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Stakeholder Final Report – Congress Research Department

Exploring Pathways to Positive Outcomes: Community-driven Sports and Recreational Activities in Alice Springs

Working Title: Community Driven Sports Programs

Central Australian Aboriginal Congress and Reclink Australia

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Overview

The Central Australian Aboriginal Congress (Congress) Research Department has developed this report for Reclink Australia (Reclink) to highlight opportunities for Reclink to use their unique community sport and collaboration model to improve health and wellbeing outcomes for the community through sports and recreation activities in Alice Springs (Mpartnwe) based on stakeholder and community perspectives.

Focus Groups, Yarning Circles, and interviews were conducted with 24 stakeholders and community members in the Alice Springs township area. Community members reported numerous benefits of participating in sports and recreational activities in Alice Springs, including increased community cohesion, mental and physical well-being, opportunities to represent language and culture in activities, pathways to mentorship and employment and activities that increase equity and inclusivity. Findings showed that there are equity gaps in activities, particularly for Aboriginal-identified, lower Socioeconomic (SES) and remote participants (in town camps and surrounding communities) who face barriers in transportation, with escalating costs to participate and navigating the language and processes of player registration systems. Participants emphasised the need to employ local people in leadership positions and increase the cultural appropriateness in sports and recreational activities across Alice Springs to foster a sense of belonging and inclusivity. The findings also show that sports and rec volunteers are overburdened with administrative responsibilities and have few paid positions supporting their work and sports codes. Participating community members and stakeholders highlighted that hosting recurring place-based activities in town camps and surrounding communities to Alice Springs, improving facilities that are also co-designed with local Aboriginal people and creating pathways for local leaders in partnership with local training providers would improve the appropriateness of sports and recreational activities along with increasing access for equity groups. A series of recommendations have been developed for Reclink, Congress and external stakeholders to

achieve these aims. ReLink will use the recommendations of this report to understand where they can add value to the Alice Springs community and surrounding areas.

Background

Alice Springs (Mparntwe) is located on Central Arrernte country in the Northern Territory (NT). The town is considered a remote location based on the following criteria: general service provision, infrastructure, natural resources and distance to five categories of service centres. It is a regional centre servicing remote Aboriginal communities, stations and mines across the tristate area of South Australia, Northern Territory and Western Australia (1). According to Australian Bureau Statistics (ABS) data, collected in 2021, there were 26,534 people living in the town of Alice Springs, with 21.2% identifying as Aboriginal people (2).

On 9 June 1973, over one hundred people from town and bush gathered in Alice Springs to create a new organisation to represent the rights and interests of Aboriginal people (3). From this meeting, Central Australian Aboriginal Congress (Congress) was formed and has provided support and advocacy for Aboriginal people in the struggle for justice and equity to address the underlying social determinants of health and essential clinical services. To this day, Congress has expanded to become the largest Aboriginal community-controlled health organisation in the Northern Territory, providing a comprehensive, holistic and culturally appropriate primary health care service to Aboriginal people living in and nearby Alice Springs, including clinical care, health promotion and disease prevention programs, and action on the social, cultural, economic and political determinants of health and wellbeing to Aboriginal peoples across Central Australia.

The communities with established Congress health services and clinics are the following;

- Alukura Women's Health Service (Alice Springs)
- Amoonguna clinic
- Gap Clinic (Alice Springs)
- Ntaria Health Service (Hermannsburg)
- Ulana (Wallace Rockhole)
- Mpwelarre Health Service (Ltyentye Apurte, Santa Teresa)
- Utju Health Service (Areyonga)
- headspace Alice Springs (Congress is headspace Alice Springs lead agency)
- Imanpa Clinic
- Ingkintja Clinic (Alice Springs)
- Larapinta Clinic (Alice Springs)

- Yulara Clinic
- Mutitjulu Health Service
- Kaltukatjara Clinic (Docker River)
- Sadadeen Clinic (Alice Springs)
- Urgent Care Clinic (Alice Springs)

Vision

Congress' vision is - "All Central Australian Aboriginal people are empowered through their cultural, economic, social and family life to enjoy the best of health and wellbeing". To achieve this vision, the Congress Board of Directors endorsed the Congress Strategic Plan 2019-2023 in 2018, which set out the Board's strategic priorities for the organisation from 2019 to 2023. The priorities are illustrated in (Appendix 1).

Congress Organisational structure

Congress delivers a comprehensive range of services via Congress' divisions, which include Health Services, Public Health, Child Youth & Families, Human Resources and Business Services. Under each division are sections that deliver a range of services pertaining to their respective division as presented in the organisational structure of Congress (Appendix 2). Congress' Health Services Division is responsible for delivering all client services and a comprehensive range of culturally appropriate services targeting the social, emotional, cultural, and physical health and well-being of Aboriginal people in Central Australia. The Child Youth & Families division delivers a range of services from early years development; assessment, diagnosis & treatment of neurodevelopmental, speech & language development disorders in Aboriginal children & youths; family and youth support services to NDIS therapy services. Congress' Public Health Services Division engages in public health activities, research and policy-level advocacy for Aboriginal health to address the underlying social and economic determinants of health. Congress's public health division has four sections: continuous quality improvement, research, health policy, and health promotion. The Health Promotion section particularly delivers health promotion and prevention activities and programs across Central Australia, with sports and physical activity promotion being a core focus. An example of a sports and physical activity program that Congress is doing is The Redtails Pinktails Right Tracks Program, which promotes sport as a vehicle to engage young people and deliver quality health promotion programs that focus on tobacco prevention and include mental health and wellbeing, leadership, domestic violence, alcohol and other drugs. The program supports sports clubs by fostering inclusive, sustainable environments and linking sports participation to positive health outcomes. It also addresses social and

emotional challenges like mental health, suicide, and domestic violence, recognising that sports clubs serve as vital community support networks.

The Rusted Gems initiative within the Right Tracks program provides an alternative to sports activities focussing on car restoration projects that build skills development, project management experience, and pathways to employment. The Rusted Gems program works closely with Charles Darwin University so participants can gain training and qualifications leading to employment opportunities.

Research at Congress

In its commitment to research that benefits the health and medical outcomes of Aboriginal people, Congress undertakes both internally driven research and research in collaboration with institutions across Australia in the areas of clinical care, health promotion and disease prevention, and actions on the social, cultural, economic and political determinants of health. Congress is guided by the mission of conducting accountable, inclusive, transparent research that aligns with its research priorities, reflecting its definition of knowledge translation. At Congress, we envision that Aboriginal health research is conducted for and by Aboriginal peoples in the spirit of self-determination. Congress's vision, mission, and commitment to research are reflected in the Congress Research Strategy 2019-2023 (Appendix 3). From 2018 – 2020, the Congress-led *Aremella Arratyenye-ileme: Doing It Right* research team consulted with the Amoonguna, Mpwelarre, Mutitjulu, Western Aranda and Utju remote health Boards, and the town-based Congress research sub-committee, to determine how they would like to see Aboriginal health research conducted in Central Australia (4). Discussions included how research had been done in the past (good and bad), priority concerns for their community, how they would like to be involved in research; and were guided by the six core values of The National Health and Medical Research Council's (NHMRC) Keeping Research on Track, especially around its six core values. The NHMRC six core values were interpreted and adapted for Central Australia through extensive consultation with the remote Board of Directors, Congress Aboriginal staff, Aboriginal language speakers, Aboriginal Health Practitioners, Aboriginal researchers, and non-Aboriginal researchers with experience in Aboriginal health research (Appendix 4).

Reclink Australia – background and impact

Reclink Australia is an organisation dedicated to enhancing the lives of disadvantaged individuals through sports, recreation, and arts programs. The organisation targets some of society's most vulnerable and isolated individuals, including those experiencing mental illness, disability, homelessness, substance abuse, and other social and economic hardships. By fostering cooperative partnerships with a network of over 400 member agencies, Reclink Australia seeks to promote and

deliver programs that enhance physical and mental health, and social benefits to populations that have limited opportunities.

The 2022-2023 Reclink Australia Impact Report highlights a year marked by significant program diversity and participant engagement, reinforcing the organisation's ongoing commitment to fostering social inclusion, physical health, and mental well-being (5). Throughout the year, Reclink delivered a wide range of sports and recreation programs, reaching 163,889 participants through 10,203 sessions across Australia. The report emphasises the vital contributions of Reclink's staff, volunteers, and partners in achieving these outcomes. Notably, the programs engaged 48,753 first-time participants, significantly focusing on under-25s, culturally and linguistically diverse communities, and individuals with disabilities. The report also spotlights personal stories and community case studies, illustrating the transformative impact of Reclink's initiatives on individuals and communities facing disadvantage.

Reclink's 2017 report 'The social value of a Reclink Australia structured sport program –'Reclink Australia Victorian Football League', conducted by the Centre for Sport and Social Impact, evaluates the Reclink Australia Victorian Football League (6). The research focuses on how participation in this structured sports program contributes to disadvantaged individuals' physical, mental, and social health. The report highlights the significant impact of the Reclink Australia Victorian Football League on disadvantaged individuals, emphasising its role in improving social, mental, and physical well-being. The league provides a supportive environment where participants can build social networks, develop life skills, and gain a sense of belonging and purpose. Through football, participants are connected to essential support services, helping them address issues such as addiction, mental health, and housing. The league also fosters collaboration among community agencies, enhancing their ability to engage with hard-to-reach populations. The program's effectiveness is underscored by a high Social Return on Investment (SROI) of \$8.94 for every \$1 invested, demonstrating its substantial social and economic benefits (6). Overall, the league is vital for empowering individuals to transition to healthier, more independent lives.

Reclink's activities in the Northern Territory

Reclink began its operations in the Northern Territory in 2006, initiated by a meeting led by Reclink Founder Peter Cullen at the Alice Springs Council, where he outlined the organisation's purpose and vision. The early days saw the involvement of volunteers from local lawn bowls and tennis clubs, where agencies were brought together to participate in these community activities. By 2008, part-time staff were established to further support Reclink's mission in the region. However, funding for these initiatives concluded in 2013, marking the end of this initial phase of Reclink's work in the NT.

Reclink Australia returned to the Red Centre in February 2024, with the appointment of a Sport & Recreation Manager and has made headway in reestablishing programs and partnerships with key stakeholders in the Alice Springs (Mparntwe) Community. Reclink's total participation since commencing programs in April 2024 is 3,788 total program attendance (7). Reclink's first event of 2024 was the Roll, Ride, or Walk Colour Smash, which attracted over 200 participants and targeted people living with disabilities and people from culturally and linguistically diverse backgrounds. As a result of this event, Reclink NT has over 100 people participating every month in the weekly Roll, Ride, or Walk.

Reclink NT's Mindful Movement program involves weekly sports activities, fitness and swimming to provide psychosocial support for people living with significant mental health conditions. As a result of the sporting skills developed within this program, the participants are now progressing in their involvement in establishing Reclink sporting teams, with our first team sport being AFL, which will be played later this year at the Alice Springs Correctional Services. Reclink NT has two Access your Ability programs per week targeted at people living with a disability and their carers/support workers. This program uses movement, dance, music and sensory stimulation to provide moments of joy for participants. The Accessible Pickleball Program offered by Reclink NT ran for six weeks in April and May 2024 for adults of all ages and abilities. In June 2024, the Alice Springs Pickleball Association took on this program and reduced it to smaller, more concentrated groups of 12 per session.

Reclink NT's Super Strong YP program was developed in response to the Youth Curfew and crime problems in the Northern Territory and targets young people aged 15 – 25. The program offers gym sessions, circuit training, stadium sports, and team-building activities and is supported by organisations that work with young people. In addition to Reclink NT's weekly programs, the program has been delivered in local schools, including wellness workshops and boot camps. The schools that have participated in Reclink NT programs include Ross Park Primary School, Yirara College, Ross Park Primary School, Centralian Middle School, and Centralian Senior College. Reclink NT has supported local events by providing pop-up sports programs and health promotion stalls, including the Buddy Festival, Country Women's Association, St. Philips College, Heads Up, Mental Health Association of Central Australia, Seniors Expo & Men's Health Week. These opportunities have allowed the promotion of the Reclink NT program and services whilst educating the community on the social, physical and mental outcomes of sport, recreation and arts.

Reclink Australia Founder Peter Cullen AM made a special visit to Alice Springs in June, to help re-establish Reclink's presence in the Red Centre. Under the guidance and support of Lucinda Moody, Sport & Recreation Manager for the Northern Territory, Peter was joined by his wife Jeanette Burge,

former West Victorian Metro Sports Coordinator Eangano Singehebhuve, and Reclink Australia Life Member Hayden Legro.

Peter and the team visited Reclink sports programs that Lucinda re-established, connecting with participants and program instructors across various community organisations such as the YMCA and Centralian Middle School. Peter's weekend in Alice Springs featured a street outreach to residents of donated sporting goods, equipment and clothing through the ever-expanding Reclink Sports Share program, as well as a special Community Clinic co-hosted by the Melbourne Football Club on the day before their AFL game against Fremantle at Traegar Park. Reclink NT visited the Alice Springs Correctional Centre to support a game of AFL for the prisoners. They provided a BBQ, a motivational talk, and some books for the prison library.

