and recreation the opportunity to develop skills, self-esteem and a sense of purpose. Long-term sustainability of programs is likely to depend on volunteering (Coalter 2001).

In summary, the mechanisms through which physical activity effects physiological and psychological outcomes are complex. Although there has been considerable progress in identifying the mechanisms, particularly for physical health and physical activity, much remains unknown about the operation of each mechanism, and the relative importance of each. Quantitative evaluation of outcomes from physical activity and recreation programs has often proved problematic. Qualitative and anecdotal information suggest that sport and recreation does have the potential to influence a variety of health and social outcomes.

## Components of successful sport and recreation/physical activity programs

Literature on sport and recreation, health promotion, crime prevention and rehabilitation, and youth development was explored for insights into the components of successful programs. 'Success' is loosely defined here and is usually based on the opinions of service providers and recipients, rather than any rigid quantifiable definition. Considerable overlap between the components of successful programs was found, with the main ones grouped below under five areas:

- Quality
- Resources
- Community
- Opportunities
- and Access.

Some of these variables describe inputs and outputs of programs while others are more to do with processes.

### Quality

Aspects of quality programs include good leadership; adequately qualified and experienced coaches and program leaders; needs-based programming; and ongoing interaction with participants upon the completion of the program. A conducive environment is also important. 'Conducive' means positive, non-threatening environments which are flexible and varied, which are not necessarily competitive and which incorporate non-traditional methods of delivery (Australian Sports Commission (ASC) and the Aboriginal and Torres Strait Islander Commission (ATSIC) undated; Department of Sport and Recreation undated; De Knop & De Martelaer 2001; Badenoch 1998; Coalter 2001; Reid et al. 1994; Walker & Oxenham 2001; Mason & Wilson 1988).

### Resources

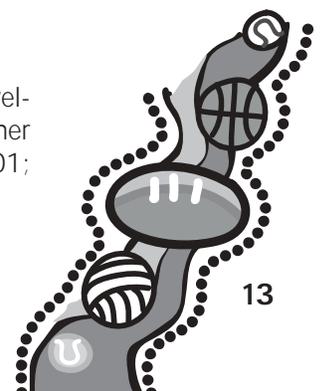
Resources are critically related to the long-term sustainability of programs. Human (both paid and volunteers) and financial resources are needed to run programs, pay staff, purchase facilities and equipment, and for maintenance (National Health and Medical Research Council 1997; Department of Sport and Recreation undated; Dunworth et al. 1999; Badenoch 1998; Reid et al. 1994; Walker & Oxenham 2001).

### Community

Community ingredients that appear to be important to the running of successful programs include community support; community ownership and control; local involvement in planning and delivery; and a holistic approach, with links to and/or partnerships with other programs and agencies (Department of Sport and Recreation undated; ASC and ATSIC undated; Walker & Oxenham 2001; Golds et al. 1997; Bownes & Ingersoll 1997; Cairnduff 2001; Cameron & MacDougall 2001; Coalter 2001; Mason & Wilson 1988; Reid et al. 1994; Dimen 1985; National Health and Medical Research Council 1997).

### Opportunities

Successful programs create opportunities in the areas of sports participation; sport development; training and leadership; employment; and volunteering (Coalter 2001; Winther 1988; ASC and ATSIC undated; Walker & Oxenham 2001; Cameron & MacDougall 2001; National Health and Medical Research Council 1997).



## Access

Ready access to programs can be enhanced through the appropriate use of facilities, through ensuring facilities are open at appropriate times, and by the minimisation of financial, transport, cultural, and information barriers (Coalter 2001; Dimen 1985; Mason & Wilson 1988, Craig et al. 2001; Reid et al. 1994).

## **Relevance of various health and social outcomes to Indigenous people and appropriateness and feasibility of their measurement in the Indigenous context**

Conclusions about relevance and measurability have been based on the literature. Further exploration of these issues was undertaken during the community visits (see Chapter 4). Indigenous people are not a homogenous group and the conclusions below should not be seen as applying equally to all Indigenous people. While this section explores the relevance of outcomes to Indigenous people, it is acknowledged that government and other sport and recreation funding bodies may have different priorities, and a balance may need to be found between the two.

### Physical health

The area in which (mainstream) research evidence is strongest, i.e. physical activity and physical health, is not necessarily the area of most immediate relevance to Indigenous people, or the most practical or culturally appropriate in terms of data collection. This is not intended to imply that Indigenous people are not concerned about the high burden of chronic disease affecting their community. However, some research suggests that because Indigenous people have a family and community focus rather than an individual focus and view their health holistically, community benefits through sport and recreation (such as social outcomes rather than specific health outcomes) may be more relevant than individual benefit (Thomson et al. 2000). Therefore, focussing on improving physical health (such as improved fitness and blood pressure) may not be a successful strategy for increasing participation in routine community programs, and measurement of such outcomes may appear largely irrelevant to community members. The case may be different for programs with a focus on elite athlete development or for a specific health intervention.

Nevertheless, physical health outcomes from sport and recreation are relevant to government and other funders of programs, so ways of measuring such outcomes are of interest to these agencies. Health clinic data have been suggested as sources of indicators of health outcomes from sport and recreation programs (Cairnduff 2001). Clinic data provide an alternative to personal surveys for the measurement of health status and are less intrusive than surveys. Changes in levels of health clinic usage may be an indicator of change in community health. Health clinic data only provide information about the health of people who actually use the clinic. This may mean certain groups of the population are excluded, e.g. young men. As part of the Northern Territory's preventable chronic diseases strategy, screening of adults aged 15 and over is conducted through community health clinics on an opportunistic basis (Weeramanthri et al. 1999). Information on blood pressure, weight, height, smoker status and other risk factors including physical activity is collected, although the quality and recording of the information varies from community to community (Dr. Christine Connors, Department of Health & Community Services, pers. comm.). Confidentiality and ethical issues (which may be legal and/or cultural) may exist with the use of such data, as they may for the general population. However, it may be acceptable to the community to use these data at the broad aggregate level e.g. number of attendances at health clinics. More work is needed to explore whether it is feasible to use clinic data in this way.

## Mental health

The research evidence for the relationship between physical activity and depression and anxiety is strong. Indigenous people tend to see mental health in terms of a broader concept of social and emotional wellbeing, not in clinical terms such as diagnosed mental illness (Tatz 1999). Social and emotional distress are seen as being related to the impact of colonisation, grief, trauma, loss of traditional lands, loss of language and other traditions, the separation of children from their families, and racism (Swan & Raphael 1995). The legacy of these issues is reflected in high rates of anti-social and self-destructive behaviour, often undiagnosed, and often bringing people into contact with the criminal justice system (Human Rights and Equal Opportunities Commission 1993). High rates of self-harm and assault among the Indigenous population are also indicators of social and emotional distress (ABS & AIHW 2001).

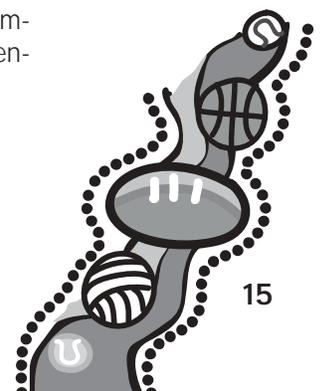
Like the measurement of physical health, measuring anxiety and depression may be appropriate in certain intervention studies but may not be either practical for programs or well accepted by the community because of its clinical focus. Various instruments do exist to measure such states but may not be appropriate in the Indigenous context (e.g. the Kessler 10 - see [www.crufad.unsw.edu.au/K10](http://www.crufad.unsw.edu.au/K10)). The Queensland Centre for Schizophrenic Research found that the questionnaire method was the least culturally appropriate method for measuring mental illness in the Indigenous population (Gulash et al. 2001). The questionnaire method may be unsuitable for Indigenous contexts because it necessitates literacy skills, may miss valuable qualitative data, is an impersonal approach and may be associated with past governmental intrusion (Scougall 1997). However, Westerman (Indigenous Psychological Services, pers. comm.) is developing an instrument to measure anxiety, depression and suicide risk in Indigenous youth. This may prove useful for the future.

## Social and emotional wellbeing

Using sport and recreation as a tool to combat the legacy of social and emotional distress such as substance abuse, self-harm, family violence, and incarceration is likely to be highly relevant to Indigenous people. Therefore, indicators in these areas may be more meaningful to Indigenous people than a focus on particular mental health conditions such as anxiety and depression.

However, definitive research evidence for the ability of sport and recreation programs to alter patterns of substance abuse and crime, particularly in the long-term, is lacking (see above). It may also be difficult to attribute any changes in these indicators to sport and recreation programs. For example, would deterioration in substance use and crime over the life of a sport and recreation program mean the program had failed? It would be important to look at other influences in the community at the time, and incorporate these into any assessment of program impact.

Regarding the measurement of indicators of social and emotional distress, the use of community data such as police statistics and health clinic data is likely to be more acceptable to Indigenous people (provided confidentiality issues are addressed) because of the unobtrusive nature of the collection of these statistics. The collection of data on substance use is more problematic and may require the use of surveys, which, as noted above, may not be culturally appropriate or practical on a regular basis. Substance use, particularly of illicit drugs, is usually under-reported in surveys. Community-level data on drug-related crime and traffic offences, and health clinic data for substance-related injury or illness could be used in combination with other statistics and community information. In addition to addressing confidentiality issues, data quality would need to be explored.



The relevance of quantitative data to Indigenous communities has been questioned. One report described current data collection systems as being primarily designed for, implemented by, and analysed by non-Indigenous people (Department of Community Development, Sport and Cultural Affairs 2001). The report goes on to say that 'qualitative and anecdotal data are of the most value in gauging community activity and wellbeing' (p. 41). Trial methods of collecting quantitative data on family violence in the community, around which the report was based, were hampered by difficulties that staff experienced with: basic data collection and interpretation; avoidance relationships between staff members meaning that coordination of the data collection and entry processes were hindered; and the data collection systems not being able to accommodate events related to different cultural circumstances. There were discrepancies between the data collected by the safe house and the night patrol and those collected by the police and health departments. In this community the most useful way of collecting data was found to be through the recording of events in a diary. The most meaningful way to the community for law and justice data to be interpreted was through incorporating the data into a series of paintings. The report states that 'this highlights the different world-views between the two cultures and the inherent weakness of relying on mainstream data collection and analysis methodology to provide accurate information' (p. 42).

Quantitative data do continue to be the main method used by government and other funding agencies to assess programs, although there is increasing recognition of the value and validity of qualitative methods. The Indigenous research context provides a good example of where qualitative methods may be a more suitable approach to data collection than quantitative methods. A combination of qualitative and quantitative methods may provide a balanced approach and suit the needs of both the Indigenous community and government.

### Education

Learning and academic progress, particularly for school-age children, is likely to be of relevance to Indigenous people. Education is seen by many Indigenous people as being a key factor for the future of their people and communities (although the way in which it is currently delivered may not be seen as the best way). Poor educational outcomes in literacy and numeracy, poor attendance, and low retention are issues that have recently been highlighted in the Northern Territory. It was noted that poor school attendance was the most significant cause of poor learning (Northern Territory Department of Education 1999).

The research is equivocal as to whether a relationship exists between physical activity and learning (see above). Therefore, it would be premature to rely on indicators for this area. However, school attendance, a fundamental prerequisite for improved learning, is both relevant and easily measurable through school statistics. An AFL Auskick program on Groote Eylandt in the Northern Territory directly linked educational attendance and football by providing participating children who also attended school with a pack consisting of a football, cap and magazines. School attendance, as measured by school rolls, improved markedly (Australian Football League of the Northern Territory (AFLNT) 2001). It may be easier to measure direct effects for targeted interventions rather than ongoing sport and recreation programs and for interventions in small communities rather than in larger ones. It would also be important to measure whether extrinsic motivation can result in long-term impacts on school attendance, and to consider parallel influences in the community when attributing changes in attendance to the effects of sport and recreation programs.

### Social cohesion

Social cohesion is likely to be highly relevant to Indigenous people but a relationship between physical activity/sport and recreation programs and social cohesion has not yet been established although anecdotal evidence is promising. Agreement on how to define and measure social cohesion and the related concept of social capital is still far from universal (Kawachi & Berkman 2000). It will be important to keep abreast of future developments in this area.

The literature suggests that changes in social cohesion are unlikely to result solely from the impact of sport and recreation programs, but rather from a whole-of-community approach, of which sport and recreation is one integrated element. Changes in individual social behaviours such as substance use and criminal offending are likely to have beneficial effects for communities however, and measures of these could provide indirect insight into changes in social cohesion.

In summary, there is tension between what may be desirable and what may be achievable in measuring health and social outcomes of Indigenous sport and recreation programs.

### Components of successful programs

The components of successful programs that have been identified and grouped into the areas of quality, resources, community, opportunities, and access, were drawn from both Indigenous and mainstream literature and would seem to be equally applicable to both contexts. The literature indicates that aspects that are likely to be of particular importance to Indigenous people include that programs be culturally appropriate, needs-based and supported and controlled by the community.

Resources are also an ongoing issue for Indigenous organisations and communities and are critical for the long-term success of programs. For example, the Miwatj Regional Council of ATSIC notes that: 'In general most communities find it hard to run the sports and recreation programs as they are operating on extremely limited budgets' (Miwatj Regional Council 2001, p.32). Nine out of the eighteen recommendations of the evaluation of the AFL Kickstart program in the Kimberley make direct references to funding or resources (Walker & Oxenham 2001). The battle for resources is not unique to Indigenous communities, but there is little private funding available in this setting. Costs of provision and maintenance of programs, personnel and infrastructure in remote areas are also high.

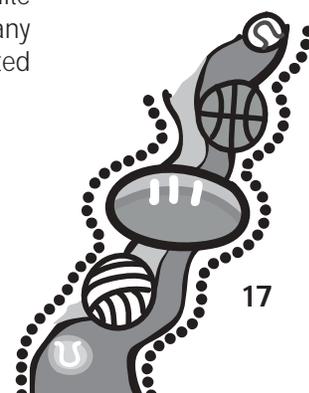
Ensuring equity of access to services for Indigenous people is of paramount importance. Distance to and availability of services, transport, road and other vehicle access, financial issues and cultural appropriateness (community control, gender of staff, services offered, language) may all be barriers to access (ABS & Australian Institute of Health and Welfare (AIHW) 2001). In remote communities and for outstations, access is often limited by distance, lack of transport, road conditions, climatic conditions, and infrequent provision of services.

Opportunities for employment are limited in most remote communities. The sport and recreation sector has the potential to provide opportunities in the paid and non-paid sector through coaching, umpiring and administering sport and recreation activities.

## Discussion

The literature review is just one element of a process of identifying and developing relevant indicators and needs to be complemented with information about what is important to Indigenous people so that the values of Indigenous people can be incorporated into the indicators, a process begun in Chapter 4.

The review of the literature has been approached from a generic viewpoint, that is, looking at health and social outcome variables that might have broad applicability to all sport and recreation programs in Indigenous communities. Sport and recreation programs may take many forms such as one-off community events, ongoing team training and competition, elite athlete development, and targeted interventions. However, this report is not aimed at any specific type of sport and recreation program, and any indicators would need to be adapted to the specific objectives of particular programs.



Indicators are unlikely to capture the complexities of all the desirable health and social outcomes of sport and recreation programs. Indicators by their nature provide summary information only and do not explain the reasons behind outcomes. A system of outcome indicators should be supplemented by other information about a program's processes and outcomes. It may be necessary to combine quantitative evaluation with qualitative evaluation in order to provide a balanced assessment of a program.

Indicator development for health and social outcomes from sport and recreation programs is a new area, both for the general population as well as for population groups such as the Indigenous population. Much more work is needed.

The literature review suggests that sport and recreation cannot act alone in bringing about social change. Sport and recreation needs to form an integrated part of a whole-of-community approach to bring about long-term positive changes in community health and wellbeing. It is important not to oversimplify the underlying social issues such as poverty, unemployment, low levels of literacy and education, poor health, and social pressures that affect Indigenous people in communities, and to be realistic about the ability of sport and recreation to impact on these areas.

Drawing together the various themes from the literature, a possible way forward would be to create a set of indicators around three dimensions: program viability and sustainability, participation and outcomes. The use of any of these measures on its own is unlikely to tell the whole story and may unfairly judge a program's worth.

#### Program viability and sustainability

Measures of inputs, processes and outputs that relate to program viability and sustainability would indicate the likely progress towards the desired health and social outcomes and would offer insight as to why programs are succeeding or otherwise. The components of successful programs identified above, namely quality, resources, community, opportunities, and access, provide a foundation for indicators of program viability and sustainability.

#### Participation

Measures of participation (such as participation rates) would indicate which groups in a community are participating in physical activity and which aren't. This would provide a partial insight into the potential of the sport and recreation programs to affect health outcomes. Of course, participation in sport and recreation programs will only be one component of the total physical activity accumulated during the day. It would be desirable to collect other aspects of participation such as whether the physical activity is sufficiently vigorous, regular and sustained over time to achieve health benefits.

