# An assessment of the health and social value of recreational sport and physical activity in Jersey

# 4GLOBAL
## *The future is active*

# Key findings summary report

# Sheffield Hallam University

# 4GLOBAL is working with the Government of Jersey to demonstrate the health and social value generated by sport and physical activity in the sector.

The Government of Jersey is dedicated to improving the health and physical activity levels of Jersey residents through the promotion of sport and other physical activity initiatives across the sector. As part this work they are seeking to demonstrate the impact of sport and physical activity on health and social outcomes across Jersey.

Sport and physical activity are widely perceived to generate benefits to society. There is a long history of evaluation and academic research into the social impacts of sport and recreation but attempts to measure and value these impacts in monetary terms have been limited.

4GLOBAL, in partnership with Sheffield Hallam University's Sport Industry Research Centre (SIRC), has been commissioned by Government of Jersey to review the evidence base and measure the health value generated by the sector in 2019 using a robust, benchmarkable and validated valuation approach. The work aims to build advocacy and awareness around the monetary value-add role that sport and physical activity plays.

This aim of this report is to summarise the methodology and findings from the modelling work using best available healthcare and physical activity data and research; and provide an estimate of healthcare savings generated in 2019 as a result of people's involvement in physical activity and meeting of the World Health Organisation guidelines. The use of 2019 data was chosen at the time of project commencement as this most accurately reflects the value generated in 'normal' and 'pre-Covid' times

In addition to the national health valuation, sub-sector analysis was conducted to demonstrate the health and social value generated through sport and physical activity participation in public leisure venues across Jersey. This additional analysis however, does not include the contribution made through private sport facilities on the island, such as private gyms, fitness clubs, and personal training.

# 4GLOBAL and Sheffield Hallam University have an established partnership, and frequently apply their knowledge and expertise to collaborate on a range of high-profile international projects.

**4GLOBAL** is a UK-based sports technology, data and services consultancy, focussed on the promotion and measurement of physical activity, and placing data and insight at the heart of everything we do. We are trusted by Governments, Cities, and Sports Federations around the world.

4GLOBAL provides strategic services and bespoke solutions to organisations across the sport and physical activity ecosystem. Our specialist areas include major event planning, legacy strategies, sport for development, delivering and evidencing the social value associated with sport, and building advocacy around the role of sport in society.

**Sheffield Hallam University's Sport Industry Research Centre (SIRC**) is a world-leading research and academic organisation who use applied techniques to solve the specific requirements of clients, and to generate new knowledge about the sport and leisure industries. Their team of academic researchers commonly apply the principles of economics to solve real-world problems, and have pioneered the use of techniques for calculating the social value of sport and physical to society in multiple countries across the world.

SIRC research clients include government departments, NGBs, sports organisations and charities both within the UK and from other countries.

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# EXECUTIVE SUMMARY

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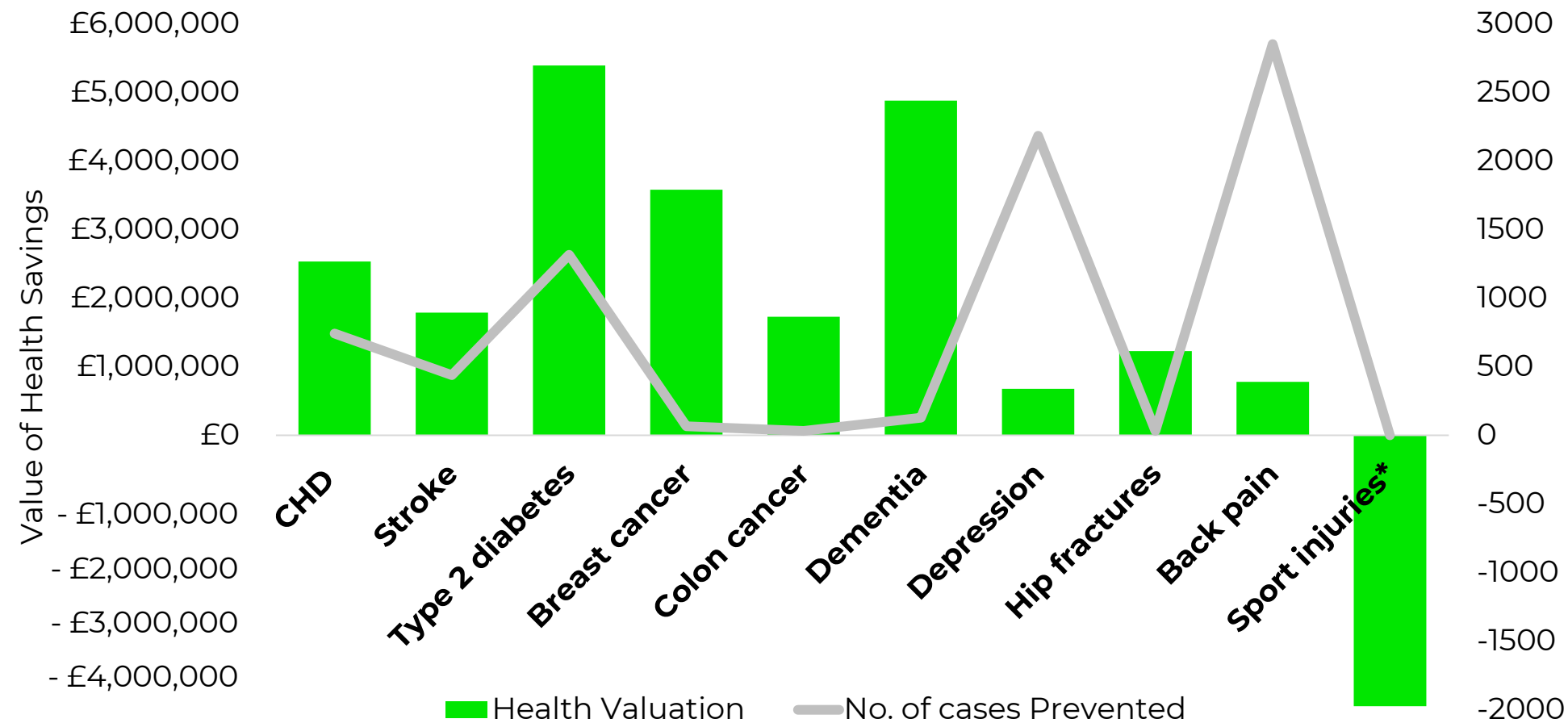**Sheffield Hallam University**
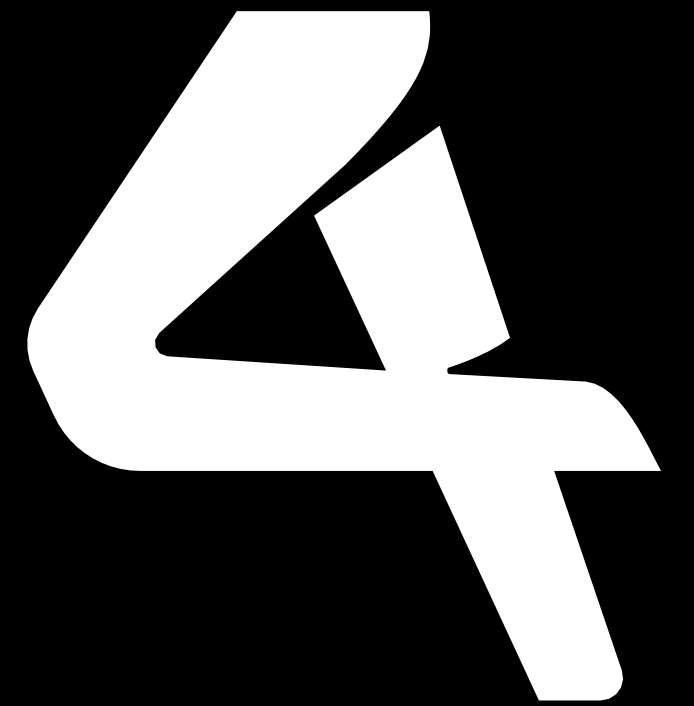
# Health value