Reclink looks forward to continuing to work with all social agencies and organisations in Alice Springs and surrounding areas to bring people together through their sport and recreation programs. Future planning should see the following new additions to Reclink NT's suite of programs in the new financial year; Queer Vibes, culturally and linguistically diversified (CALD) Swimming Program, Arts & Craft for people affected by Domestic Violence, Dance Fit, and a football league in collaboration with AFL NT, Alice Springs Correctional Centre and Reclink NT member agencies.

Reclink's donation of sporting equipment has included 400 sporting balls handed out to the Alice Springs Community, plus donations of sporting equipment to Ross Park Primary School, St. Philips College, Men's Health Week attendees, OLSH College (Bath Street), Alice Springs Correctional Centre, Ida Standley Pre-school, Gap Youth Centre, and the Mental Health Association of Central Australia.

Reclink NT adopts a holistic approach to community engagement by collaborating across various key sectors (Appendix 5). This includes partnering with local government to ensure alignment with regional priorities and working closely with educational institutions to engage youth in meaningful activities. The organisation integrates health and wellness initiatives by collaborating with entities focusing on physical and mental well-being. Community services play a vital role in supporting vulnerable groups, while youth and recreation sectors provide safe and inclusive spaces for young people. Disability support is a critical component, ensuring that programs are accessible to all, and partnerships within the employment and housing sectors help to create pathways to stability for disadvantaged individuals. Reclink NT's work with the law enforcement and justice sectors also emphasises prevention and diversion, contributing to safer communities. This integrated, sector-wide collaboration allows Reclink NT to deliver comprehensive and inclusive programs that address the community's diverse needs.

Although Reclink NT works within the urban catchment of Alice Springs Town Council and Tangentyere Council (Town Camps), they have discussed potential long-term programs in these shires with Central Desert Shire and MacDonnell Regional Council. Reclink NT will deliver mental health and sporting workshops at Ross River this month for residents of the Central Desert Shire in collaboration with Mental Health Association of Central Australia and Mac Youth.

Introduction

Community health and well-being: Overview

Community health and well-being include the collective physical, mental, and social health of a group of people living in a specific area (8). Healthy communities are societies in which people have the physical and mental health and well-being needed to conduct their daily lives with improved health-related quality of life (9, 10). For the purpose of this project 'sports-related physical activity' was defined as any organised physical activity that increases energy expenditure above resting levels such as running, cycling, swimming, football, netball, basketball, athletics and the like with some element of competition; and 'recreational physical activity' was defined as physical activities involving physical exertion for the purpose of health and wellbeing done for enjoyment and relaxation during one's free time such as hiking walking, swimming, meditation, playing games and dancing - anything that encourages physical fitness, social interaction, reduce stress, and foster a sense of belonging and community cohesion (11).

Improving the health and well-being of Aboriginal people and others with diverse cultural backgrounds needs a holistic approach that allows for physical, mental, emotional, spiritual and cultural well-being required to maintain cultural relevance and appropriateness (8). Culturally safe physical activity programs that are community-led and adopt First Nations values are effective in improving social and emotional well-being (12). Community-driven and culturally appropriate physical activity, sports and recreational activities appear to support and encourage engagement in people with diverse cultural backgrounds (13). This entails involving the community to engage the community, co-design, plan and implement culturally appropriate physical activity, sports and recreation activities and facilities to foster sustainable changes (12).

Relevance to Aboriginal Communities

While there is limited evidence, physical activities/sports and recreation are found to be effective tools for health promotion within Indigenous communities (14). Sports and recreation activities improve social and cognitive skills, physical and mental health and well-being; increase social inclusion and cohesion; increase validation of and connection to culture; and crime reduction. While many agree that community sports and recreation can be effective vehicles for health promotion (15), some argue that the benefit of physical activities and recreation in promoting health in Aboriginal and Torres Strait Islander communities operate indirectly, through contact with Elders, providing a safe place for risk-taking, or diversion from other activities (8).

Before the 18th century, Australian Indigenous people had a largely active lifestyle incorporating the day-to-day physical activity involved with finding food and resources, sustaining the spiritual connection to the country, and maintaining familial and cultural practices (16). Within Indigenous communities, a strong component of sport and recreation is linked with culture as integral to understanding 'culture', as well as highlighting the culture within which sport and recreation operate. However, the active lifestyles and roles Indigenous people once held were disrupted by the dispossession associated with European colonisation (17). The intergenerational trauma inflicted by colonisation, subsequent dispossession, exploitation, systemic racism, and cultural division against the Aboriginal people has resulted in numerous health and social inequalities (9, 18).

The benefits of organised sport and recreation are not always enjoyed equitably between Aboriginal and non-Aboriginal people. For example, in Australia, only 44.1 % of Aboriginal children engage in organised sport and recreation activities compared to 71.7 % of non-Indigenous children (19). Geographic and socio-economic barriers, racism can diminish the experience of organised community sport and recreation for Indigenous peoples, and act as a barrier to participation (19). This has resulted in significant inequality in the health and well-being of Aboriginal and non-Aboriginal communities. For example, compared to non-Indigenous Australians, Indigenous people have been experiencing disproportionately higher rates of communicable, non-communicable and chronic disease burdens with persistent health disparities (11, 20). Although the Aboriginal peoples represent nearly 4% of the total Australian population, they bear significantly higher inequality in life expectancy (14), chronic health conditions, education, employment and income (18, 21). The risk of cardiometabolic diseases and comorbid conditions due to obesity and physical inactivity are the main risk factors for high disease burden in this population group (11, 20). For Aboriginal people, physical inactivity is the fourth (6%) leading modifiable risk factor that contributes to the loss of healthy life after tobacco use (12%), alcohol (8%) and high body mass (8%). Nationally, physical inactivity is attributed to 44% of the coronary heart disease burden and 36% of the diabetes burden. Indigenous Australians experience a burden of disease that is 2.3 times the rate of non-Indigenous Australians (19).

Purpose of the Project

The purpose of this project is to identify community-driven and culturally appropriate physical activity, sports and recreational activities that enhance community development, health, and well-being for Aboriginal youth and adults.

Project aim

This project aims to provide ReLink Australia with a comprehensive understanding of physical activities and sports including the potential opportunities, benefits, and risks. This understanding based on the experiences and feedback of the Aboriginal community, will be important for developing and implementing effective physical activity and sports programs in Alice Springs. The project will also explore the logistical, cultural, and social enabling factors that influence the success of physical activities

Therefore, this project investigated the perspectives and experiences of Aboriginal youth, adults, and local community representatives on the cultural appropriateness, enablers or barriers of community-driven sports and recreational activities available in Mparntwe (Alice Springs) to empower Aboriginal individuals and communities through tailored recreational opportunities that support their overall well-being and contribute to positive community outcomes.

Objectives

- This qualitative study aims to explore the perspectives and experiences of Aboriginal youth and adults (aged 15 and above), as well as local community stakeholders and representatives, who are engaged in sports and recreational activities in Alice Springs.
- The study will focus on identifying culturally appropriate and community-driven sports and recreational activities and programs that enhance the overall health and well-being of Aboriginal residents within the local context.
- It will investigate the types of activities desired by the community, the barriers and facilitators to introducing these activities or programs, and their perceived impact on individual and community health and well-being.
- The findings will contribute valuable evidence from Indigenous communities to the existing body of knowledge, providing a foundation for assessing the feasibility and potential challenges of developing innovative programs in this region.

- These insights will be crucial for Reconnect Australia and Congress in the future design and implementation of effective sports and recreational programs tailored to the needs of the area.

Significance of the Research

The link between physical activity and health

There is epidemiologic and clinical evidence showing that physical activity is linked with improved physical, metabolic, social and emotional health outcomes (18). For Aboriginal peoples, common physical activities such as hunting, walking and sports programs improve metabolic health indicators (lower fasting plasma glucose and fasting plasma triglyceride) and anthropometric outcomes (reduction in BMI) and improved physical function and cardiovascular risk factors (weight and waist circumference) (22). The integration of organised physical activity and recreation into daily life promotes physical, psychological and social health and well-being for individuals and communities and prevents chronic diseases such as diabetes, heart disease, and obesity, and plays a significant role in improving mental health by reducing symptoms of anxiety and depression (11). For Aboriginal peoples', studies have shown that there is a link between the effectiveness of physical activity and sports programs in improving physical health outcomes in Aboriginal peoples (14). Recent studies (14, 23) show that regular physical activity is significantly associated with lower risk of chronic diseases such as diabetes, cardiovascular diseases, and mental health problems (14, 23, 24). Although there is limited evidence, some studies also reported a causal association between physical activity and cognitive functioning associated with depression (24).

Studies also show that structured-based physical activities are associated with significant weight loss, blood pressure control (25), lower BMI and waist circumference in the Aboriginal population (26, 27). Other studies also reported that more structured group-based physical activity is linked with marked improvement in metabolic (increased insulin sensitivity, decreased insulin resistance, decreased leptin) and anthropometric (BMI, waist circumference, and waist-to-hip ratio) metrics of health and wellbeing (26).

While there is limited empirical data to show that physical activity is protective of serious mental health (28) and dementia (29) for Aboriginal peoples, physical activity and recreation contribute to social and emotional well-being by providing opportunities to connect with the culture, improving participants' help-seeking behaviour, and environment and foster a sense of belonging (23) which would significantly lower the risk of mental health problems. For example, studies show that four physical activities run for 1-hour weekly are significantly associated with reduced suicidal ideation and lower mean depression and anxiety scores among Aboriginal young people aged 11 to 21 years (30). Other studies also reported that Aboriginal youths who participated in sports were 60% more likely to

experience good mental health outcomes (28). Studies also reported that Aboriginals are more likely to participate in physical activity and sports competitions designed for Aboriginal people. For example, more Aboriginal people participated in the “Indigenous Marathon Program” for their mental well-being compared to non-Aboriginal participants. Physical activity and recreation contribute to Aboriginal peoples' social and emotional well-being by providing opportunities to connect with the culture, improving participants' help-seeking behaviour, and environment and foster a sense of belonging (23), which would significantly lower the risk of mental health problems. Studies also reported that Aboriginal peoples are more likely to participate in physical activity and sports competitions that represent cultural and language identity (31).

Community impact

Traditional forms of physical activity such as hunting, walking, cultural dance and travelling on foot and being physically active are part of Aboriginal people's cultures (18). However, according to the 2020 AIHW report, only 12% of Aboriginal adults in non-remote areas met physical activity guidelines in 2018/19 which was 38% in 2012-13. In 2012-13, Aboriginal adults were 18% less likely than non-Aboriginal adults to have met the recommended physical activity guidelines and are 26% more likely to be physically inactive (19). While the overall adult physical activity is well below the recommended guideline, it also shows gender disparity between males and females. In 2012-13, the rates of sufficient physical activity were higher for Indigenous males than females (43% vs 33%) and this rate has declined to 13% for males and 10% for females in 2018-19 (19).

Culture appropriate, recreation, physical activities and sports play an important role in communities' development and improving the health and well-being of individuals, contributing to the empowerment of individuals, and promoting the development of inclusive communities (10). These physical activities are crucial in maintaining good overall health through preventing or reducing obesity, a leading contributor to disease in Australia (11). Physical activities in the community can also reduce the risk of many chronic conditions, such as cardiovascular disease, type 2 diabetes and some forms of cancer. Physical activity also slows down the progression of chronic disease, such as type 2 diabetes (17, 32). Traditional forms of physical activity such as hunting, cultural dance and travelling on foot have been shown to improve community and cultural connections (18).

Physical activities provide social/group support with several physical, mental and social health benefits for Aboriginal peoples (8, 15, 17). Colonisation, land ownership, dietary modifications, physical activity changes, and exposure to a sedentary lifestyle have heavily impacted this lifestyle. These days, physical activity to reduce the burden of disease has been identified as a priority by Aboriginal and Torres Strait

Islander peoples (17, 33). While there is increasing participation in structured group sports such as football, netball, rugby, from Aboriginal communities (31, 34), only a little over one-tenth of the Aboriginal population, 18 years and above, meet the recommended physical activity level of 150 minutes of physical activity over five or more sessions per week (35).

Enablers and barriers to physical activity and sport

Physical activity and sports are often connected with social norms and cultural values in Aboriginal communities. For Aboriginal people, participation in physical activity and sports is influenced by individual, family, community, culture-related, systemic or policy and structural level factors. In Aboriginal communities, motivation to improve health, involvement of family or friends in physical activity as a way to manage stress and/or other negative feelings, to stay away from negative social behaviours such as early alcohol drinking, to connect with the culture, provision of “gender-appropriate” sports are some of the enablers for participation in physical activity and sports programs (36, 37). On the other hand, perceived lack of sporting ability due to being overweight/obese, high participation fee and transport-related costs, shyness in wearing sports clothing, especially among women, racism or discriminative behaviour in the team, lack of time due to family obligations, and use of alcohol and drugs were the most common individual barriers to participate in physical activity and sport (38, 39).

