



Commissioned by:



Community Impact Study:

Golf in ACT

November 2017

Prepared by:



Foreword



Stuart Fraser, CEO Golf NSW

With over one million participants nationwide, there is no doubt that golf brings pleasure and enjoyment to many.

In ACT alone, over 10,000 people participate in the sport, and the game continues to evolve and attract a more diverse range of participants.

Nonetheless, for a long time, the contribution that golf makes to the wider community has neither been fully understood, nor appreciated by those outside of the sport.

Golf is in a period of transition. Recent cultural shifts towards flexible, fun and non-competitive recreation activities have led to the introduction of new game formats, programs and participation options. As an industry, golf must now set its sights on raising awareness about the diversity and inclusivity of our offer, which allows the sport to be accessible by all, and truly ensures that it is 'the game for life'.

We hope that this report will assist in changing perceptions and raising awareness of the sport, by quantifying the benefits that golf provides, not only to those directly involved, but to the ACT community as a whole.

While the economic and health contributions of the game reported over the following pages are impressive, when taken in-hand with the social case studies and story telling - which are so often under reported - the wider contribution of the sport is truly encapsulated.

We would like to thank and acknowledge all of the clubs and individuals who have been involved and contributed to this project. The vital data and insights that have been shared are what ultimately prove the value of this sport to the community.

Finally, we hope that this Community Impact Study will become a vehicle through which Golf New South Wales is able to advocate for the sport in the future.



Stuart Fraser
Chief Executive Officer
Golf New South Wales

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Overview

The Community Impact of Golf in ACT

Economic



Golf Community
Individuals
Business Multipliers

Social



Social Capital
Social Cohesion
Education

Health



Physical
Mental

Objectives

To determine the contribution of golf to the broader community in the ACT. The focus of this project was to understand the benefit that golf contributes to the community across three key areas of economic, social and health benefits.

Method

A range of valuation methodologies have been used in this project that are consistent with approaches and data inputs from the Australian Bureau of Statistics, the Australian Institute of Health and Welfare, and the Australian Sports Commission.

This project also incorporates primary research with golf stakeholders and participants – including an online survey with 1,335 individuals from within the golf community, and depth interviews with 13 golf industry stakeholders. The research is also supported by data and insights from a national Community Impact Study completed for the Australian Golf Industry Council (AGIC) in 2017.



Executive Summary – Golf in ACT

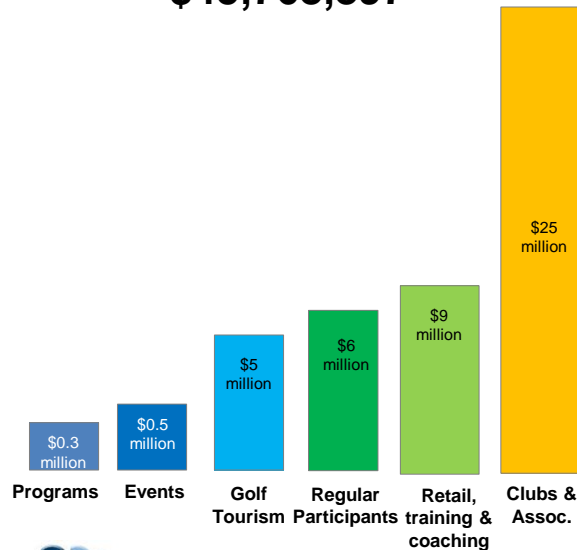
The Community Impact of Golf in ACT

\$47,067,958

Economic



Community Economic Benefit:
\$45,768,897



Community Impact Study, November 2017

Social



Participation in golf provides regular and cross-generational **social interaction across the lifespan.**

Golf provides a foundation to **build a strong and connected community.**

The game of golf and golf courses provide a **strong connection to the outdoors and natural environment.**

Golf **teaches valuable life lessons and principles** such as respect, honesty, etiquette and self discipline.

ACT golfers have a **life satisfaction score of 8.0** compared to the Australian population 7.3 and OECD countries 6.6.

ACT golfers **score 10 percentage points higher for social capital** than Australian sport participants and 18 percentage points higher than non-sport participants.

Health



Annual Health Benefit:
\$1,299,061



Physical Health
\$1,249,299p.a.

Mental Health
\$49,762p.a.



Lifetime Community Health Benefit:
\$44,487,284



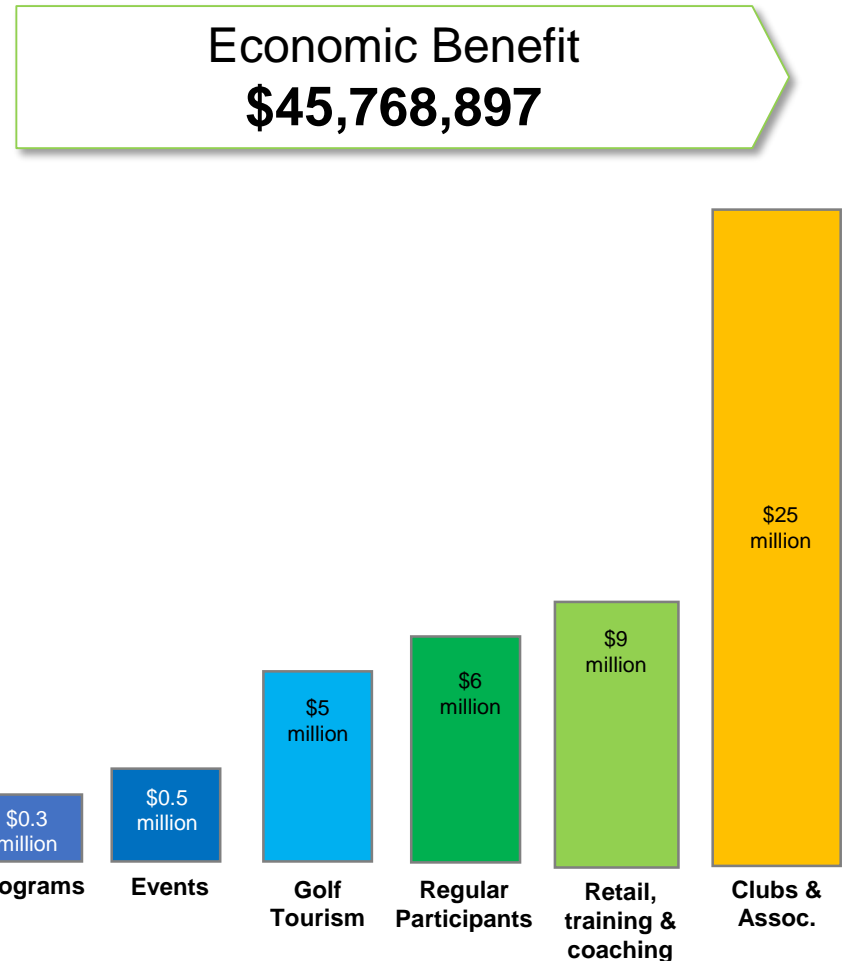
Executive Summary: Golf in ACT

KEY ECONOMIC FINDINGS

Golf is one of the largest participation and community sports in Australia with well over one million participants. It is among a number of high profile sports which are becoming increasingly commercially oriented. Indeed, many golf clubs have been managed as small to medium businesses in their own right for many decades; both as public (or community) and private ventures.

Golf makes an economic contribution to ACT and the Capital's region of \$45,768,897. This includes:

- The regular and occasional participants (from social to program based participants, school participants, regular club member competitors, and elite participants at the many events staged throughout the year).
- Expenditure on services, goods, maintenance, and employees by golf clubs, associations and peak bodies.
- Golf tourism, which generates visitation throughout Australia.
- Golf training and coaching activities.
- Retailing of golf equipment and merchandise.