### Over 7,500 cases

of health conditions were prevented in 2019 as a result of sport and physical activity participation across Jersey.

### £18.7 million

of health savings generated in 2019 by sport and physical activity participation.
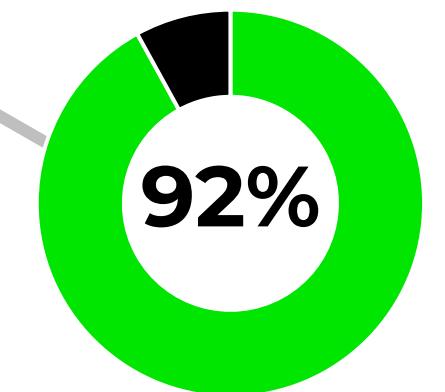
# Public leisure venue contribution

Based on 2019 data from public leisure venues (Les Quennevais, Fort Regent, Springfield, Langford, Oakfield, Haute Vallee, Grainville, FB Fields, Airport Playing Fields, Crabbe Ranges).

### Over £4.5 million total social value

in 2019 - generated through improvements to physical/ mental health (£2.1m) and subjective wellbeing (£2.4m)

£184 average SV per person

**92%**

**Covid-19 Recovery**
(2019 vs 2022 Total SV)



Chart — Value of Health Savings / Cases Prevented

Categories: CHD, Stroke, Type 2 diabetes, Breast cancer, Colon cancer, Dementia, Depression, Hip fractures, Back pain, Sport injuries*

Left axis (Value of Health Savings): £6,000,000 / £5,000,000 / £4,000,000 / £3,000,000 / £2,000,000 / £1,000,000 / £0 / -£1,000,000 / -£2,000,000 / -£3,000,000 / -£4,000,000

Right axis (Cases Prevented): 3000 / 2500 / 2000 / 1500 / 1000 / 500 / 0 / -500 / -1000 / -1500 / -2000

Legend: Health Valuation — No. of cases Prevented

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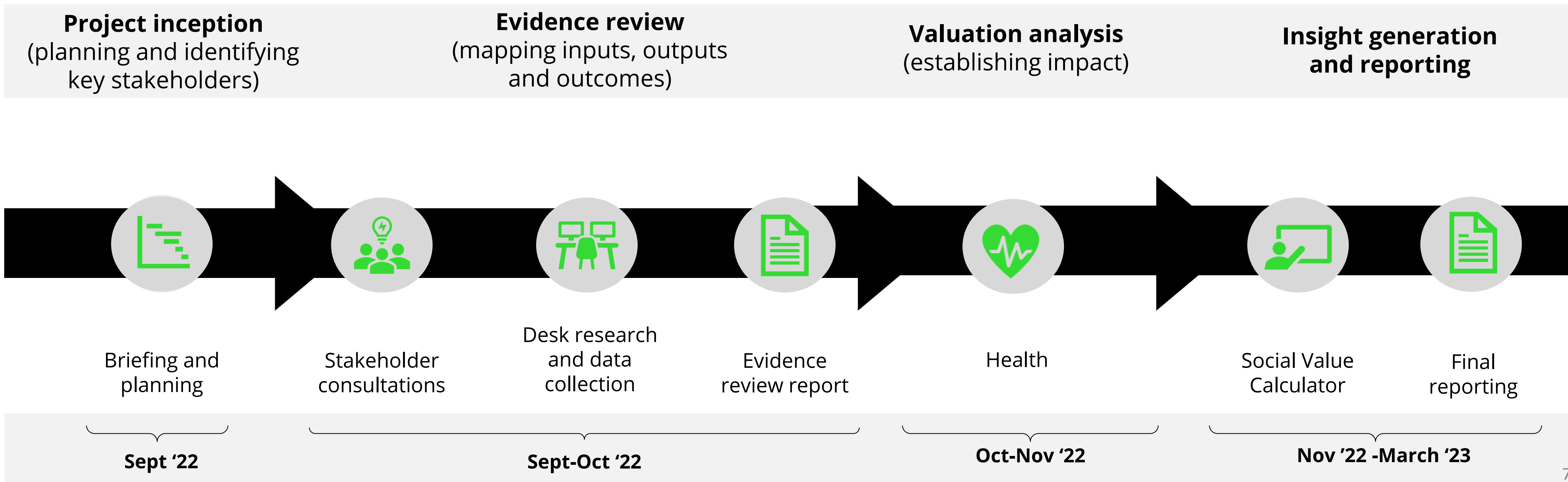# NATIONAL HEALTH VALUATION: METHODOLOGY

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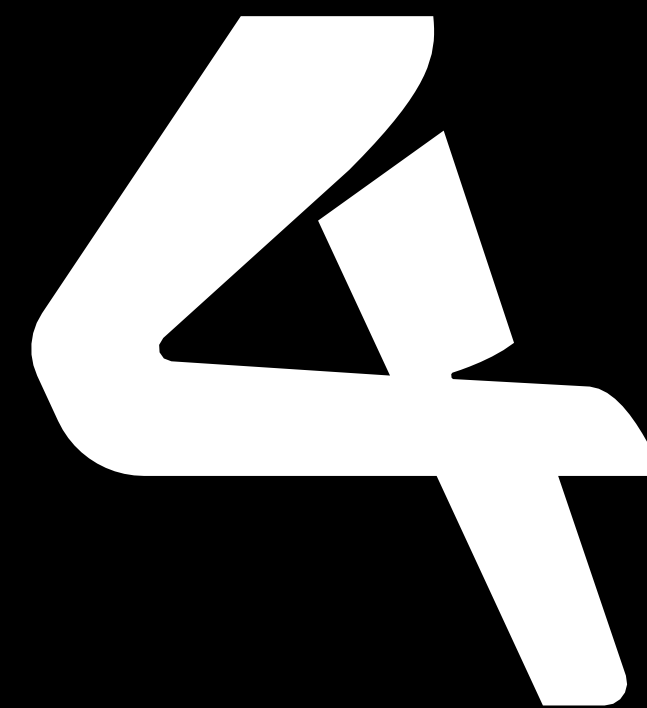
# The project approach consisted of an end-to-end solution in four phases, combining stakeholder consultation and academic research with data modelling and analytics.

| Project inception (planning and identifying key stakeholders) | Evidence review (mapping inputs, outputs and outcomes) | Valuation analysis (establishing impact) | Insight generation and reporting |



Briefing and planning

Stakeholder consultations

Desk research and data collection

Evidence review report

Health

Social Value Calculator

Final reporting

**Sept '22**

**Sept-Oct '22**

**Oct-Nov '22**

**Nov '22 -March '23**

# The modelling requires data from various sources and covering different areas in order to be successful.

The project kicked-off with an extensive data collection and evidence review phase. The purpose of the review was to identify and consolidate existing Jersey-based empirical evidence to feed into our modelling analysis, which demonstrates a link between engagement with sport and physical activity and health outcomes.