The cultural appropriateness and cultural safety of physical activities and sports programs is an enabling factor for the participation of Aboriginal peoples in PA (36, 40). The sense of belonging to community and cultural connection that physical activity offers is also an important enabler (41). However, the intergenerational trauma due to colonisation and land disposition (42), limited family-oriented PA opportunities (43) with a lack of cultural inclusivity limited resources and infrastructures, unsafe community playgrounds, and seasonal restrictions (15, 41) are the most common community barriers for Aboriginal people to participate in physical activity and sports programs.

Physical activity interventions and sports programs co-designed with the Aboriginal community members and implemented in collaboration with the community are considered to provide an enabling environment for Aboriginal population for PA engagement (44, 45). Having to depend on external organisations for coming to communities and organizing the programs is a systemic barrier that could be addressed by empowering local communities to practice their culturally rich and appropriate physical activities and dances and letting Aboriginal community members/leaders organize the sessions themselves thus, generating a sense of ownership and even employment opportunities in many cases (45). Engaging Aboriginal communities and co-designing physical activity

interventions and sports programs were found to be an enabling factor (44, 45). However, policy barriers result in less community empowerment activities and support from policymakers can hinder the success of physical activity interventions and sports programs in Aboriginal communities (45).

Status of physical activities and sports in Alice Springs

In Alice Springs, there are a range of physical activity and sports programs through private and public entities, some providing sports and physical activity directly and others providing supplementary support and networking. The Alice Springs town council made various sports facilities available, including cricket, AFL, swimming, softball, netball, football (soccer), tennis, basketball, skateboarding, BMX and many more. In addition to the available diverse sports and physical activity facilities, the Town Council endorsed the Sports Facilities Master Plan 2019 –2029 intending to upgrade and develop more facilities for its residents (46).

Nevertheless, various barriers—including social, cultural, logistical, and transport challenges, limited funding, restricted access to resources, inadequate community engagement, and the lack of culturally appropriate physical activities and sports programs—significantly hinder Aboriginal people's participation in these programs.

Methods

Study site and design

The study site for this project is Alice Springs town. We implemented an exploratory qualitative research design guided by community-based participatory research (CBPR) techniques. We used yarning circle and focus group discussion using semi-structured questions designed and implemented in culturally appropriate ways in line with the Congress Aremella Arratyenyeye-ileme: Doing It Right guide for research (47). The CBPR ensured the active involvement of the community and local stakeholders throughout the research process, fostering collaboration and shared decision-making. Before community engagement commenced, this project's approach, sampling strategy, and methods were approved by the Menzies Human Research Ethics Committee.

Sample size and study participants

A sample size of 24 participants was determined by data saturation principles, where recruitment ceased when recurrent research themes began emerging in the data, considering the research aim and objections.

Participants in this study included Aboriginal community members and leaders and representatives from local organisations, service providers, governmental and non-governmental agencies involved in sports and recreational activities. Participants were included or excluded based on the following criteria:

Yarning Circle (Conducted with Aboriginal participants from the community):

Inclusion Criteria	Aboriginal community members, comprising of the youth and adults (15 years or older, both males and females), were invited to participate in the Yarning Circle, irrespective of their previous experience/participation in sports or recreation activities. This aimed to capture diverse perspectives from those most likely to benefit from and contribute to community sports and recreational activities/programs.
Exclusion Criteria	Non-Aboriginal community members and those outside the targeted age range were excluded. Similarly, those who were unable to comprehend the study information and provide informed consent were excluded including people with significant cognitive impairment. Those who participated in the focus group discussion were excluded from the yarning circle.

Sample size	8-12 participants
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Focus group discussion (Conducted with Aboriginal and non-Aboriginal local stakeholder representatives):

Inclusion Criteria	Local stakeholder representatives aged 18 or above, with at least 12 months of local business or work experience joined focus group discussion (irrespective of their gender). Eligible stakeholders encompassed organisations, agencies and service providers involved in community health, social support, sports and recreational programs.
Exclusion Criteria	Representatives younger than 18 years old and those without the required working experience were excluded. Those who were unable to comprehend the study information and provide informed consent were excluded including people with significant cognitive impairment. Further, those who participated in the yarning circle were excluded from the focus group discussion.
Sample size	8-12 participants

Semi-structured Interviews (Conducted with both Aboriginal and non-Aboriginal stakeholders to validate and deepen the insights gathered from the yarning circle and focus group discussion):

Inclusion Criteria	Aboriginal community representative(s), 15 years or older, with a connection to physical activity, sports or recreational programs, identified/referred to from the yarning circle were invited to participate in semi-structured interviews. Aboriginal and non-Aboriginal stakeholders representing organisations, agencies and service providers involved in sports and recreational programs in Alice Springs (18 years or older) were invited to participate in the interview. These criteria were designed to ensure a broad range of perspectives and insights, enriching the qualitative data collected during yarning circle and focus group discussion.
Exclusion Criteria	Aboriginal community representatives below 15 years of age and Aboriginal/non-Aboriginal stakeholders below 18 years of age were excluded. Those who were unable to comprehend the study information

	and provide informed consent were excluded including people with significant cognitive impairment.
Sample size	6-8 participants

Participant recruitment

Yarning Circle:

Various methods were used to recruit participants for the Yarning Circle:

- Information Dissemination: Posters and flyers were prominently displayed at Congress clinics, relevant stakeholder organisations, sports, and recreational events, ensuring widespread visibility.
- Targeted Sampling: Service providers referred potential participants, allowing for a focused recruitment approach.
- Purposive Sampling: Guided by Community Elders, individuals within the community who met the inclusion criteria were approached and invited to participate.
- Snowball Recruitment: Participants already identified referred other potential participants, expanding the reach of the study within the community.

Focus Group:

The recruitment process for the focus group discussion with local stakeholder involved the following methods:

- Information Dissemination: Posters and flyers were displayed at Congress clinics, relevant stakeholder organisations and community events to raise awareness about the focus group discussion.
- Direct Outreach: Local stakeholders with at least 12 months of local business activity or work experience in relevant fields were directly invited to participate.
- Referrals: Service providers and organisations engaged in sports and recreational activities/programs were encouraged to refer eligible participants who possess community sports and recreational experiences and insights.
- Engagement through Stakeholders: Local stakeholders were engaged through existing networks and partnerships to encourage their participation.

Semi-structured interviews:

Individual interviews were conducted following the yarning circle and focus group discussion to further validate and delve deeply into the information gathered. The recruitment process for interview participants was more targeted and purposive, involving the following methods:

- Snowballing: Participants and service providers identified during the focus-groups and interviews referred others who could contribute valuable insights.

Data collection and analysis

A yarning circle guide and focus group guide were used to conduct the yarning circle and focus group discussion, respectively. Similarly, an interview guide was used to conduct semi-structured interviews with the study participants. Field notes were taken, and interviews were audio-recorded and transcribed verbatim. The transcripts were read and re-read to develop a coding matrix of themes and categories following Braun and Clarke's thematic analysis guidelines (48, 49). The audio recordings were securely stored in compliance with data management protocols identified in the project ethics application and protocol. Access to these recordings was restricted to project staff and investigators identified in the ethics application. Once transcribed, the recordings were retained in secure, encrypted Congress servers, ensuring data integrity and participant confidentiality. The storage and handling of audio recordings and transcripts adhered to NHMRC, Congress and Menzies HREC ethical guidelines and data management standards (50). Data analysis was conducted using NVivo 12. A reflexive thematic analysis approach was used, and the themes emerged inductively from the interviews.

Findings

Impacts of sports and recreational activities

Participants highlighted the salient relationship between physical activity and *education outcomes, which improve health and well-being outcomes*. Integrating school attendance and educational information into activities increased healthy behaviours and engagement with school.

I wouldn't be surprised if you'd see the increase in attendance. If you knew that sports was involved. You know. That kid would start coming to school on those particular days, to ensure that they go as well (Participant 15, Yarning Circle 2, Community Member).

You know, when they're playing sports, they can learn, learn about health things. So like eating right, drinking right, um, sleeping right, and things like that. So they can get the best out of 'em as well (Participant 20, Community Member).

Community members emphasised that sports and recreational activities were safe, intergenerational spaces for them to participate together, *increasing community cohesion and relationality*. Intergenerational sports and recreational activities also create opportunities for *mentorship*, creating safe spaces for people to be together and reinforcing a sense of community and connection.

I think that sense of community is just so important where people are feeling seen and heard and welcomed (Participant 11, Community Member).

There's nothing more stronger than one of our little fellas that may be struggling can then look up to one of our alumni that's working and you know, he's bought his own house or a car, and go "wow, like he's just told me I was doing the same thing that I'm doing now". "I can make that, I can make choices, I can, and change my life, I can strive for things, and I can succeed" (Participant 13, Community Member).

It's a great way to bring people together, build positive relationships, um, have competition but being able to work collaboratively with each other... having you know, the support networks around the community to, of how we can actually build on that to you know, "yes, let's have those, these positive things" and if something does happen, how we gonna deal with it in a way that we end up with a positive outcome, and reduce those negative behaviours (Participant 17, Stakeholder).

Sports and recreation activities can also forge *employment pathways* for community members through relationship building and associated life skills development.

It teaches you how to deal with, talk with, sit in a room like this and speak. Um, so sport creates all of that. It creates confidence to be able to stand; it creates that self-esteem to be like that, and that value of a person (Participant 2, Focus Group 1, Stakeholder).

I've had a few mates that I play football with in town here, and a lot of 'em like from the community, town camps and communities like Amoonguna and things like there. And they've always enjoyed being able to play sports. So a lot of 'em have found work now as you know, rec, you know, rec officers there now (Participant 20, Community Member).

We support them into the next realm in their life by um, finding 'em a job and a meaningful job or training. Um, but for some of our fellas they've started a long way back as well. So um, I think the biggest thing for them is to give themselves confidence, you know, and have someone there daily to mentor 'em to say "hey you can actually do it". You know, you might, you might've come from a rough background, but doesn't mean that your life has to be that way. Um, and so it's just that reinforcing of you know, values, and, and standards and expectations, um, of being a young man (Participant 13, Community Member).

A community member expressed how sports and recreational activities could support *cultural continuity* with community members showcasing their culture and lifestyles in a strengths-based way.

Being an Aboriginal person a lot of the people you know, they like to represent who they are. So a lot of the times you know, when they're playing sports and that there, people can see "oh, he's an Aboriginal kid, he's you know, he's showing what he can do". So, as you know, an Aboriginal person, you know, they can run fast, you know, they can do things like that. But it also shows you know, how they, how they used to run to get their food back in the days. You know, there was no cars to get to things, and like now, so it shows their culture about how they used to live, their parents, and the old parents, used to live. You know, so, back in the Dreamtime and things like that. Um, and I guess just representing your people too. Um, cos you see like a lot of the you know, a lot of the Indigenous sports stars today, kids all love them. They all look up to 'em. (Participant 20, Community Member)

Stakeholders and community members pointed to many great *equity models* in Alice Springs activities that provide free equipment, opportunities, and community connections to local people. This ranged from community radio stations hosted by people who live with a disability to bike programs that support young people with skills building by fixing broken bikes that they then can keep. These models of supporting community members with skills building and resources often come from grassroots movements where community-oriented values shape the program.

So I've been part of the pilot, the program since it first began. Um, so it's bike program where they fix bikes and they teach kids how to ride bikes in the Larapinta area... So, a really great program. Um, community led, community vision, it came from a young dad who had a bike program when he was at school, and that's how he learned, to, bikes, was through a program through this, so we took that initiative on (Participant 15, Community Member).

I've got a fella in a wheelchair who runs a sports show, so I organised interviews with for him for his show. So, we have everyone from the Mayor to sporting identities, sporting groups come on the show. And he, he engages with them in the sporting activity they do (Participant 21, Stakeholder)

Access, Affordability, and Appropriateness

Access barriers

Participants identified that people of lower socio-economic status, people without sports or private school affiliation, pre-teens and those living with a disability often had additional access and inclusivity challenges with engaging with sports and recreational programs.

Access to sports and recreational activities often varied between *private and public schools*, creating barriers to participation. When these activities are held at private schools, students from public schools may feel excluded due to perceptions that these programs are exclusive. This perception discourages participation and highlights the need for more inclusive, community-driven efforts in neutral spaces to ensure a sense of belonging and inclusivity.

It's some development thing that they were running from [a private school], and I guess it was Government or Town Council funded, and they were running these sessions to kind of, and they were like at [a private school] at six a.m. and we talked as a committee and said that's just not inclusive... Private schools six o'clock in the morning, like how can that happen?... it's kind of being catered for a certain type of person... I don't know what person would feel comfortable if they didn't go to that school, to walk into it.... as a young person I remember being really intimidated by like, those private schools, cos you felt like everyone was so smart and so rich.. zero of our girls would attend that (Participant 11, Community Member).

Participants frequently identified gaps in the availability of interschool competitions and sporting activities for *kids under 13*. This meant they often were forced to join older teenagers, which dampened participation.

...We've got some of the younger fellas, you know, twelve-year-olds... coming through that don't have anything... and they've gotta play under fifteens, is probably the closest they've got

for some sports...There's not much junior participation at all (Participant 13, Community Member).