#### Outcomes

Measures of variables such as level of offences and criminal activity, levels of substance abuse, school attendance and health clinic attendances would attempt to more directly capture health and social outcomes.

The next chapter outlines some evaluation processes that are currently employed to monitor sport and recreation and related activities. Chapter 4 explores the practical setting in which the indicators would be expected to operate - the discrete Indigenous community context.



### 3. CURRENT EVALUATION PRACTICES

During the course of the project, many stakeholders, service providers and academics were contacted to elicit ideas on the measurement of inputs, outputs and outcomes from sport and recreation programs, and where possible, to obtain examples of indicators in use or proposed for use. A relatively small number of examples were uncovered. No doubt others exist, but it is not possible to say whether these would differ significantly from the following examples.

Some of the following indicators are for specific purposes, such as evaluating programs at the community level, while others are intended for evaluation on a broader scale. Two examples of evaluation of targeted interventions are also provided.

#### **Northern Territory programs**

Cairnduff (2001) found little evidence of evaluation of existing sport and recreation programs in the Northern Territory.

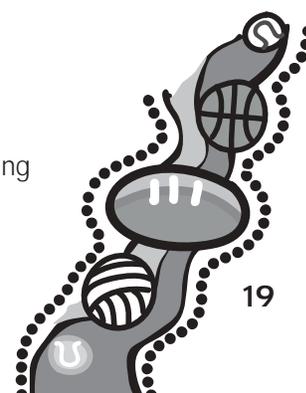
Existing evaluation tends to focus on grant acquittal. For example, the Commonwealth Department of Family and Community Services, which provides funding to communities to run after-school and vacation care programs, requires attendance records to be kept and information on the average number of children attending per quarter as well as audited financial statements. The Office of Youth Affairs, which coordinates a number of grants for youth activities, uses a questionnaire to collect quantitative and qualitative information on the number of participants, the types of activities conducted, whether the grantee was satisfied with the activity and whether any media or community interest was generated.

Indicators of sport and recreation programs currently in use in the Northern Territory generally measure the characteristics of programs or teams such as the numbers participating, the sustainability of teams formed (whether the team lasts the season), the continuity of players, improvement in team competition grades and 'gut feeling' (Cairnduff 2001).

Sport and recreation officers employed by the NT government are required to have a plan for the implementation of sport and recreation programs in the community. These plans do not have a standard format. They usually encompass objectives and expected outcomes but do not necessarily include indicators to measure the outcomes, and currently it appears that not much emphasis is given to the reporting of achievement against objectives. However, it is possible to see that some of the following objectives, as indicated in actual plans, lend themselves to measurement and indicators could potentially be developed.

These examples are from a one-year plan:

- Continued high level use of the community recreation hall
- Expansion of the number of people involved in organised activities
- Expansion of the range of activities offered to people in the community
- Increase in the number of older members of the community engaged in running activities for young people
- Enhancement of recreational facilities in the community.



The following examples are from a three-year plan:

- Reduce vandalism, antisocial behaviour, juvenile crime by providing after-school activities
- Increase cultural awareness; increase understanding of looking after country and to have fun during the holidays
- Encourage increased activity in the community
- Train local residents to a level that will eliminate the need to recruit from outside the community
- Lengthen the shortened life expectancy of sniffers
- Provide opportunities for individual sports as well as team sports
- Give petrol sniffers a place to go to dry out
- Formulate a football league
- Build a new recreation hall
- Construct a swimming pool.

Other examples sighted have included indicators such as the completion of a development plan, reported satisfaction of program participants, number of a certain target group participating in activities and the identification of long-term resources.

The AFL Auskick project provides an example of a targeted program where indicators were set up to closely match objectives. This particular project took place on Groote Eylandt in 2001. The program was introduced as a means of providing social benefits to the community. An expanded program (KickStart) for implementation in other communities is now beginning. An evaluation process will be set up to monitor the success of the project which is operating under a partnership between the AFL, ATSIC, and the government departments for sport and recreation, education, health and police. The aim of the project is to enhance the lifeskills of Indigenous Australians and increase participation in sport through the AFL game. The performance indicators used for the Groote Eylandt project were:

- Increase in school attendance;
- Number of participants;
- Number of local youth and adult coaches;
- Level of juvenile crime (AFLNT 2001; AFLNT 2002).

## **National programs**

### **Indigenous Sports Program (ISP)**

The ISP operates under a Memorandum of Understanding (MOU) between the ASC and ATSIC. Key outputs specified in the MOU for 2000-2004 and their corresponding performance indicators are as follows:

#### *Output 1: Active Participation*

Number of Aboriginal and Torres Strait Islander people who were assisted to participate in sport and recreation activities, at the regional, state/territory, national and international levels.

### *Output 2: Skills Development*

Number of Aboriginal and Torres Strait Islander people who were assisted in developing skills through accredited sport and recreation programs.

### *Output 3: Access to Facilities*

Number of communities benefiting from sport and recreation facilities and equipment.

Number of teams benefiting from sport and recreation facilities and equipment.

Number of individuals benefiting from sport and recreation facilities and equipment.

## **National sporting organisations**

Examples of the types of indicators that national sporting organisations might use are:

- The numbers of clubs, teams, and registered players
- The percentage growth on the previous year's registrations
- The number of special events organised
- The numbers of accredited coaches and umpires
- Financial turnover and surplus/deficit.

## **Targeted research**

### 'Ten thousand steps a day'

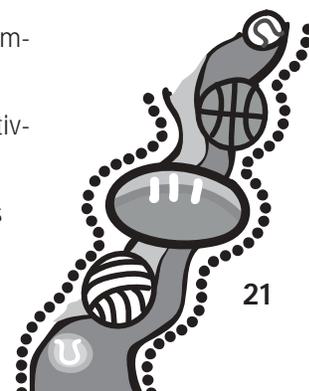
The School of Human Movement Studies in the University of Queensland, with collaborators from Central Queensland University, the Queensland University of Technology and the National Heart Foundation, is conducting a project to create a sustainable model of community-based physical activity promotion. The School is working with the Rockhampton community in Queensland to increase the community's capacity to address the determinants of physical activity. This two-year Queensland Health funded project consists of a number of strategies such as media campaigns, working with general practitioners and other health professionals, targeting the needs of disadvantaged and special needs groups, promoting policy and environmental change and supporting community-based initiatives. One of the most innovative aspects of the project is the use of pedometers (step counters) which are being promoted throughout this multi-level intervention project.

Project evaluation will focus on changes in levels of physical activity collected pre- and post-program via computer-assisted telephone interviews from a randomly selected sample of adults in Rockhampton and a comparison community. Extensive process data will also be collected to determine the extent to which the community's capacity to address the determinants of physical activity has been enhanced.

Examples of indicators include:

- Minutes of physical activity in the previous week
- Percentage of the population sufficiently active for health benefit
- Percentage of the population recalling the 'Ten Thousand Steps per Day' campaign
- Percentage of General Practitioners counselling their patients on physical activity
- Number of local businesses displaying the 10,000 Steps promotional posters
- Number of community walking trails with 10,000 Steps signage

(E. Eakin, Queensland University of Technology, personal communication; [www.10000steps.cqu.edu](http://www.10000steps.cqu.edu))



## Impact on health of children and adolescents of introduction of swimming pools into remote Aboriginal communities

The TVW Telethon Institute for Child Health Research in Western Australia is currently conducting an evaluation of the impact of swimming pools on the health of children and adolescents in two remote Aboriginal communities in Western Australia, where pools have recently been built. A secondary objective of the project is to determine whether there is any improvement in the social and emotional wellbeing of adolescents (Lehmann et al. 2000; Lehmann & Tennant 2001).

Quantitative baseline data have been collected on demographics, episodes of disease and numbers of antibiotic prescriptions in the year prior to the study, where and how often children swim, and school attendance. A paediatrician assessed the children for ear health and skin health. Qualitative information collected consisted of community discussions to elicit expectations, concerns and social changes expected as a result of the pool. Two interim reports have been produced and positive results have been found for the reduction of ear problems and skin sores, increased school attendance and reduced youth crime. The researchers will continue to monitor the impact of the pool to see if health and social gains can be maintained in the long term (Lehmann & Tennant 2001; Lehmann et al. 2002).

### **Applicability of the above indicators to the current work**

There are a number of potentially useful indicators here. Simple quantitative measures such as number of participants can be useful but are best placed in a context. A population rate rather than an absolute number is more useful as it relates the number of participants to their representation in the population. Some of the participant measures relate to specific groups such as 'sniffers', 'school children' and 'older people'. This reflects the importance of measuring the participation of those at whom programs are targeted (where applicable).

The collection of simple baseline data such as the number of facilities and other resources available for physical activities should not be overlooked. The best sport and recreation officer in the world cannot do his/her job without the basic necessities of the job.

Both qualitative measures and process measures feature among the examples and similar measures could be considered for the present project.

A few health outcome indicators are among the examples. These include medical measurements such as ear and skin checks, population data such as health clinic episodes and population measures such as life expectancy. Of these, health clinic data are likely to be the most accessible and practical for everyday programs.

Two social outcome indicators are listed above - school attendance and juvenile crime. Both have been highlighted in the literature and will be explored further in the next chapter.

Other indicators of interest include the training of local people and the collection of information about perceived barriers to participation in physical activity.

The 'Ten Thousand Steps per Day' project includes a number of interesting indicators relating to the individual and the community. Measuring the number of consultations during which doctors or health workers counsel their patients about physical activity is a potential indicator of the effectiveness of the sport and recreation officer's relationship with the health clinic.

The following chapter discusses findings from the community visits.



## 4. COMMUNITY VISITS

This chapter is intentionally entitled 'Community Visits' rather than 'Community Consultation'. It was not possible in the short timeframe to speak with everyone who may have been interested in having input. It is recognised that there is more to understanding the views of the community than speaking with a few key people in the community. Macdonald (2001) describes how NSW Kooris value their personal autonomy which is defined 'through the sharing of what one owns or has rights over' which enables one to 'establish one's personal integrity in social relationships' (p.9). Consequently, 'to speak for another who has not granted ... permission in a specific context is to deny their right to speak for themselves' (p. 9). This can make community consultation more complex than it appears, as it is difficult to know whether the views of a few accurately represent the views of many. Therefore, it is acknowledged that the information below cannot represent the views of all community residents.



### Purpose of the visits

Visits were made to three discrete communities in the Northern Territory. The purpose of the visits was to find out about community members' expectations of sport and recreation programs, the key components of successful sport and recreation programs, and ideas on how to measure outcomes of sport and recreation programs.

### Key people interviewed

Discussions were held with a range of community members including the town clerk, council chairperson, elders, sport and recreation officer and assistants, youth workers, teachers, police officers, CDEP coordinators and workers, and health clinic staff.

### Methodology

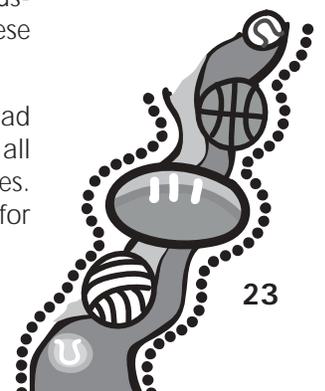
Discussions consisted of informal semi-structured interviews. Most of the interviews were on a one-to-one basis.

The main questions were grouped into three key areas:

- 1) How can sport and recreation benefit the community? e.g. better health, improved school attendance, reduced offending etc. Which outcomes are most important to the community?
- 2) What are the key components of successful sport and recreation programs? What makes a program work? How would you know it's working?
- 3) What are the possible ways of measuring whether programs are working e.g. could records such as those of the sport and recreation officer, the council, the health clinic, the police and the school be used?

All interviewees were asked the three key questions, but a range of additional questions was used depending on who was being interviewed (e.g. school teacher, police officer). A list of questions can be found in the Appendix. Information was frequently elicited through discussion rather than direct questioning. Written notes were taken during the interviews and these were later explored for common themes.

Before an issue was identified as a 'theme' in a community, several of the interviewees had to express the relevance of the issue. Themes were then grouped as being common to all three of the communities visited, to two of the communities, or to one of the communities. Themes common to all of the communities were considered to provide stronger evidence for developing routine program-monitoring indicators around that theme.



Themes which were relevant in one community only were considered less likely to be suitable for the development of routine program-monitoring indicators and more likely to be suitable as community-specific indicators.

Personal advice was sought and relevant literature consulted as to the appropriate way for visitors to conduct business in remote Indigenous communities (Colin & Garrow 1996; Munkara 2001).

## **The communities**

Every community has its own strengths, experiences its own problems and has its own priorities. Three communities cannot be considered representative of all Northern Territory communities. Nevertheless, it is possible to find common elements from the three communities visited and these may be applicable to other places. Further discussion with communities and other stakeholders would be necessary to determine this.

Two of the communities visited are in the northern regions of the Northern Territory (the 'Top End') and one is in Central Australia. All of the communities are located in remote areas with one being in a very remote area (hundreds of kilometres from a major centre). One community is relatively small with a population of fewer than 500, one is of a medium size with a population of approximately 650 while one community is relatively large with a population of over 1000. The communities were established about 50 years ago, by either government or Catholic missionaries.

All the communities have a sport and recreation officer, although two had been in their positions for only three months and the other, six months (although, this officer has since left the community). All three officers are non-Indigenous. The community council employs the sport and recreation officer. Each of the three councils receives the maximum grant of \$25,000 from the Northern Territory Department of Community Development, Sport and Cultural Affairs, and other funding through the Commonwealth Department of Family and Community Services. One council also receives some funding through the ATSIC regional office. Other funds come through their own fundraising efforts and through pooling funding.

Two communities have had sport and recreation activities running fairly consistently for a number of years, although the position of sport and recreation officer has been occupied by a number of different people. The other community had been without a sport and recreation officer for at least eighteen months before the employment of the current officer and consequently activities were only just recommencing. In one community, the sport and recreation program is run together with a juvenile diversion program.

Despite the lack of continuity of sport and recreation officers and programs, the three communities visited could be considered among the fortunate ones. That is, they had benefited at least at some stage from sport and recreation programs, and a certain amount of infrastructure is in place to support this. At the time of writing, the Northern Territory Department of Community Development, Sport and Cultural Affairs was providing funding for 37 community sport and recreation officers. Some communities employ their own officers, without government assistance. Although the number of these is unknown, it is believed to be small. There are nearly 100 communities in the Northern Territory with a population of more than 50 and many smaller communities and outstations (ABS 2000). Many communities do not have sport and recreation facilities or the assistance of a sport and recreation officer.

The three communities visited all have a recreation hall in good condition, at least one basketball court (with lights) and at least one grassed oval (no lights). One community has a pool and another is in the process of building one. Other facilities in some communities include skate ramps, TV rooms, music equipment, gymnasiums, and pool tables. Football is by far the most popular sport but two of the three communities had not had a regular team competition for two to three years. Softball is the most popular sport for women. Basketball is also frequently played. Typical programs include after-school activities e.g. swimming, basketball, pool; evening and/or weekend activities e.g. football training, competition games;

occasional activities e.g. discos; and less frequent events such as community carnivals. Visiting ISP and SHAPES officers and trainers from various sporting associations provide occasional programs such as specialised sporting clinics, sometimes run in conjunction with the school.

The communities have different issues of concern to them but those in common include alcohol and associated violence and injury, family violence, chronic diseases such as diabetes and heart disease, and skin infections. Marijuana is considered a very serious problem in two communities but under control in the third. None of the communities reported having significant problems with petrol sniffers and all said they cracked down immediately on any cases, usually by evicting the offender. Suicide was not mentioned as a significant problem. All communities are very concerned about their youth, particularly their young men, although one community had almost completely eradicated youth crime. Keeping youth busy, getting children to school, developing role models, and providing opportunities for future employment were all commonly raised as important issues.

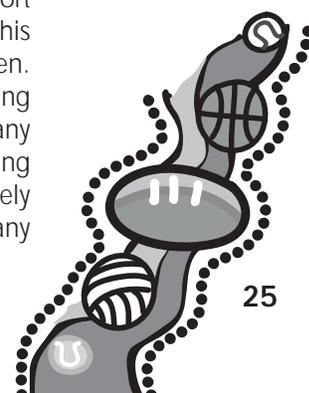
Although all three communities are 'dry', they all experience problems with alcohol. Two communities are in relative proximity to alcohol outlets and one is serviced by 'grog runners' (people who buy alcohol in bulk quantities outside the community and sell it at the boundary of the dry area, a practice which is currently not illegal although the law in the NT is now under review). Seasonal effects were noted in two of the communities. In one case, people said that involvement in football during the winter months means that the young men consume less alcohol during these months. In another, the advent of the wet season means that roads are cut and the 'grog runners' are unable to access the town. Both communities noted a corresponding decrease in problems in the town (e.g. less trouble with police, fewer youth on the street at night, fewer drink-driving offences) when less alcohol is being consumed.