Executive Summary: Golf in ACT

KEY SOCIAL FINDINGS

Golf, like many sports at a grassroots community level, contributes a broad range of social benefits such as community cohesion, social mobility, social inclusion and social capital.

Golf in ACT unique social strengths:



Participation in golf provides regular and cross-generational **social interaction across the lifespan**.

Golf provides a foundation to **build a strong and connected community**.



The game of golf and golf courses provide a **strong connection to the outdoors and natural environment**.

Golf **teaches valuable life lessons and principles** such as respect, honesty, etiquette and self discipline.



ACT golfers have a **life satisfaction score of 8.0** compared to the Australian population 7.3 and OECD countries 6.6.

ACT golfers **score 10 percentage points higher for social capital** than Australian sport participants and 18 percentage points higher than non-sport participants.

The approach used in this study towards understanding the social contribution of golf included:

- A global **literature review** of sport's social impact.
- Depth **interviews with 13** golf industry stakeholders.
- A **survey with 1,335** individuals from the golf community.
- Development of **detailed case studies**.
- Data from the Australian Bureau of Statistics (ABS), AusPlay and Organisation for Economic Co-Operation and Development (OECD).
- Supporting data and insights from a national Community Impact Study completed for AGIC in 2017.

Using the 11 OECD aspects identified as essential to well-being, and the ABS factors to measure social capital, the following highlights have been identified.

- Golfers from ACT have a **much higher self-assessed health status (69%)** than Australian Golfers (59%), general sport participants (57%) and non-sport participants (40%).
- Golfers from ACT are also **much more likely to volunteer within the community (73%)** than Australian Golfers (63%), general sport participants (42%) and non-sport participants (19%). The most common volunteer activities for ACT golfers are sport and physical activity related and community/welfare.

Executive Summary: Golf in ACT

KEY HEALTH FINDINGS

- Regular participation in physical activity provides significant health benefits to individuals from **both a physical and mental health** perspective.
- The physical health benefits analysed in this study are derived from **reducing the prevalence of chronic diseases** (breast cancer, coronary heart disease, diabetes, bowel cancer and stroke) as identified by the Australian Institute of Health and Welfare.
- The mental health benefits are derived from **reducing the prevalence of anxiety and depression**.
- Three out of the top ten most common diseases in Australia are reduced in prevalence through physical activity, with 5.0% of all diseases being attributed to physical inactivity according to the Australian Institute of Health and Welfare.
- These diseases which are reduced in prevalence through physical activity have a significant negative impact on the health of Australians. **Physical inactivity is the fourth highest risk of disease behind tobacco, obesity and alcohol use.**
- 94% of the burden of disease resulting from physical inactivity is borne by people aged 15 years and above, especially those aged over 45 years of age – therefore golf participation plays a significant preventative role in the later stages of life.

The community contribution to health which golf provides in terms of dollars saved is significant for all golfers. The reason golf members provide a greater contribution than social players is based on the higher frequency of participation. The charts below highlight those contributions annually and across the lifetime of participation.

ANNUAL HEALTH CONTRIBUTION			
Participant Segment	Physical Health Benefit	Mental Health Benefit	Total Health Benefit (Yr)
Males (Regular)	\$848,019	\$14,969	\$862,989
Females (Regular)	\$142,624	\$23,965	\$166,589
Sub-Total (Regular)	\$990,643	\$38,935	\$1,029,578
Males (Social)	\$221,480	\$4,544	\$226,025
Females (Social)	\$37,175	\$6,283	\$43,458
Sub Total (Social)	\$258,655	\$10,828	\$269,483
Total Annual Health Contribution	\$1,249,299	\$49,762	\$1,299,061

LIFETIME HEALTH CONTRIBUTION			
	Physical Health Benefit	Mental Health Benefit	Total Health Benefit (Yr)
Total Lifetime Health Contribution	\$43,540,447	\$946,838	\$44,487,284



Main Report - 1: Economic Contribution

1: Economic Contribution

SCOPE OF THE ASSESSMENT

A range of data sources were assessed to determine estimates of the economic contribution and socio-economic indicators for golf. These included:

- **Annual reports** from golf organisations in ACT.
- Analysis of a selection of financial statements and a survey of golf clubs throughout ACT. **Financial statements or records** were also collected from golf organisations.
- Details of golf participants in 2016 from the **Golf Club Australia Participation Reports**.
- Survey of **1,335 participants** by Sport Business Partners.
- **Australian Bureau of Statistics** Census of Population and Housing Data.
- **Tourism Research Australia** regional profiles for 2016.
- **IBISWorld** industry reports.

Results have been applied to, and reported by, Local Government Authority (LGA) regions within New South Wales and ACT.

The number of participants in varying forms of golf in ACT during 2016-17 have been derived from the Golf Club Australia Participation Report, SBP survey of participants, and Tourism Research Australia data.



Note:

The estimates presented in this report have been entirely derived from these sources and, therefore, their accuracy is dependent on the extent to which these sources are truly representative of golf activities throughout ACT and Australia. Golf NSW and affiliated organisations, Sport Business Partners, and Street Ryan and Associates Pty. Ltd., accept no responsibility for the accuracy of information or estimates presented, or for decisions taken as a result of material in this report.



Main Report - 2: Social Contribution

2: Social Contribution

ASSESSMENT APPROACH AND KEY ASSUMPTIONS

The following provides an overview of the conceptual methodology that was used to assess the social contribution of golf to the community.

Qualitative assessment

- A literature review was undertaken to understand the definitions and contextual approach towards what we have labelled as “community contribution”. This includes social cohesion, social capital, social inclusion, and social mobility – these concepts are frequently used interchangeably although there are slight differences. For this project we have focused on the development of social capital and social cohesion given these concepts primarily look at individuals and their local community networks, as distinct from society as a whole.
- Depth interviews were undertaken with **13 experienced stakeholders** from within the golf community. The objective of this phase was to uncover the intangible social and other benefits of being involved in the sport. These interviews then inspired the development of a series of case studies which evidence the unique social strengths of golf in ACT.
- The research is also supported by data and insights from a national Community Impact Study completed for AGIC in 2017.

Quantitative data

- In 2012 the Australian Bureau of Statistics (ABS) produced a report which sought to establish a correlation between indicators of social capital and sports participation. These social capital indicators included self-assessed health; personal stressors; work-life balance; feelings of safety and trust; social network size and diversity; and access to support. The questionnaire construct for these ABS Social Capital indicators was replicated through an **online survey with 1,335** golfers between July and September 2017.
- The Organisation for Economic Co-Operation and Development (OECD) conducts a measurement of life satisfaction which seeks to evaluate a person’s life as a whole rather than their current feelings. The questionnaire construct for the OECD measure of life satisfaction was replicated through an **online survey with 1,335** golfers between July and September 2017.

2: Social Contribution

DATA SOURCES

The following data sources have been used as key inputs into the approach towards valuing the social contribution of golf.

Each data source is presented in more detail over the following pages.

- The community benefits of sport participation.
- What is a cohesive society?
- The Australian Bureau of Statistics' Sport and Social Capital in Australia.
- Depth interviews with golf stakeholders.

The community benefits of sport participation^{11,12,13}

Some of the commonly identified social benefits of participating in sport are; improved community identity, community cohesion, the promotion of community pride and ownership, and the promotion of ethnic or cultural harmony.