So if you're between the age of kind of nine and thirteen, um, if you have the pop up events for say, a football competition, that's great, but it's not a consistent season like you'd have the under fifteens, eighteens, reserves, and seniors....I feel like that ten, sort of nine to thirteen-year-olds miss out (Participant 23, Stakeholder).

Equity gaps also existed in sports and recreation activities in Mparntwe, with kids *without a club affiliation* or family members who were connected to services and transport unable to participate.

So, it kinda seems like there's a gap where if you're not involved with the service then you can't access that service, sort of thing. So, there's this gap of people who you know, are single parents, or don't have a car or things like that where they can't access them services cos their kids aren't in, for want of a better word, trouble. Or you know, causing issues with the community. So, there's that gap of them kids that could have potential to continue on a pathway, but you know, for other reasons, they aren't able to get that assistance (Participant 1, Focus Group 1, Stakeholder).

Sports and recreation access barriers for *people living with a disability were noted*, particularly with a lack of specialised equipment and skilled staff, which would decrease access to various sporting codes.

I'm fund raising to purchase what's called a frame runner. The easiest way to describe is, is it's a trike without pedals. So, um, originally designed for people with cerebral palsy that have those balance issues. Um, so the more severe disability and some of them, you know, being wheelchair bound, um, or they might need a walking frame to um, or a walking stick to help get about. Um, but you put a kid, you put somebody in one of these frames that then um, and then they can use their legs to propel themselves, the look of joy on their faces is amazing... but that costs five thousand dollars. We might need to get a few more to suit one frame, the design of that isn't necessarily gonna suit every athlete as well (Participant 17, Stakeholder).

Having somebody who has an understanding on how to deal with those kids, also, and you know, because you wanna protect those kids as well as every, all the kids around them (Participant 16, Yarning Circle 2, Community Member).

Systems/technology barriers (Access)

Systems for registering for sports and recreational activities often create *technology, identity documentation, and language barriers* for participants. Navigating these barriers often fell to

volunteers and club staff, which added to their already significant workloads. Participants frequently called for *a hub to support people's computer access* and learn admin skills to navigate registration systems.

You need technology for everything now, and people just don't have it... me and my friend, we're up till after midnight getting these registrations done. And like our senior fellas, you would think, you'd think we could just leave it with them. They, they don't know how to do it. They, they didn't grow up with technology (Participant 11, Community Member).

I really feel like there needs to be somewhere for people to access computers and be able to, be able to learn, in a really safe space (Participant 11, Community Member).

That's why I think a hub, a sporting hub run by you know, especially Aboriginal like you know, workers or things, you know, where they can advertise all this, you know. So if someone wants to know something about a sport they can go into that one place and this, this, this is available (Participant 14, Community Member).

It's alright for them to ask for help from us, but we don't even, we barely know too, you know, we're just trying to learn... I think it'll be easier to sign the paper, write your name. But doing it all online is a bit hard now (Participant 8, Yarning Circle 1, Community Member).

This young fella last night didn't know his parents contact numbers, like nothing... but these profiles now, you need to have an email address. A lot of people don't know for emails, don't know about emails. And it's when you've registered once, you are locked into that email. So, it's not just "we'll create you an email". It's "you need to be using this because next year this is gonna be another barrier"... Then that space is sitting with them, and calling, like Player H.Q and saying "this person doesn't have", "oh, we'll do the recovery". "We can't, we tried, we can't". (Participant 11, Community Member).

A community member expressed that *navigating sports and recreation registration, and player systems* could be particularly challenging for local Aboriginal people as they are not localised and lack explanations or support.

Minimal Aboriginal people seem to apply for it. Well, you know, like it's process, eh, and like sometimes that's a barrier for people... Yeah, and having to have it in by a certain date, I suppose, like some people struggle with that, you know, or even just filling the forms, you know. They don't have that support system in place. Questions asking. Just all the digital shit, like not everyone's capable, you know. My brother's not terribly capable. Do it online, eh, and

block 'em. It seems like it's easy for the people that know how to do it, cos they tell me to do something online, and I'll get it done (Participant 7, Focus Group 2, Community Member).

Transport (Access barriers)

There is a great need for service collaboration and advocacy to improve *transportation access and equity* for sports participants who live in communities and town camps around Mparntwe/Alice Springs. Participants highlighted the disengagement that junior participants experienced when they could either not attend sports and recreational activities because of transportation issues or could not return home from them, causing them to become stranded in the centre of town.

There's a lot of kids that don't live within town reach as well, which is another hard one. Like who, who, how does, how do services get that far out? You know, you're talking Amoonguna, you know, some fellas live out in block, out in Wallace and all these kind of places. So there's yeah, it, it is quite a juggling act but for kids that live in town, I don't know of a service that will do that. Yeah. Yep, yeah, yeah, huge gap, you know. And we got, I suppose you've got finishing training and it could be at you know, six o'clock, seven o'clock. How do they get home?

You see kids walking back. You know, there should be a transport system,...four o'clock, five o'clock, whatever time, the bus'll pick you up...have a bus pick up like that, where it's communal, but you're not exactly going to their house to pick them up... You're teaching them to get to this destination, so you're giving them some responsibility as well. (Participant 7, Yarning Circle 1, Community Member).

Some of the *outer suburbs and communities surrounding Mparntwe/Alice Springs* had few sports and recreational activities in their area, which exacerbated transportation issues, highlighting how people congregate in the centre of Mparntwe/Alice Springs for activities.

Kids at Larapinta or Sadadeen, they've got a long way to go and that's why they come into the CBD cos they've got no resources where they are (Participant 4, Focus Group 1, Stakeholder).

You know, I think this is probably the issue for some of 'em that they maybe start wandering the streets, you know, get home at whatever time (Participant 13, Community Member).

Some young people were supported to attend drop-in centres and activities within a *service catchment area*, creating a gap for young people outside of this scope.

I mean, you think of Brown Street and Gap Youth centre, they, they're going out to you know, town camps and stuff like that... They bring 'em back to the hub where there is basketball (Participant 15, Community Member).

Stakeholder coordination of activities and facilities (Access)

Stakeholders expressed that although there were regular networking meetings happening to *coordinate activities*, more needed to be done in the space to improve their collective approach, which would provide a constellation of support across sporting activities to both coordinate calendars and use of facilities but also resources and connections that support activities and community members.

The other thing that we're looking at as well, and very much in sympathy is that sports house model. You know, where all the sports that do have D.O's and Managers and what not can actually come together and you know, all be in one place, rather than working you know, in silos or just you know, being in a dark room in an office with no windows under the grandstand at Anzac Oval, you know, or something like that. So, just a good way to collaborate, and it gives you opportunity to, like if one, one sport's going out to a community, and you know, someone else will be "hey I'll jump in the car with you, and I can give you a hand to deliver, but while I'm there, I'm gonna speak to the principal of the school (Participant 5, Focus Group 1, Stakeholder).

There's a number of youth sector meetings that happen. There's some sports meetings that we're trying to get happening more regularly. Um, MACA run a mental health network meeting as well, which is good... I feel like young people will benefit when they see that organisations are working together (Participant 1, Focus Group 1, Stakeholder).

Participants frequently mentioned a *lack of sports and recreational facilities* open for sporting codes and individual community members who wanted to access them on weekends or outside of training hours.

I don't know if this is a Reclink space, but like, doing up our facilities here. Our parks. There's no basketball courts. There's nowhere to go and shoot hoops. You can't go into the Netball courts because the gates are closed (Participant 2, Focus Group 1, Stakeholder).

Then sometimes, you know, we're, we're liaising with club officials and trying to liaise with schools and themselves, and it's just, it, it's very hard when um, you know, we've got facilities, we've got baseball that are trying share, AFL are trying to share with us. Baseball need the facilities, so then we, we'll rock up, kids would rock up, and hang on, we've moved to wherever, Head Street (Participant 13, Community Member).

Costs of activities (Affordability barriers)

Community members, from coaches to participants to parents, highlighted the *costs of playing and running sporting activities* in Mparntwe/Alice Springs, creating significant participation and sustainability challenges for activities. These were sometimes mitigated by community members and committees sponsoring younger people.

In athletics we are really struggling. We do have coaches, for example myself, I have to pay to become a coach, I have to pay for me, to actually volunteer. So I know it's a bit of a struggle, in terms of actually parents as well, you know, going to different various sporting activities for parents can be really expensive (Participant 6, Focus Group 1, Stakeholder).

It's a lot of figuring out who's really struggling in that space, and saying "ok, we'll sponsor this kid this year, we'll sponsor this kid, or just get down at this time and we'll figure out the rest (Participant 11, Community Member).

Kids sports fees...you sort of gotta budget for a month just to fit it in (Participant 10 , Community Member).

I just find golf fascinating because it's test your patience and it's a very expensive game as well. It's like it's like a hobby, buying golf sticks and whatnot (Participant 18, Community member).

The cost of participating in interstate trips was significant due to *transportation costs*, which were disproportionately felt by lower socioeconomic participants.

A lot of kids are gonna miss out on those trips, cos yeah, and we know which kids are gonna. It's not the middle-class health workers and teachers whose kids are missing out. You know, it's low SES (Participant 1, Focus Group 1, Stakeholder).

The cost of leaving Alice for any representative sport or recreation, it, it costs a lot of money. Um, especially in flights. You know, if you wanna get up to Darwin, you, the only fast way to get up there is by flying (Participant 12, Community Member).

These *escalating costs* left some clubs with funding issues due to participants who couldn't cover their fees and provide uniforms, all of which exceeded the vouchers provided for participation.

Now we're in a position where we've got like over a hundred juniors that haven't paid their fees. Um, because you know, where are they getting a hundred bucks from (Participant 11, Community Member)?

This year we decided as a committee to include, socks, shirt and a club polo. Which is pretty, which means we get nothing. You know, from that hundred dollars, we get nothing because this is what fellas need to be able to play the sport (Participant 11 , Community Member).

Participants highlighted systemic issues with *decreasing sponsorship* for clubs and the deduction of registration costs received, with the town council receiving a proportion of vital funds for clubs driven by volunteers.

A portion of each person's [basketball] registration has to go to Alice Springs Town Council... Why should money go to them when they're not feeding into the grass roots? (Participant 9, Yarning Circle 1, Community Member)

We started losing Government funding because we couldn't get hold of it, and [name redacted-local business] started reducing what they would fund things for. So that was the end of basketball trips (Participant 16, Community Member).

The Northern Territory Government (NTG) provides NT-based students with \$100 vouchers twice per year for sports and recreational activities (January and July), but participants highlighted that these often didn't cover registration fees and uniforms and discouraged poly-sports participation.

You get the school voucher, eh, but that's, if you want to do more than one sport, a hundred dollars not gonna cut it (Participant 7, Yarning Circle 1, Community Member).

The combination of *increasing registration costs* exceeding sports vouchers and *a reduction in club funding* has created a registration costs squeeze for sports clubs, which is leading to an attrition of participant engagement, particularly for those with lower socioeconomic and English literacy backgrounds who could not directly afford to pay registration, could not always apply for vouchers due to literacy barriers and weren't able to be subsidised by the clubs.

We've actually lost a lot of kids because we've gone, we can't keep sustaining this because we have to make people pay, because it's costing us a lot of money and we can't afford it. And cos we've put the thing down on the kids, we've had a lot of kids drop off because of that, that funding and being able to play (Participant 15, Community Member).

Program, which is about two hundred dollars I think. So that pretty much covers your, your registration to be part of the sport.... But then you know, how literate are the parents to be able to do that? Um, and you know, are they relying on other volunteers, support groups, to then do that for them (Participant 17, Stakeholder)?

Under sixteen, there was hardly a cost to enrol. When I was playing, now it's hundreds, if not thousands. And that's if your kids could do one sport, let alone a couple of sports (Participant 10, Community Member).

Appropriateness barriers

Women face barriers to sports participation, highlighting the need to increase investment in women's sports codes and events. Further research is needed to understand these gender-based needs and supports in Mparntwe/Alice Springs.

I know football's, it's picked up, picked up a lot of girls in sport, but you know, we're not seeing many girls in basketball, we're not seeing many girls in that soccer, we're not seeing many girls just playing in other sports... I think we need to put some money and focus into girls. (Participant 15, Yarning Circle 2, Community Member)

Aboriginal people in Mpartnwe/Alice Springs also face inclusivity barriers as many sporting clubs do not include *cultural and language* elements and understandings that make them feel represented and supported.

Communicating with English sometimes people find it shame (Participant 12).

I think like a lot of times, cos a lot of people are coming from bush as well, so there's always like language barriers,... English isn't these mob's first language. It's their like third, fourth or fifth, depending where they're from. (Participant 3, Focus Group 1, Stakeholder).

You get tired of telling people things, repeating it, and you know, like um, but you know, there's this lack of cultural understanding. (Participant 7, Yarning Circle 1, Community Member).

Racism and its associated effects of shame and stigmatisation were reported as being prevalent and causing many sports and recreational activities to be unsafe spaces. This could be exacerbated by deficit narratives present in Mparntwe/Alice Springs. A participant highlighted that sports and recreation activities had the potential to destigmatise these spaces if conducted appropriately.