## Outcomes from sport and recreation

When asked about the outcomes that communities were looking for from sport and recreation, people in all three communities identified youth issues as a priority. The importance of keeping young people busy and consequently out of trouble was a common theme. Youth crime is a significant issue in two of the communities and had previously been so in the third. It is almost exclusively a young male activity and most of the crime is relatively minor (but expensive) such as vandalism, break and enter, and theft. Sport and recreation activities are seen as being one way of relieving youth boredom, although it was stressed that other factors also affect youth such as poverty, hunger, overcrowded housing, peer pressure, family issues, and substance use. Several people mentioned that when a sport and recreation officer had left a community, there had been a subsequent increase in youth crime until a new officer was employed. This would certainly suggest that the sport and recreation activities have a definite role to play in curtailing these problems.

In addition to simply relieving boredom, sport and recreation activities are seen as a source of fun and enjoyment. This would appear to take precedence over aspects such as skill acquisition or becoming the next AFL superstar.

Sport and physical activity tend to be seen as an activity of children and youth. Although young men (up to about 30 years of age) do play football, this tends to be seasonal. Apart from the odd softball or basketball team, few young women appear to be involved in sport past about 15 years of age. Motherhood and family responsibilities often take over at this time. Some people noted also that sport for women is not as organised as it is for men. Football tends to be the dominant activity and typically a male activity past puberty. During the football season, the girls often take on an inactive role as spectators and may accompany their partners to matches outside the community. Most adults said that sport was something for young people. One sport and recreation officer said his clientele was almost exclusively primary school children. A large proportion of the community is therefore not involved in any sport or physical activity.



There appeared to be little focus on physical activity as an ingredient for good health. It was rare for someone to mention health outcomes as being a desired outcome of sport and recreation programs. This does not necessarily mean that there is no understanding of the connection between physical activity and health, rather it is not seen as a priority, perhaps because people have so many other issues to deal with in their lives. For example, many people are aware that smoking is bad for their health, but this does not necessarily mean that they will give up. In some cases, people's physical health is strongly connected with their traditional beliefs and spirituality so that physical activity may be seen as having little influence on the body or mind.

School attendance was mentioned as an issue that could be affected directly through sport and recreation programming. In one community, a direct link had been made between the school and the sport and recreation officer, so that children could not attend after-school activities unless they had attended school for the entire day. A pass system has been implemented to assist in monitoring this. At last report, school attendance had increased considerably. Another community has plans for a 'no school, no pool' policy, something which has proved successful elsewhere (see Chapter 2). The new AFL KickStart program aims to directly influence school attendance by working closely with community schools and community recreation officers, conducting football activities in schools, developing leadership skills, and providing tangible incentives (such as posters, stickers and footballs) to regular attendees. It seems possible that increased school attendance is an achievable outcome in these circumstances.

Decreasing the levels of consumption of alcohol and marijuana is certainly an outcome that communities seek and are grappling with constantly. There was not generally a strong belief that these issues could be significantly affected through the sport and recreation program, because of complex factors underpinning substance abuse such as social and emotional distress. Certainly some community members in one community had observed a link between decreased alcohol consumption (and associated problems such as family violence) and playing football, because the young men got into less trouble during the football season. They said that the same could not necessarily be said for the spectators however. Neither of the other communities was sure whether a link existed. Marijuana has become increasingly prevalent and is causing a great deal of concern in some communities. Quite a number of community members mentioned an increase in marijuana use associated with a corresponding increase in apathy and a decrease in involvement in activities like sport and employment in the Community Development Employment Program (CDEP) over the last two to three years. One senior community member indicated that the marijuana issue and the associated drain of money from the community and stress placed on families was of the highest priority in their community, taking precedence over other issues including sport and recreation activities.

## **Components of successful programs**

There was widespread consensus on what makes a good program and what makes programs work in Indigenous communities. The most important element was community ownership. Community ownership can include community members being involved in the planning and delivery of services, taking responsibility and leadership roles, and developing strategies appropriate to and agreed-on by the community. Community ownership was seen by many people as necessary to guarantee community support. To achieve community ownership, it is necessary to consult extensively with the community to involve residents in the planning and running of activities. Sitting down with families outside or at their homes was suggested as the best environment for consultation to occur in. Meeting rooms were considered too formal, meaning that Indigenous people often did not attend meetings. This was not due to a lack of interest on their part.

Community ownership does not mean that 'outsiders' are not welcome. In fact, several people mentioned that the injection of skills from outside the community was very important, providing a boost to morale and motivation in addition to the actual skills. Some people preferred to have a sport and recreation officer from outside the community because this meant the person was external to any family conflicts or obligations. Regardless of whether the sport and recreation officer was from within or outside the community, however, the involvement and training of local people was considered essential in order to make programs sustainable. Too often, someone would come into the community, set something up and then leave. The program would then collapse because there were no trained local people to carry it forward. This applied equally to sport and recreation and other types of community programs.

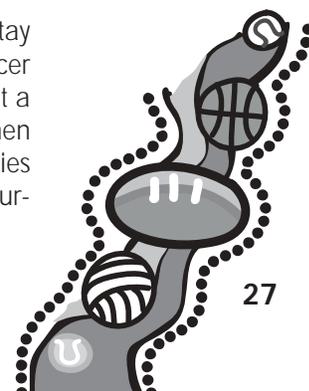
Although the involvement and training of local people is seen as essential, it is not always easily achievable. In each of the communities, CDEP was paying two or three assistants to help the sport and recreation officer. CDEP covers wages for four hours labour a day. Some communities have 'top-up' funding from other funding sources to pay workers a higher wage. Concern was raised about the reliability of some CDEP workers. It is difficult to know what the exact reasons for this are but presumably there could be many including low financial incentive to stay on CDEP (rather than unemployment benefits), family issues, peer pressure, health issues (hunger, fatigue, substance use), low English literacy levels and so on. Each of the communities, however, had at least one or two CDEP employees who were showing great promise and whom the sport and recreation officer was very keen to support and encourage to take on further responsibility. These employees had aspirations for the future such as studying to obtain sport and recreation qualifications. Sport and recreation is an avenue for such people to progress to leadership roles.

Another issue with the involvement of local people is whether they are representative of the community. In communities with several clans or language groups, it may be necessary to have a local leader for each. Quite a few people mentioned that having community role models is important but that there is a shortage of these currently in the community.

The importance of the support of parents and other volunteers was also frequently mentioned. One of the three communities has good parental support. This community is also one that has a 'whole-of-community' strategy towards sport and recreation and youth issues. The other two communities experience very little parental involvement and some sport and recreation officers felt that a large part of their role was baby-sitting. The lack of parental and volunteer support appears to be related to a general lack of community support for the sport and recreation program. This could in turn be related to a lack of community ownership of the program. However, the lack of involvement may also be due to other priorities taking precedence over sport and recreation.

No one thought that the role of the sport and recreation officer in communities is an easy one. The universal opinion was that the demands on the sport and recreation officer are extensive and that he/she needs plenty of support. Several residents remarked on the need for more than one sport and recreation officer. The role was described as undefined, and as having no boundaries so that the sport and recreation officer was virtually continually 'on call'. Sport and recreation officers and youth workers spoke of being 'stretched'. It was difficult to know whether to concentrate on a target group or to try and cover many demands. Neither strategy could be entirely satisfactory and the latter could lead to 'burn-out', a common experience among community sport and recreation officers.

The high turnover of sport and recreation officers was frequently mentioned. The average stay (anecdotally) was said to be six to twelve months. Being without a sport and recreation officer was also an issue. It took time to find a replacement so that a community could be without a sport and recreation officer for several months or longer. Once a new officer started, it then took time to gain the trust and support of the community. Although the three communities visited had all had a sport and recreation officer at some stage, many people noted that surrounding communities did not have any staff or programs in place.



A consistent theme was the need for a variety of activities, provided frequently and at appropriate times. All three communities run after-school programs, and a school holiday program. However, the frequency of evening and weekend activities varies. One community has activities four nights a week and on weekends, and it is believed this contributes to the low juvenile crime rate. However, as mentioned above, sport and recreation officers cannot run activities single-handedly and there is a limit to how many hours they can be expected to put in. Therefore, it seems that while sport and recreation activities need to be provided regularly and at appropriate times, local community support is needed to sustain these activities.

Resourcing and facilities are an ongoing issue, and critical to the sustainability of any sport and recreation program. All communities have to make up the wage of the sport and recreation officer from at least two sources. In addition to this are the costs of housing the officer and providing a vehicle, maintenance and running costs of the sport and recreation hall and other facilities (ovals, pool) and maintenance and replacement of equipment. Funding from the community's own fundraising, the store, and general-purpose funds were mentioned as sources of income to help keep the sport and recreation program running. Grant applications and acquittals are frequent and time-consuming with no guaranteed outcomes. Grants through the Department of Community Development, Sport and Cultural Affairs have to be applied for annually and those through the Department of Family and Community Services every two years. Many people felt that the continual process of applications and acquittals that derives from the short-term nature of grants - often from many different sources - was excessive and counter-productive.

Skills and experience of the sport and recreation officer were also mentioned as key components of successful sport and recreation programs. Most people felt that it was important to have a qualified sport and recreation officer. Local residents may not have the skills and therefore the confidence to conduct sporting activities. The need for the officer to be provided with cross-cultural training was mentioned in some instances. Given the stated need for officers to consult widely with the community, skills in the area of cross-cultural communication would certainly be desirable. Many non-Indigenous people would probably feel lacking in this area. In recognition of this, cross-cultural training is provided through the ISP. However, cross-cultural communication skills also take time to develop so that a one-off training course may not be sufficient. This is an area that requires some thought so that the maximum support and training can be provided to sport and recreation officers both before and during their stay in the community. Perhaps they need a community-based mentor(s) to assist them.

Good working relationships with other agencies in the community were the basis of the whole-of-community strategy used in one community. In this community, the council, school, police, safe house, night patrol, health clinic and sport and recreation officer all work together and support each other. They are also supported by external agencies which are signatories to the community plan. Several people in this community noted that this was a key to the success of the community in dealing with issues such as youth crime and family violence. Trouble (e.g. property theft, assaults) had reportedly decreased in the town since the implementation of the strategy. This may be easier to achieve in small communities than in large communities. However, in the larger community, there was considerable willingness to spend time building relationships and working together to solve issues. The process probably just takes a little longer in larger communities.

## **Measurement of outcomes**

Measurement of outcomes was the most difficult area to elicit information on. Statistical measurement is not an area that many people feel comfortable with, in the Indigenous or the wider community. In addition, doubts were expressed about the feasibility of attributing changes in communities to the effects of sport and recreation programs. Doubts were also expressed about the capacity of numbers to provide an accurate picture of the impact of programs. In part, this may be because people feel uncomfortable with statistics or have had past experiences in which quantitative information has been used in ways they considered misleading. This does not necessarily mean that quantitative information could not be used in meaningful ways.

Youth crime was the one social outcome area that was mentioned in all three communities as being worthwhile measuring and monitoring. Reported incidents of youth crime can be monitored through the police information system (in the NT, this is known as 'PROMIS'). Night patrols also sometimes collect statistics and could be a source of additional information.

Domestic violence is also recorded in PROMIS although at least one community expressed doubt as to the accuracy of the figures. Data quality would need to be investigated and changes or improvements made where possible. Safe house and night patrol figures could also be used but recording methods and other data quality issues would need to be ascertained first. One of the issues raised is that the definitions used by the community may not match that of the police or the 'mainstream' community. The term 'family violence' is sometimes used by communities whereas the police use the term 'domestic violence'. At what point 'family violence' should be recorded in the police statistical system is not always clear. Recording across communities is almost certainly not consistent.

The relationship between domestic/family violence and sport and recreation is more tenuous than that of youth crime and sport and recreation. Family violence may be an indicator of alcohol consumption, which in turn may be related to the amount of sport and activities being engaged in by the community. However, in one community, a drop in alcohol consumption simply meant that access to alcohol had been restricted due to wet season road closures. Family violence may also be a general indicator of community 'wellness'. Whether this can be related to sport and recreation programs is uncertain. More work needs to be done to ascertain the validity and reliability of family violence as a potential indicator of sport and recreation program impact.

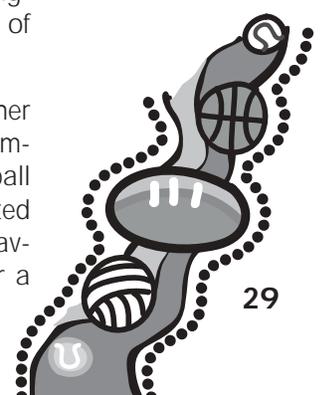
School attendance figures are easily obtainable through school rolls. Recording of attendance is a requirement of the NT Department of Employment, Education and Training to which schools must regularly provide attendance figures. These attendance figures, however, do not necessarily reflect whether students' attendance has been for the full day (Beneforti 2000). Therefore, understanding the roll-marking practices of the relevant school and additional or other forms of recording might be considered for programs where attendance and sport are linked.

Health clinics collect patient episode data. Unless part of a community screening process or a targeted intervention, these type of data will only be collected on those who attend the clinic. Health clinic staff said that certain population groups such as young males attend clinics infrequently (although this can change if there is a male health worker) and therefore health changes in this group will not be picked up through the health clinic data.

Health clinics also have information on injuries, however the cause is not necessarily recorded. For example, a person who has been the victim of assault may not report it as such. The involvement of alcohol or other drugs in an injury or assault case may also not be recorded.

Changes in the overall health status of the community may be reflected through health clinic data, but there are a number of factors which can confound interpretation of the data, which are discussed in more detail in the next chapter. It may be possible simply to monitor the total number of health clinic attendances and see if this fluctuates with the provision of sport and recreation in the community. The broader the level of data, however, the less meaningful the data become and the less certain the attributability of any changes to the impact of programs.

The use of health clinic data may be more suitable for a targeted intervention situation rather than routine program evaluation. For example, the sport and recreation officer in one community expressed interest in conducting screening of young males at the start of the football season to ensure their health is adequate for participation. Screening could then be repeated at the end of the season to check for improvements in fitness and changes in lifestyle behaviours (for example). The sustainability of such changes would need to be assessed over a longer time period.



Outcomes such as reductions in substance use were not considered by these communities to be particularly sensitive to influence by the sport and recreation program. Alcohol sales occur outside two of these communities and are therefore impossible to control or monitor. In one community, a pub is located close by and the council monitors alcohol turnover figures. However, their interpretation is not always straightforward. For example, the council believes a recent drop in alcohol sales may indicate that people are buying marijuana in preference to alcohol. Cigarette sales were not discussed. Cigarette smoking was only raised in one community where the sport and recreation officer said the local people described his attempt at restricting smoking in certain areas (such as the open-air basketball court) as 'white man's rules'. Imposing smoking and alcohol bans may be effective where tied to participation in a desirable activity such as a disco or sports carnival.

Where alcohol or illicit drugs are involved in offences, this information is sometimes recorded by police. The police in one community said there were many more drug-related incidents than those recorded in the system. It is not always easy to ascertain whether drugs, particularly illicit drugs, are involved.

Traffic incidents involving alcohol, such as drink-driving, dangerous driving, speeding and motor vehicle accidents could be monitored through police data. Again, it must be recalled that people in communities felt that there was a lot more to effecting changes in substance abuse than the provision of sport and recreation programs. However, as part of an integrated strategy, sport and recreation may be able to assist in bringing about positive change.

Petrol sniffing was not an issue in these communities but is prevalent in some communities. Petrol sniffers are usually a small and easily identifiable group in a community, and are sometimes targeted specifically through the sport and recreation program. In such cases, it would seem relevant and feasible to monitor the number of sniffers, sniffing patterns, and any changes.

Suicide and self-harm were not raised as issues of priority in these three communities although undoubtedly, in other communities (such as Yarrabah - see Chapter 2), these will be important issues.

## Summary

Despite the different locations, size, cultural context, and history of the three communities, there were common themes encompassing their interests in and priorities for the sport and recreation program:

- Sport and recreation can provide young people with enjoyment, keep them busy, off the streets and out of trouble. This is seen by many community members as the primary purpose of the sport and recreation program.
- Where sport programs are linked to the school, increased school attendance is an achievable outcome, at least in the short-term.
- In some cases, the sport and recreation program may be able to impact on other areas of social concern such as alcohol consumption and violence.
- Sport and recreation can provide employment avenues and assist with the development of leadership skills in community members.
- Sport and other physical activities are primarily seen as an activity for the young.
- Physical health through physical activity is not generally seen as a priority.
- Having a skilled and experienced sport and recreation officer is highly valued.
- Turnover of sport and recreation officers in communities is a problem.
- The role of the community sport and recreation officer is a very demanding one.

- The sport and recreation officer needs to have plenty of assistance.
- As well as human resources, financial resources to pay the sport and recreation officer's salary and on-costs, to purchase equipment and maintain equipment and facilities, are considerable. The availability and condition of physical resources for the sport and recreation program are also important.
- Sport and recreation activities need to be provided at appropriate times of the day/year.
- To make programs work, the community must support the sport and recreation officer and programs. This includes being involved with the planning and provision of activities, and community agencies working together to effect outcomes.
- Sport and recreation officers may need cross-cultural skills for working collaboratively in communities.
- Current funding applications consume valuable time and effort of sport and recreation officers. Grant submissions may cover different time-frames and be linked to different reporting requirements.