A literature review by Atherley (2006) concluded that sport can provide social benefits such as community integration, cohesion, cooperation, and community identity and pride.

It is also evidenced that sport participation can contribute to crime reduction, community safety, education and lifelong learning, and environmental benefits.

Life Satisfaction¹⁴

The OECD measures 11 aspects identified as essential to well-being in terms of material living conditions (housing, income, jobs) and quality of life (community, education, environment, governance, health, life satisfaction, safety and work-life balance).

What is a cohesive society?¹⁴

The OECD defines a society as “cohesive” if it works towards the well being of all its members, fights exclusion and marginalisation, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward social mobility.

Within this definition of ‘social cohesion’ there are three distinct aspects. These being social inclusion, social capital and social mobility.

- Social inclusion: is measured by aspects of social exclusion such as poverty, inequality, acceptance, and social polarisation.
- Social capital: combines measures of trust (interpersonal and society), the extent of personal networks, and the extent of an individual’s engagement within a community.
- Social mobility: measures the degree to which people can, or believe they can, change their position in society.

Self-Assessed Health Status¹⁸

In 2012, the Australian Bureau of Statistics released a range of social capital indicators from the 2010 General Social Survey (GSS). These indicators compared sport participants versus non-sport participants within the Australian population.

Respondents to the GSS were asked to make a general assessment of their own health against a five point scale ranging from excellent through to poor.

2: Social Contribution

SOCIAL CAPITAL

In 2012 the Australian Bureau of Statistics released a range of social capital indicators from the 2010 General Social Survey (GSS). These indicators compared sport participants versus non-sport participants within the Australian population.

Social capital is defined as being **“a resource available to individuals and communities founded on networks of mutual support, reciprocity and trust”**.

Social capital can contribute to both individuals (via outcomes in health, education, employment and family wellbeing) and communities (community strength and resilience).

It is theorised that participating in sport develops social capital due to the community based social interaction that this involves.

The ABS suggests that whilst it is not possible to establish a causal link between sport participation and social capital, it is possible to establish correlations between the two.

From selected indicators of social capital (see adjacent table), it can be seen that Australian golfers in comparison to both general sport participants and non-sport participants are healthier, more engaged with their local community, and have closer relationships with their social networks.

Each of the social capital indicators in the adjacent table is presented in more detail over the following pages.

Social Capital Indicators

Social Capital Indicator	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Self-Assessed Health Status (% Excellent/Very Good)	69%	59%	57%	40%
Personal Stressor (% that have not experienced personal stress)	47%	47%	37%	44%
Work-life Balance (% can meet family/community responsibilities)	97%	99%	92%	87%
Volunteership (% that volunteer within the community)	73%	63%	42%	19%
No. of Confidants (% with 3 or more friends to confide in)	70%	60%	58%	37%
Contact with Social Networks (% with weekly face-to-face contact)	83%	80%	81%	73%
Social Network Diversity (% with friends of diverse ethnicity)	81%	82%	77%	67%
Access to support (% able to ask for small favours)	98%	95%	94%	88%

2: Social Contribution

SPORT AND SOCIAL CAPITAL IN AUSTRALIA - SELECTED INDICATORS

SELF-ASSESSED HEALTH STATUS				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Excellent	23%	16%	22%	13%
Very Good	46%	43%	35%	27%
Good	25%	31%	30%	32%
Fair	5%	9%	11%	18%
Poor	1%	1%	3%	9%
Total	100%	100%	100%	100%

PERSONAL STRESSOR				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Experienced a personal stressor	53%	53%	63%	56%
Did not experience a personal stressor	47%	47%	37%	44%
Total	100%	100%	100%	100%

WORK LIFE BALANCE*				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Can meet responsibilities	97%	99%	92%	87%
Can not meet responsibilities	3%	1%	8%	13%

* Of those with family/community responsibilities

VOLUNTEERSHIP				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Volunteers	73%	63%	42%	19%
Not volunteers	27%	37%	58%	81%
Total	100%	100%	100%	100%

2: Social Contribution

SPORT AND SOCIAL CAPITAL IN AUSTRALIA - SELECTED INDICATORS

NO. OF CONFIDANTS				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
None	3%	4%	10%	23%
1-2 friends	27%	36%	32%	40%
3-4 friends	40%	36%	32%	23%
5 or more friends	30%	24%	26%	14%

SOCIAL NETWORK DIVERSITY*				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Friends with same ethnic background	18%	15%	23%	33%
Friends of similar age	6%	5%	9%	17%
Friends with same level of education	5%	5%	12%	16%

* % All Friends of same level

CONTACT WITH SOCIAL NETWORKS*				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Everyday	28%	22%	21%	19%
At least once a week	55%	58%	60%	54%
At least once a month	14%	15%	14%	17%
At least once in three months	2%	3%	4%	7%
No recent contact	1%	2%	1%	3%

* Face-to-Face contact

ACCESS TO SUPPORT				
	ACT Golfers	Australian Golfers	Sport Participants	Non-sport Participants
Are able to ask for small favours	98%	95%	94%	88%
Are able to ask for support in a crisis	97%	95%	95%	90%

2: Social Contribution

QUALITATIVE ASSESSMENT – STRENGTHS OF GOLF AND IMPORTANCE TO COMMUNITIES

Qualitative assessment of the social cohesion generated through the Australian golf community

Depth interviews with 13 individuals actively involved in the golf community were conducted to identify golf's unique strengths in delivering social benefits to individuals and the community.

These depth interviews included interviews with 3 x Golf Club Managers, 3 Golf Administrators, 2 x PGA representatives, 2 x LGA representatives, 2 x Volunteers and 1 x Special Needs in Golf Expert.

Whilst golf, like all sports, delivers a broad range of social benefits, the following are some of the sport's unique strengths.

Strengths of the sport

A range of positive aspects were identified through our interviews, and while some of these are obvious, they will assist with identifying the social impacts of the game and provide some clarity on the brand essence. At the core of the game is;

- Golf is the **number one sport for adults 45 years and over (Nationally)**, by a long way. (Golf 504,000; Tennis 189,000; Bowls 184,000) ²¹
- The **health benefits gained from the sport**; the walking, socialisation, and the physical activity for a sustained period – the seven to nine kilometres of walking that many **would not do without the connection to golf**.
- The sport is **played around the world in over 50 countries**. No matter where you travel, you can connect with people through golf.

- Golf can be **played by all ages, from 5 to 95**. Very few other sports can have a child compete against people in their 80's or 90's.
- The **connection to the outdoors and nature** on the golf course is fast becoming the only time many spend in green open space.
- Golf provides **both competitive and non-competitive opportunities**. You can choose to play in a competition and compete against others, or you can choose to play for the enjoyment of the game.
- The game **teaches life skills to younger players**. They include respect, appropriate behaviour and honesty.
- Many clubs are **now providing a café style experience**, both for participants and the general public (revenue stream). This complements the social connection that is achieved by engaging in the sport.

Importance to local communities in ACT

- Golf clubs, courses and activities are often undervalued. In many rural and regional areas **they are recognised for their contribution to the local community**. Such as being a social hub, providing fundraising activities, and free golf for community groups.
- Increasingly, clubs that provide **cafés are seeing an increase in patronage**. Many are becoming a meeting place not only for golfers but many non-golfers from the local community.
- Golf clubs and courses are often a **large employer within a local community**.
- Golf clubs often **use local suppliers from their community**, whether that be food and beverage or local trades.