They've already come in with this judgement based on what they've seen on the news. And you know, it's a totally different story. So, they come here with this sense of entitlement and sense of "we're bringing something that's gonna help" (Participant 10, Yarning Circle 1, Community Member).

There's a shit load of racism in this town as you know... So yeah, I think that just providing that safe space where... they're not getting growled at, not getting excluded (Participant 1, Focus group 1, Stakeholder).

Try to bring those different diversities together, I think that'll also help. Cos I know that's a big stigma, is, is those different, you know, the bush kids, the town kids, the black kids, the white

kids, the private school kids, the public school kids. That happens a lot (Participant 2, Focus Group 1, Stakeholder).

Participants highlighted the importance of *local leadership and governance* in improving inclusivity, particularly Aboriginal-identified positions that inherently work with cultural safety and understanding.

Another thing which would be good is like um having like Aboriginal identified positions. Like the AFL, they should have an Aboriginal-identified position. You know, you're on the centre of you know, Australia, you deal with Indigenous people. Hundreds of 'em on a daily basis, probably. And you have no um, Aboriginal identified person (Participant 7, Yarning Circle 1, Community Member).

Some clubs were reported to have made progress in *destigmatising spaces* and representing local Aboriginal people through representative governance structures.

Oh, yeah. Um, we have seen, I suppose Netball is quite, like I think across Australia it's quite a "white" sport. So in Alice Springs we're seeing huge numbers of um, ah, sorry, I don't want to be political. But um, at West Netball Club we're really working for that inclusion, and we're seeing high numbers of Aboriginal you know, there's a lot of Islanders (Participant 11, Community Member).

Where I grew up playing Netball with um, other clubs that were quite white, and I always felt a bit left out. Um, and then this club had, it just had a different view, I think. We had Aboriginal people sitting on the committee, and we had um, oh also Islanders, sitting on the committee, and they were just able to pull in from the people they know, and I think that's what started it. Now it's friends and we've got so many junior teams. This is, we've got like, we've just have two elevens teams, which is huge (Participant 11, Community Member).

Opportunities in sports and recreation activities

Stakeholders and community members who participated in this study provided salient insights for increasing equity in sporting activities along with cultural appropriateness through strengths-based solutions. These included fundraising for equipment, empowering local and Aboriginal leadership through improving employment and training pathways and creating central spaces with wrap-around holistic support services and free, open activities that meet community members where they live. Increasing access and appropriateness of these activities allows all community members to positively benefit from improved education and employment outcomes along with increasing community cohesion, mentorship connections and cultural representation.

Building local leadership (Appropriateness)

Local people are passionate about investing in their own communities and have a longer-term connection with Mparntwe/Alice Springs. They particularly highlight *community-oriented values* that would lead to sustainable engagement and support for sports activities. They understand the young people's participation needs and can, through their knowledge and relationships, provide pastoral and holistic support. Most sports codes in Mparntwe/Alice Springs run on *volunteer capacity*, with very few having paid positions, usually based in places with higher funding levels. This highlighted the responsibility that is placed on community members to sustain their sports.

Us local people are not planning on leaving any time soon. And it's that common goal of what other people from interstate come in here for, or wanting to be better for our town and our people that we have more of a passion to it. You know. We don't care if we're not getting paid a dollar for it cos we want it and we need it, you know (Participant 2, Focus Group 1, Stakeholder).

"I've seen you down here", and um, and then it kind of, they'll be like "oh, maybe, maybe in the future". "Come to training". So, yeah, I think it's just, I think the key thing is those senior people in those leadership roles, is, is really like a big part of the community because you can't, you can't be pulling people into this without you know, kind of knowing where they're at (Participant 11, Community Member).

Most sports codes in Mparntwe/Alice Springs run on *volunteer capacity*, with very few having paid positions. When there are paid positions they are usually based in places with higher funding levels. This highlights the weight that is placed on community members to sustain their sports.

My knowledge, um, is that yeah I would say a high percentage of the staff that are at clubs are volunteer based. Um, maybe in the football, you're probably talking about maybe one person getting paid. Um, I wouldn't know any, the Presidents, um or community members that get paid. So you're probably thinking your head coach. Um, you know, in other sports I'm not too sure. I think it even goes downwards from there...there's no increase on people attracting people for monetary value to the club (Participant 13, Community Member).

Participants also highlighted the lack of *accredited training and employment placements* within sports and recreational activities. The importance of local positions and leadership in supporting engagement and inclusivity means, and the lack of pathways to formally recognise them means that this is a foundational challenge broadly impacting the sector.

To deliver coaching and officiate in training, you're relying on people to come down from Darwin (Participant 5, Focus Group 1, Stakeholder).

Even if we train local adults to be the umpires and the coaches, cos how much talent do we have in this town? They're just obviously not qualified, or accredited. So could that be a possibility where Reclink can run accredited training or umpiring sessions where most of the adults that are here in town that are interested, and then we don't have to get people from Darwin and Melbourne and Sydney (Participant 2, Focus Group 1, Stakeholder).

A participant emphasised that most *volunteers are not reimbursed* for their time, especially with the high costs of participating in sports and that vouchers or reductions in membership fees could support volunteering participation. These incentives, along with pathways to employment and earning money, could further reduce crime recidivism rates by giving community members in Mparntwe Alice Springs pathways to invest in their communities.

Volunteers, obviously, there's gotta be an incentive there. You know? Um, I don't know. Kind of depends on what you're getting the volunteers down there for. You know, you might have an incentive that relates to that or it might just be a purely personal incentive for them, like you know, a voucher or a shopping card or something. I don't really know (Participant 2, Focus Group 1, Stakeholder).

I think we start with the young people, you know. They're the ones that's got that room to kind of do that. Some older people, it's like "ok" young, like they'll start doing it, you know, have those programs and training sessions and having them volunteering things, um, the sessions to be better equipped to be umpires, and. You know, and also with the crime rate, ... Like if youse do work with a young person, they've got their first job, hey. It's the, and so it's teaching them those things as well, you know. Don't have to go and steal it to get your buzz. You can earn it. It feels just as good (Participant 2, Focus Group 1, Community Member).

At Basketball, we play, we pay a lot of money, have to play, and then they can't provide umpires (Participant 9, Yarning Circle 1, Community Member).

Peer coaching structures were effective in some clubs when they were supported by management and governance structures, allowing junior participants to gain experience and support their peers.

We put it out to our young ones to coach the young ones... We've got a, I think we've got three young girls now in our fifteens cohort that are coaches. Um, this is quite, such a difficult age group, but for that to work we've gotta be super flexible in that someone's gotta be there if they can't get there. So it's just, it really means that you know, the leadership group have to be there to fill the, fill the blank, Yeah, fill in when they're not around. We also encourage all the young ones, young ones as I mean juniors, um, to do umpiring courses (Participant 11, Community Member).

A lack of *umpiring training* often creates conflict and generates negative attitudes within sporting communities, which leads to people disengaging. Accreditations for coaching and other documentation like Ochre Cards (Working with Children Checks) created capacity and qualification gaps, especially for participants from remote communities. These gaps created conflicts with other participants in the activities and led to their disengagement.

I mean, that's one of the main factors why a lot of people have probably stepped back from basketball apart from juniors, juniors is really really strong, but then just having to ref and not actually having the tools to actually upskill other people to do it (Participant 9, Yarning Circle 1, Community Member).

Especially at basketball, like having to umpire like back when we were younger like they had like a pool of like, a really hardcore like referee programme and then those was people like stepped away and I think that's a huge factor that we have to umpire our own games like at basketball like, we'll play but we'll have to ref, but then not everyone knows how to ref then they utilise the same people week in week out, which is 1 main reason I stepped away because I've been an umpire since I was in under twelves and that was about 18 years ago (Participant 9, Yarning Circle 1, Community Member).

I'm behind basketball, but I had to always then, they say "oh, let's try an umpire", and I say "I am strong, they can't be nasty or um, got attitude". I'm like "well, I work all day too, I don't come here to get abused by you guys". "Like I could've easily just went home, I'm here helping you guys out, you know" (Participant 7, Yarning Circle 1, Community Member).

If you've got a team, you have to provide an umpire, and so, like most teams do it like, every person in their team gets a turn to umpire (laughs), and that's what turns the remote kids. They're like "I'm not playing, I don't know how to umpire". Like you know? And then, like when people that don't know how to umpire, I'm, They don't know how to umpire, and then the teams are getting angry (Participant 7, Yarning Circle 1, Community Member).

For footy they have to have a coaching accreditation to even be listed as the coach (Participant 9, Yarning Circle 1, Community Member). Yeah. Does basketball do that too? (Participant 7, Yarning Circle 1, Community Member) No, they just have to provide the Ochre card (Participant 9). Yeah, I think the coaching course is online, but you know, not everyone'd be able to do it (Participant 10, Community Member).

Paid staff capacity in clubs was reported to have been under-resourced, which burdened clubs with finding strong volunteering committees that often felt overburdened by working long hours.

I guess in terms of football you'd probably have the coach and then you'd be lucky to have somebody to come down to be a team manager, in any of those teams... Which does put a lot of pressure on the coach to make sure that everything's up and running and doing that. In terms of committee volunteering, you know...have one or two people on it, trying to run the club. As such, and they're trying to work with the coach. So, pretty much will spend their day from whatever time football starts, now at eight o'clock or eight thirty in the morning, all the way through until the last game at whatever, I don't know, five, six o'clock (Participant 16, Community Member).

Historically, sporting codes such as football had strong *training and development pathways* for trainees, supporting capacity building for the next generation of staff and volunteers. Community members in a yarning circle reported that this had ceased and that there were few pathways for Aboriginal community members to work and train in sports codes.

Yeah, cos they used to have that at the AFL, cos that's what [name redacted] went through as a trainee there. And then all of a sudden it just, there was nobody, it just dropped by the wayside, you know. Like, I don't know, yeah. But that would be ideal. Even if it's trainees positions, eh, just someone to you know, that can then work their way through a pathway themselves to you know, a better work position, and make way for someone else to you know (Participant 7, Yarning Circle 1, Community Member).

There's no Aboriginal positions, sporting-wise, eh, to make your way through (Participant 7, Yarning Circle 1, Community Member).

Like, you'd think by now in Central Australia there would've been, at some stage, how many years for football in Central Australia? Seventy years or something. Has there ever been an Aboriginal person who's been the CEO of the [name redacted – football league] here? I bet you not. You know? Because there's no pathways for that. And yet they deal with you know, probably ninety percent of Aboriginal people playing football here (Participant 7, Yarning Circle Community Member).

Participants identified that a central organisation could provide a training framework and *coordinate sports and recreational pathways* for community members across Mparntwe/Alice Springs. The central hub could also advocate for the sector capacity needs to the sports codes, training organisations and Northern Territory Government.

So, yeah, you know you need people here in Alice Springs to manage this stuff. You know? So some sort of office, you know, that manages sports, you know. Um, you know, local sports. And then you know, like create these you know, jobs, pathways, you know, and you know,

talent for Aboriginal people. Because we have so many kids talented in sport but there's no pathways for them, you know. Or for employment, and things like that. Cos if you don't make it in football and that, you know, you could be interested still in being associated with the sport. But there's no pathways for you. Like if you ask me where could I go to be a trainee in some sort of sports thing, I'd be like "I don't know" (Participant 7, Yarning Circle 1, Community Member).

Having a *dedicated training program* for sports and recreational activities allows for increased volunteering access for people in prison and court-mandated rehabilitation services. This would provide tangible opportunities for people to volunteer, invest and build relationships in their communities and support their reintegration.

Well you think about you know, them like community umpires that used to come out for football through the prison program. You know, they, AFL would go and run training sessions on how to be an umpire in, in the prison. And then alright, we're gonna start getting you guys as community, to come and umpire the community mob. Now, half those people that are no longer in jail still come out and....they're getting paid. But they're umpiring the footy, the community footy. Or they're going back to their communities and they're being role models there because they've learnt that skill here, they've come out, they get paid for it, they go back to their community, they're seen that way.... [residential rehabs] they could be doing more community involvement stuff (Participant 15, Yarning Circle 2, Community Member).

Let's start engaging those young youth that are you know, let's put them to some good use as well. Come down, let's help, participate, you know, bring you back on the right track. Let's get you involved in some sports, but let's you, let's get you doing some of the admin stuff, or those support stuff as such. Because you need to be the future role model for those younger ones coming through. These guys look up to you. So instead of you taking these younger ones onto the streets and being naughty, why don't you bring 'em down to basketball? Why don't you bring 'em down to Netball? Why don't you bring 'em down to a sport? Let's look at those, you know, and that's where Reclink, you know, DASA and CAAAPU, those people are not normally there because they've volunteered to go there, they've been court ordered or whatever to go there and get some additional help (Participant 15, Yarning Circle 2, Community Member).

Sports Hub (Access, affordability and appropriateness)

Participants advocated for a *sporting hub* led by local Aboriginal leaders that could provide opportunities, facilities, and holistic support to local Aboriginal people. This would be a foundational solution to improve capacity building, cultural safety, and engagement in sports and recreational

activities. This space could engage young people with sports and recreational activities, build relationships to help them understand their needs, and provide wraparound services to support them. Key advocacy efforts across the sector could attract territory government investment in this space.