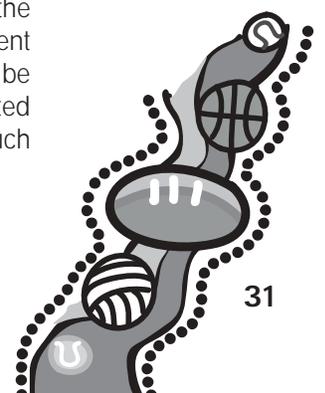
These themes are quite consistent with the findings of the literature review. Programs that form part of a 'whole-of-community' approach, that are well-resourced, that are of high quality, and accessible, are the most likely to succeed.

Community residents are extremely positive about sport and recreation and everyone appeared to want more of it. The resources to support the continuation of sport and recreation in communities and to introduce it into other communities are limited. It is unlikely there will ever be sufficient external funding to have one sport and recreation officer based in every community. Therefore it is critical for communities and funding bodies to work towards training local residents so that they can run programs themselves. Sport and recreation officers could then move on to more needy communities. This does not eliminate the need for outside assistance to those communities who are managing to sustain their own programs. A safety net of external support, both financial and human, must exist.

Creating sustainable programs through reducing turnover of sport and recreation officers, training local residents to take over the programs, and developing a succession plan for when the sport and recreation officer moves on, would all seem to be rational and achievable strategies for long-term success of programs.

The most promising social outcomes that can be linked to sport and recreation programs would appear to be reducing youth crime and increasing school attendance, which are both also relatively easy to measure statistically. Both these outcomes are likely to contribute over time to improved individual and community health. If youth are more gainfully and happily occupied, they are also less likely to be engaged in negative behaviours such as substance abuse and violence, which are detrimental to individuals, families and whole communities. Improved school attendance is a key factor in learning, and education has been shown to be strongly related to improved health.

Employment of local residents through the sport and recreation program may be considered as either an output or an outcome. However, the lack of meaningful employment in communities, the consequent lack of hope for the future that young people may experience, and the strong links between employment and health mean that it could be argued that employment that arises either directly or indirectly through the sport and recreation program should be seen as a social outcome from community sport and recreation programs. However, limited employment opportunities in communities and low financial benefit through programs such as CDEP may mean that it is difficult to effect change in this area.



Measurement of other health and social outcomes from sport and recreation programs is more complex. This does not mean that the sport and recreation program cannot influence other outcomes, but the more complex the pathways between the program and the outcome, the more tenuous the association becomes and the more difficult to attribute an impact, even partial, back to the program itself. While it may be possible to do this through targeted research, it is not yet feasible for routine program evaluation. Both the literature and the community visits have highlighted the difficulties. Potentially, a variety of indicators lend themselves to measurement such as episodes of substance use-related injury and violence, self-harm and suicide, and indicators of health status. Much more work needs to be done, such as testing these indicators for validity, reliability and measurability. It is premature to attempt to measure these health and social outcomes unless they form part of the objectives of a specific intervention.

The proposed indicators are introduced and discussed in the next chapter.



## 5. THE INDICATORS

The proposed set of indicators has been developed, taking into consideration both the findings of the literature review and the information shared by communities and other stakeholders. The indicators are shown in the table on page 35 and described more fully in the text.

The indicators are still at an early stage of development. As discussed in chapter 2, indicators should be assessed against a number of selection criteria. The literature suggested that a good indicator should be valid, reliable, understandable, relevant, actionable, measurable, and acceptable. A preliminary assessment has been made here about the validity, relevance and measurability of the indicators, based on the findings of the project. To refine the indicator set, a more rigorous assessment involving wide stakeholder consultation needs to be conducted to determine how well the indicators meet these and the other criteria. The indicators would also need to be tested in the field before using them to make decisions such as funding allocations.



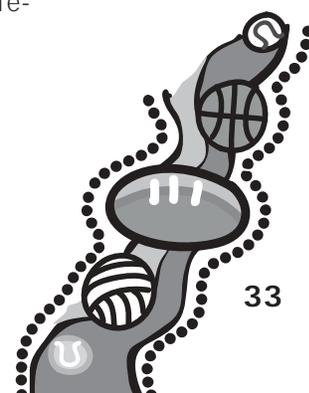
Each indicator is accompanied by explanatory notes under the topics of:

- Description:* type of indicator, purpose of the indicator
- Priority:* prerequisite, critical, high, medium and community-specific
- Rationale:* the reasons for including this indicator
- Measurement:* potential ways to measure the variable; measurement issues
- Limitations:* factors that may affect the usefulness of the indicator
- Related indicators/supporting information:*  
indicators that could be used as alternatives or additional indicators; supporting documentation or other information that could add value to the indicator.

The priority categories have been determined using a combination of information from the literature review, stakeholder discussions and community visits. As with all qualitative information, a degree of subjectivity may be involved in determining the priority of each indicator. A testing program would help clarify the usefulness and accuracy of the priority categories. At this stage, they are intended as a guide for assisting with the interpretation of the indicators.

### A framework for the indicators

At the end of Chapter 2 (literature review), three types of indicators were proposed for use together for the routine monitoring of sport and recreation programs. This 'model' is presented below.



The community visits have reinforced the relevance of these three types of indicators. Establishing sound practices for sport and recreation programs is necessary to generate increased participation. Participation, through a variety of intermediary pathways such as those discussed in the literature review, will result in certain outcomes. There are potentially many of these intermediary pathways and they will vary with the individual. For example, participating in sport and recreation programs may prevent youth crime, not just because people are occupied at appropriate times of the day, but also perhaps because people's positive social networks have been strengthened.

There are potentially many health and social outcomes that could result from sport and recreation programs. However, measuring the outcomes may be constrained by factors such as community priorities, the availability and cultural appropriateness of instruments to measure change, the at times nebulous concepts (such as social cohesion) to measure, the availability and quality of data, the practicalities of recording data, and confounding factors such as other influences on the individual and in the community.

Outcomes have therefore been divided into two groups (see the table on page 35). The first group consists of those where there is reasonable evidence in the literature and in practice of an association between the sport and recreation program and the outcome, where community members have stressed the importance of this outcome, and where the outcome lends itself to practical and culturally relevant measurement. The indicators in the second group appear desirable to measure but their robustness is currently limited by the lack of strong evidence of an association between the sport and recreation program and the outcome; by community doubt as to the relevance of such indicators to their communities; and by issues of practical and culturally relevant measurement. These indicators are recommended for further research and development.

The context in which the indicators will operate has also been important in formulating the indicators. The proposed indicators are intended for use in describing the processes and impact of sport and recreation programs operating routinely in a discrete community. The indicators (other than those that have been listed in the table as 'community-specific') are believed to be broadly applicable to remote Indigenous communities in Australia and could be used to compare the progress of programs in communities.

The table shows how the proposed indicators fit into the model presented on page 33. The indicators together with the model provide a basic framework. Priority categories have been assigned according to the relative importance of each indicator to the overall success of the sport and recreation program. As explained above, this has been elicited through discussions with community members and other stakeholders. Indicators described as 'community-specific' may have relevance only in certain communities.

There are more 'program viability and sustainability' indicators than either participation or outcome indicators. This is recommended as a sound starting point. There is a lot to learn about the workings of sport and recreation programs in communities before any attempt is made to derive conclusions about the effectiveness of programs based on health and social outcome indicators. Information from the 'program viability and sustainability' indicators will provide valuable insights into how and why (or why not) health and social outcomes are being achieved. Such information will assist with replicating successful sport and recreation programs in communities.

When used together, the three groups of indicators should provide an integrated and holistic approach to the measurement of the impact of sport and recreation programs in discrete Indigenous communities. The indicators have the potential to capture useful summary information about a continuum of events from implementation and running of programs through to attainment of outcomes.

*Proposed indicators by type and priority category*<sup>1,2</sup>

**Program viability and sustainability indicators**

Prerequisite	1. Turnover of sport and recreation officers in the community
	2. Length of time the current sport and recreation officer has been working in the position in the community
Critical	3. Scheduling of activities at appropriate times
	4. Assistance given by local community residents
	5. Funding for the sport and recreation program
High	6. Qualifications and/or past experience of the sport and recreation officer
	7. Satisfaction that the community council or other community leadership group expresses with the sport and recreation program provided
	8. Confidence that the sport and recreation officer expresses in the current capacity of local community residents/assistants to organise and run activities themselves
	9. Confidence that the sport and recreation officer expresses in current working relationships with key groups in the community
Medium	10. Succession planning for sport and recreation
	11. The sport and recreation officer's assessment of the adequacy of current facilities and equipment

**Participation indicators**

High	12. Participation rate for community sport and recreation programs
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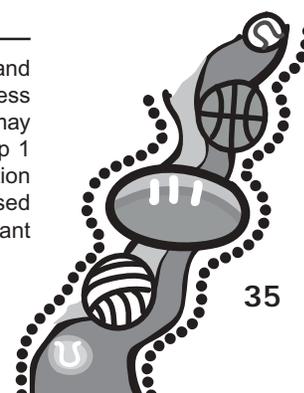
**Outcome indicators - Group 1**<sup>3</sup>

High	13. Episodes of 'minor' (youth) crime
Community-specific	14. School attendance

**Outcome Indicators - Group 2**<sup>4</sup>

Community-specific	A. Employment of local community members in sport and recreation or related work
	B. Health clinic attendances
	C. Episodes of family violence
	D. Arrests and apprehensions for alcohol or other drug-related offences
	E. Night patrol client interactions
	F. Numbers of (petrol) sniffers
	G. Episodes of self-harm

1. A standard reporting period, e.g. 12 months is implied. 2. The priority categories 'critical', 'high' and 'medium' have been assigned according to the relative importance of each indicator to the overall success of the sport and recreation program, based on the project's findings. 'Community-specific' indicators may not have relevance in all settings. Within each priority category, indicators have equal status. 3. Group 1 indicators are those where there is reasonable evidence in the literature and in practice of an association between the sport and recreation program and the outcome, where community members have stressed the importance of this outcome, and where the outcome lends itself to practical and culturally relevant measurement. 4. Group 2 indicators are potential indicators that require further development



## Indicators by type

### Program viability and sustainability indicators

#### 1. Turnover of sport and recreation officers in the community

*Description:* Program viability and sustainability indicator. Prerequisite for reporting against outcome indicators. Indicates the stability of the working environment in which sport and recreation officers and programs are operating.

*Priority:* Prerequisite

*Rationale:* The high turnover of sport and recreation officers was a common theme in discussions with community and other stakeholders. High turnover creates an environment of instability. Continuity of both programs and officers is important. It is not just the lack of continuity that occurs when one sport and recreation officer leaves and a successor is not employed for some time. Even where there is no gap in employment between sport and recreation officers, other factors are attached to sport and recreation officers such as the relationships they have built up in the community. It takes time for a new officer to establish him/herself and to gain the confidence of the community.

Achieving health and social outcomes in an environment of instability such as that created by high turnover of sport and recreation officers is extremely challenging. Therefore this indicator should be monitored closely. It would be desirable to establish low turnover before attempting to measure outcomes.

*Measurement:* Council records are the best source of this information, or if the council does not employ the sport and recreation officer, the relevant employer's records.

The information required is the length of time the current officer has served (also an indicator - see below) and the number of different officers that have served within the reporting period. A turnover score can then be calculated. This score could then be assessed against an agreed-upon benchmark score. The scores can be monitored over time and a trend plotted for use in both comparisons within and between communities.

*Limitations:* A turnover score does not explain the reasons behind the high turnover of sport and recreation officers in communities. Minimising turnover is the responsibility of both funding agencies and communities and can best be achieved through partnerships. It may be difficult to achieve low turnover without adequate working partnerships.

*Related indicators/supporting information:* Indicator 2. Qualitative information should be sought about the reasons for a sport and recreation officer's departure.

#### 2. Length of time the current sport and recreation officer has been working in the position in the community

*Description:* Program viability and sustainability indicator. Prerequisite for reporting against outcome indicators. Indicator of whether the sport and recreation officer has had sufficient time to implement or continue programs that could produce health and social outcomes.

*Priority:* Prerequisite

*Rationale:* There is little point in attempting to measure social outcomes of programs without first allowing a reasonable period for a sport and recreation officer to establish him/herself. Given that each community has its own characteristics, cultural context and issues and priorities, and given the need to build relationships with residents, several months in the job would appear necessary before any outcomes could reasonably be expected. Where a community has not had organised sport and recreation programs for some time, a longer period may be more realistic.

*Measurement:* This information should be readily available through community council records, or through the sport and recreation officer's own records.

A benchmark should be established in consultation with stakeholders, and if necessary through research.

*Limitations:* There is currently no benchmark for what constitutes 'sufficient' time in a community to achieve social outcomes, and indeed it may vary with the community and the individual officer. Research could assist in finding answers to these questions.

*Related indicators/supporting information:* Indicator 1. An additional indicator could be the period of time a community is without a sport and recreation officer.

### 3. Scheduling of activities at appropriate times

*Description:* Program viability and sustainability indicator. Prerequisite to facilitating attendance at programs and reducing youth crime. Indicates the potential of the program to keep young people busy at critical times.

*Priority:* Critical

*Rationale:* Communities are greatly concerned with keeping their young people busy and out of trouble by providing them with alternatives. After-school activities are usually provided and are an important way of keeping children occupied at that time of the day.

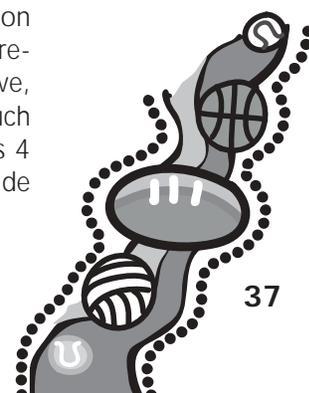
However activities for older youth are not always scheduled for times when they are most needed such as evenings and weekends. This appears to be for a variety of reasons, such as too many demands on the sport and recreation officer, lack of people to help the sport and recreation officer, lack of funding and lack of facilities such as lighting for ovals (some of these are addressed through the other indicators).

*Measurement:* The sport and recreation officer would need to record information as to when activities were provided during the reporting period. Both the times and the frequency would ideally be recorded, although just the former may be sufficient initially. The critical periods for sport and recreation scheduling are after-school, evenings, weekends, and school holidays, sometimes referred to as 'prime crime time' (Mason & Wilson 1988). Of course, if the community has a different critical period then this needs to be incorporated. The information could then be described using a categorical variable e.g. highly appropriate scheduling, appropriate scheduling, not appropriate.

The word 'activities' here is used in rather a loose sense. Having the recreation hall open under supervision during a critical period could be a satisfactory 'activity'. Physical activity is not necessarily a part of all activities.

*Limitations:* Providing activities at appropriate times is only one element in tackling youth crime. Clearly, the program cannot provide activities on a 24-hour basis and therefore there must be mechanisms operating in preventing youth crime other than simply keeping youth busy. Some of these could be: having something to look forward to, positive social interaction and perhaps increased self-esteem and sense of well-being. However, there is no doubt that when there is little to do in a community, youth have less to look forward to, more time to get bored, and more time and opportunities to seek mischief.

*Related indicators/supporting information:* The information should be used in conjunction with other information. It should not necessarily be seen as a failing of the sport and recreation officer if he/she is unable to meet the criterion for 'appropriate'. As explained above, many issues can impact on the ability of the officer to provide activities at all these times, such as lack of volunteers to assist with the running of programs (captured through indicators 4 and 8); and resource issues (indicators 5 and 11). The purpose of the indicator is to provide insightful information as to why programs are having desired effects or otherwise.



This indicator could be supplemented by an additional indicator such as: assessment by the sport and recreation officer of his/her current capacity to provide activities in the identified critical periods.

#### 4. Assistance provided by local community residents

*Description:* Program viability and sustainability indicator. Indicates the strength of community support for the program, which in turn indicates its future sustainability. Indicates the degree of assistance for the sport and recreation officer, which will affect his/her ability to run quality programs during critical periods.

*Priority:* Critical

*Rationale:* The job of the community sport and recreation officer is an extremely demanding one and cannot be adequately performed without assistance. Sport and recreation officers risk burnout if they attempt to satisfy everyone's demands. In addition, over-reliance on the sport and recreation officer will ultimately lead to failure of the program when the officer leaves the community. Therefore, the employment and training of local people is essential. In addition to paid employees, volunteers are needed, just as for any community sporting or recreational event. Communities realise the importance of local support for the sport and recreation officer. It was a common theme during the community visits.

In some communities, it may be necessary to have assistants to work with particular groups. In one community, having helpers from one's own clan was considered important to ensure the participation of community clans. Gender was not specifically raised in the visits but in some communities, male and female assistants may be considered essential.

*Measurement:* The best source of this information is the sport and recreation officer him/herself. He/she will need to keep records on who is assisting and when. The CDEP is also a source of information for those who are employed through this program. Numbers of paid hours per week would be available through the CDEP records. The sport and recreation officer will need to keep track of numbers of volunteers and the amount of time they put in. This could then be averaged out over the reporting period.