After establishing the data requirements we identified a range of stakeholders across the health, statistics and sport sectors in Jersey to consult with and signpost us to appropriate Jersey-based data.
In total 22 stakeholders were engaged with by 4GLOBAL in September and October 2022. This included through ten virtual consultations using Microsoft Teams, follow up signposting to other relevant individuals, emails and phone calls.
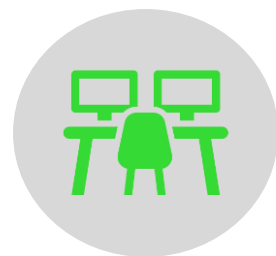
This was supported by an extensive period of desk-based research to extract relevant data from the sources signposted to by Jersey stakeholders, as well as from publicly available information; alongside a check and verification exercise to ensure the data is accurate, valid and fit for purpose.

# For the purposes of this project, we used the definition of sport and physical activity taken from the **Council of Europe's Sports Charter**.

Throughout the report 'sport' is used as an overarching terms to include sport and physical activity. The full list of sports included under this definition, and for the purpose of this project, is outlined in the appendices.

*…"sport" means all forms of physical activity which, through casual or organised participation, are aimed at maintaining or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels.*

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# The health value of 'active' and 'fairly active' adults who take part in sport and physical activity across Jersey was measured.

The method, developed by SIRC, aligns with globally recognised research. Health outcomes were valued by estimating the number of potential cases of ill-health averted by sport and physical activity participation (reduced risk of disease), multiplied by the average annual treatment cost per person diagnosed with the condition.

**DATA INPUTS**     **INDIVIDUAL RISK PROFILING**     **TOTAL HEALTH VALUE**
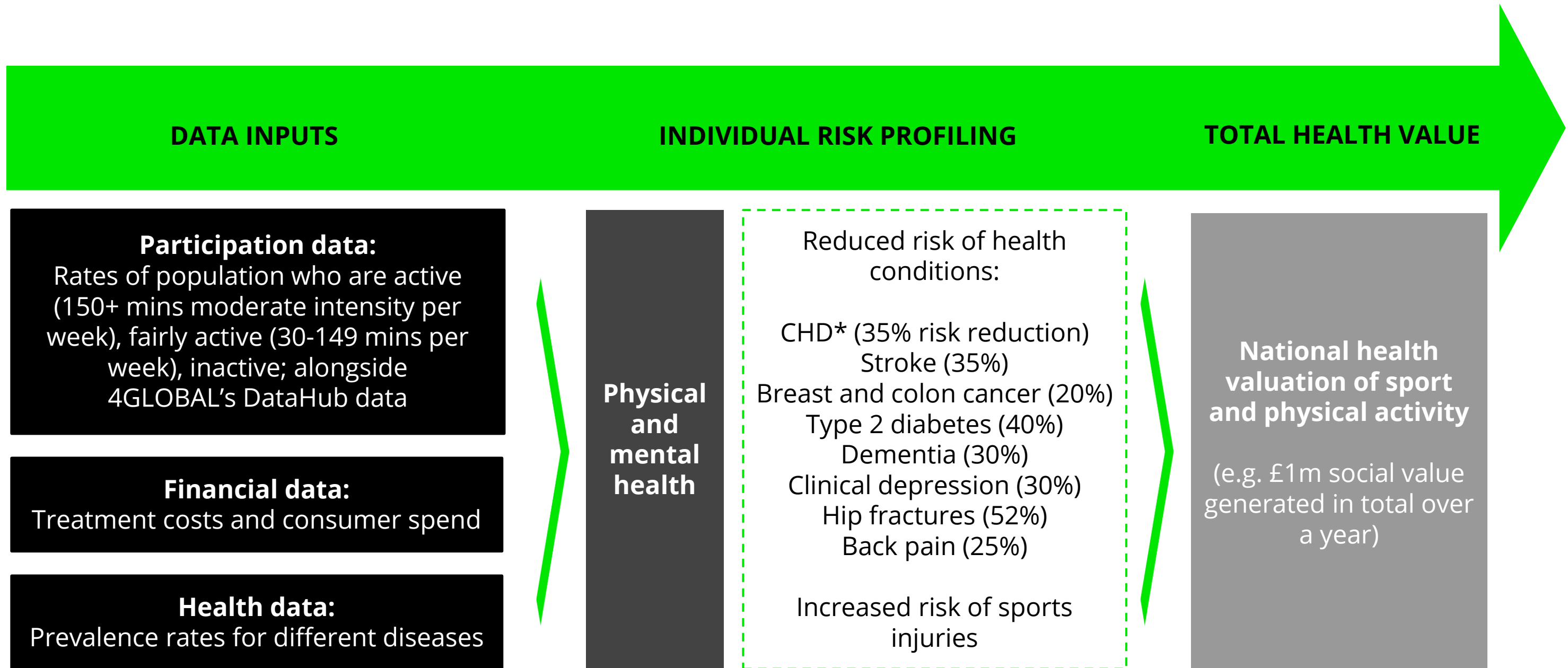
We valued 9 health conditions for which there is strong empirical evidence of the link between sport/physical activity, improved physical and mental health, and subsequent risk reduction.

**Participation data:**
Rates of population who are active (150+ mins moderate intensity per week), fairly active (30-149 mins per week), inactive; alongside 4GLOBAL's DataHub data

**Financial data:**
Treatment costs and consumer spend

**Health data:**
Prevalence rates for different diseases

**Physical and mental health**

Reduced risk of health conditions:

CHD* (35% risk reduction)
Stroke (35%)
Breast and colon cancer (20%)
Type 2 diabetes (40%)
Dementia (30%)
Clinical depression (30%)
Hip fractures (52%)
Back pain (25%)

Increased risk of sports injuries

**National health valuation of sport and physical activity**

(e.g. £1m social value generated in total over a year)

We also placed a negative notional value (deflator) on sports injuries, by multiplying the number of A&E admissions recorded due to sports injuries with the average cost of an injury.

Further details on the methodology and associated data sources is provided the full Health Valuation Report.