That's why I think a hub, a sporting hub run by you know, especially Aboriginal like you know, workers or things, you know, where they can advertise all this, you know. So if someone wants to know something about a sport they can go into that one place and this, this, this is available (Participant 14, Yarning Circle 2, Community Member).

A community youth centre. Having that proper hub, you know, it's got everything there. You know, spend the money on you know, there's a lot of money that's been poured into this, this town over the years, and I think if you poured money into there, you know, you're talking about having indoor gyms you know, basketball where these kids can go. You've gotta, you know, you've got a bed that these could actually lay if they needed, if they needed to lay down, they're not just wandering the streets. You know, if they need to access food, they could go there. Services are there, things, you know, transport services are there...I think it's bigger picture, but I think if we're talking about changing what's happening in Alice Springs, um, that's one of the things that have to happen (Participant 13, Community Member).

There should be some centre where you can, a recreational park, you know, where there's a basketball court, there's even a netball court there. You know. And you would see families probably take their kids down there then (Participant 7, Yarning Circle 1, Community Member).

Coaching/representation for Territory/state teams (Access)

Local development officers who can identify local sports stars for Territory/state teams are crucial to improving pathways for community members to participate in sports and recreational activities at higher levels on territory/state teams.

So, I think what needs to happen, or not needs to, you need to have a look at having some development officers that actually work with the schools in the first instance. That's where you're gonna gauge the interest (Participant 14, Yarning Circle 2, Community Member).

It's like you have to try a lot harder to be, to for us to be noticed....Yeah, like those head sport people, they all live in Darwin (Participant 7, Yarning Circle 1)...We need our own head sports here (Participant 9, Yarning Circle 1, Community Member).

Whole of family and community approach to designing activities (Appropriateness)

Sports and recreational activities can become microcosms of the broader communities they represent, increasing community cohesion and long-term engagement with participants.

I moved across to [netball club- name redacted] as I did see it as a family club, and I wanted [name redacted] to be part of you know something, a community that she can relate to, and she can build those relationships with, which is something I didn't have when I was younger (Participant 11, Community Member).

That's one thing about Aboriginal people, is they're really inclusive...the big things that we have in our advantage is that we don't really care what race, colour you are, if you're gonna befriend us, then they'll welcome you with open arms and treat you like family (Participant 7, Yarning Circle 1, Community Member).

It's a great way to bring people together, build positive relationships, um, have competition but being able to work collaboratively with each other (Participant 17, Stakeholder).

Intergenerational sporting activities were especially effective, with community members recruiting their family members to support sports and recreational activities and increase their engagement in them.

I had one of his great grandsons turn up for fifteens last night. So he's in our you know, they've got such a, he's brang...I think three or four of his grandchildren in, and how the people, when you, especially football, as a coach, you kind of bring people in, they need to be runners. They need to run water, they need to um, you kind of need an assistant to help you, someone to do strapping. It's a lot of work. So when we've got people from, you know, community doing that, the people they're pulling in from community, so it's, it's giving people that space as well, like adults, the space the operate in this, in a safe way (Participant 11, Community Member).

We had um, community elders from the um, The aged care facility come out and they were cheering the kids on, and we actually started the day with them actually in their wheelchairs racing down the track. There was one that was being pushed, and there was two that were in their power chairs. It was just brilliant. The kids were there cheering them on... it's just an easy way to get all the generations together (Participant 17, Stakeholder).

Culturally appropriate sporting activities include a *whole family/community approach*, particularly when young people travel to Darwin or interstate for competitions. Activities should be designed to include families in the planning and resourcing process.

A lot of Aboriginal kids require their family with them. So, if they are looking to go away, it's allowing the opportunity for a parent to go with them. Or a guardian, or a friend, or a close family member. Somebody to help them and support them. When I think of my daughter going away for sports, she's the only one from Alice Springs (Participant 7, Yarning Circle 1, Community Member).

Sports and recreational activities have the potential to reconnect families who have been separated through incarceration, which supports *post-incarceration re-integration* into the community.

Alright, I'm gonna watch you play. How many kids love their parents to watch them play. You know? But we don't do it enough. Because they're locked up (Participant 7, Yarning Circle 1, Community Member).

Think about the women that are also at these places, [names redacted – residential rehabs]. You know, how many, you know, the females in sport. Alright, that's my aunty or that's my Mum or anything like that. Well, ok, we're gonna, we're gonna promote them, we're gonna give them education and guidance around being a good role model now. And they're gonna be coming down to our sports and they're gonna be starting out. Just having your aunty or your sister, or your cousin, or somebody down there, at netball. You will probably see an increase in participation from young females (Participant 8, Yarning Circle 1, Community Member).

Program consistency is key to relationships (Appropriateness)

Programs running in Mparntwe/Alice Springs need to be *consistently available* and focused on sustainability to form long-term relationships and routines around their availability.

Obviously some of them don't have the resources to check when it's available and check different calendars and stuff, so if we can just be consistent in terms of we're always gonna be there, then they're gonna be there and they can turn up and have a good time, and from our perspective we normally give 'em a little bit of food and stuff as well, while we're at the programs (Participant 4, Focus Group 1, Stakeholder).

So then the kids know "alright this is our sports time, let's go". And it keeps 'em at their town camp, but it also, it gets them moving, and you know, they're, a lot of their energy you can sort of push that out. You know, once they've played an hour's worth of football, you know, cos they're not gonna wanna be doing, you know, "I wanna go home and have a feed and go to sleep". They're not gonna be wanting to, "oh, I'm gonna go walk around town and do anything silly" and things like that. So those kind of things, just having activities like that there, every day, and just getting 'em involved. I feel like that will be probably a good thing to do (Participant 20, Community Member).

Some activities were only available briefly and then weren't available.

You might get um, pickle ball, you know, going out into a remote community and like once you bring all your stuff in and you run a program for three days, and accommodation, travel allowance, all that sort of gear, paying professional fees to the um, to the coaches. You know, might look at ten thousand dollars plus, you know, for a bit of, what I call a bit of a sugar hit (Participant 5, Focus Group 1, Stakeholder).

Consistently available programs have the lifespan to build relationships and rapport with family members, increasing program participation and acceptance.

That's one of your top priorities in those programs, is you've gotta have that relationship with the families. So I would imagine they've got good, good rapport with the families (Participant 2, Focus Group 1, Stakeholder).

Place-based activities (Access and appropriateness)

In consultation with community elders, *activities located in the outer suburbs, communities, and town camps* in Mparntwe/Alice Springs will decrease transportation shortages by bringing the activities to the people, increasing their appropriateness, and ensuring people's cultural and community representation.

Sport is the way to deal with all this break-in and crime. The crime numbers went up because lot of our young ones all started coming into town to play in the town comp. That's when the crimes went up (Participant 12, Community Member).

So, then once they feel comfortable and you feel like "oh, alright we can expand 'em more, we're gonna go and join up with say another town camp over this side". So, so if you had um, had this like a trucking yards camp, there's a lot of kids that like to do basketball and that. There's a lot of kids at Amoonguna camp. You know, one time you can get them all together and maybe have a game together or they can go to Amoonguna. So those kind of things there now, just once you've settled in those town camps, then you can sort of bring 'em all together and then you can have those more experiences with other kids um, to bring 'em all together (Participant 20, Community Member).

Community members highlighted that activities in communities and town camps increased *local governance of activities* and *relationship building* by meeting people in their place on their own time, allowing them to feel safe and comfortable while participating in activities.

Like, that's the only way because then you, cos then like with us, we can then control our kids out at community because it's our rules. Like, you know, we can control 'em that way. Whereas

when they here, it's bit hard to control them because they can go anywhere (Participant 12, Community Member).

So if you've got workers who go out to those things, run those, yeah, so if you have those activities out there, you know, you get certain people will you know, go and work at those town camps there and work with the kids and give them the sports. Um, it saves not only you know, the transport side of things for families to get them to go to do these sports but you're also building a connection in their area so they feel more safer and more I guess open to talk. (Participant 20, Community Member).

Open, free activities (Access and affordability)

Community members and stakeholders highlighted that *pop up activities* in a range of sports that are *free and openly accessible* would engage young people and increase equity of activities for lower socio-economic participants. These activities should be easy to sign up for further increasing their accessibility. Having *diverse activities as part of a roster* could introduce kids from various town camps and communities to new sports fostering new connections and opportunities.

There's lots of free things. We've had the Alice Springs town council ran yoga pop up in the Art Gallery. That was a four-week session, every Saturday. So, offering those kinds of free pop-up activities are really engaging for people (Participant 23, Stakeholder)

Having open days on the different sports um, come and try days. Um, a bit more of a mandatory thing for each club, each sport in town (Participant 19, Community Member).

From activities for anyone to try, but also you know, free activities as well. Just to let kids, I guess, give them a taste of things, you know. Um, of you know, that there is these kind of sports and these kinds of opportunities outside. I think if you expose them a bit more to it I think you'll find that a lot of the kids are, will be a bit more open to it. And so like even um, so you've got like Reclink and that there, that want to do sports. Even if you go out once ah, get someone designated for certain areas and say "alright we're gonna do", have like a sports officer somewhere there, and say "oh, we're gonna have this, we're gonna have football Monday, Monday and Friday afternoons", or something like that there. "Tuesday maybe some other different sports". But it's also free, but it's also that those kids there that are in those town camps they have it in their area (Participant 20, Community Member).

Participants also identified that *multicultural sports days* could be an effective way to engage people and bring community members together highlighting diversity and promoting cross-cultural communication.

I think it was Queensland, around the, like having touch rugby, they have like culture. Like there was like the English team, and then there's the Indigenous team...and then there was like Filipino teams too...I think that's all the culture, the multi cultures and stuff... They even had like England, they have their own team, Australia team. It looks fun (Participant 24, Community Member).

Fundraising and equipment collection (Affordability)

Stakeholders pointed to programs they'd seen in other states that could support access to sports by receiving *donations of second-hand equipment* that could be fixed and then given to community members who otherwise couldn't afford it.

It might be a bit similar to Reclink, but not quite the same. As they recycle all of the old um, football boots, um, basketball shoes, sports equipment...cricket bats, whatever they recycle them and fix them up, clean them up...and they sell them really cheap, if not sometimes, they actually give them away...it really helps families for low cost sports equipment. So they don't have to go into Sports Power, or Intersports, and spend two hundred and twenty bucks on a pair of boots (Participant 23, Stakeholder).

So sometimes, you know, kids wanna play basketball but they don't have the right kind of shoes, and sometimes they can get, they can feel like "oh, I don't want to play because I feel shame about, oh, he's got, I don't have the right shoes", or things like that. Or sometimes when they wanna play footy or soccer they don't have the boots, and then they say "oh, I can't play". So if you can find things like, even donations of old um, footy boots and basketball shoes and you know, just old equipment there, a lot of people may not use now, but at the same time, you know, it's not like it's some of the old run down stuff (Participant 20, Community Member).

Creating campaigns for other community members and businesses to *sponsor young people* in their sports activities could support their registration and equipment costs and foster a shared vision of young people's futures as part of a collective approach.

We were trying to get 'em to do something off footy season. So we got all the footy boys to play, they're twelve years old, to play basketball. They hadn't played before, so of course they needed registration, uniform, shoes, like none of 'em had anything. So, we did a big, I literally just put a facebook post out and said "does anyone want to sponsor a child?" And the amount of people I had come back, just from my friends list who were in a position to sponsor a child, they paid like eighty bucks for their season. So even like sponsoring a child, and you don't even have to have a face to the thing. It was just literally "I've got ten kids that need help to play

sports". And you'd be amazed at how many people dip in their pocket, even if it's thirty bucks (Participant 23, Stakeholder).

Engaging businesses around town by highlighting sports participants engagement with them could lead to new *sponsorship connections*.

We had a meeting at the beginning of the program, and um, they asked each participant what is their favourite business in town? I could say IGA because you can buy your drink there everyday. So, then it was on the organisation that um, were supporting the participants on ask them, and made the connections so they can sponsor them...a lot of local businesses were very keen (Participant 22, Stakeholder).

Storytelling in activities (Appropriateness)

Engaging community members in *mixed-methods storytelling* during activities gives them a chance to express themselves in a way that is unique to their perspectives and cultures. It also highlights positive changes for their journeys and development.

I take plenty of photographs of activities, get running and then because then I might go to a school, and I might say ohh his behaviours a bit he even said boxing makes him behaviours change and I said well, it's in a positive way. So as evidence, I take photographs of him doing activity and then I send it back to their providers, so they know that hey, there's so and so do all these activities and they're seeing the different in different light from what they know him in their experience... I keep a library of photographs of participants doing activities and you can see it's giving meaning to them (Participant 20, Community Member).

I take participants on watercolour painting tours around the region, seeing locations where, you know, they can sit down and do a colour paint and then a landscape and then also you know, we go somewhere for someone to eat because I think food and and activities go together and gives meaning for it and a chance for them to talk about what they've produced. That's a, a very worthwhile activity (Participant 20, Community Member).