2: Social Contribution

SOCIAL IMPACT OF GOLF

- The **social connection between members** of the golf community **cannot be underestimated**. There are many examples of how this connection provides extensive mental health benefits to those involved.
- Many **older golfers** note that the bulk of their **friendship group belong to their golf club**.
- Golf clubs and courses are often the **venue for many social events**, thus providing a social hub for the local community. Many clubs host birthday parties, weddings, corporate functions, other sports functions, even funerals.
- Golf provides a **high value experience** for many locals by bringing people together and providing a social connection.
- Some clubs and courses **host community events**. For example; hosting the local fire brigade for a social event to thank them for their contribution to the community; and hosting a primary school fundraiser through an outdoor cinema on the fairway.
- Golf **industry expertise** is now being shared with the local community. For example ground staff from one course now maintain the local school oval and local football/cricket club oval.



2: Social Contribution

Empower Golf

Empower golf was created to facilitate and promote golf for Australians of all abilities.

Background

- James Gimble founded Empower Golf after he was left disabled following an accident. He found that banter, mateship and being out in nature were all taken away from him when he could no longer play golf.
- James set out to facilitate and promote golf for Australians of all abilities.

Initiative

- To establish Empower Golf Hubs at golf courses nationally to enable access to golf for all abilities.
- Provide and fund equipment as well as organise development days, coaching and tournaments to experience golf.
- Build infrastructure and grow the profile of disabled golf with the ultimate goal of having golf included in the Paralympics.

Outcome

- Clint Morgan, through the help of a para golf all terrain wheelchair was able to stand and swing a golf club, just 9 months after a BMX accident left him paralysed.

Reference

<http://www.empowergolf.com.au/about-us/>

<http://www.communitynews.com.au/melville-times/news/empower-golf-gives-confidence-to-get-back-on-course/>



Key learnings

- **The benefits that golf brings to those with a disability is often underestimated, and goes beyond the physical, to mental and health benefits as well.**
- **Empowering golfers of all abilities to play the game opens the sport up to new audiences, and encourages everyone to get involved.**

2: Social Contribution

Jack Newton Junior Golf

Jack Newton Junior Golf (JNJG) is an organisation that focusses on delivering golf to junior players (under 18) in NSW. Jack Newton, OAM, has been the driving force behind junior golf since the foundation was established in 1986.

Background

- The Jack Newton Junior Golf Foundation (JNJG) was established in 1986 to introduce more young people to the game of golf and to nurture their skills and enjoyment of the sport.

Initiative

- The objectives of JNJG are to establish and service a variety of golf programs for boys and girls that create pathways through the sport and cater for the beginner through to the elite.
- JNJG provides quality teaching and coaching at all levels through the Golf Australia Community Instructor accreditation scheme.
- Ultimately, the foundation aims to increase the participation levels of junior persons in golf throughout NSW and the ACT.
- JNJG conducts five major tournaments throughout the year, making up the JNJG Tour. The foundation also runs a Junior Masters Series which consists of eight masters series tournaments.

Outcome

- The JNJG tour is the number one junior golf tour in Australia.

Reference

<http://www.jnjg.com.au/about-junior-golf/what-is-jnjg>



Key learnings

- The under 18 age bracket is largely under-represented in the golf participation landscape, making up less than 5% of the national club golf membership base.
- Targeted junior programs and tournaments provide a pathway for developing golfers to take up the sport, and encourage ongoing retention of junior players.

2: Social Contribution

Golf and Health Project

In October 2016, the World Golf Foundation launched the Golf and Health Project. The project aims to academically research and highlight how the sport can benefit people's lives.

Background

- Researchers at the University of Edinburgh in Scotland, conducted the largest, most comprehensive study of golf and health, with the results shown in a Scoping Review published in The British Journal of Sports Medicine. In total, 5,000 papers were reviewed to provide a comprehensive view on the impact of the game on health, illness prevention and associated injuries.

Initiative

- The project has international support and its own dedicated website that posts regular updates on the project and its findings.
- Findings have covered the physical, psychological, social & well-being, spectating, and injury prevention benefits.

Outcome

The research has found that key benefits of golf participation include:

- Improved life expectancy and quality of life.
- Mental health benefits.
- Decreased risk of more than 40 major chronic diseases like type 2 diabetes, heart attacks, colon and breast cancer.
- Positive impacts on cholesterol, body composition, metabolism, and longevity.

Reference

<http://www.golfandhealth.org/>



Key learnings

- **The findings from this report support and strengthen the existing evidence base, highlighting the health and well-being benefits of golf.**
- **This includes an increase in life expectancy, a decreased risk of major chronic diseases and positive impacts on social well-being.**

2: Social Contribution

Inclusive Participation Programs

An England Golf study in 2015 revealed that 80% of golfers with a disability in the UK want to reconnect with mainstream participation pathways. This is consistent with the Australian Sports Commission's AusPlay Research into sports participation for people with a disability in Australia.

Background

- Golf Australia recognises the importance of providing dual pathways for golfers with a disability, giving them the choice to participate in either mainstream or disability specific sporting programs.

Initiative

- Golf's National Junior Participation Program, MyGolf has been developed with principles of universal design embedded throughout the curriculum.
- This ensures that it is adaptable and flexible enough to exist in the Special School & Special Development School Golf programs.

Outcome

- 2,664 participants with a disability have been included through programs since 2016.
- In 2017, golf athletes from special schools have also competed in mainstream School Sports Australia Primary School events in 2017.

Reference

- <http://www.golf.org.au/pga-inclusive-coaching>



Key learnings

- **Providing equal opportunities for golfers with a disability will drive inclusion initiatives and diversify program offers, opening up the sport to a broader range of participants.**

2: Social Contribution

Soldier On Partnership

Soldier On works to support wounded veterans and their families through a range of rehabilitation and reintegration initiatives. The organisation has worked closely with a number of golf clubs and institutions to provide participation opportunities to veterans.

Background

- Golf Australia, ISPS Handa, and individual golf clubs have worked closely with Soldier On to provide several grassroots and high profile golf opportunities to veterans and their families.

Initiative

- ISPS Handa also facilitated the opportunity for Soldier On to select and send a team to participate in the Invictus Games Golf Demonstration event in Florida, which was won by the Australian team.

Outcome

- Following the success at the Invictus Games, Soldier On selected a team of 10 golfing participants to compete for the Clyde Pearce Cup in Wales.
- ISPS Handa also provided opportunities for Soldier On golfers to participate in pro-ams and corporate golf events at both the Australian Open, and the Australian Ladies Open. Regular golf clinics for participants around the country are set to become a regular offering and were kick-started by a pilot program organised by Golf Australia and the PGA in Sydney.

Reference

- <https://www.soldieron.org.au/YearInReviewFY1516>



Key learnings

- **This example is just one of many that highlights the contribution the golf industry makes towards charity and not-for-profit organisations.**
- **The work that many clubs do within the community is often under-reported, yet provides crucial funding and support to local businesses and not-for-profit organisations.**

2: Social Contribution

MyGolf Ambassador Program

The MyGolf School Ambassador Program aims to resource and recognise teachers for their efforts in promoting and delivering MyGolf School programs within their local school community.

Background

- Launched in August 2017, the initiative developed by Golf Australia and the PGA of Australia aims to make golf easier and more accessible for teachers to deliver, while providing a reward for their effort.

Initiative

- MyGolf school ambassadors have exclusive access to the newly developed MyGolf School Coaching Resource App.
- The app contains interactive manuals that teachers can use to deliver fun and engaging programs to children in grades 3-10. It also features interactive video, teaching points and fun, skill-based games.
- MyGolf school ambassadors also receive access to professional development opportunities in their state, access to tickets to attend golf events in their state and regular e-newsletters with valuable coaching tips.