*CHD – Coronary Heart Disease

# In the absence of empirical evidence for Jersey, a series of reasonable, conservative assumptions about key elements were made.

A lack of appropriate evidence is one of the key reasons for excluding particular outcomes in modelling analysis. The introduction of assumptions allows an estimate to be made for an outcome, rather than for it be excluded from analysis; and for findings to be robust and in line with previous research and best practice.

The following assumptions on risk reduction as a result of sport and physical activity were made:

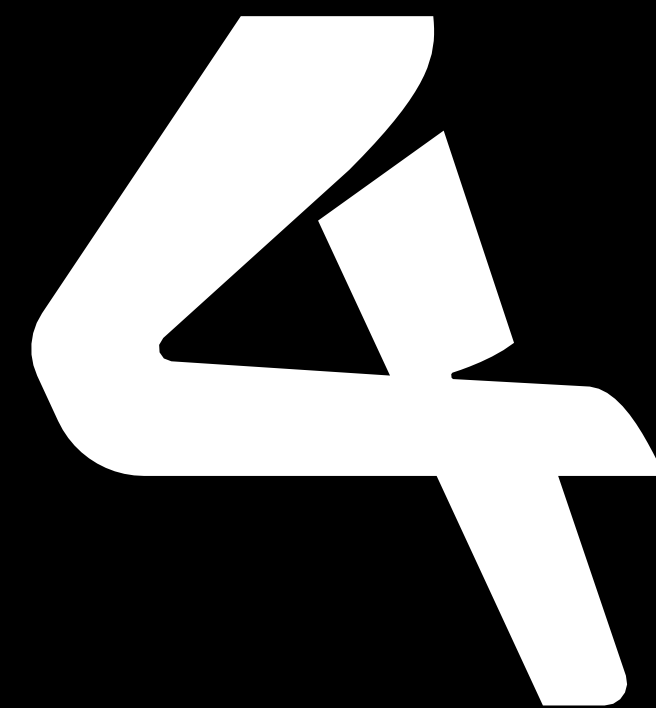| | | | | | |
|---|---|---|---|---|---|
| In the absence of Jersey-specific data, we used credible and transferable evidence that exists in England or the UK, and assumed the same effect is also likely in Jersey. In particular we aimed to use South West England data, as this region is demographically similar to Jersey. | Reductions in participants' risk of disease are applied to 'active' adults (18+) who take part in sport/physical activity at moderate intensity for 150+ minutes (or 75+ minutes of vigorous activity) per week. | For the 'fairly active' sub-group (30-149 minutes), we assume there is a linear dose-response relationship between participation and the reduced risk of developing various health conditions | In the absence of Jersey specific data for sport facility and gym membership as a proportion of overall activity, we have used the UK Social Value Calculator in-facility deflator of 55.32% to adjust for the proportion of overall activity which takes place in gyms and facilities | We have also applied a multi-centre usage deflator vale of 5.3% to account for individuals participating at more than one facility or gym. | Finally, it was agreed due to a lack of recent, credible data sources or proxy inflator values on health treatment costs, England values have been used in the health model. Therefore, the values are likely to be conservative due to higher cost of treatment in Jersey compared to England. |

Appendix 1 of the Health Valuation Full Report (Excel) details the full data inputs used in the model for men (tabs 3a and 3b) and women (tabs 4a and 4b); alongside the geographical sources of the data used in the model (tab 5).

# NATIONAL HEALTH VALUATION: KEY FINDINGS

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# The net value of health benefits achieved through participation in sport and physical activity in Jersey in 2019 was approximately £18.7m, and total number of disease cases prevented was 7,794.

Using the methodology outlined, we calculated the health valuation of sport and physical activity for Jersey in 2019.  The table below shows the total cases prevented and health savings across the nine health conditions used in the modelling.

| Outcomes | Men | | | Women | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Cases Prevented | Value | | Cases Prevented | Value | | Cases Prevented | Value |
| CHD | 497 | £ 1,694,805 | | 246 | £ 839,701 | | 743 | £ 2,534,506 |
| Stroke | 233 | £ 950,485 | | 206 | £ 840,455 | | 440 | £ 1,790,940 |
| Type 2 diabetes | 795 | £ 3,254,514 | | 522 | £ 2,136,296 | | 1,317 | £ 5,390,810 |
| Breast cancer | | | | 66 | £ 3,579,936 | | 66 | £ 3,579,936 |
| Colon cancer | 17 | £ 926,125 | | 15 | £ 802,535 | | 32 | £ 1,728,660 |
| Dementia | 37 | £ 1,392,600 | | 91 | £ 3,488,586 | | 128 | £ 4,881,186 |
| Depression | 1,096 | £ 340,884 | | 1,088 | £ 338,583 | | 2,184 | £ 679,467 |
| Hip fractures | 12 | £ 450,503 | | 20 | £ 779,702 | | 32 | £ 1,230,205 |
| Back pain | 1,428 | £ 390,367 | | 1,425 | £ 389,469 | | 2,853 | £ 779,835 |
| Sub-Total | 4,114 | £ 9,400,284 | | 3,680 | £ 13,195,262 | | 7,794 | £ 22,595,546 |
| Sport injuries* | | | | | | | | -£ 3,948,203 |
| Total | 4,114 | £ 9,400,284 | | 3,680 | £ 13,195,262 | | 7,794 | £ 18,647,343 |

*Costs accounting for sports injuries caused by sport and physical activity are negative and therefore subtracted from overall health value.

# Out of the health conditions included in the modelling, Type 2 Diabetes generated the highest health savings, and the condition with most cases prevented was Back Pain.

**Graph showing the number of health cases prevented against the subsequent value of health savings in Jersey (millions).**