Discussion

This exploratory qualitative study revealed that physical activities and recreational sports have numerous perceived positive impacts for Aboriginal and Torres Strait Islander people. These findings have culminated in recommendations listed below for ReLink to deliver sports and recreational activities in Alice Springs that are designed with integrated local community member and stakeholder perspectives. The perceived health benefits of culturally appropriate physical activities, sports and recreational activities in our findings are consistent with findings from previous studies on the broader benefits of physical activities, sports and recreational sports on improved physical and mental health outcomes along with increasing social cohesion and relationship building (8, 15, 17). In agreement with findings from the previous studies (36, 37), participation of Aboriginal people in physical activity and sports is influenced by individual, family, community, and culture-related factors. Similarly, in this study, the role of family, community and culture was paramount in community members engagement in sports and recreational activities and the appropriateness of these activities hinged on local leadership and engagement of elders through these activities. This incidentally caused positive mentorship and support for young people and community members of all ages, consistent with the indirect benefits highlighted in the literature (36, 37). Hence, it is critical to focus on co-designing and promoting physical activities, sports, and recreational activities that involve family/community members and elders. Ensuring a whole of community approach and consequent constellation of support for participants creates social inclusion and cohesion, connection to culture and crime reduction (15).

Several sources in the literature reported that perceived lack of sporting ability due to perceived physical image, participation fee and transport-related costs, racism or discriminative behaviour are the most common barriers to participating in physical, sports and recreational activities (38, 39). Similarly, in our study, we identified numerous barriers to improving local sports and recreational activities in Mparntwe, specifically those relating to access, affordability, and appropriateness in the design and implementation of activities, particularly those causing inclusivity challenges for Aboriginal and Torres Strait Islanders, female community members, people living with disabilities, and those of lower socio-economic status.

Participants were aware of the availability of sports and recreational activities across different public and private domains, which were accessible to community members in Mparntwe (Alice Springs) and surrounding communities. These activities had varying levels of accessibility with community members who are from suburbs on the edge of Mparntwe/Alice Springs or from surrounding

communities experiencing serious transportation issues, along with community members who are of lower socioeconomic status struggling to afford player registration and equipment costs, particularly in sports such as basketball, baseball and golf. Participants in this project highlighted that free, open activities that meet people where they live in town camps and communities surrounding Mpartnwe and that have QR codes that people can scan for assistance with transport, food and equipment may lower equity barriers (Recommendation 1). Reclink can reinforce these activities with a recurring roster of activities that introduce young Aboriginal people to various activities in their communities and help coordinate other organisations and programs to deliver activities alongside them (Recommendation 2).

Prominent access gaps include a lack of activity and facility access to non-private school young people who often see these spaces as not representing or including them, and there is a need for open activities that meet people in their communities, schools and with their families. Kids under the age of 13 often didn't have competitions across sporting codes, so they needed to play under 15s against much older teenagers. This age group is crucial to engage as they can become chronically disengaged in later years if not connected to communities, mentorship, and positive activities, making re-engagement far more challenging. Skilled and specialised staff and equipment such as frame runners are important to increase access and appropriateness of activities for people who live with a disability, and further community-driven and organisation fundraising is needed for this equipment along with government investment in support positions (Recommendation 1).

It is essential to design strategies and promote predominant enabling factors that are helpful to close these gaps in sports and recreational activities. In our review, previous studies show that instituting mechanisms to create a sense of belongingness to the interventions (41), empathetic approaches to show respect to the culture and intergenerational trauma are important (42). Making the recreational and sports activities family-oriented, designing culturally inclusive resources/infrastructures, safe community playgrounds (15, 41, 43) are the most common enabling factors for Aboriginal people to participate in physical activity and sports programs.

Similarly, in our findings, a repeated recommendation across community members and stakeholder interviews, focus groups and yarning circles is to increase the supportive sports and recreational infrastructure, including a holistic sports and youth hub with accommodation and sports facilities (Recommendation 3). This hub would further improve access to sports and recreational activities for Aboriginal and low socio-economic participants by allowing various services to offer a constellation of support to improve transport, registration navigation, costs to participate through accessible facilities and activities and allow for representation of local culture through its design and employment of local

leaders. This recommendation is cross-cutting to support many of the gaps in this report and will improve access to and appropriateness of activities, increasing participants' sense of belonging.

Language barriers were reported to have impacted Aboriginal peoples' access to sports and recreational activities in Mparntwe. Often, participants must sign up for activities via player registration systems in English and require identity documents and knowledge to navigate digital platforms. Stakeholders and community members highlighted that these systems can be inappropriate and inaccessible for some Aboriginal participants as they are not localised and provide no language or navigational support for people of culturally and linguistically diverse backgrounds (CALD). Organising and coordinating educational sessions within clubs and hosting a computer hub for people to navigate these systems will improve local community members' access to these activities. Currently, participants are supported to navigate these systems by volunteers in clubs on a case-by-case basis, and these volunteers are already overburdened with myriad responsibilities (Recommendations 3 & 5).

The cultural appropriateness of activities and lack of local Indigenous people in employment positions and represented in committees were reported to have reduced the appropriateness of these activities. Some participants experienced racism and stigmatisation in activities, which reduced their engagement. Creating training and employment pathways for Aboriginal-identified community members in sports and recreational activities to position local leadership increases the cultural appropriateness of these activities (Recommendation 4). This will support the capacity of sports and recreational activities, which were reported to have placed heavy administration burdens on participants, which was also highlighted in the Alice Springs Town Council Facilities Master Plan (51). Placements can be created for CERT II Sports and Recreation trainees in Reclink and partner programs in collaboration with Charles Darwin University (CDU) to illuminate future pathways for the next generation. Establishing or engaging with an existing community advisory group for Reclink's sports and recreational activities will further design sports and recreational activities in partnership and increase the representation of culture, community ideas, and shared vision in activities (Recommendation 4). Community members recommended that Reclink engage with community members who are in prison and in rehab to support them in attending their family members' games and volunteering at activities, providing opportunities for them to reintegrate into the community and create positive connections (Recommendation 4).

Multimodal storytelling around sports and recreational activities that captures moments of joy that Reclink and Congress, and the community create will further increase community members' representation and strengths-based promotion in activities. These mechanisms will also highlight participants' health, well-being, and skills development. This will also foster relationality as participants' stories will be promoted to other members of their families and communities, further increasing participation (Recommendation 5).

Stakeholders and community members highlighted strategies that can be implemented by Congress, Reclink, Town Council, NT Government, and/or other organisations for a collaborative approach that leverages resources, connections, and ideas to support the community. Reclink and Congress, as sports and recreation and primary health providers, collectively have broad coverage of gaps and recommendations that community members identified. Some areas like transport to sports and recreational activities and facility access are outside of the scope of Congress and Reclink's service delivery but there is an opportunity for these recommendations to be advocated for to other organisations and government bodies (Recommendation 1). The recommendations of this report from community members and stakeholders with experience in running and participating in sports and recreational activities have been written with an equity frame to lower barriers for diverse demographics of community members.

Clearly, a whole-of-community approach encompassing various government (local and territory) and non-government organisations, community groups, elders, and members of all ages will need to work collaboratively to support transport, decrease the cost of activities, offer free and place-based activities, raise funds for equipment for lower socio-economic participants, and provide specialised equipment for people living with disabilities which is aligned with Reclink's approach of working collaboratively across communities.

Congress researchers led this project in partnership with Reclink with both organisations having diverse connections to other community organisations and community members. These trusted relationships and connections supported the project conceptualisation, community engagement, interviewing and future dissemination of findings. The project included a team of researchers specialising in primary health care and the social determinants of health and sports, as well as Health Promotion members with experience in culturally appropriate sports and recreational activities. Reclink staff were appropriately involved as project investigators supporting recruitment, being involved in a focus group, and providing feedback and insights into the interim and final reports. The diversity of stakeholders and perspectives that governed the project, combined with data from

participants, including members from various organisations and community groups, has led to diverse and dynamic findings in this report. These community members represent multiple language and cultural groups across Central Australia and various age groups and professions relating to sports and recreation activities.

Future research and stakeholder engagement should include remote settings to understand better these communities' challenges and opportunities for sports and recreational activities. Reclink's NT activities should also be further evaluated, including data collection from participants engaging in emerging and future activities.

Conclusion and Recommendations

This study, along with the previous supporting literature, shows that there are various salient reasons for members of the community in Alice Springs to be involved in sports and recreational activities, including increasing relationality, various domains of health and employment and training pathways. These benefits can be supported by increasing equity in sporting activities, particularly for Aboriginal-identified, lower SES and remote participants through increased place-based opportunities, support in player systems, whole community activities and holistic sports hubs, along with supporting the coordination of partner sports and recreational organisations. Reclink and Congress, as a national sports and recreational program and Aboriginal Community Controlled Health Service (ACCHs) in Central Australia, have collaborative opportunities to increase the cultural appropriateness of sports and recreational activities by strengthening local leadership, support navigating the language of player registration systems and increasing community integration and support. Future research can be undertaken to explore remote community needs and to monitor and evaluate emerging sports and recreation programs undertaken by Congress and Reclink, particularly to understand the needs and opportunities for activities in remote communities outside Alice Springs township areas.

The following recommendations, regarding how Reclink should re-establish sports and recreational activities in the Alice Springs community are outlined based on the research conducted:

1.	Equity and inclusivity in sporting activities (Recommendations)
	<ul style="list-style-type: none"><li data-bbox="347 1724 1398 2038">• Create QR codes that offer food and accommodation support for participants to select before signing up for activities. This will allow Reclink to collect data on needs and create referral pathways for other services to provide transport and food support. Reclink use its network of supportive organisations to provide referral pathways (through the QR code) that can support participants with food and transportation.

	<ul style="list-style-type: none"> • Reclink will continue to run free events that are consistently available and ongoing, particularly in sporting codes that participants deemed inaccessible due to high costs, such as baseball, basketball, and golf. • Reclink to continue running Sports Share activities in Alice Springs/Mparntwe to support lower socioeconomic sports and recreation participants with equipment donations. • Reclink partner with local grassroots equipment donation programs like Bikes Mwarre to leverage support and resourcing and increase access to equipment. • Reclink partner with sports codes to raise funds for equipment (such as Frame runners) for people living with disabilities to increase inclusivity in activities. • Reclink and Congress partner with Tangentyere in town camps and surrounding communities to run place-based activities that decrease transportation logistics. • Create sponsorship opportunities by creating sports and recreation player profiles and social media posts of participants, connecting these participants with their favourite businesses, and asking for sponsorship for fees, sporting trips, or equipment.
2.	Coordination of Activities and Organisations (Access)
	<ul style="list-style-type: none"> • It is recommended that Reclink create a roster of activities across town camps in Alice Springs and surrounding communities to introduce Aboriginal young people to diverse activities that recur at similar times, creating routine and connection. • Support the coordination of partner organisations to meet, co-design activities and share spaces and resources.
3.	Advocacy for Improved Facilities and Services (Access)
	<ul style="list-style-type: none"> • Reclink and Congress advocate to Alice Springs Town Council and the Northern Territory Government for a holistic sports hub that is co-designed with Aboriginal community leaders and members that is open and available for families to use sporting facilities and provides young people with accommodation, mentorship support, to navigate player registration systems along with a holistic network of services that can run programs from the space. This advocacy can happen in consultation and reference to the Alice Springs Sports Facilities Master Plan. • Reclink and Congress will advocate for existing sports and recreational activities in partner schools and sports codes that allow facilities to be open to the public during certain hours. They will also facilitate, with dedicated staff, the opening of existing sports and recreational activities in partner schools and sports codes allowing these

	<p>facilities to be open to the public during certain hours. This will increase inclusivity and accessibility for community members who may not otherwise have access through organisation and school affiliations.</p>
4.	Improving Local Leadership and Governance (Appropriateness)
	<ul style="list-style-type: none"> • Extend Reclink Australia’s Pathways to Employment program to the NT • Create collaborations with Charles Darwin University to support participants in Reclink programs to be upskilled into TAFE and Tertiary qualifications • Provide placements for Aboriginal identified Certificate II Sports and Recreation trainees in Reclink sports and recreational programs to support the next generation of local sports and recreational staff. • Congress and Reclink to advocate for increased traineeships in partner sports codes and peak body organisations. • Establish a community advisory group for Reclink’s Alice Springs-based activities to provide advice and governance on the design and implementation of activities. • Reclink and Congress to engage with Drug and Alcohol Services Australia (DASA), Central Australian Aboriginal Alcohol Programmes Unit (CAAAPU), BushMob, Saltbush Youth Accommodation, Alice Springs Corrections Centre and Youth Detention Centre to support participants to be involved in sports and recreation volunteering activities and community events.
5.	Improved Cultural Appropriateness of Activities
	<ul style="list-style-type: none"> • Reclink and Congress programs to collaboratively run player systems education programs within clubs to support English secondary language participants to sign up. • Reclink and Congress will run intergenerational, whole-of-family activities that encourage community members to participate together, strengthening connections and support. • Reclink to create storytelling activities within activities that promote strong Aboriginal leaders, success stories and moments of joy. These can be multimodal activities with various storytelling formats that allow participants to represent themselves and their stories. This may involve participating in community radio shows to promote sports and recreational activities and include sports and recreational participants' involvement, storytelling and moments of joy in these shows.