Outcome

- The program has already gathered huge interest from teachers across the country with a total of 955 registrations across Australia for the program.
- The App has had 961 impressions, and 348 app units are being used in the country.

Reference

<http://www.mygolf.org.au/news-display/mygolf-school-ambassador-program-tees-off/92456>



Key learnings

- **Adapting coaching delivery resources to include digital formats and platforms encourages new, fun and engaging programs for children.**
- **This will assist in growing the sport at a grass roots level and improve the accessibility of golf for future generations.**

2: Social Contribution

SOCIAL STORY-TELLING FROM RESPONDENTS

“In terms of lifelong learning, the game certainly teaches you a lot of good life lessons – respect for people of authority, your playing partners, the game. It teaches you how to deal and mix with people in a variety of settings, how to interact socially, across the sport and with older and younger players alike. You have to be a gracious loser and in a field of 200, there is only one winner.”

- Golf Administrator

“The employment we create is significant at a local level – we have 60 or so on the books and we pay 50 people each week. We are creating employment full and part-time and an opportunity to build a career pathway.”

- Long-term Volunteer and Player

“The health benefits are obvious – walking 8-10kms plus, not to mention the physical activity of the game, the swinging, searching, watching. The ability to be outside for 4-5 hours away from the stresses of life, work and home. Chatting and talking to people who share a common interest but may be from a different walk of life – it is a lifesaver in my opinion.”

- Golf Administrator

“At a community level, the ability to spend 4-5 hours away from work, a relaxation period, a time to re-charge – it is a happy place for most. Most play for the social aspect, playing with mates, a few laughs, a couple of beers or wine – and some exercise thrown in. It is a wonderland for many.”

- Club Administrator

“The club culture is fantastic – it promotes a network of support and the connection to friends, common interest groups, the whole social dynamic post the game – around the golf course, the game itself, the sense of joint ownership and belonging. At my club, I see a group of 80 year olds who are there each week and they catch up for a few holes and lunch. All know my parents and it is like a second and extended family to me.”

- Golf Administrator

“The integrity of the game – and we know it is not all perfect but the etiquette and rules, the integrity it teaches, the right and wrong.”

- Club Administrator

2: Social Contribution

SOCIAL STORY-TELLING FROM RESPONDENTS

“There are amazing case studies of success and growth. Wilcannia – the only place in town where a family can eat and drink in a friendly environment – and it has the most amazing Chinese food. Coolamon outside of Wagga – it’s the local sports club – it has Rugby League, Bowls, Golf. It is the go to club to celebrate success and congregate at. Manildra outside of Orange is another beauty – it has an external BBQ area, it is almost the only place in town where people can have gatherings, birthdays, functions – kids can run around and play. Even Royal Sydney – it isn’t just a golf club – it is a dining, sport, gym, golf, it is about the relationships, the social environment – and a place to socialise with friends, work and golf colleagues.”

- Golf Administrator

“The life skills taught through the game the honesty, the integrity and a set of traditional standards. The game provides a foundation for learning to communicate, a lot of kids today cannot hold a conversation – with at least with golf, you are often introduced to speaking to each other, speaking publicly and a connection to the game. Anyone can play from 8 to 85 years. Age is no barrier and the 14 year olds can and will play with the 80 year olds.”

- Club Administrator

“The games strengths are built on the economic footprint, regionally the golf club is often the centre of the regional or rural community. The benefits are widespread, and while it is an understated position, the ability of the game to cover off and include families, juniors, women and social players – there are offers everywhere now. The facility of a club – the F and B offers, the community hub – a place where people, golfers and the community get together and enjoy each other’s company. It provides local and regional employment and flow on effects.”

- Golf Administrator

“A golf club provides a sense of belonging. One of the painful experiences of aging is being alienated – but people come here to have anywhere from 2 to 20 companions. For older members it has a huge impact on their life. It is so much better here than any other watering hole or RSL where you can just have a drink and a flutter. At a golf club it is all very social and you are staying active in so many other ways. In addition, it provides a sense of belonging, feeling appreciated, being respected, feeling loved – all of these things are the unwritten things about the benefit of the game.”

- Club General Manager

2: Social Contribution

SOCIAL STORY-TELLING FROM RESPONDENTS

"The volunteers on the golf course – they spend 5 hours here (about 10-12 of them each week). They come from all walks of life and turn up at 7am on Monday. They do 5 hour shifts from weeding, mulching, edging, blowing pathway – some of these jobs are ones the Superintendent cannot get to – the members love it... and it makes a huge difference to each club."

- Club Administrator

"The eco-system of the game, the agronomy, the PGA traineeships, the importance of Boards and decision making, apprentice chefs, golfers and mechanics – and superintendents – these all create opportunities to be involved with the game for fun and for life."

- Golf Administrator

"Volunteering – personally this gives me a whole lot of satisfaction. I volunteer at events from ages 8 to 80 – and with the juniors I do a couple of months a year at events and to watch these kids prosper and progress in skill, manners and respect for the game and people. I got into volunteering to fill a big hole in my life – we feel an obligation to help the club and it is omnipresent in many country and regional towns – where you have a working bee every Friday to rake bunkers, leaves, gardens and even watering."

- Long-term Volunteer and Player

"The culture of the game, from juniors to the elderly – it is an inspirational game and teaches about life skills. Younger peers and adults mixing in the one environment. At club level it is a healthy pursuit and it creates community camaraderie – and even more so in regional areas of Australia. With handicaps and social offers anyone of any ability, age or skill can compete and play together. Now that is rare."

- Long-term Volunteer and Player

"In terms of charity, I see that clubs all around the State either directly or indirectly, provide rounds of golf to help charities and organisations like Rotary and Probis. Some golf clubs do far more than they can really afford and offer reduced or free room hire and rates for meetings. Emergency service and bushfire situations can heavily rely on golf clubs for assistance in times of need or as a place of refuge. There is an ASX charity day that raises a \$1M at Pennant Hills and there are Cancer Council days, Diabetes days run through the strong networks of clubs. We can help aggregate and raise the profile of charitable organisations through our networks and even help local service based clubs and charities through the simple offer of meeting and venue spaces at low or no cost."

- Golf Administrator



Main Report - 3: Health Contribution

3: Health Contribution

VALUATION APPROACH – PHYSICAL AND MENTAL HEALTH

The following provides an overview of the conceptual methodology used to calculate the health benefits derived from golf participation. The approach is similar to many previous whole of sport industry studies, and includes data input from the Australian Institute of Health and Welfare and the Australian Government Department of Health.

Physical Health

- Evidencing the negative effects of insufficient physical activity. The 2011 study by the Australian Institute of Health and Welfare ¹ **attributed 5.0% of the burden of disease in Australia to physical inactivity.** The specific diseases resulting are breast cancer, coronary heart disease, diabetes, bowel cancer and stroke.
- Identifying the total number of Disability-Adjusted Life Years (DALYs) lost due to diseases caused by physical inactivity, and then calculating the equivalent contribution from a per person perspective.
- Understanding the expected life duration based on current age and gender segments, as well as the average duration in years of golf participation.
- Calculating the Value of a Statistical Life Year (VSLY) based upon Department of Finance best practice guidelines. The **VSLY used is \$187,240⁷.**
- Modelling the actual number of golf participants (across age and gender segments).