Legend: ■ Health Valuation  — No. of cases Prevented

*Sports injuries were subtracted from the overall health value.
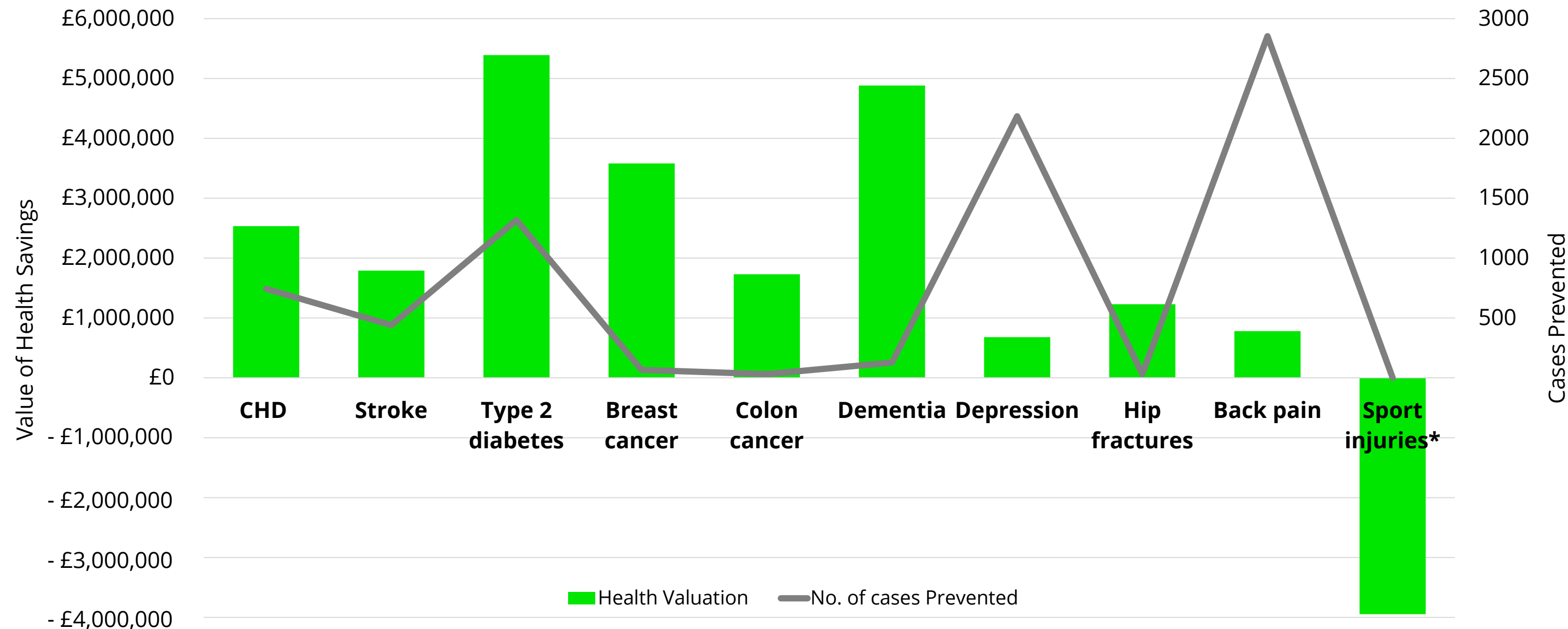
The health condition with the highest valuation is Type 2 Diabetes, with over £5 million in health savings achieved by participation in sport and physical activity in 2019.

The health conditions with the highest number of cases prevented are Back Pain and Depression. However due to the lower treatment costs associated, the total valuations are low compared to other health conditions.

In contrast, due to the high relative treatment costs for Dementia, the valuation is over £4 million (2nd highest), despite having the 4th lowest level of cases prevented.

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# The annual health values at the participant level were calculated as an average of £287 per person taking part in sport or physical activity.

The health valuation aimed to produce values at the national, population level, but also at the individual participant level. The values have been adjusted to represent 2019 prices.

| | Age | Men | | Women | |
|---|---|---|---|---|---|
| | | 150+ mins per week | 30-149 mins per week | 150+ mins per week | 30-149 mins per week |
| CHD | 18+ | £62 | £32 | £30 | £16 |
| Stroke | 18+ | £35 | £18 | £30 | £16 |
| Type 2 diabetes | 18+ | £120 | £59 | £78 | £41 |
| Breast cancer | 18+ | N/A | N/A | £128 | £72 |
| Colon cancer | 18+ | £34 | £18 | £29 | £16 |
| Dementia | 65+ | £366 | £204 | £569 | £310 |
| Depression | 18+ | £12 | £6 | £12 | £7 |
| Hip fractures | 65+ | £120 | £63 | £130 | £65 |
| Back pain | 18+ | £14 | £8 | £14 | £8 |
| Sport injuries* | 18+ | £61 | £61 | £61 | £61 |

*Sports injuries should be subtracted from the overall health value.

# SUB-SECTOR CONTRIBUTION: PUBLIC LEISURE VENUES
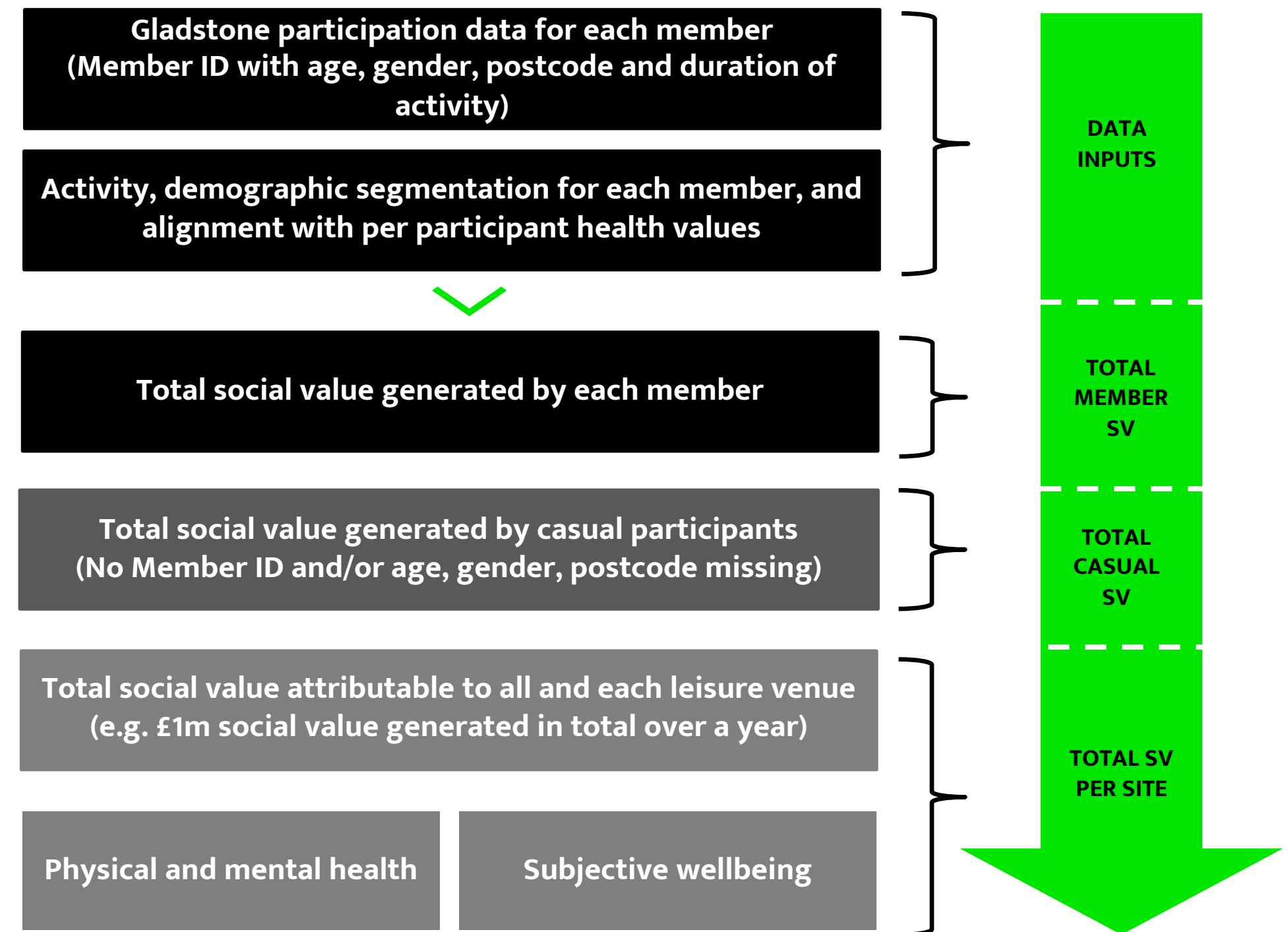
# The project aimed to demonstrate the health value generated through sport and physical activity participation in public leisure venues across Jersey.

