

Fit for the Future: The Health Value of Wellbeing and Leisure Services

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The District Councils' Network (DCN) is a cross-party member led network of 183 councils that provide 86 of the 130 most valued and visible public services in every street in non-metropolitan England. We are a Special Interest Group of the Local Government Association (LGA) and provide a single voice for district services within the LGA.

District councils are the authorities in two-tier areas with responsibility for leisure and wellbeing services, including the provision of council leisure centres. They are therefore the authorities most appropriately placed to tackle inactivity in our communities.

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Executive Summary

This report was commissioned by the District Councils' Network, with the aim of evidencing the health economic value of their members' leisure and wellbeing services, and the further impact they could potentially have on reducing health inequalities.

It includes estimates of the potential impact of increasing physical activity on health, the healthcare sector, and the wider economy. It demonstrates the potential benefits that accrue from introducing a sustainable programme of physical activity for a cohort of otherwise inactive adults. The analysis was completed using a Sport England approved Model for estimating the Outcomes and Values in the Economics of Sport (MOVES).

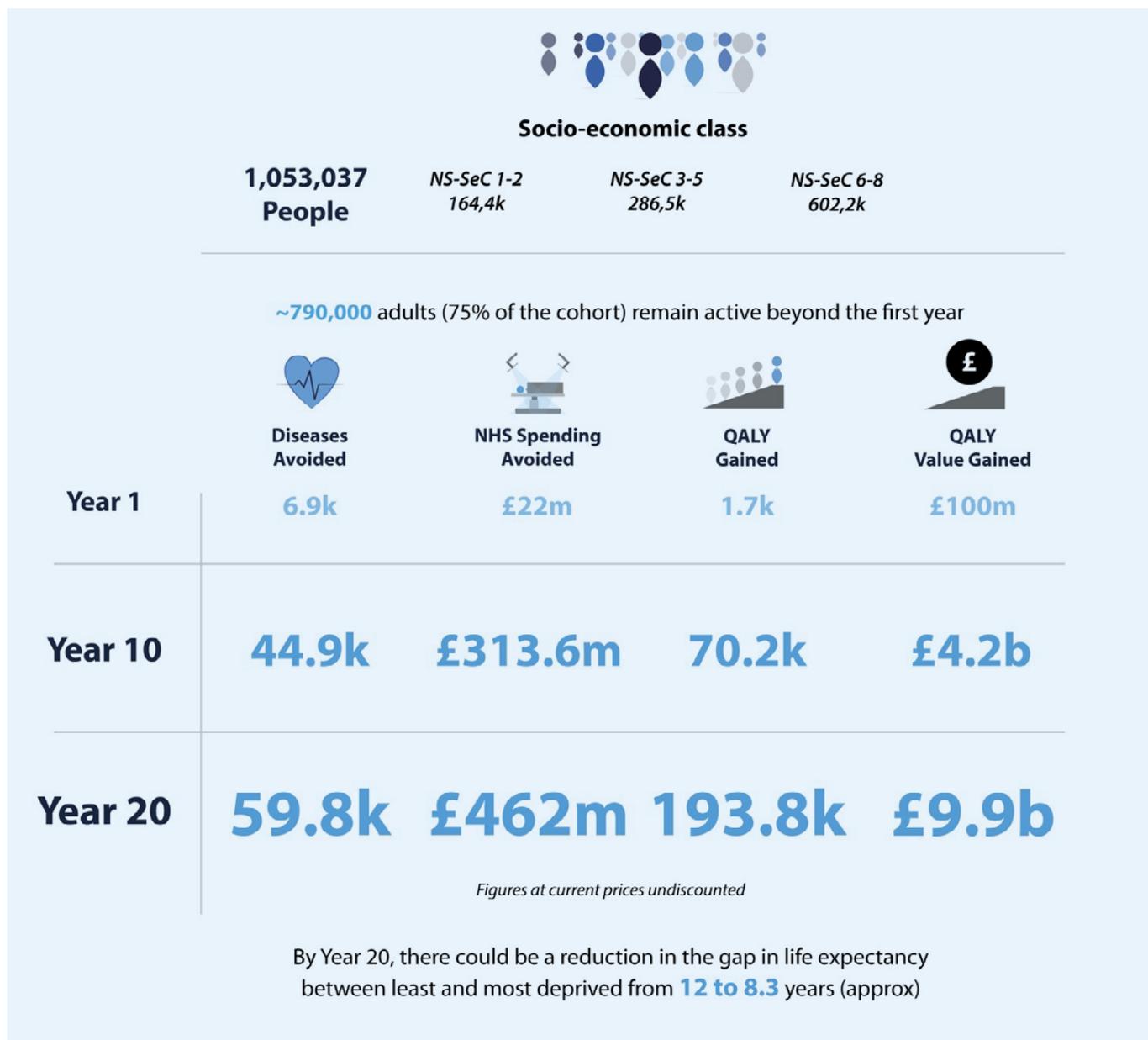


The analysis in this report is particularly relevant at this time given the increased awareness arising from the COVID-19 pandemic, of the level of health, social and economic inequalities that exist across the country. The government's levelling up agenda, and the creation of Integrated Care Systems (ICSs) across the NHS in England, calls for greater and specific collaborations across organisations to foster place-based partnerships. These should have the common goal of improving general health and wellbeing and reducing inequalities. If the leisure services sector can leverage their existing infrastructure and service to focus on the skills and communication tools needed to engage those inactive in communities, they can be the catalysts for this reduction of inequalities.



The analysis is based on a hypothetical cohort of individuals. It provides evidence for a funding and planning committee to draw from when making plans to improve health and reduce inequality through physical activity. The results show that improving physical activity especially among the most deprived, should lead to a **reduction in diseases** (thereby saving the healthcare system the cost that would have been incurred in treating the diseases), **improved quality of life** and the associated economic returns (improved health means people can be more productive for longer), and finally, a reduction in health inequalities (by reducing the gap in healthy life expectancy between the lower and higher social economic group). It also estimates the potential reduction in NHS expenditure as a result.

Impact of Increasing Physical Activity in a Population Cohort



List of Abbreviations

DHSC – Department of Health and Social Care

GP – General Practice

ICSS – Integrated Care System

LRS - Leicester-Shire and Rutland Sport