- The basic formula for calculating physical health benefits is therefore: $\text{Physical Health} = \text{No. of Participants} \times \text{DALYs prevented} \times \text{VSLY} \times (1\text{-year of golf Participation/Expected Life Remaining}).$

Mental Health

Calculating the mental health benefits was similar to the method used to calculate physical health, with a number of adjustments as follows:

- Evidencing the preventative effects of physical activity on anxiety and depression. Based upon the evidence used by the Australian Government Department of Health to support the current Physical Activity & Sedentary Behaviour Guidelines for Adults (18-64 years)², **we have used** the conservative estimated range that physical activity has **a 25% preventative impact** on anxiety and depression.
- Identifying the total number of Disability-Adjusted Life Years (DALYs) lost due to anxiety and depression, and then calculating the equivalent contribution from a per person (by age and gender) perspective.
- The basic formula for calculating mental health benefits is therefore: $\text{Mental Health} = \text{No. of Participants} \times (\text{DALYs from anxiety and depression/preventative effect of physical activity}) \times \text{VSLY} \times (1\text{-year of golf Participation/Expected Life Remaining}).$

3: Health Contribution

ANNUAL HEALTH CONTRIBUTION

ACT Golf Members

ANNUAL HEALTH CONTRIBUTION – GOLF MEMBERS			
Participant Segment	Physical	Mental	Total Health Benefit (Yr)
	Health Benefit	Health Benefit	
Male 0-14 years	\$0	\$241	\$241
Male 15-24 years	\$0	\$2,361	\$2,361
Male 25-64 years	\$67,086	\$12,368	\$79,454
Male 65-74 years	\$227,393	\$0	\$227,393
Male 75+ years	\$553,541	\$0	\$553,541
Female 0-14 years	\$0	\$59	\$59
Female 15-24 years	\$0	\$988	\$988
Female 25-64 years	\$10,418	\$3,772	\$14,191
Female 65-74 years	\$30,571	\$19,146	\$49,716
Female 75+ years	\$101,635	\$0	\$101,635
Total	\$990,643	\$38,935	\$1,029,578

4k individuals \$265 per person (per year)

ACT Social Players

ANNUAL HEALTH CONTRIBUTION – SOCIAL PLAYERS			
Participant Segment	Physical Health	Mental Health	Total Health Benefit (Yr)
	Benefit	Benefit	
Male 0-14 years	\$0	\$67	\$67
Male 15-24 years	\$0	\$277	\$277
Male 25-64 years	\$22,779	\$4,199	\$26,978
Male 65-74 years	\$57,840	\$0	\$57,840
Male 75+ years	\$140,861	\$0	\$140,861
Female 0-14 years	\$0	\$17	\$17
Female 15-24 years	\$0	\$116	\$116
Female 25-64 years	\$3,537	\$1,281	\$4,818
Female 65-74 years	\$7,776	\$4,870	\$12,646
Female 75+ years	\$25,862	\$0	\$25,862
Total	\$258,655	\$10,828	\$269,483

6k individuals \$43 per person (per year)

3: Health Contribution

LIFETIME HEALTH CONTRIBUTION

ACT Golf Members

LIFETIME HEALTH CONTRIBUTION – GOLF MEMBERS			
Participant Segment	Physical Health Benefit	Mental Health Benefit	Total Health Benefit (Yr)
Male 0-14 years	\$0	\$1,317	\$1,317
Male 15-24 years	\$0	\$18,135	\$18,135
Male 25-64 years	\$1,677,140	\$309,197	\$1,986,338
Male 65-74 years	\$8,186,148	\$0	\$8,186,148
Male 75+ years	\$22,141,633	\$0	\$22,141,633
Female 0-14 years	\$0	\$413	\$413
Female 15-24 years	\$0	\$6,919	\$6,919
Female 25-64 years	\$156,276	\$56,586	\$212,862
Female 65-74 years	\$703,126	\$440,351	\$1,143,477
Female 75+ years	\$4,065,389	\$0	\$4,065,389
Total	\$36,929,712	\$832,917	\$37,762,629

4k individuals \$9,715 per person

ACT Social Players

LIFETIME HEALTH CONTRIBUTION – SOCIAL PLAYERS			
Participant Segment	Physical Health Benefit	Mental Health Benefit	Total Health Benefit (Yr)
Male 0-14 years	\$0	\$472	\$472
Male 15-24 years	\$0	\$1,664	\$1,664
Male 25-64 years	\$410,018	\$75,591	\$485,608
Male 65-74 years	\$1,677,369	\$0	\$1,677,369
Male 75+ years	\$3,803,256	\$0	\$3,803,256
Female 0-14 years	\$0	\$66	\$66
Female 15-24 years	\$0	\$1,278	\$1,278
Female 25-64 years	\$42,449	\$15,371	\$57,820
Female 65-74 years	\$31,103	\$19,479	\$50,583
Female 75+ years	\$646,540	\$0	\$646,540
Total	\$6,610,735	\$113,921	\$6,724,656

6k individuals \$1,085 per person

3: Health Contribution

DATA SOURCES

The following data sources have been used as key inputs into the approach towards valuing the health contribution of golf. Each data source is presented in more detail over the following pages.

Physical health sources

- Health care expenditure in Australia.
- Health care expenditure on Disease.
- The cause of disease in Australia.
- The burden of disease due to physical inactivity.
- Disability-Adjusted Life Year (DALY).
- DALYs attributed to physical inactivity.
- Value of a Statistical Life Year (VSLY).
- Recommended physical activity levels.
- Average life expectancy and duration of golf participation.

Mental health sources

- Health care expenditure on mental disorders.
- The cause of disease in Australia.
- The prevention of anxiety and depression.
- DALYs caused by anxiety and depression.



Note:

The estimates presented in this report have been entirely derived from these sources and, therefore, their accuracy is dependent on the extent to which these sources are truly representative of golf activities throughout ACT and Australia. Golf NSW and affiliated organisations, Sport Business Partners, and Street Ryan and Associates Pty. Ltd., accept no responsibility for the accuracy of information or estimates presented, or for decisions taken as a result of material in this report.

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Health care expenditure in Australia³

According to the AIHW total health expenditure on goods and services in Australia was \$161.6 billion in 2014-2015 (up by 2.8% from 2013-2014), which represents 10.03% of Gross Domestic Product (GDP) per annum. This total health care expenditure is an **equivalent of \$6,846 per person** in Australia.

Health care expenditure on disease⁴

Whilst not all health expenditure is allocated towards a specific category (such as disease) figures from 2008-2009 AIHW expenditure data show that approximately **12% of total** allocated health expenditure is spent on cardiovascular diseases (the highest expenditure category). This is followed by oral health at 10%, mental disorders at 8.5%, neoplasms (cancers) at 7% and diabetes mellitus at 2% of allocated expenditure.

The cause of disease in Australia¹

Cancer and cardiovascular disease are the two leading causes of disease in Australia, **accounting for 33% of all disease**. Whilst there are a range of risk factors that contribute to each disease group, physical inactivity is attributable to 3 of the top 10 diseases in Australia. This means sport participation is critical to the prevention of the overall burden of disease in the community.

Top 10 causes of disease in Australia		
Cause	% of all Diseases	% of Disease attributable to physical inactivity
Cancers	18.5	6.4
Cardiovascular disease	14.6	21.2
Mental disorders	12.1	-
Musculoskeletal	11.6	-
Injuries	8.8	-
Respiratory	8.3	-
Neurological	6.8	-
Gastrointestinal	3.2	-
Infant/Congenital	2.7	-
Endocrine	2.4	29.7

Source: AIHW.