Generating a view of the value added through participation in public leisure sites supports our understanding of their contribution to the Jersey national picture.

The figure (right) summarises the methodology used. This includes using 4GLOBAL's Social Value Calculator (SVC) to multiply leisure venue participation data with the annual health values per participant findings from the national analysis. Participation data was extracted from the Gladstone Leisure Management Systems of publicly accessible leisure venues across Jersey*.

**Gladstone participation data for each member** (Member ID with age, gender, postcode and duration of activity)

**Activity, demographic segmentation for each member, and alignment with per participant health values**

**DATA INPUTS**

**Total social value generated by each member**

**TOTAL MEMBER SV**

**Total social value generated by casual participants** (No Member ID and/or age, gender, postcode missing)

**TOTAL CASUAL SV**

**Total social value attributable to all and each leisure venue** (e.g. £1m social value generated in total over a year)

**TOTAL SV PER SITE**

**Physical and mental health**          **Subjective wellbeing**

*Note this is based solely on the data that was made available to the project team at the time of the work, in January 2023.

# Social value outcomes for leisure sites was divided into physical and mental health, and subjective wellbeing.

A user generates social value when they participate in an activity. For this project, the value generated was at the site and per-participant level, then divided into two social outcomes: physical and mental health; and subjective wellbeing.

**Improved physical and mental health**
The national health valuation aimed to produce values at the population level that enables the development of the Social Value Calculator (SVC), measuring the sub-sector value of activity that takes place in sports facilities, leisure centres and gyms in Jersey. Values are deflated using: multi-centre usage; and participation outside a facility. The values have been adjusted to represent 2019 prices.
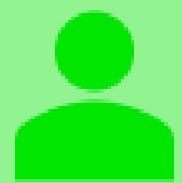
**Improved subjective wellbeing**
Subjective wellbeing was calculated by multiplying the value of increased wellbeing derived from a participant's engagement in sport (using the wellbeing valuation approach) by the number of unique people taking part.
The wellbeing valuation approach uses large scale survey data in the UK to estimate the impact of sport on people's self-reported wellbeing, and uses these estimates to calculate the amount of money that would produce the equivalent impact on wellbeing. The wellbeing value represents the hypothetical income required to compensate for not benefitting from wellbeing enhancement through participation in sport and physical activity.
For the purpose of this work, we have applied the UK model, and assumed findings hold true for Jersey.

# Over £4.5 million in social value was generated across the Government of Jersey leisure sites in 2019.

**TOTAL SV PARTICIPANTS**

**24,893**

**AVERAGE SV PER PERSON**

**£ 184**

**TOTAL SOCIAL VALUE**

**£ 4,569,081**

**PHYSICAL AND MENTAL HEALTH**

**£ 2,128,106**

**SUBJECTIVE WELLBEING**

**£ 2,441,033**

In keeping consistent with the rest of the project, and for comparison against the national findings, we used 2019 data to demonstrate the health value generated through sport and physical activity participation in public leisure venues across Jersey.

The primary driver in social value was an improvement in participant's subjective wellbeing, which accounted for 53% of the total social value.

*Note these figures do not account for the value added from 16-18 year olds at non-fee paying schools, who do not pay to access and use the public leisure sites

# The social value for physical and mental health variables can be split down into sub-categories relating to specific health outcomes.

The table demonstrates how social value is calculated against specific illnesses or diseases. As different demographics are affected differently by disease and the cost of medical treatment varies considerably depending on the condition. The measures include the increased risk of injury as a result of taking part in physical activity. This breakdown is crucial to providing an accurate estimate of value-added through the leisure venues in terms of improved health.

The health condition generating the highest value was Dementia, making up 40% of all social value coming from leisure sites in 2019. This was followed by Type 2 Diabetes at 13%.

| | |
|---|---|
| **CHD** | **£ 124,848** |
| **BREAST CANCER** | **£ 214,933** |
| **COLON CANCER** | **£ 88,234** |
| **TYPE 2 DIABETES** | **£ 272,405** |
| **DEMENTIA** | **£ 857,480** |
| **DEPRESSION** | **£ 35,336** |
| **HIP FRACTURES** | **£ 219,229** |
| **BACK PAIN** | **£ 40,285** |
| **STROKE** | **£ 92,440** |
| **INJURIES*** | **£ 182,915** |

*Sports injuries should be subtracted from the overall health value.

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# Out of the 24,893 social value participants in Jersey in 2019, 71% hit World Health Organisation activity guidelines, generating an average of £524 value per person.

**SOCIAL VALUE PER PERSON**

| £524 | £10.71 |
|------|--------|
| **ACTIVE** | **FAIRLY ACTIVE** |

**ACTIVITY LEVEL BREAKDOWN**

| 17,662 | 7,231 |
|--------|-------|
| **ACTIVE** | **FAIRLY ACTIVE** |

**PERSON TYPE BREAKDOWN**

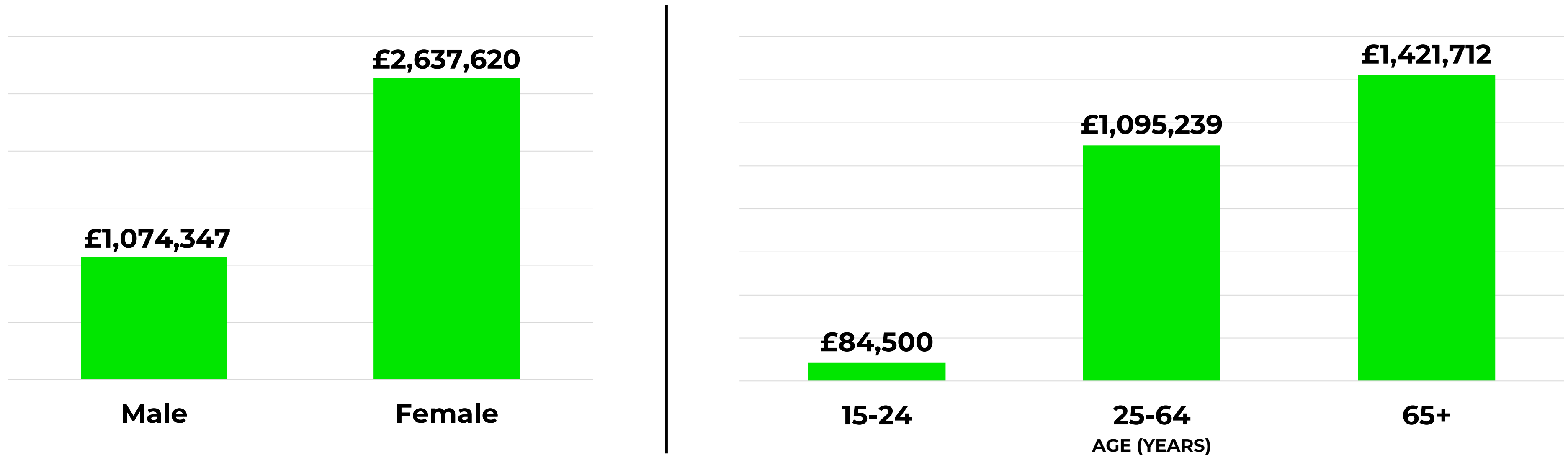| 6,971 | 17,922 |
|-------|--------|
| **MEMBER** | **CASUAL** |