*Limitations:* This quantitative measure does not say anything about the skills, abilities or reliability of assistants, which was raised as an issue impacting on sport and recreation delivery. However, this is addressed through indicator 8.

*Related indicators/supporting information:* Indicator 8. Turnover of assistants.

#### 5. Funding for the sport and recreation program

*Description:* Program viability and sustainability indicator. Indicates the financial environment in which the sport and recreation program operates.

*Priority:* Critical

*Rationale:* Communities obtain funds from a variety of sources including state/territory, commonwealth and local government grants, non-government organisations and the community's own fundraising efforts. Some grants are of a one-off nature, such as for purchase of equipment or to run a special event, and others are for a defined period, such as annual grants from the NT Department of Community Development, Sport and Cultural Affairs which go towards funding the salary of community sport and recreation officers.

The literature review, community visits and discussions with stakeholders have all reinforced the need for stable and ongoing funding. The continual process of grant applications and acquittals, usually on an annual basis, was raised as being an issue contributing to turnover of sport and recreation officers and programs. Based on the comments of stakeholders, longer grant periods would appear to be preferred.

*Measurement:* There is a range of information that could be captured about grants such as the number of sources used to fund the sport and recreation program, the number of grants, both government and non-government, the amount of those grants, the type of grant and the frequency of application. It could be difficult to establish what represents an 'ideal' situation for funding a community sport and recreation program. The existence of numerous grants may just mean that these are small and require lots of paperwork. However, this may also be the result of a skilful community making the most of the system to get ahead.

More work is required to determine the measurement of this variable and how to benchmark it but in the meantime it is proposed that 'simple is better'. Four questions are suggested to capture the essence of the funding for the sport and recreation program:

- 1) In this year/reporting period, what proportion of funding for the sport and recreation program comes from grants (either government or non-government)?
- 2) How many grants have been used to support the program this year/reporting period?
- 3) What is the duration of the longest grant period? i.e. before another application is required.
- 4) What is the size of the largest grant used to support the sport and recreation program this year/reporting period? (Where only part of a grant is allocated for sport and recreation, this amount should be considered, not the full amount; where a grant extends over more than one year, only this year's allocation should be taken into account.)

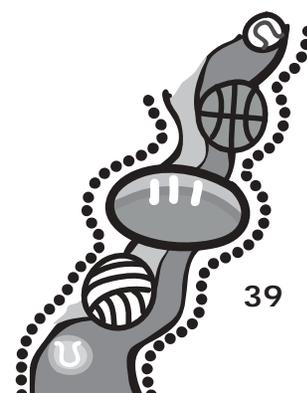
The answers to these questions should be considered in the context of community size and needs.

Some guidelines for what is to be included as 'funding for the sport and recreation program' need to be given such as salaries, on-costs, accommodation, vehicles, maintenance and upgrade of equipment and facilities.

*Limitations:* Establishing a benchmark may not be possible, which will impact on the usefulness of this variable in terms of comparisons between communities. This needs to be established through research.

Funding can be a sensitive issue and communities may not wish to give too much detail. For example, some people have expressed disappointment at having lost grant funding just as they seemed to be making some progress. Therefore, if communities perceive that this information could be used against them, they may not wish to reveal their various sources of funding and the amounts.

*Related indicators/supporting information:* Where more detail can be obtained about the funding amounts and processes, this should be documented.



## 6. Qualifications and/or past experience of the sport and recreation officer

*Description:* Program viability and sustainability indicator. Indicator of the capacity of the sport and recreation officer to apply relevant skills and experience to the job.

*Priority:* High

*Rationale:* Community members frequently raised the issue of the importance of having an officer with relevant experience and/or qualifications. While some activities do not require any particular training e.g. organising a disco, others do, such as training in particular sports, or looking after a swimming pool. Community members in some cases do not feel confident to organise certain activities themselves. They also appreciate the boost of skills, confidence and motivation that a skilled person can provide. Sport and recreation officers also need basic administrative and management skills. The need for training, such as in cross-cultural communication, was also noted as very important because of the considerable amount of community consultation that sport and recreation officers need to engage in to gain the support of the community.

Given the commonly stated need for local people to be trained in sport and recreation management and delivery, 'train-the-trainer' or basic teaching skills would also appear to be a highly relevant part of the sport and recreation officer's skill base.

*Measurement:* A benchmark should be established in consultation with stakeholders for each of the areas of: sport and recreation qualifications and/or experience; cross-cultural training; and 'train-the-trainer' qualifications. Established coaching and official accreditation standards exist for some of these areas and these would no doubt provide a foundation to work from. The ISP already includes a cross-cultural training module for field officers and this could be reviewed for suitability. A qualitative assessment (e.g. good/adequate/poor) could be made for each area.

*Limitations:* There is no current benchmark for what constitutes 'sufficient' experience or a minimum appropriate level of qualifications, although this may be relatively easily ascertainable by stakeholders. A 'sufficient' level of cross-cultural training/experience may be more difficult to determine.

In some cases, a motivated person with no particular experience or qualifications may be able to achieve as much as an experienced or qualified person. However, in general, training and experience have an important role in the ability of a person to be able to carry out his/her job.

*Related indicators/supporting information:* The sport and recreation officer should supply evidence as to his/her qualifications and experience such as relevant certificates, references and other documents. It would be worthwhile seeking information from the sport and recreation officer as to what additional qualifications he/she would like to attain.

## 7. Satisfaction that the community council and/or other community leadership group expresses with the sport and recreation program provided

*Description:* Program viability and sustainability indicator. Indicates whether the community is satisfied that there are sufficient activities of a varied nature to stimulate the interest of and sustain motivation and enjoyment of the group(s) that the community has identified as wishing to target through the sport and recreation program.

*Priority:* High

*Rationale:* As in any community, Indigenous communities consist of people with a wide range of interests and abilities. Therefore, a variety of activities is more likely to provide enjoyment and relieve boredom on a long-term basis rather than one or two activities. Boys and girls of primary school age are interested in and enjoy playing many sports but after this age, the focus moves to one or two major sports. AFL is undoubtedly the most popular and widely played sport in Northern Territory Indigenous communities but, once past the primary school

age years, this sport is generally played by young males - up to about 25-30 years of age. Football also tends to be seasonal, meaning that during the 'off' season, football players may not be engaging in an alternative sport or physical activity. Girls tend to move towards softball and basketball but after about age 15, young women involved in sport are in the minority. Adults tend to view sport as an activity of the young.

A mix of individual and team sports provide variety as do non-sporting activities such as recreational swimming, playing pool, making music, and discos. Traditional games, such as those presented by Ken Edwards (1999) in his book, *Choopadoo: Games from the Dream-time*, may provide another source of variety. Models of sports delivery that are used in urban areas may not be readily transferable to remote Indigenous community contexts. In all cases however, consultation with the community should take place to determine the most appropriate types of activities and how to deliver them.

For health and social outcomes to be achieved across the community, more than a small section of the community needs to be engaged in sport and recreation. However, community members have also expressed a strong desire to have ownership of the sport and recreation program. This means involving them in decisions about what activities will be run and for whom. While the sport and recreation officer should advise the community about the importance of broad community participation, if the community's priority is to provide sport and recreation for an identified target group, then the activities provided should meet the needs and interests of that group.

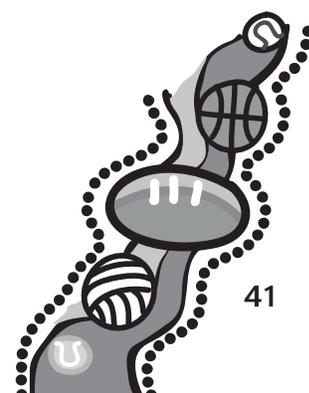
*Measurement:* The most likely source of the appropriate documentation to support this indicator would be a letter from the council chairperson or other community leader. Meeting minutes might be an alternative source of information. Extension of the sport and recreation officer's contract is not necessarily a good indicator of whether the community is satisfied.

Ideally, the sport and recreation officer and the council will have agreed to a plan of activities and objectives at the beginning of the officer's contract or the beginning of the year as the case may be. Major variations to the agreed-upon program would be discussed during the year and documented. At the end of the year, it should not then be difficult for the council to assess what has been provided against what has been agreed to.

It may be desirable to ask the council to rate satisfaction with the program against a number of criteria such as: number of activities; types of activities; frequency of activities; times when activities are provided; other activities (e.g. training of local people).

*Limitations:* The endorsement of the work of a sport and recreation officer by the council or other community leadership group may not necessarily represent the opinion of the wider community. However, the sport and recreation officer needs to work within existing power structures in the community. If there are other identifiable leadership groups in the community, the sport and recreation officer may also wish to seek the opinion of these groups.

*Related indicators/supporting information:* It might be useful to keep a running audit of what is being provided; e.g. the number and types of activities. This 'history' may provide useful information for future planning. It would be desirable to seek suggestions from the community as to how the program provided could be changed or improved and the sport and recreation officer could also give an assessment of his/her current capacity to meet the expressed needs of the community.



## 8. Confidence that the sport and recreation officer expresses in the current capacity of local community residents/assistants to organise and run activities themselves

*Description:* Program viability and sustainability indicator. Indicates whether the community could run the sport and recreation program (or some components of it) were the sport and recreation officer to leave the community.

*Priority:* High

*Rationale:* While indicator no. 4 has to do with quantity of assistance, this indicator is more to do with quality. Capable, trained, literate and reliable assistants are an asset to any manager or organisation. In Indigenous communities, they are especially valuable as they are the key to the future of sport and recreation programs in the community.

*Measurement:* The sport and recreation officer works closely with his/her assistants and is the best person to comment on the capacity of assistants to organise activities themselves. The sport and recreation officer could classify the capacity of assistants into categories such as high, medium, and low. A rating could be given in each of the areas of: current level of skills (which could be further divided into sporting, administrative, management of activities, other); experience; reliability; and motivation.

The officer should categorise the ability of assistants as he/she assesses it to be at the end of the reporting period as this will indicate whether the community could cope on its own were the sport and recreation officer to leave the following day. The sport and recreation officer may be able to see potential for development in his/her assistants, but this is not the focus of this indicator.

*Limitations:* The measurement of this indicator is subjective. However, it could be backed up with documentation such as the CDEP hours worked, certificates or other qualifications obtained by local people, and evidence of activities managed. This may not be necessary. Trust needs to be placed in the sport and recreation officer's ability to make an honest and fair assessment of the assistance he/she receives.

Sport and recreation officers may see a good result on this indicator as a threat to their jobs. That is, if they have been so successful in training local people that they can run the program themselves, they are not really needed in the community any longer. If this were really the case, such an outcome should be seen as extremely positive and it means that this sport and recreation officer (who should be rewarded for his/her efforts) can now move on to assisting another community.

*Related indicators/supporting information:* As noted above, supporting documents could be provided to show evidence of training or other involvement of local people, for example, first aid certificates, coaching or umpiring certificates, certificates of participation in leadership courses. The sport and recreation officer could also provide information on any skill transfer activities that have taken place because much of the training provided will be 'on the job' rather than through formal courses.

## 9. Confidence that the sport and recreation officer expresses in current working relationships with key groups in the community

*Description:* Program viability and sustainability indicator. Indicates the extent and strength of cross-agency relationships in the community. Indicates the ability of the sport and recreation officer to draw on other resources in the community.

*Priority:* High

*Rationale:* A key theme in the literature on community programs was the need for community organisations to work together. The importance of working together was particularly stressed during one of the community visits. This community has been especially successful in tackling juvenile crime through a 'whole-of-community' approach, which incorporates the sport and recreation program.

*Measurement:* The key agencies in the community need first to be identified. They are likely to include the council, other community leadership groups, the health clinic, the school, the CDEP office, and the police. In some communities, youth groups, women's and men's groups and other groups may be prominent.

While the sport and recreation officer's assessment of his/her confidence in cross-agency relationships will be subjective, this should not necessarily be seen as a limitation. Over time, the officer will have a sense of whether relationships are strengthening or not and whether this is having an impact on his/her work.

This variable could be categorised as follows: negative relationship; no relationship; partially productive relationship; fully productive relationship, don't know/unsure. The first category recognises that in some cases, a community group can actually be obstructive. The assessment should be completed for each key group identified.

The variable could be further broken down into more detailed and meaningful categories. A working relationship could be described by the degree of involvement, e.g. occasional sharing of information; regular meetings; sharing resources (physical, human, financial); joint projects.

(This indicator and the previous one are based on the work of Hawe et al. (1999) who developed indicators to map the domains of capacity-building and high-quality practice in health-promoting organisations, groups and communities.)

*Limitations:* Identifying key groups in the community may not always be as straightforward as it appears. The sport and recreation officer should in all cases consult widely with the community to develop relationships and build up knowledge of community processes. In larger communities, the process is likely to be longer and more difficult. Some sport and recreation officers may also be tempted to use poor working relationships with the community as an excuse for failure to achieve outcomes. However, this indicator is not a stand-alone measure, and should be considered in conjunction with information provided by the other indicators such as indicator number 7.

*Related indicators/supporting information:* Indicator 7. If indicators 7 and 9 provide contradictory information, supporting documentation such as the minutes of meetings may be necessary. An alternative source of information would be the opinion of the community groups as to their assessment of their working relationship with the sport and recreation officer. An external party would probably be best placed to elicit this information from the relevant groups.

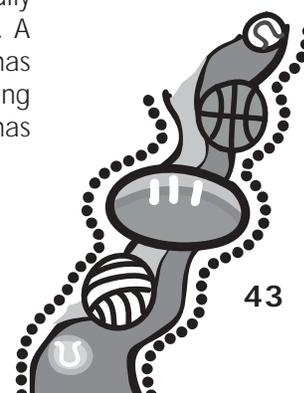
## 10. Succession planning for sport and recreation

*Description:* Program viability and sustainability indicator. Indicates whether planning for the future of sport and recreation in the community has occurred.

*Priority:* Medium

*Rationale:* High turnover of sport and recreation officers is an ongoing problem, causing frequent disruption to programs. As well as reducing turnover, communities need to plan for the continuity of programs once the sport and recreation officer has left the position and/or the community. Continuity of programs is a prerequisite to the achievement of outcomes.

*Measurement:* Evidence of a plan will need to be produced for this indicator to be fully satisfied. Various intermediate steps could indicate progress towards developing a plan. A possible way of categorising this variable is: initial discussions have occurred; planning has started but a final plan has not been agreed on; a plan has been developed and is awaiting community endorsement; plan developed and endorsed by the community; existing plan has been reviewed.



Where a plan has reached final development stages, the elements of the plan could be assessed. There may be a number of elements that are common to good succession plans. More work needs to be done to ascertain what these are but they could include: training and roles of staff; identification of future resources; planning for maintenance and upgrade of facilities and equipment; and managing relationships with other agencies in and outside of the community. Once the essential elements have been identified, an assessment could be made as to whether the plan satisfies each area.

Planning alone does not guarantee success, and it is possible to achieve success in the absence of a plan. This indicator is therefore considered to be of medium priority.

*Limitations:* Having a plan does not mean that it will be actioned.

If a sport and recreation officer has not been able to develop a plan or have it endorsed, then this could relate to weak or obstructive relationships with the council or other agencies in the community. This should be captured through indicator 9.

*Related indicators/supporting information:* Where it has been difficult to develop a plan, sport and recreation officers should document the problems they are having so appropriate assistance can be given. Indicators 2, 4, 5, 7, 8 and 9 are related to this indicator.

### 11. The sport and recreation officer's assessment of the adequacy of current facilities and equipment

*Description:* Program viability and sustainability indicator. Indicates whether the equipment and facilities currently available are sufficient and in sufficiently good condition for the sport and recreation officer to be able to do his/her job.

*Priority:* Medium

*Rationale:* The sport and recreation officer needs a certain amount of basic sporting and recreational equipment and facilities in order to do his/her job. Sport and recreation officers and community members can be very creative in working with minimum facilities and equipment, but there is a limit to what can be achieved and what should be expected to be achieved without adequate resources. Maintaining and upgrading facilities is an ongoing issue and is expensive. Basic equipment needs to be purchased regularly. Equipment for specialised sports is frequently not available at all.

*Measurement:* The sport and recreation officer should rate the quantity of equipment (e.g. good, sufficient, insufficient), and the quality of equipment with respect to need for repair and/or replacement for specific items. This would then be repeated for facilities. The assessment should be made at the end of the reporting period.

Over time, it may be possible to set benchmarks for the minimum levels of equipment and infrastructure required. If such benchmarks can be established, this indicator could be measured quantitatively.

*Limitations:* It may be difficult to compare this information between communities due to the subjective nature of the words 'good', 'sufficient' etc. Even within communities, opinions may differ from one sport and recreation officer to the next and could vary with their own sporting or recreational interests, or with the changing interests of community members. Assessing equipment or facilities as insufficient or needing major repair or replacement should be a trigger for follow-up by the relevant community council or state authority. This is the major purpose of this indicator - so that rectifying action can be taken.