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

The burden of disease due to physical inactivity¹

In Australia, **31.5% of the burden of disease** can be attributed to **29 selected risk factors** (top 11 shown opposite). Of these risk factors, physical inactivity is the fourth highest cause at 5.0%, behind tobacco (9.0%); high body mass – obesity (5.5%); and alcohol use (5.1%).

These findings are taken from the Australian Institute of Health and Welfare (AIHW) study (2011). The data from this study is widely used in Australia to measure the burden of disease, and has also been used in many similar studies to this one, including Muller et al (2010)⁵ and Access Economics (2010)⁶.

The AIHW study (2011) found five specific diseases which physical inactivity is an attributing factor. Breast Cancer, Coronary Heart Disease, Diabetes, Bowel Cancer and Stroke.

Disease burden attributable to top 11 risk factors	
Risk Factor	% Attribution
Tobacco	9.0
High Body Mass - Obesity	5.5
Alcohol Use	5.1
Physical inactivity	5.0
High blood pressure	4.9
Low fruit and vegetable Diet	3.4
High blood plasma glucose	2.7
High cholesterol	2.4
Occupational exposures and hazards	1.9
Diet high in processed meats	1.4
Diet low in nuts and seeds	1.4
Total*	31.5

Note*: the total is not cumulative as there is some overlap between risk factors

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Disability-Adjusted Life Year (DALY)¹

The Disability-Adjusted Life Year (DALY) is a single, consistent measurement of the years of life lost due to premature death and 'healthy' years of life lost. This measurement of the burden of disease is adopted and used by the World Health Organisation (WHO).

A study by AIHW (2011) found that 53% of the burden of disease impacts people between the ages of 15-64 years of age.

Distribution of age, disease and golf participation			
Age Group	Australian Population Distribution	Golf Member Distribution	DALY Population Distribution
0-14 years	18.8%	3%	6.0%
15-44 years	41.3%	24.4%	24.1%
45-64 years	24.6%	36.6%	29.3%
65-74 years	8.6%	23.1%	18.5%
75+ years	6.6%	12.9%	22.1%

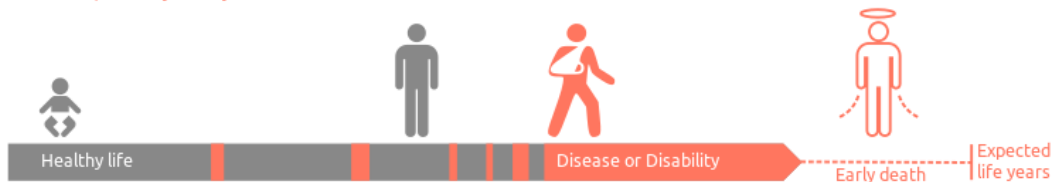
Source: ABS, AIHW, AGIC, SBP Calculations.

DALY

Disability Adjusted Life Years is a measure of overall disease burden, expressed as the cumulative number of years lost due to ill-health, disability or early death

$$= \text{YLD} + \text{YLL}$$

Years Lived with Disability + Years of Life Lost



3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Disability-Adjusted Life Year (DALY) attributed to physical inactivity¹

Based upon the findings from AIHW (2011), it is possible to calculate the contribution of any given person, based upon their age and gender profile, to the DALYs lost as a result of physical inactivity.

Note - there is zero to very minimal DALYs lost due to physical inactivity for people between 0-24 years of age.

	Males					Females				
	0-14	15-24	25-64	65-74	75+	0-14	15-24	25-64	65-74	75+
DALYs attributed to Physical inactivity - Australian Population (A)	0	0	61,700	30,600	33,300	0	0	42,600	19,600	36,500
Australian Population, 2016 (B)	2,331,078	1,622,984	6,316,978	1,023,017	696,915	2,208,167	1,540,667	6,426,136	1,060,448	902,486
Ave. DALY per person (C) = (A/B)	-	-	0.010	0.030	0.048	-	-	0.007	0.018	0.040

Source: AIHW, SBP calculations.

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Value of a Statistical Life Year (VSLY)⁷

The value of a statistical life year in 2016 is \$187,240.

This figure is calculated based on best practice guidelines from the Australian Government (Office of Best Practice, Department of Finance) who calculated the VSLY in 2014 as \$182,000 plus the additional CPI calculation.

Some other studies have used a VSLY as high as \$252,014 based on a global literature review conducted by Access Economics in 2008. However SBP has chosen to use a conservative VSLY to ensure consistency with Australian government guidelines and common practice. If the higher VSLY had been used, the annual health benefit would increase from \$48.9 million to \$65.8 million in total (a \$16.9 million increase).

Recommended physical activity levels^{2, 8}

According to the Australia Government Department of Health, the current Physical Activity & Sedentary Behaviour Guidelines for Adults (18-64 years) are:

- Doing any physical activity is better than doing none. If you currently do no physical activity, start by doing some, and gradually build up to the recommended amount.

- Be active on most, preferably all, days every week.
- Accumulate 150 to 300 minutes (2 ½ to 5 hours) of moderate intensity physical activity or 75 to 150 minutes (1 ¼ to 2 ½ hours) of vigorous intensity physical activity, or an equivalent combination of both moderate and vigorous activities, each week.
- Do muscle strengthening activities on at least 2 days each week.

For health benefits to be achieved through physical activity, a person must meet the minimum recommended levels of 3 x sessions of at least 25 minutes vigorous exercise; OR 5 x 30 minutes of moderate exercise per week.

Whilst regulatory standards on the minimum recommended levels of exercise continue to evolve, it is these levels of the amount of physical activity that contribute health benefits that are representative of the currently available scientific evidence.

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Average life expectancy and duration of golf participation^{9,10}

The current life expectancy of individuals at their present age is shown in the table below. This has been calculated from ABS, 2015 Life Tables. It shows that a male who is currently 25 years of age is expected to live to 82 years of age, whilst a female 75 years of age is expected to live to 94 years of age.

The **expected average duration of golf participation** amongst all members (20 years) is **43% higher** than social (14 years).

The current average life remaining has been factored into the calculation of the physical health benefits of golf participation by valuing the contribution of one year of being physically active out of a person's remaining life.

Golf cannot claim to be the source of disease prevention for a person's entire life, however it will contribute preventative health benefits for their remaining life.

Gender/Age Group	Current Life Expectancy (Years) ⁹	Average Life Remaining (Years) ⁹	Member : Average Participation Duration (Years)	Social : Average Participation Duration (Years)
Male 0-14 years	81	74	5	7
Male 15-24 years	81	61	8	6
Male 25-64 years	82	38	25	18
Male 65-74 years	86	16	36	29
Male 75+ years	93	6	40	27
Female 0-14 years	85	78	7	4
Female 15-24 years	85	66	7	11
Female 25-64 years	86	41	15	12
Female 65-74 years	88	19	23	4
Female 75+ years	94	7	40	25
Mean no. of years	NA	NA	20	14

3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Frequency of golf participation^{9,10}

Golf members participate more than those who are social players – both in the number of times played per year, and in the number of hours participated per week.

The disparity in the participation volume between members and non-members explains why a significant proportion of the physical health benefits of golf are generated by members.