The amount of value depends on demographic factors (age, gender etc) and how long individuals are active for. The activity levels and resulting social value generated per person include assumptions on the activity taking part outside of leisure venues.

There are two types of user, either a member or a casual participant. Members are defined as facility users with an active subscription (paid or unpaid) to use the facility. Casuals are all facility users without an active subscription using the facility to do physical activity occasionally or regularly.

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# Females and over those aged 65+ were the highest contributors to social value in Jersey in 2019.

Demographic breakdown was possible for 'member' user types, and those that have active subscriptions at facilities.



| | |
|---|---|
| **£1,074,347** Male | **£2,637,620** Female |

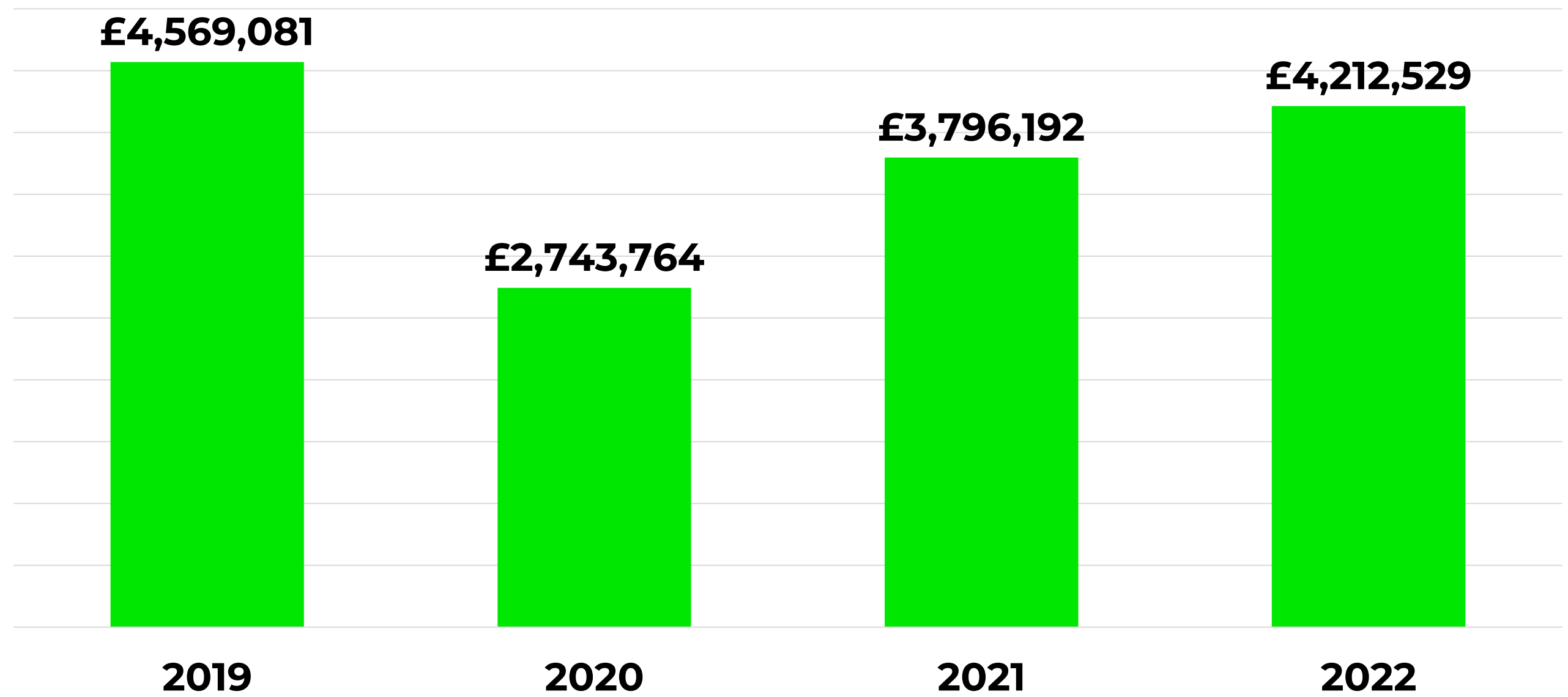| | | |
|---|---|---|
| **£84,500** 15-24 | **£1,095,239** 25-64 | **£1,421,712** 65+ |
| | AGE (YEARS) | |

# The leisure sector in Jersey is recovering since Covid-19, with total social value now currently at 92% of its pre-Covid levels.

In addition to 2019 data, Gladstone Leisure Management System data for 2020 through to 2022 was shared with the project team for the purposes of this report, and for the generation of the Government of Jersey Social Value Calculator platform.

This enabled us to review how the leisure sites were impacted by, and are recovering from, the Covid-19 pandemic.

The total social value generated by leisure sites in Jersey dropped by 40% for the year of 2020, in comparison to 2019, due to Covid-19.
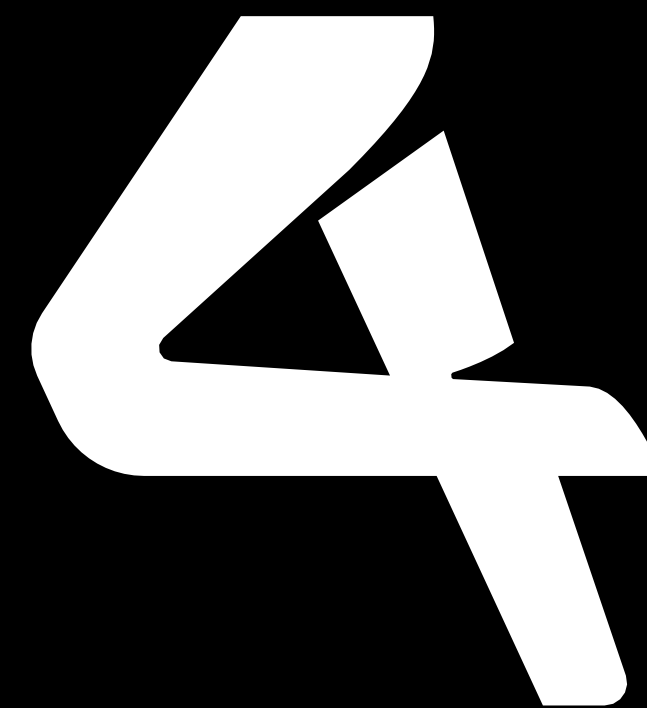
However, the total social value generated by Government of Jersey leisure sites in 2022 was over £4 million, and are currently only 8% off the pre-Covid level.

| Year | Social Value |
|------|--------------|
| 2019 | £4,569,081 |
| 2020 | £2,743,764 |
| 2021 | £3,796,192 |
| 2022 | £4,212,529 |

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# SUMMARY

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# The results of this research demonstrate the importance of involvement in sport and physical activity to Jersey.