*Related indicators/Supporting information:* An audit of what equipment and facilities are available will provide a useful source of information that can be monitored over time for significant improvement or deterioration. The sport and recreation officer should also detail any special needs or problems.

## Participation indicators

### 12. Participation rate for community sport and recreation programs

*Description:* Participation indicator. Indicates which sections of the community are participating in sport and recreation programs (and as a subset, those that have a physical activity component) and in what proportions. May also be a partial measure of community support and ownership.

*Priority:* High

*Rationale:* Numbers of participants are already collected by many sport and recreation providers and funding bodies. By extending the collection of numbers to the calculation of a population rate, it will be possible to put these numbers in the context of the size of the community population. Monitoring the rates of community participation in sport and other activities will give some indication of who the sport and recreation programs are reaching, and who is being missed. In turn, this will give some indication as to which groups need greater targeting - in consultation with the community - for physical or other activities.

While the three communities visited did not place great priority on physical health benefits through physical activity, physical activity is recognised as a protective factor against developing certain chronic diseases, such as diabetes and heart disease, which the Indigenous population experiences at younger ages and higher rates than the non-Indigenous population. There is currently little information on the participation of Indigenous people in physical activity. Participation rates for the physical activities provided through the sport and recreation program are therefore a first step in gaining more understanding of participation levels. In the long-term, these rates may also be compared with chronic disease levels in communities.

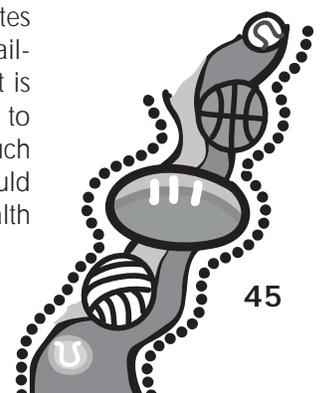
If participant numbers are low, then this can be an indication of low support for the programs being run. Participation would therefore also seem to be a reasonable indicator of community support. However, people may participate in other ways such as through volunteering, so this indicator could only be seen as a partial measure of community support.

*Measurement:* There are a number of groups for whom participation rates could be measured, including the total population of the community, and particular groups in the community (age, sex, identified target groups such as petrol sniffers). A rate may be calculated for their participation in all sport and recreation programs, and/or in those with a physical activity component.

#### *a) Using program participation records*

Measurement of the participation rate is in essence quite simple. It is the number of people participating divided by the population. This can then be broken down by sex and age groups.

In practice however, there are some complications. Firstly, it will be necessary to have reasonably accurate population counts by age. The Census of Population and Housing is the source of official population statistics. Community population counts by single year of age are available from the Census down to what is known as Indigenous location (ILOc). ILOCs consist of a minimum of 50 people. If numbers for a particular age are very small, the numbers will be confidentialised (i.e. randomised to either 0 or 3). The Census is conducted every five years so the further from the Census year, the less accurate the figures will be. Population estimates (where Census figures are adjusted for population growth for intercensal years) are not available at the community level. Communities are not always satisfied that the Census count is accurate and often keep their own records. Small communities in particular may be able to generate their own population list. The community will be aware of local fluctuations such as those due to seasonal changes, carnivals, funerals etc. Therefore consultation should be conducted with the key community organisations (particularly the council and the health centre) about which figures to use, and the figures should be monitored regularly.



Secondly, in order to assess the proportion of the population who have participated, each participant in programs should be counted only once. If the same people are participating in several activities and are counted in each of these, the rate of participation would reflect episodes of participation rather than people participating. The assessment of episodes of participation per person might also be of interest, but the collection of such data is logistically more difficult.

Thirdly, exactly what is considered as 'participation in programs' needs to be defined. Ideally, it would be desirable to measure levels of participation (e.g. none as opposed to some; low, medium and high levels of engagement) and for physical activities, intensity of activity engaged in (e.g. vigorous, moderate, light). This is somewhat ambitious for the present. It would be quite a step forward to simply achieve the recording of who is participating in any type of sport and recreation activity. Even this will require some quite careful recording by the sport and recreation officer. The longer the reporting period and the larger the community, the more difficult this will become, as people move in and out of programs and the community. However, if recording (for example, in a simple spreadsheet) becomes an everyday part of the sport and recreation officer's administrative duties (or if he/she trains someone else to do it), the task will become easier over time.

Fourthly, the period of time over which the participation rate is to be averaged needs to be decided. It could be the whole year, a block of time such as a ten-week block, a number of snapshot weeks throughout the year, or reflective of program provision e.g. the footy season versus the 'off' season.

*(b) Using a community survey*

An alternative to measuring participation through administrative records is to conduct a survey on a regular basis, say annually.

Conducting a survey raises different issues such as sample design, questionnaire design, cultural appropriateness of questions and methods used to measure participation (e.g. self-report, actual measurement of activity through the use of pedometers), acceptance by the community of the survey, method of administering the survey (e.g. through personal interview or written questionnaire), response rate, data entry, editing and analysis.

A community survey could be quite short and simple depending on what it is one wants to find out. Determining the exact purpose of the survey is clearly very important. For example, capturing information to measure a person's total daily participation in all types of physical activity is different to measuring participation in the sport and recreation programs offered through the community sport and recreation officer.

The ABS' National Health Survey (NHS) and the Indigenous Social Survey (ISS) incorporate questions on participation in physical activity or sport. Although the data are not reportable at Indigenous community level, the questionnaires may provide a starting point for developing community survey questions. For example, the 2001 NHS included an 'exercise' module which is designed to assess exercise levels as a health risk factor (sedentary, low, moderate and high). Respondents were asked if they had walked for sport, recreation or fitness in the previous two weeks, and if so, how often they walked and the total time spent walking. Respondents were then asked about whether they had, in the previous two weeks, undertaken any moderate and/or vigorous exercise. These questions were asked of adults and on behalf of children. These questions were not asked of Indigenous respondents in remote areas because testing in the development stage of the survey suggested that the questions would not produce reliable results for this population group (personal communication, Lisa Connolly, National Centre for Culture and Recreation Statistics, ABS).

The ISS includes questions about participation in sport and physical activity or sport, and the nature of that participation (as a player or sporting participant, coach, referee, official, committee member, administrator or other role) in the previous 12 months. Data are also being collected about involvement in social activities and attendance, as spectator, at sporting carnivals and matches. These questions will be asked of respondents aged 15 years and over, including those living in remote areas (personal communication, Lisa Connolly, National Centre for Culture and Recreation Statistics, ABS).

*Limitations:* These are mainly covered under the measurement issues above.

There are no benchmarks for participation rates although a community may set some targets to aim for once it has established existing participation levels. In general, an increasing rate of participation should indicate greater success of the sport and recreation programs. However, the accuracy of recording and the uncertainty of population counts have the potential to provide misleading results.

Where measuring participation in physical activity is the aim, it needs to be remembered that the sport and recreation programs are not the only way in which people partake in physical activity. Therefore participation in programs can only be a partial measure of people's physical activity levels. The school is the most likely source of other organised physical activities for children. Informally organised games will also be a source of physical activity as will walking and physical exertion for hunting or other cultural activities.

Surveys may be viewed negatively by communities unless they feel there is some benefit to taking part. There are a host of organisations and researchers running surveys in communities, usually with little tangible result for the community itself. The success of the survey will depend on its community acceptance.

Surveys are snapshots of a situation at any time, whereas administrative data such as the sport and recreation officer's records could provide information over time and allow for the tracking of individual participants or target groups. The burden of reporting - whether it be on the sport and recreation officer or community residents - needs to be weighed up against the quality and value of the information gathered.

*Related indicators/supporting information:* If a survey approach were taken, the survey could be used as a vehicle to find out about other aspects of sport and recreation in the community such as satisfaction with programs and barriers to participation.

## **Group 1 Outcome Indicators**

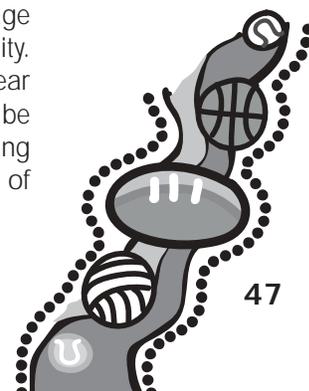
### **13. Episodes of 'minor' (youth) crime**

*Description:* Group one outcome indicator. Over time, indicates whether the sport and recreation program has been successful in reducing the incidence of crime such as property offences and theft.

*Priority:* High

*Rationale:* This was a high priority in all communities visited and was also a strong theme throughout the literature.

*Measurement:* The definition of 'youth crime' needs to be established. The definition of 'juvenile crime' used by the police may not fit with community needs. There appears to be an age at which minor crime such as property offences drops off. This can vary with the community. In one community, the problem group may be young teenagers, in another, 18 to 30 year olds may be the offenders. For any comparisons between communities, definitions need to be standardised; however, the community may wish to also use its own definitions for monitoring groups within the community. Alternatively, it may be easier just to measure overall levels of particular offences.



The type of crime to be monitored should also be defined. Most likely, this will cover property offences such as theft, break and enter, vandalism and other relatively 'minor' crime.

Discussions should be held with the local police to ensure that the data are recorded in and can be extracted from the police system. Preliminary discussions have been held with the NT police statistician about the nature and accuracy of data collected through PROMIS but it would be necessary to deepen this knowledge.

The sport and recreation officer should request figures on a regular basis from the local police station so the data can be examined for any trends. A benchmark should be established before regular monitoring begins. This may require looking back at data over at least a 12-month period to allow for fluctuations and to detect any patterns such as seasonal variations. Local police officers will also be able to provide a context for the data.

A 'rate' rather than an absolute number may be a preferred measure, particularly in larger communities and also if comparisons are to be made between communities. This would require the measurement of the community population and/or the population of the target group for the denominator. If this information is already being collected for indicator 12, then a rate can be easily calculated (although the same measurement and interpretation issues will apply).

*Limitations:* Other community influences are also likely to impact on property crime, such as other community programs, seasonal influences and political influences. Therefore it is important to consider the statistics on crime in conjunction with other community information.

Not all episodes of youth crime may be recorded. Sometimes, an informal caution may be issued and no further action taken. Such incidents are not recorded in the information system.

The literature on evaluations of crime interventions indicated that this can be an area fraught with difficulties. Evaluations frequently fail to show any significant reduction in crime rates. A factor that may mediate this is the setting - remote discrete communities. In a less remote setting, other influences are likely to be numerous and frequently, there may not be knowledge of these influences. In remote communities, changes - such as the increase in availability of alcohol due to the opening of the road after the wet season, or a family rift - become more quickly apparent.

*Related indicators/supporting information:* Additional sources of information include the Night Patrol where this service is operating in the community. Night patrols sometimes keep statistics.

#### 14. School attendance

*Description:* Group one outcome indicator. Indicates whether the sport and recreation program has been successful in increasing attendance at school.

*Priority:* Community-specific. The priority will depend on whether school attendance is an issue in the community and the importance that the community places on this outcome.

*Rationale:* Various sport and recreation programs have been able to demonstrate a relationship between their activities and school attendance. The relationship operates through the simple mechanism of tying an attractive activity (e.g. sport, after-school activities) to a motivating force (e.g. regular school attendees receive a reward on completion of the program; school attendance is a prerequisite to participating in after-school activities).

Increasing school attendance is a key factor in improving learning. Many community members are concerned with the levels of school attendance.

*Measurement:* School attendance records are the most obvious source of this information. However, the current method of reporting school attendance to the NT Department of

Employment, Education and Training does not indicate whether the child attended for a full day. In most schools, this information will be recorded in school roll books and on class lists, therefore these are generally a better source of information than the official school statistics. However, one should consult with the school about their recording practices and whether any additional recording methods would be beneficial. As with other indicators, if comparisons are to be made between communities, recording practices would need to be standardised.

The existing levels of school attendance should be established before the inception of the program. As a minimum, the previous twelve months of attendance data should be examined for fluctuations. Attendance often drops off in the dry season for example, as people move to outstations. Consultation with teachers will provide valuable contextual information as to usual patterns of attendance.

The variable is expressed as the number of participants attending school for the full day divided by the number of eligible children (expressed as a percentage).

*Limitations:* Many factors can affect school attendance and the potential of sport and recreation programs to affect school attendance in the long-term is unknown.

*Related indicators/Supporting information:* The sport and recreation officer should attempt to inform him/herself of possible external factors that could influence school attendance and document these.

## **Group 2 Outcome Indicators**

Indicators in group two are intended for further research and development. The indicators are categorised as community-specific because their relevance will depend on the priorities of the community. The indicators have not been assessed against the indicator criteria as it is considered premature to do so.

### **A. Employment of local residents in sport and recreation or related work**

*Description:* Group two outcome indicator. Indicates the impact of the sport and recreation program on paid employment opportunities in the community.

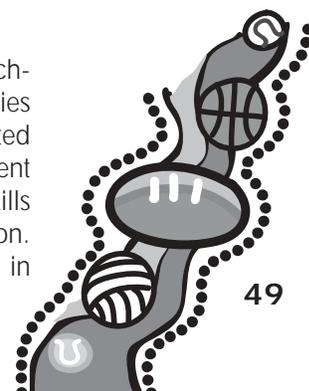
*Priority:* Community-specific

*Rationale:* There are few opportunities for employment in Indigenous communities. Apart from the obvious relationship with poverty, unemployment can lead to a sense of hopelessness among young people who may wish to stay in their community but cannot see a way out of poverty and its associated disadvantages. Sport and recreation is an avenue for meaningful employment which in turn can lead to improved health and wellbeing for employees and their families. The employment of local people in sport and recreation management and delivery is also a critical success factor for the sustainability of programs in the community.

*Measurement:* The number of local residents employed in the delivery and management of sport and recreation should be recorded at the beginning and the end of the reporting period and any increases reported. Increases in the numbers employed are likely to be incremental (see the section on limitations for more detail).

A standard might need to be set such as 'number of employees who are paid at least four hours a day' (standard CDEP hours) so that those who are working very minimal amounts are not included. For such workers, the financial gains will be very limited.

A variety of jobs could come under the sport and recreation umbrella e.g. conducting coaching clinics, maintaining the swimming pool, administrative duties, maintenance of facilities and equipment, or assisting with lessons at the school. It is fairly clear that these are related to the sport and recreation program. However, in some cases, the link between employment and the sport and recreation program may not be so obvious but could be a result of the skills and leadership that a person has developed through being involved in sport and recreation. For example, a former assistant with the sport and recreation program may be successful in gaining employment in the council offices.



*Limitations:* Numbers do not say anything about the quality of assistance but this is captured through indicator 8.

Employment will be limited by the number of CDEP places available, which will place constraints on the ability of the sport and recreation program to impact on employment. CDEP also currently only funds participants for four hours a day. The CDEP wage is only slightly above the unemployment benefit which limits the financial gain and can reduce the incentive to work. Even where employees are working the maximum allowable CDEP hours, it is debatable as to how meaningful this employment is and to what extent it can impact on poverty. Some communities offer top-up wages so that extra hours can be worked. Such issues need to be considered when deciding on a level of financial benefit that is meaningful for the purposes of this indicator. Comparing an employee's wages with the ABS' average weekly earning figures may be of assistance.

CDEP does not operate in all communities. There will be even less opportunities for paid employment in communities where there is no CDEP.

In any case, increases in the numbers employed are likely to be small, but even small gains should be seen as a success. The focus should be on any increase in employment rather than achieving a particular benchmark such as a certain number of employees per head of population. Where employment is not increasing over a period of time, other indicators e.g. those relating to funding, quality of assistance, working relationships and succession planning should be looked at, as well as considering other forces in community life and external political decisions such as those regarding the administration and funding of CDEP.

Having a job is not the only factor impacting on poverty in Indigenous communities. Family obligations may mean that the employee sees little of the money earned. Costs of food and other commodities are also high in remote areas, leading to a drain on resources.

*Related indicators/supporting information:* Indicators 4 and 8; a brief description of the type of work each employee is engaged in should be included to show how the work relates to sport and recreation; any issues that impact on the opportunities for employment should be documented by the sport and recreation officer.

## B. Health clinic attendances

*Description:* Group two outcome indicator. Health clinic attendances are a crude measure of community health status.

*Priority:* Community-specific

*Rationale:* Increased participation in physical activity should, over time, lead to improved physical and mental health status. Active and non-active participation in sport and recreation may also lead to higher self-esteem, better social networks, reduced boredom and reduced substance use, all of which could be expected in the long-term to assist in reducing the number of violent and substance use-related incidents in the community. Health clinic data are one way of obtaining an indirect measure of health status. Health clinic data are in most cases already being collected and therefore provide a source of data that does not require further data collection processes such as surveys.

*Measurement:* Potentially useful data include: total number of attendances (by age and sex); number of attendances for injury; number of assault-related injuries; number of alcohol or other drug-related injuries; incidence (new cases) of relevant chronic diseases such as Type 2 diabetes and heart disease.

Health clinics maintain patient records. They may use either a paper-based (cards) or computer information system. In the Northern Territory, the Primary Care Information System (PCIS) is under development. This will lead to more clinics recording patient details on computers which, among other things, will mean easier data extraction.