Frequency of playing golf	Member Golfers	Social Golfers
Not at all	1%	1%
Less than 3 times	0%	3%
3-6 times	0%	6%
7-12 times	3%	11%
13-26 times	5%	18%
27-52 times	24%	29%
53-104 times	43%	20%
More than 104 times	24%	14%
Mean no. of times	67 times per year	8 times per year

Source: ABS, AusPlay, AGIC Survey, SBP Calculations

Hours per week playing golf (including practice)	Member Golfers	Social Golfers
None / NA	1%	8%
Less than 1 hour	3%	11%
1 - 3 hours	4%	15%
4 - 6 hours	25%	31%
7 - 9 hours	21%	14%
10 - 12 hours	20%	14%
13 - 15 hours	13%	4%
16 - 18 hours	5%	1%
19+ hours	8%	4%
Mean no. of hours/week	9.4 hours	6.2 hours

Source: AGIC Survey, SBP calculations.



3: Health Contribution

PHYSICAL HEALTH DATA INPUT

Number of individuals receiving health benefits

Whilst Golf in Australia (and in ACT) have accurate records of the number of members (reported in the 2016 Golf Club Participation Report to be 146,174), there is less consistent and reliable data on the number of Social Golf participants in Australia.

In order to determine the number of non-member participants, SBP utilised all publicly available data relating to golf participation and developed three distinct methods of calculation. The data sources used included: ABS sport participation data from 2011/2012, AusPlay data 2016, and the Golf Australia – Golf Club Participation Reports 2015 & 2016. SBP then applied the national (member to non-member) ratios for each age segment to ACT to determine the number of non-member participants.

The calculations used to estimate the non-member golf segment are drawn from the ABS and AusPlay data. For the purposes of this report, we have utilised the average percentage of each of the segments.

Golf ACT Segment	Number of ACT participants
Male 0-14 years	242
Male 15-24 years	623
Male 25-64 years	4,466
Male 65-74 years	1,758
Male 75+ years	982
Female 0-14 years	60
Female 15-24 years	156
Female 25-64 years	1,117
Female 65-74 years	439
Female 75+ years	245
Total	10,088

Golf ACT Segment	Number of ACT participants
Club Members	3,887
Social Players	6,201
Total	10,088

Source: Golf Australia, AusPlay, SBP Calculations

3: Health Contribution

MENTAL HEALTH DATA INPUT

Health care expenditure on mental disorders⁴

Whilst not all health expenditure is allocated towards a specific category (such as disease) figures from 2008-2009 AIHW expenditure data show that approximately 8% of total allocated health expenditure is spent on mental disorders – this being the third highest disease expenditure category.

The cause of disease in Australia¹

Data from 2011 AIHW Burden of Disease report show, following cancer and cardiovascular disease, mental disorders are the third most common causes of disease in Australia, accounting for 12.1% of all disease. Within the mental disorder disease category, anxiety and depression was the largest specific cause, accounting for 6% of all disease.

Top 10 causes of disease in Australia	
Cause	% of all Diseases
Cancers	18.5
Cardiovascular disease	14.6
Mental disorders	12.1
Musculoskeletal	11.6
Injuries	8.8
Respiratory	8.3
Neurological	6.8
Gastrointestinal	3.2
Infant/Congenital	2.7
Endocrine	2.4

Source: AIHW.

3: Health Contribution

MENTAL HEALTH DATA INPUT

The prevention of anxiety and depression⁸

Based upon the evidence used by the Australia Government Department of Health to support the current Physical Activity & Sedentary Behaviour Guidelines for Adults (18-64 years), we have estimated that physical activity has a 25% preventative impact on anxiety and depression.

The 25% preventative impact has been used as a conservative estimate for a number of reasons. The Brown et al (2012) report identifies a range of studies which supported physical activity as protective against the onset of anxiety disorders and symptoms, with a reduction impact of 48-53%.

The Brown et al (2012) report also notes that there is substantial evidence that regular physical activity protects against the onset of depression symptoms and major depressive disorders. The reduction impact across a number of studies, was between 25-40% lower.

We note that the evidence used by the Department of Health to support the physical activity guidelines address anxiety and depression separately.

Given that we know the collective impact of anxiety and depression in terms of DALYs, and separately the preventative impact physical activity has on both anxiety and depression, we have chosen the lowest preventative impact (25%) in order to take a conservative approach.



3: Health Contribution

MENTAL HEALTH DATA INPUT

Disability-Adjusted Life Year (DALY) caused by anxiety and depression¹

The findings from AIHW (2011) show that anxiety and depression has a comparatively larger impact on a per person basis amongst the younger age groups, and females compared to males.

For the mental health aspects of this project we have calculated the number of DALYs caused by anxiety and depression that are likely to have been prevented due to participation in physical activity.

Across the 0-64 age segments, 49% of all DALY's lost due to anxiety and depression occur between the ages of 25-64, whilst 67% of all DALY's are lost to females.

	Males					Females				
	0-14	15-24	25-64	65-74	75+	0-14	15-24	25-64	65-74	75+
DALYs caused by Anxiety and Depression - Australian Population (A)	10,400	14,800	45,500	0	0	10,200	25,100	61,700	49,100	0
DALYs prevented due to participation in physical activity (B) = (A x 25%)	2,600	3,700	11,375	-	-	2,550	6,275	15,425	12,275	-
Australian Population, 2016 (C)	2,331,078	1,622,984	6,316,978	1,023,017	696,915	2,208,167	1,540,667	6,426,136	1,060,448	902,486
Ave. DALY prevented per person (D) = (B/C)	0.0011	0.0023	0.0018	-	-	0.0012	0.0041	0.0024	0.0116	-

Source: AIHW, SBP calculations.

Note- Anxiety and Depression do not appear in the top 10 risk factors for males over 65 y.o and 75 y.o for females



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Note – The estimates presented in this report have been entirely derived from the sources identified and, therefore, their accuracy is dependent on the extent to which these sources are truly representative of golf activities throughout Australia. Golf New South Wales, Sport Business Partners, and Street Ryan and Associates Pty. Ltd., accept no responsibility for the accuracy of information or estimates presented, or for decisions taken as a result of material in this report.



About the Authors

ABOUT THE AUTHORS



SBP provides advice and insights to the not-for-profit and commercial business sectors through a range of integrated strategic, commercial and market research services.

The firm was established in 2001 as a specialist strategic consultancy for the sport business sector, and for the last 15 years we have been a trusted adviser to more than 75 leading professional and Olympic sports, government agencies and commercial businesses across Australia, New Zealand and internationally.

The core services offered by SBP are based around strategic reviews and planning, market research and insights, commercial and business model advisory and business problem solving.

Illustrating the breadth of sporting experience within SBP, the organisations that SBP have worked with include Football Federation Australia, Athletics Australia, Australian Rugby Union, Cricket Australia, Gymnastics Australia, Baseball Australia, Golf Australia and the Australian Sports Commission.



Street Ryan has been established since 1981 and works on regional development assignments in metropolitan, provincial, rural and remote areas of every Australian state and territory. Initially a function of the focus on regional development, quantitative analysis and impact assessment have become core Street Ryan consulting areas in their own right.

Street Ryan has considerable experience and practical knowledge in sports assessment, participation censuses, economic and demographic analysis and projections. Our senior staff have been working in these areas for more than three decades.

Street Ryan have a long history in supporting national sporting organisation clients, including long-term relationships with the Australian Football League (AFL), Cricket Australia, Bowls Australia, and the Australian Rugby Union, as well as a range of shorter term assignments with Golf Australia, Softball Australia, New Zealand Cricket, Tennis Australia and Hockey Australia.

Beyond sporting organisations, Street Ryan specialises in regional development assignments around Australia for private and public organisations, often encompassing economic contribution and impact assessment and demographic analysis for capital development and investment projects, major events, tourism and industry sectors.



Unit 3, 456 High Street

Prahran, VIC 3181

T: 03 9525 0352

www.sportbusiness.com.au