This report aimed to use best available data to measure the health value generated by the sector and provide an estimate of healthcare savings generated as a result of people's involvement in sport and physical activity. Findings aim to to build advocacy and awareness around the role that the sport and physical activity sector plays in keeping Jersey residents healthy.

Significant health cases prevented and subsequent savings made across the nine health conditions were evident from sport and physical activity participation across the island in 2019. The total valuation is impacted by treatment costs, however the over £18 million in savings across 2019 was primarily driven by Type 2 Diabetes and Dementia.

Sport and physical activity participation through Government of Jersey leisure sites alone produced over £4.5 million in social value over 2019, including over £2 million of value-added through savings in physical and mental health; and nearly £2.5 million value from improvements in subjective wellbeing. In particular this was driven by individuals hitting World Health Organisation physical activity guidelines, female participation, and over 65-year-old participation.
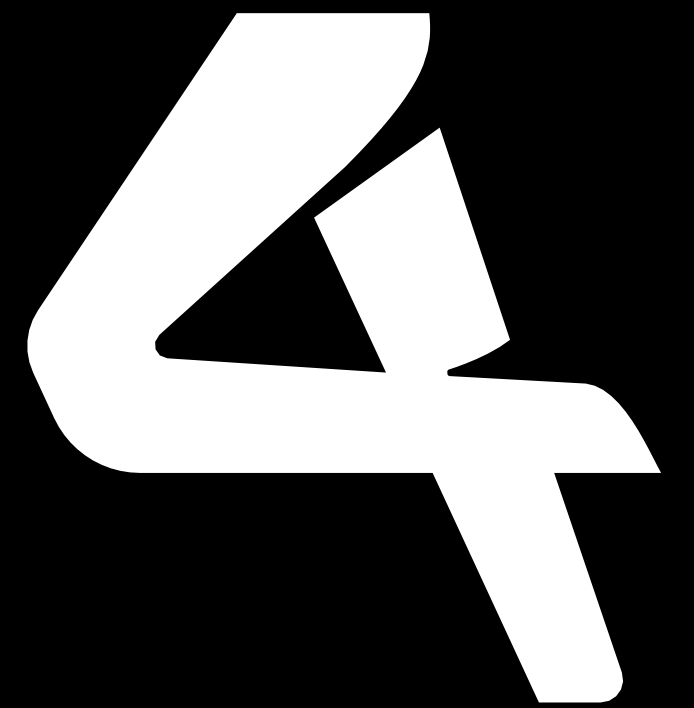
Findings also provide insight into the leisure sector's recovery from Covid-19, with the total social value generated through the leisure sites in 2022 now at 92% of the 2019, pre-Covid level.

# APPENDIX

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# The full list of the 76 sports included in the definition of sport and physical activity for the purposes of this project are as follows:

- Air sports *(including flying, skydiving, gliding/paragliding, parachuting, ballooning)*
- Archery
- Athletics
- American football
- Badminton
- Basketball
- Biking *(including mountain biking, BMX)*
- Bowls
- Boxing
- Boccia
- Caneoing/ kayaking
- Caving
- Cricket
- Curling
- Cycling
- Croquet
- Crossfit
- Dance
- Darts
- Dog agility
- Disability Sport *(including wheelchair basketball, wheelchair rugby, other disability sport provision)*
- Dodgeball
- Equestrian

- Fencing
- Fishing/ Angling
- Football
- Gaelic Games
- Golf
- Gymnastics *(including trampolining)*
- Hockey *(including inline, field, ice)*
- Ice hockey
- Korfball and handball
- Lacrosse
- Life saving
- Martial arts *(including karate, taekwondo, martial arts, judo, jiu jitsu, kickboxing)*
- Motor sports
- Mountaineering *(including climbing, rock climbing, trekking, bouldering)*
- Modern pentathlon
- Netball
- Orienteering
- Parkour
- Petanque
- Racket sports *(including tennis, table tennis, padel, squash, racketball)*
- Rowing
- Rounders

- Rugby *(including union, league, touch, sevens, tag)*
- Running
- Sailing
- Shooting
- Scooter
- Skateboarding
- Skating (including ice skating)
- Snooker
- Softball/baseball
- Surfing
- Swimming *(including artistic and syncro)*
- Ten Pin bowling
- Triathlon
- Ultimate frisbee
- Volleyball *(including beach volleyball)*
- Waterpolo
- Water sports *(including kitesurfing, windsurfing, surfing, paddleboarding, water skiing)*
- Winter sports *(including snowboarding, skiing, bobsleigh, luge, skeleton, snowsports)*
- Weightlifting and powerlifting
- Wrestling
- Yoga

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# The annual health values per participant taking part in a sports facility or gym were calculated, and applied in the leisure site SVC modelling.

| | Age | Men | | Women | |
|---|---|---|---|---|---|
| | | 150+ mins per week | 30-149 mins per week | 150+ mins per week | 30-149 mins per week |
| CHD | 18+ | £26 | £3 | £13 | £2 |
| Stroke | 18+ | £15 | £2 | £13 | £2 |
| Type 2 diabetes | 18+ | £51 | £7 | £33 | £4 |
| Breast cancer | 18+ | N/A | N/A | £54 | £8 |
| Colon cancer | 18+ | £14 | £2 | £12 | £2 |
| Dementia | 65+ | £155 | £22 | £241 | £34 |
| Depression | 18+ | £5 | £1 | £5 | £1 |
| Hip fractures | 65+ | £51 | £7 | £55 | £7 |
| Back pain | 18+ | £6 | £1 | £6 | £1 |
| Sport injuries* | 18+ | £26 | £7 | £26 | £7 |

*Sports injuries should be subtracted from the overall health value.

# Thank you

**4GLOBAL**

**Sheffield Hallam University**

**Dr Steven Mann**
**Global Partnerships Director**
Steven.mann@4global.com
M +44 (0)7837 462993


**Georgia Lucey**
**Project Analyst**
georgia.lucey@4global.com

**Prof. Larissa Davjes**
**Academic Lead**
l.e.davies@shu.ac.uk
0114 225 2487


**Dr Themis Kokolakakis**
**Sports Economist**
T.Kokolakakis@shu.ac.uk