In theory, it should be possible to obtain the total number of clinic attendances for the reporting period, and a variety of breakdowns of interest such as for particular conditions. For health conditions such as diabetes and heart disease, incidence (new cases) is recommended for use rather than prevalence (new plus existing cases). Over time, increased physical activity should lead to the prevention of certain diseases developing which in turn should lead to decreased incidence of disease. It can also assist with control of the disease for those who already have it but this is more difficult to measure.

*Limitations:* There are a number of issues to consider when evaluating the usefulness of these data. Changes in attendance at a health clinic could be because of a variety of reasons such as special screening programs, health promotion campaigns, the presence of Aboriginal health workers, the availability of female and male health workers and personal and avoidance relationships. Therefore, increased attendance is not necessarily an indicator of worsening health, nor is decreased attendance necessarily an indicator of improved health.

Clinic data only capture information about those who attend. People do not always attend clinic in their own community. They may attend clinics in other communities or they may attend hospital instead of the community clinic. Certain population groups are known to attend health clinics less frequently than other groups. Young males for example do not usually attend clinic although this may change if a male health worker is on the staff. Therefore, the data will not be available for measuring changes in health status of these groups unless they are particularly targeted for screening.

Populations fluctuate considerably in some communities. For example, in the wet season, people move in from outstations. Health clinic attendances are likely to increase during this period (although they may also decrease for other reasons, e.g. less access to alcohol). Families move in and out of town for ceremonial business. This can also affect the number of attendances. Fluctuating population numbers also affect the denominator in the calculation of any population-based rate (if a rate is desired in preference to a number). Consequently rates may be misleading. This is also discussed under participation indicators (indicator 12) above.

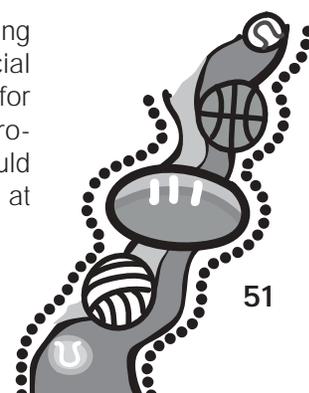
Recording of patient data is likely to vary within and across communities and information may be cumbersome to extract if paper-based records are used. Although the PCIS should assist with standardisation of data collection and recording, not all clinics will be part of the PCIS (for example, Commonwealth-funded Aboriginal Medical Services).

Implementing information and monitoring systems is one of the objectives of the Primary Health Care Access Program (PHCAP), a new way of delivering health services to Indigenous people in the Northern Territory. In time, this may assist with the consistency and regularity of routine data reporting.

Confidentiality may be an issue in some communities particularly where numbers are small.

It may take a long time to see changes in health status. Chronic diseases are the end result of a lifetime of exposure to risk factors. Physical activity is only one of a number of risk factors for chronic disease and it will be difficult to attribute changes in chronic health conditions to sport and recreation programs. However, it may be possible to say that sport and recreation has been one component of a long-term community strategy to reduce the incidence of chronic disease.

Personal surveys are an alternative way of collecting information about health status. Existing surveys such as the ABS' National Health Survey and the ABS' forthcoming Indigenous Social Survey (neither of which report community-level data) could be used as a foundation for developing community questionnaires. Surveys would need to be tested for cultural appropriateness as the literature indicated that this is frequently a problem. The community would need to support the survey before it could be run. It would then need to be repeated at regular intervals, e.g. yearly.



### C. Episodes of family violence

*Description:* Group two outcome indicator. Family violence is an indicator of community 'wellness'. Family violence is also often strongly associated with alcohol abuse and may therefore be an indirect indicator of alcohol abuse in the community.

*Priority:* Community-specific.

*Rationale:* Family violence is an issue of great concern to many Indigenous communities. Sport and recreation, in combination with other strategies, may be able to affect family violence indirectly through increasing self-esteem, increasing social cohesion, providing relief to boredom and stress, and providing an alternative to substance use.

*Measurement:* The definition of family violence and a methodology for its measurement need to be agreed upon. Family violence is a broader concept than domestic violence. The concept has been summarised as follows:

- family violence may involve all types of relatives. The victim and the perpetrator often have a kinship relation
- the perpetrator of violence may be an individual or a group
- the victim of violence may be an individual or a group
- the term 'family' means 'extended family' which also covers a kinship network of discrete, intermarried, descent groups
- the community may be remote, rural or urban-based: its residents may live in one location or be more dispersed, but nevertheless interact as a social network
- the acts of violence may constitute physical, psychological, emotional, social, economic and /or sexual abuse
- some of the acts of violence are ongoing over a long period of time, one of the most prevalent examples being spousal (or domestic) violence (Memmott et al. 2001).

Sources of information on family violence include police records, safe house records and night patrol records.

Police and community members do not always agree on what constitutes family violence. This can lead to disagreement over how it is recorded. Safe house records may not match police records for example.

*Limitations:* Many factors at a personal, community and historical level are likely to influence family violence and it may not be realistic to expect the sport and recreation program to be able to effect changes in such a complex area.

Family violence is a sensitive issue and in some communities, there may be an unwillingness or lack of readiness to discuss the topic. The sport and recreation officer needs to be aware of the community's needs and priorities.

Small numbers mean that caution should be used in the reporting of any statistics on family violence because of confidentiality. Small numbers also limit interpretation of change over time.

### D. Incidents of alcohol or other drug-related offences

*Description:* Group two outcome indicator. Indicator of the levels of drug-related crime and substance abuse in the community.

*Priority:* Community-specific

*Rationale:* The sport and recreation program may be able to indirectly affect levels of substance abuse in the community by providing alternatives to crime, providing positive social networks and building self-esteem and leadership skills.

*Measurement:* Data from the police information system should be used to measure this indicator. This may be supplemented by information from the Night Patrol where statistics are kept.

*Limitations:* Many factors affect substance use. The use of alcohol and other drugs such as marijuana is widespread in some communities and is not likely to be easily addressed. The sport and recreation program is most likely to be effective in tackling this area when used as part of a whole-of-community approach.

Not all episodes of drug-related offences will be recorded in the system or will be identified as drug-related.

#### E. Night patrol client interactions

*Description:* Group two outcome indicator. Indicator of the level of disturbances occurring during the night. These are often alcohol-related but may also be related to family violence or youth issues. Therefore this indicator could be seen as an indirect indicator of community 'wellness'.

*Priority:* Community-specific

*Measurement:* Night patrol records. The definition of a 'client interaction' needs to be agreed upon.

*Limitations:* Not all communities have night patrols and not all night patrols record statistics. Comparing across communities may pose difficulties because different recording methods may be used.

#### F. Number of (petrol) sniffers

*Description:* Group two outcome indicator. Indicates the level (numbers and/or quantity) of sniffing of petrol and/or other solvents in the community.

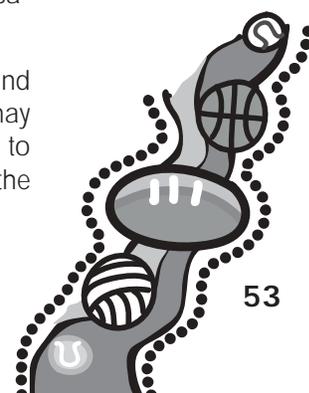
*Priority:* Community-specific.

*Rationale:* Sniffing affects small pockets of individuals, usually young people, sometimes with devastating results. Sniffing is a problem only in some communities and may fluctuate considerably over time. Sport and recreation can provide an alternative to sniffing. Petrol sniffers can be directly targeted, at least temporarily, through sport and recreation programs by tying extrinsic rewards to the cessation of sniffing e.g. desirable activities such as discos and access to the recreation hall. In the long-term, positive social interactions, increased self-esteem and hope for the future may assist ex-sniffers to continue to abstain from using the substance.

*Measurement:* Sniffers, particularly chronic sniffers, are usually a small and readily identifiable group in the community. Therefore it should be sufficient to keep track of their numbers. Tracking the progress of ex-sniffers may also be desirable. A baseline figure should be established and monitored over time.

The participation rate of the group in physical activity can also be monitored through indicator 12 above.

*Limitations:* Like other forms of substance abuse, sniffing has many underlying causes and the sport and recreation program's ability to effect change may be limited. Some sniffers may have progressed beyond the point at which sport and recreation programs may be able to have an impact. It may be necessary to consult with relevant health professionals about the person's mental and neurological condition.



## G. Episodes of self-harm

*Description:* Group two outcome indicator. Indicator of the level of social and emotional distress in the community. Indicator of community 'wellness'.

*Priority:* Community-specific.

*Rationale:* Anecdotal evidence suggests that sport and recreation in combination with other interventions can have an effect on the level of self-harm in some communities. Not all communities experience problems with self-harm. Building youth self-esteem and self-efficacy, developing leadership and other skills, and providing alternatives to boredom are some of the ways in which sport and recreation programs may be able to assist in the prevention of self-harm.

*Measurement:* Although self-harm can refer to different behaviours (e.g. substance abuse), the intended meaning here is that of self-inflicted injury and attempted/completed suicide. This is also the manner in which 'self-harm' is recorded in mortality and morbidity collections. The number of suicide cases in a year is likely to be small and it will usually be clear to the community whether the death was the result of a suicide or an accident (although all suspected suicide cases are referred to a coroner for confirmation). The source of information would therefore be either through the clinic, the police, or the coroner's report. The source of information on attempted suicide and self-inflicted injury will most likely be the health clinic. Not all episodes may be reported.

*Limitations:* Suicide and self-harm are complex issues. Suicide in the Indigenous context may differ from non-Indigenous suicide. Community people talked about the signs for suicide as often being very difficult to spot, although this is not unique to Indigenous communities. Therefore, it may be very difficult for the sport and recreation program to have an impact on this area. Some communities have had success, however, where community residents have acknowledged and addressed the problem together, using a variety of strategies, including sport and recreation programs.

Self-harm is a highly sensitive topic. This can affect the accuracy of recording. Small numbers mean that caution should be used in the reporting of any statistics on self-harm because of confidentiality. Small numbers also limit interpretation of change over time.



## 6. CONCLUSIONS

Sport and recreation is a source of great enjoyment for young Indigenous people on communities. As discussed in the literature review, sport and recreation also has the potential, directly or indirectly, to have an impact on health and social outcomes. Programs may divert young people from crime, motivate them to attend school, build leadership skills, foster community role models and provide opportunities for employment and volunteering. As reported by members of remote Indigenous communities, sport and recreation may provide alternatives to antisocial behaviours such as alcohol abuse and this can have flow-on effects for the community in terms of reduced violence and injury. Indigenous people participate in community sporting events with great enthusiasm, skill and passion, and this has been reported to bring pride and cohesiveness to communities.

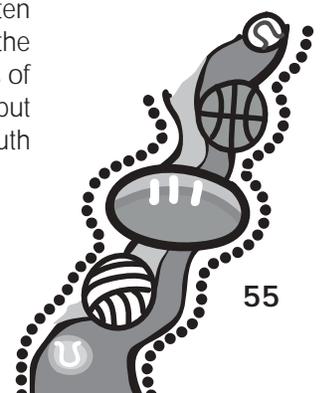
Sport and recreation programs are in great demand in Indigenous communities. People see sport and recreation as a very positive influence in the community and they want more of it more often. This often leads to considerable burden being placed on the community sport and recreation officer who sometimes feels that he/she is on call 24 hours a day. This can lead to burn-out, meaning that the sport and recreation officer may only stay a short time in the community.

At the same time, sport and recreation programs are expensive to provide and support. Communities rely on government and other grants as well as their own fundraising efforts. Grants often need to be applied for annually. In addition to the paperwork and time required, the uncertainty surrounding future provision of funds can affect continuity of officers and programs.

This project has investigated potential indicators for the routine measurement and monitoring of health and social outcomes from sport and recreation programs in discrete Indigenous communities. The findings presented in this report do not provide the answer to the question of how to measure such outcomes. However, they represent a start in the process of sorting out what is achievable now and what needs further work. This is not the first report to deal with outcome evaluation, whether it be of sport and recreation programs or other programs, and the conclusions here are not vastly different from what has been reported before. That is, outcome evaluation is complex and does not always produce the results that were expected or desired.

The project findings indicate clearly that the measurement of health and social outcomes requires knowledge of what has gone before. It is difficult if not impossible to attach meaning to outcomes without understanding what processes have led to those outcomes (and therefore how they can be repeated). Two additional types of indicators have therefore been proposed for use together with outcome indicators: 'program viability and sustainability' indicators; and participation indicators. The use of these three types of indicators together should provide a balance of the types of information needed for the evaluation of Indigenous community sport and recreation programs and decision-making. Both quantitative and qualitative methods are suggested for the measurement of the indicators.

The findings also highlight the fact that many sport and recreation programs currently operating in Indigenous communities do so in an environment of high turnover of officers and programs and low community involvement. Despite a general understanding that programs need to function as part of a 'whole-of-community' approach to be successful, there often appears to be little integration of the sport and recreation program with other parts of the community. Sport and recreation officers struggle on alone, trying to provide for the needs of many, with the support of few. They do much good work and are usually highly valued, but are often only fully appreciated once they have left. This may lead to a resurgence in youth problems as youth are once more faced with the prospect of having nothing to do.



In such an environment, measuring health and social outcomes from sport and recreation programs may be somewhat premature. For this reason, the indicators which have been proposed relate in large part to the processes that will lead to viability and sustainability of sport and recreation programs. These indicators deal with things like turnover of sport and recreation officers, funding stability, community support, involvement and employment of local people, succession planning, adequacy of facilities and equipment, and access to these facilities and equipment at critical times.

The turnover of sport and recreation officers and the length of time the person has been in the position in the community have been listed as prerequisites for the measurement of the other indicators, whether they be viability and sustainability indicators, participation indicators or outcome indicators. If turnover is high and if the officer has only been in the community for a few months, these indicators are like a red flag which caution the would-be evaluator against proceeding.

The indicators attempt to capture what communities have expressed many times in the past - the elements that will make programs work such as community ownership and support, community involvement in planning and delivery, and skills transfer to local residents so that they can carry on once the sport and recreation officer leaves the community. Some sport and recreation officers are already working in this manner but for others it will mean changing the way they operate. It requires more effort and time on the part of the officer and the community to build relationships, particularly initially. However, in the long run, sport and recreation officers will benefit from the additional support and will be less likely to suffer 'burn-out'. Government departments, community councils and other managing bodies need to recognise and embrace such an approach by adopting systems and structures which support the sport and recreation officer to work in this manner. For example, it may be worth considering the development of an Indigenous sport and recreation officer accreditation scheme. Sport and recreation officers may require additional training in areas such as time management, planning, assertiveness, skills transfer and community development, as well as a stronger network of support from both inside and outside the community. Collection of the information to enable assessment of outcomes is also a new task and will require some additional training.

Assuming these processes can be put in place and maintained, can health and social outcomes be achieved and measured?

Firstly, sound practices should lead to increased participation. Participation is a prerequisite to achieving health and social outcomes. Participation may involve the whole community, or target groups such as certain age groups, young women, first-time offenders, or petrol sniffers. This will depend on the community's needs and priorities. While whole-of-community participation may be desirable from a western health perspective, it may not reflect local priorities. It may also be necessary to look at different models of sport and recreation delivery from those used in urban areas.

Where it is measured at all, participation is currently measured in terms of numbers only. But this does not tell us in what proportions the community is participating. Therefore, it would be preferable to work towards a participation rate. A rate also permits meaningful comparisons over time within a community, and comparisons with other communities. Measuring participation rates does involve some changes to existing practices and some complicated data issues. Certainly, testing is required to see how feasible it is in practice.

While participation in physical activity may be the desired focus of health professionals, it is important to measure participation in all the sport and recreation activities provided through the program, whether they have a physical component or not. It is not just the physical activities that may lead to social outcomes such as reduced offending. However, participation in activities with a physical component should also be monitored to gain partial insight into community physical activity levels.

Of course, there is much more that it would be desirable to know about participation such as the nature of activities being participated in, the frequency of participation by individuals, and the intensity of exercise. This may be possible in the future. But first the basic processes to measure simple participation need to be implemented.

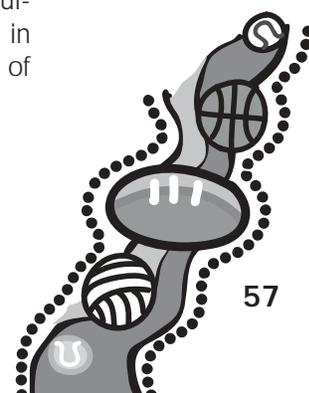
The project has identified two social indicators, youth crime and school attendance, as particularly promising. The former was an issue in all the communities visited and is known to be an issue in many others. School attendance is somewhat community-specific but has been raised as an issue in many communities. Reductions in youth crime are effected through the simple mechanism of providing children and youth with something positive to do, to relieve boredom and give them something enjoyable to look forward to, thus reducing the temptation to get involved in negative behaviours such as breaking into homes. While it is a simple mechanism, it is likely that over time, other factors such as positive peer relations and improved self-esteem and sense of wellbeing will continue to prevent youth from getting into trouble. Improvements in school attendance are also effected through a simple mechanism, that of using sport and recreation as an extrinsic motivator. Art or music could equally be used. Improved school attendance, however it is achieved, is a prerequisite for learning. Although this report has not focussed on the area of learning, there is potential for sport and recreation not just to attract students to school but to be used as a vehicle for literacy, numeracy and other learning activities (the Soccer World Cup for example provides a context for the teaching of geography and social studies as well as sporting skills).