6.	Monitoring, Evaluation and Continuous Improvement of Sports and Recreational Activities
	<ul style="list-style-type: none">• It is recommended that ReLink and Congress programs continue to monitor and evaluate their programs with qualitative and quantitative data for iterative improvement and development in partnership with community members.

Appendix 1 (Congress Strategic Plan)



Central Australian
Aboriginal Congress
ABORIGINAL CORPORATION LIMITED

OUR PRIORITIES

(what we will do for 2019 to 2023 to achieve our vision)

1 Aboriginal health in Aboriginal hands

As an Aboriginal community controlled health service committed to the principles of self-determination, we seek to engage and empower the Aboriginal peoples of Central Australia in everything we do. Responding to the needs and wishes of the community, we will speak out on their behalf on issues that affect their health, and ensure that we respect their diverse cultures and ways of being across the organisation.

1.1 Community control

We will ensure that effective structures and processes of Aboriginal community control continue to be the foundation for all our work.

1.2 A voice for our people

We will continue to be a strong advocate for the rights and needs of Aboriginal peoples, based on our strong local, regional and national reputation.

1.3 Community engagement

We will actively engage the Aboriginal community in their own health care and in the work of Congress.

1.4 Cultural responsiveness

We will ensure a welcoming, culturally responsive environment for our clients and staff, and deliver our services with integrity and respect for Aboriginal culture and experience.

2 Delivering quality health services

We will deliver evidence-informed comprehensive primary health care services, seeking to get the right balance between preventing ill-health and providing effective treatment for those who are sick. We will make our services highly accessible to Aboriginal people and families, and ensure that all our services work together to address their needs across the life course.

2.1 Treatment for those who are sick

We will provide high quality, acute and continuing care for our clients who suffer illness or injury, including management of chronic disease.

2.2 Illness prevention and health promotion

Using both individual and population level approaches, including community development, we will work with an empowered Aboriginal community to prevent ill health and promote good health.

2.3 Action on the causes of ill health

We will seek to address the social, cultural, economic and political determinants of health, including environmental health and housing, through the delivery of services, the development of healthy public policy, by working in partnership with other organisations, and by speaking out on the needs of the communities we serve.

3 Supporting remote communities

At the request of remote Aboriginal communities across Central Australia, and in consultation with them, we will deliver health services beyond the boundaries of Alice Springs. In doing so, we will ensure high standards of service quality, cultural responsiveness, and governance, paying particular attention to the resources required to deliver quality services.

3.1 Delivering health services to remote communities

We will deliver primary health care services to remote communities while desired by those places, taking into account wherever possible their particular needs and priorities.

3.2 Giving remote communities a strong local voice

We will ensure that the remote communities we serve, have a strong voice in service delivery and health advocacy, and will respect their local cultural authority.

4 Supporting our staff

We will recruit, retain, support and develop our staff to ensure high quality, culturally responsive services for our clients and a safe and respectful workplace. As an Aboriginal community controlled service we will pay particular attention to recruiting and supporting Aboriginal staff.

4.1 Aboriginal staff

We will continue our focus on employing and supporting Aboriginal people, seeking to increase the number and proportion of Aboriginal staff at all levels and in all roles.

4.2 A skilled, professional workforce

We will support the recruitment, retention and development of a skilled, culturally responsive and professional workforce, ensuring that they have the skills and confidence to deliver and shape effective services through the provision of orientation, induction and ongoing education and training.

4.3 Empowered staff in a respectful workplace

We will encourage our staff to share their skills and experience, support them with high quality human resources services, and ensure the provision of safe and respectful work environments.



5 Working together

Our strength is our capacity to work together for the health of our people. We will ensure that Congress continues to be well-managed with internal systems, frameworks and infrastructure that ensure the effectiveness and stability of our services. We will encourage good communication within and outside the organisation, critical reflection and responsible innovation.

5.1 Governance and leadership

Under the leadership of our Board, we will ensure that Congress has exemplary governance and management policies and processes within an effective organisational structure.

5.2 A learning organisation

Responding to the needs of the communities we serve, we will conduct and use research and evidence to inform the development of all our services, programs, health policy positions and submissions, and support a quality improvement culture for all our activities.

5.3 Finances

We will seek stable and diversified funding and other income to ensure our services are sustainable, and provide high levels of accountability and transparency to the community and our funders.

5.4 Infrastructure

We will support our clients and staff by providing safe and appropriate infrastructure and technology, with a particular focus on enabling our teams to work together.

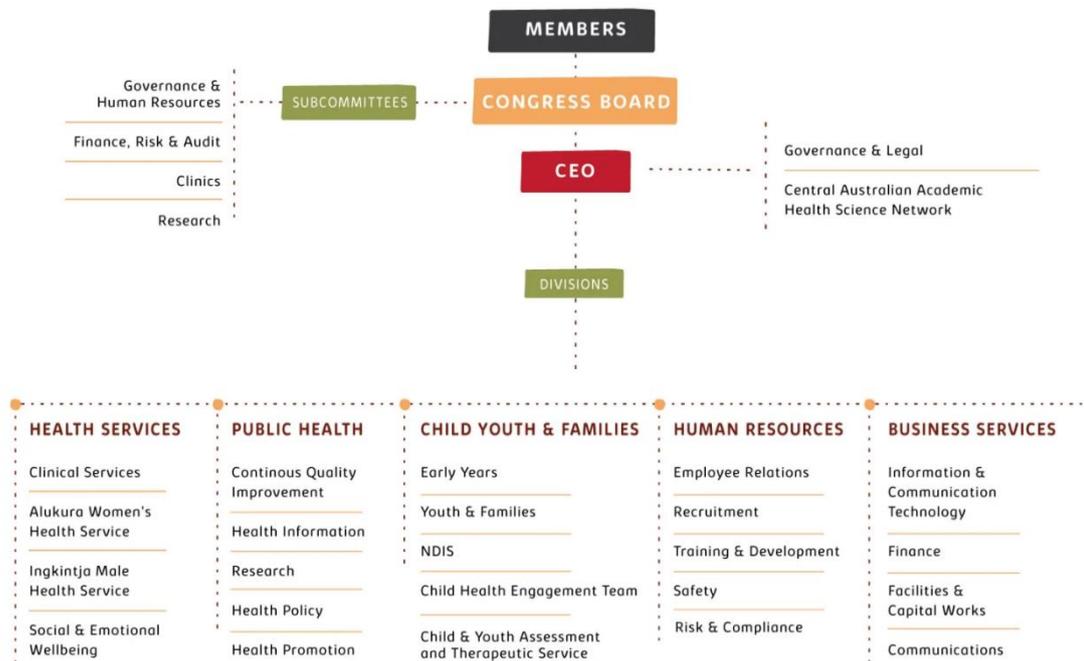
5.5 Partnerships

We recognise that we cannot achieve our vision by ourselves, and commit to working with Aboriginal organisations, governments, research institutes, universities and other organisations with similar values to build healthier lives for the communities we serve.

OUR VALUES (how we act)

- Cultural integrity
- Equity and Social Justice
- Respect and empathy
- Recognition
- Resourcefulness
- Responsibility
- Relationships

Appendix 2 (Congress Organisation Structure)



Appendix 3 (Congress Research Strategy)



Congress Research Strategy 2019–2023

OUR VISION: *All Central Australian Aboriginal people are empowered through their cultural, economic, social and family life to enjoy the best of health and wellbeing*

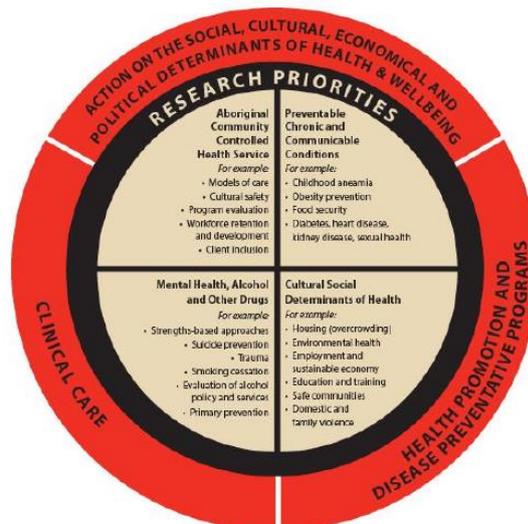
(CONGRESS STRATEGIC PLAN 2019–2023)

All research conducted with Congress will be **accountable, inclusive and transparent** and align with our Research Priorities and reflect the Congress definition of Knowledge Translation:

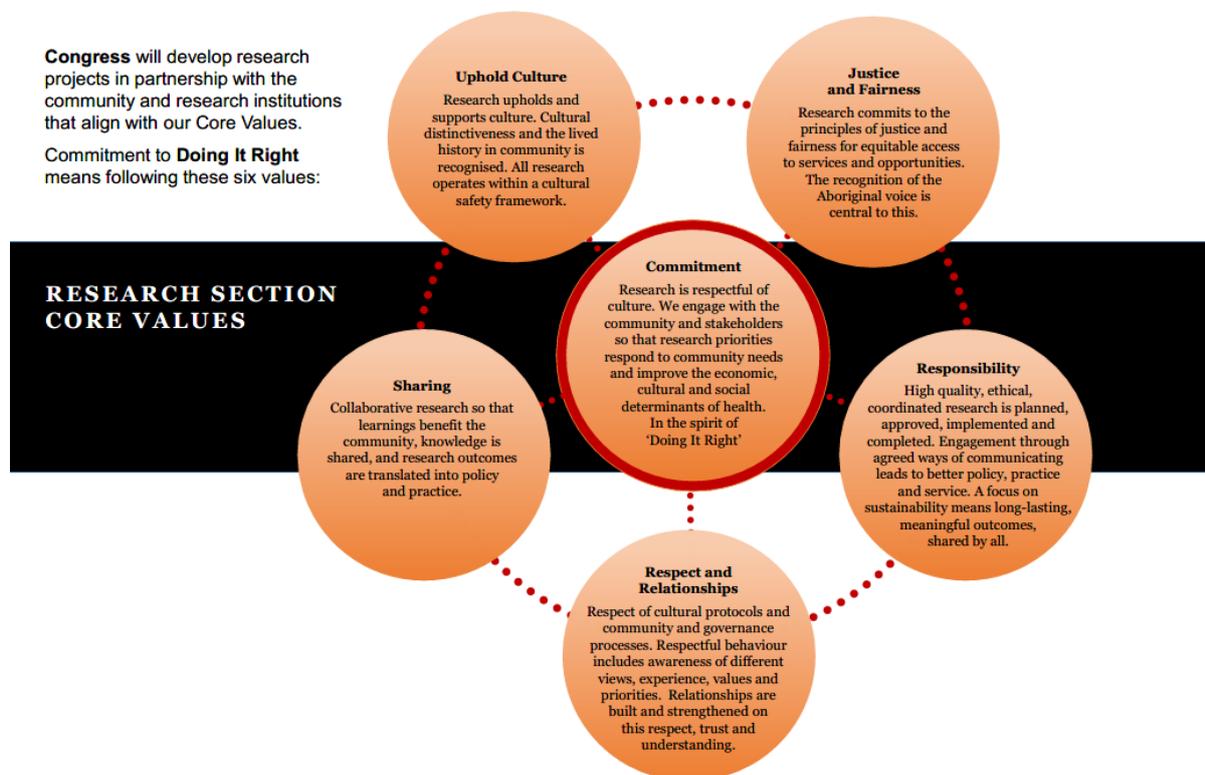
“Knowledge translation is shared learning between partners working together to make research processes more equitable, culturally safe and relevant; and research outcomes more accessible, useful and actionable.”

We commit to:

- build research capacity as an organisation, and as individual staff members, to be actively involved in research.
- the employment and training of Aboriginal researchers.
- increase internally generated research projects to 70% by mid-2022.



Appendix 4 (Congress Research Core Values)



Appendix 5 (Remlink Collaborations)

Remlink NT has established an extensive list of stakeholders since its inception in Alice Springs including: Alice Springs Town Council, Alice Springs Aquatic & Leisure Centre, Mental Health Association of Central Australia, CASA Services, Enable Opportunities, Joyful Souls, Yirara College, Central Australian Aboriginal Congress, Northern Territory Government, Youth Diversion – NT Police, Acacia Hill School, Centralian Middle School, Ross Park Primary School, Clontarf Foundation, Centralian Senior College, Get Physical, YMCA of Central Australia, Multicultural Services of Central Australia, headspace, Bush Mob, Saltbush, Life Without Barriers, Women’s Safety Services of Central Australia, Heart Foundation NT, Alice Springs Correctional Centre, Gap Youth Centre, Tangentyere Council, Central Australia Youth Link Up Service, Disability Sports NT, Total Recreation, Catholic Care, APM Employment Services, Alice Springs Youth & Community Centre, Disability Advocacy Services , Anglicare NT, CASA, DASA and Community Housing. Basketball, AFL Northern Territory, Disability

Sports NT, Rugby NT, Pickleball Alice Springs, Athletics NT, Perentie Jiu Jitsu, Alice Springs Golf Club, Tennis Alice Springs and Alice Springs Cricket Association.

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