Both crime and school attendance are outcomes which can be measured relatively easily. The quantitative data however should always be analysed in conjunction with local knowledge. Other factors can influence these outcomes such as family issues, land issues, sorry business, changes in staff, seasonal influences, lack of parental support and so on.

Other health and social indicators have been listed for further research and development. Sport and recreation can potentially influence many outcomes such as employment, alcohol and other substance abuse, family violence, suicide, and the development of chronic disease. Both the literature and the community visits suggest caution in linking these outcomes to sport and recreation programs. The pathways between sport and recreation and these outcomes are complex, and a myriad of other variables have the potential to interact with sport and recreation and each other to confound the analysis.

This is not to say, however, that these outcomes should be cast aside at this early stage. Rather, it would be useful to further research the validity, reliability and measurability of such outcome indicators. If the suggested program viability and sustainability processes have been put in place, then it may be worthwhile to monitor a number of health and social indicators over time to see whether there are patterns that correspond with the provision of the sport and recreation program. This may provide some evidence of the ability of sport and recreation programs to impact on health and social issues. However, as noted above, such information should also be viewed in conjunction with local community knowledge.

Each of the indicators needs to be tested before being recommended for use. The function of the indicators as an interrelated set also needs to be assessed. Preliminary work would involve seeking stakeholder agreement on the final set of indicators to test; refining the indicators to establish measurement methods and benchmarks; finding out more about data availability and data quality; and talking with communities, stakeholders and researchers to identify who would be involved in a testing program. Priority should be given to monitoring of 'prerequisite' indicators, namely turnover of officers, and the length of time the officer has been in the position. Such information is not difficult to collect and will provide a better picture of turnover than that which currently exists (largely anecdotal).



The long-term sustainability of programs would ultimately appear to rest on the ability of communities to run programs without extensive support from outside - although a safety net of financial and human resources would be required to assist communities to maintain and build upon their success. Sport and recreation resources, like other resources, are limited. The aim of the sport and recreation officer's job, and hence the responsibility of organisations that fund and/or employ sport and recreation officers, should be to build the capacity of the community to such an extent that local residents can take over the program, and the officer can move on to a more needy community. This would necessarily broaden the role of the sport and recreation officer to include more community consultation, relationship-building and skills transfer.



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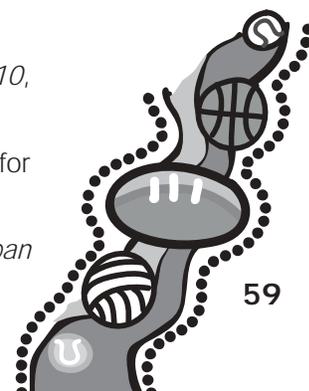
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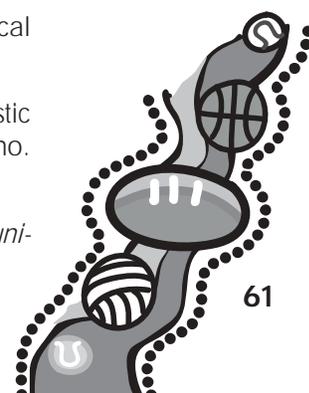
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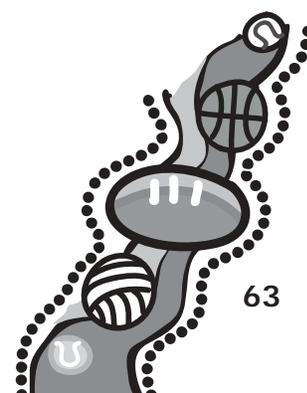
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## 8. APPENDIX

### Interview/discussion questions used during the community visits

The following questions were used as a guide to foster discussion and elicit information. Not all these questions were used in every situation nor were they necessarily asked using these exact words.

#### Sport and recreation officer

##### General questions

Can you describe what your job involves?

How long have you been here?

Was there a sport and recreation program before this? When was the last time there was a sport and recreation officer/program?

How do you think sport and recreation benefits/should benefit the community? e.g. better health, improved school attendance, reduced offending etc. From your experience to date, which outcomes seem to be most important to the community?

##### Activities/facilities/availability/resources

What kinds of activities are offered?

What facilities and equipment are available? Are they in good condition?

What times of day are the activities/facilities available?

Who funds programs? (staff, facilities, equipment, maintenance)

Are community members keen to be involved - as players? as non-players? Do CDEP workers help out?

Are there any outstations? Do any activities make it out there? or do people come in?

Neighbouring communities - do they have sport and recreation officers/facilities?

Do you ever travel out of the community to attend events? (competitions, carnivals)

Do you work with other organisations in the community? Which ones? In what ways do you work with them?

Is council supportive? How do they support you?

##### Planning/evaluation/mechanisms

Are there particular issues in this community that the community wants you to address via the sport and recreation program?

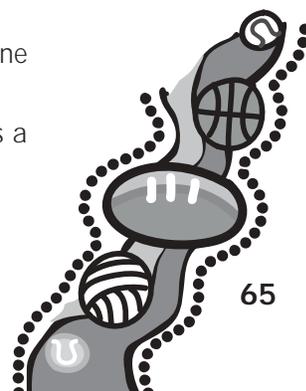
What do you personally want to achieve through the sport and recreation program? What are the obstacles?

Do you have a plan for sport and recreation? What are its aims? Do you use any indicators? Do you measure success in any way?

Can you give me an example of a successful program that you have been involved in? One that wasn't so successful?

What are the key components of successful sport and recreation programs? What makes a program work? How would you know it's working?

Are programs developed in consultation with community members?



## Participation

What's the level of involvement of the community in sport and recreation? All ages? Males and females?

Why do certain groups participate and others not? What are the barriers to participation?

Are there any gender issues which make provision of activities for girls difficult?

Why do you think people attend? For fun? for skill building? health? less boredom? other reasons?

Do you keep records on participants? What are the issues with recording information/ getting the data?

What do you think about measuring participation? e.g. amount, intensity.

## Training

Are there opportunities for yourself and others (e.g. CDEP, volunteers) to receive training in things like coaching, umpiring and management? How important is this?

## Measurement

What are the possible ways of measuring whether programs are working e.g. could records such as those of the sport and recreation officer, the council, the health clinic, the police and the school be used? How would the community feel about it?

What do you think about trying to measure changes in health status as a result of the physical activities offered? Would it be relevant to the community? Do people see a link between their health and physical activity? Could you measure the changes? How?

What about the effect of sport etc on the use of substances? Does it work? Why? Can you measure it? (health clinic, pub, questionnaire)

Other issues - school attendance, self-harm, family violence, community cohesion (relevant? measurable?)

## **Council/Community leaders**

### Background

What's the history of the community? When established? How many different language groups?

What is the population? Does it fluctuate much?

What are the neighbouring outstations and communities? (and distances, access).

What are the main problems in this community? What are the strengths of this community?

Is this a dry community?

### Sport and recreation

Does the council see sport and recreation as important? Why? In what ways can it benefit the community? Which outcomes are most important to the community?

What's the history of sport and recreation in the community?

Funding - how is sport and recreation funded? staff, facilities, equipment, maintenance. Is it difficult to keep the program running?

What are the key components of successful sport and recreation programs? What makes a program work? How would you know it's working?

What are the barriers to participation? (money, equipment, age, other problems).

## Planning/community involvement

Does the council have input into the development and provision of sport and recreation?

How closely do organisations such as sport and recreation, health, education, police work together in this community?

## Measurement

What are the possible ways of measuring whether programs are working e.g. could records such as those of the sport and recreation officer, the council, the health clinic, the store, the club, the police and the school be used?

What would be a reliable indicator(s)?

How could you measure something like community support? community cohesion?

## Other contacts

Are there particular people who you think I should speak with while I'm here?

## Health clinic

### Background

How many nurses and doctors (permanent, visiting) are there?

Are there any Aboriginal health workers? male/female?

How long has the interviewee been working in the community? (if not local) in this job? (if local)

What are the main health issues in this community?

Is this a government or community-controlled clinic?

Is health screening conducted? all who attend? targeted? What information is kept? BP, weight etc?

Are their patients representative of the population? Do certain groups attend more often than others?

### Sport and recreation (physical activity)

Is there much of a focus on physical activity/sports in this community?

Do you think the community sees sports and physical activity as having a major role in community life? What outcomes do you think the community would like to see from sport and recreation programs?

Are there many opportunities for community members to be active?

Do people see physical activity as being important to their health? (that is, do they know about it being good for you, and do they do anything about it).

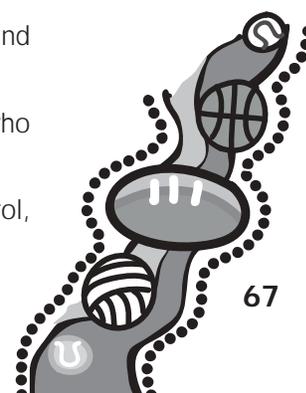
Do people believe that physical activity is connected with physical health? mental health?

Is physical activity promoted? Have there been any attempts in the past to link sport and recreation programs to health?

Do you think that the people who play sport in this community are healthier than those who don't?

Does being involved in sport have an effect on substance use? (smoking, alcohol, petrol, other drugs) e.g. do they see less incidents involving alcohol during the footy season

What stops people getting involved in sport and physical activity?



## Programs

Can you comment on what you think makes a good sport and recreation program? What makes it work? How you would know if it was working?

If not, can you think about community programs that you have had experience with, and comment on what made them work or not work?

## Measurement

Would it make sense to measure things like people's fitness (heart rate, blood pressure) and their weight to see if a physical activity program had brought about changes? Would it be appropriate?

Do you think health clinic data could be used to see whether sport and recreation was having an effect on the community? e.g. use the total number of clinic attendances and see if this changes with the provision of sport and recreation programs/ the participation of people in the community.

## Police

### Background

How many police officers are there in the community? Male/female?

Are there any Aboriginal police officers?

How long has the interviewee been in the job?

What are the main policing issues in the community?

What are the main causes of trouble? (both immediate and underlying)

Are there internal (e.g. family) issues and external (e.g. proximity to the pub) issues?

Who are the main offenders? (age groups, sex, other groupings)

### Sport and recreation

Does the community have much of an interest in sport? Any in particular? Do you think the community sees sport as being an important part of their lives? For what reason? What outcomes are they looking for?

Is/can sport and recreation be used to help with problems in the community? (e.g. on its own or used as part of a juvenile diversion program?)

Has it been used this way in the past?

What sorts of problems can it help with?

What do you think makes a good sport and recreation program/juvenile diversion program? What are the key components of successful sport and recreation programs? How would you know it's working?

Why does it work?

Does/can it work long-term?

Does it only work for certain types of offenders? and offences? If so, which ones.

Do organisations in this community work closely together? Which ones? What are the benefits of such an approach?

## Measurement

Could you measure whether a sport and recreation program was having the desired outcomes? e.g. reduced incidents of vandalism?

What sorts of records would be most useful, easiest to collect, appropriate to the community?

Are there any recording issues/problems with juvenile crime/domestic violence? Is the system (PROMIS) easy to use? Do you think the statistics across NT are accurate i.e. is everyone recording in the same way?

## School

### Background

How many students and (Indigenous) teachers at the school?

Established when?

Years offered? if primary only, what happens after that?

Does the school have any issues with attendance? What things affect attendance?

What are the main issues in the community?

### Sport and recreation at the school

Does the school run sport and recreation programs/a physical education program? Is it a large part of the curriculum?

Does SHAPES visit the school? Do teachers get in-servicing?

What sorts of sport and recreation activities are offered? Which are most popular? Why?

Are sporting facilities/equipment available/close by?

Do you work with the sport and recreation officer?

Do you work with other agencies in the community e.g. health clinic, council, police.

Do many of the students attend after-school care programs?

What do the students feel about sport and recreation? Can it influence whether they come to school? (either way, bring them to school or take them away - if there's an event somewhere else). Can it be used to have long term effects on school attendance?

Can physical activity affect learning? Is the effect measurable?

Are education and sport/physical activity linked in any way through the school curriculum? eg. literacy and numeracy development?

Can sport/physical activity help kids get the skills to lead better lives? Do kids see it this way? parents? teachers?

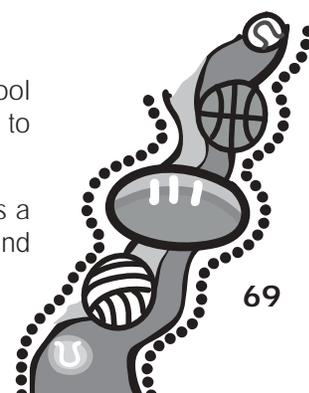
Do you think there is a link between physical activity and self-esteem? Is it measurable?

Do you think it would be worthwhile looking at school attendance data and seeing if there is a pattern between kids attending school and times when sport is offered at school? Would it be reliable? Why/why not?

### Sport and recreation in general (i.e. not just at school)

How can sport and recreation benefit the community? e.g. better health, improved school attendance, reduced offending etc. Which outcomes do you believe are most important to the community?

What are the key components of successful sport and recreation programs? What makes a program work? How would you know it's working? (if no direct experience with sport and recreation, any other sort of community program will do).



## **CDEP coordinator**

Can you describe how CDEP works in the community? Who is eligible? Is a pool of money received based on number of applicants? Is funding limited to the money per person or are there also grants available?

How many CDEP workers are there in this community?

Has the program been operating very long?

Are many involved with the sport and recreation? How many?

What jobs do they do as part of the sport and recreation work?

Do they learn new skills e.g. umpiring, coaching, management

Who provides the training?

Who funds the training? Sport and recreation, CDEP?

Do they enjoy the work? are they reliable? turn up when required etc?

Do you think there are/will be opportunities for future work in this field in this community?

Do you think that CDEP workers could run the whole program themselves? (w/o the need for a sport and recreation officer?)

What's your opinion about the importance of sport and recreation to the community? Does it play a major role? Should it? Can it help the community? individuals?

How can you keep sport and recreation running in the community? (sustainability) What's the key to success?

Do you think if sport and recreation was running in the community on a regular and continuing basis that you'd notice any changes in individuals and/or the community?

## **CDEP workers**

Can you describe the job you do?

How many CDEP workers assist?

Do you enjoy it? Why?

Have you been doing this work for very long?

Are there particular activities you help out with?

Do you organise activities yourself?

Are you learning new skills? What sorts of skills?

Do you think these new skills will help you in your future life? In what way?

What do you think is important about sport and recreation?

How does it help the community? individuals?

What makes a good sport and recreation program? What makes it work? what are the key elements?

How would you know if a program is working? Would you see changes in the community? What sorts of changes?

## **Night patrol/safe house**

Why was the night patrol/safe house established? When? What is its purpose?

Who is involved in running the night patrol/safe house? Do you have a vehicle? Who funds the service?

What are the main problems in the community? What is the cause of the problems?

Who are the main offenders? (males/females, age groups, other groups)

How does the night patrol/safe house help the community?

What makes the work of the night patrol/safe house successful?

Do you work together with other organisations or groups in the community?

Do you think sport and recreation programs can help solve some of the problems in the community? How? What can make these sorts of programs work? What are the key elements?

Do you keep any records? What sort of records do you keep? Have you noticed a change since the night patrol was introduced? Do your records reflect this? Do you have any difficulties keeping records?

## Questions for volunteers

In what ways do you help with sport and recreation in this community?

Do you enjoy it?

Why do you do it?

Have you been helping out for very long?

Are there particular activities you help out with?

Do you receive any training? e.g. umpiring, coaching, organising

Are there many/enough people who help out?

Do you have children participating?

Do you think it's important to have lots of helpers? Why?

What do you think is important about sport and recreation?

How does it help the community? individuals?

What makes a good sport and recreation program? What makes it work? what are the key elements?

How would you know if a program is working? Would you see changes in the community? What sorts of changes?

## Questions for women's/men's groups

What is the purpose of this group?

Why was this group formed? When was it formed?

What activities do you do/issues do you deal with?

What are the main issues for women/men in this community?

Do women/girls/men/boys get involved in sport? (if so, which sports) Other forms of physical activity? Other recreational activity (e.g. painting)?

Do you see a role for sport in the community? Is it important? Can it help women/men e.g. keep them healthy, help them to feel good about themselves, help them get a job?

Does sport tend to be dominated by the men/women?

Is sport or other physical activity good for the men/women? In what ways?

What makes the community healthy? What sorts of community programs work? What makes a program work?

Does the women's/men's group work with other community groups? Do you get some support or funding from somewhere?