METs – Metabolic Equivalent Tasks

MOVES - Model for estimating the Outcomes and Values in the Economics of Sport

NHS – National Health Service

NICE – National Institute for Health and Care Excellence

SE – Socio-economic

QALYs – Quality Adjusted Life Years

WTP – Willingness To Pay

Introduction

Background

The UK Government has an ambition to improve population health, reduce health inequalities and improve co-ordination across health and social care. There is also additional momentum for progress driven by the Covid-19 pandemic. The DHSC policy is to utilise the new enabling structure of NHS Integrated Care System (ICS) and its partnerships with Local Government to develop and implement place-based strategies for effective population health improvement programmes.

One of the main goals of the ICS is that organisations in each health and care system join forces so they are better able to improve the health of their population and offer well-coordinated efficient services to those who need them. DCN member councils are such organisations and have the ability to implement change and strengthen partnerships particularly at the level of place and neighbourhood due to ongoing commitments and existing infrastructures / community assets.

Physical activity and community engagement is a key driver of population health, with changes in healthy behaviours accounting for approximately 45% of variation in health outcomes¹. On average, over 25% of the population² is physically inactive and this varies by age, gender, social class, and ethnic background and is a key driver of variation in health, wellbeing and healthy life expectancy. Levels of physical activity and community engagement have fallen as a result of the COVID-19 pandemic and this has disproportionately impacted those whose health status is already relatively poor. The health impact of COVID-19 has also been more severe for those with underlying health conditions and high-risk factors such as smoking and obesity, amongst others. This falling level of participation, and the costs of necessary lockdown closures, has consequently impacted the economic health of the leisure industry. These challenges have put public sport and leisure services under the spotlight and led to a renewed recognition of the vital contribution they make to communities³

Overview of Leisure Services

Publicly funded leisure services are physical and social activities funded by local authorities and provided through public, third-party sector, and private (profit and non-profit) leisure centres, by utilising community and natural assets, or most recently – virtually through various on-line platforms. Leisure services play a key role in enabling equality of access to activities which promote population health and acts as a catalyst and convener for community engagement at a hyper-local level. They are aimed at increasing participation in physical and social activities for individuals, families and communities who would otherwise find it hard to access services for cultural, geographical, or financial reasons. Local Authorities are uniquely positioned to increase general and targeted participation levels, co-ordinate, and leverage community assets, and participate in specific health initiatives such as social prescribing and (p)rehabilitation exercise referral schemes.

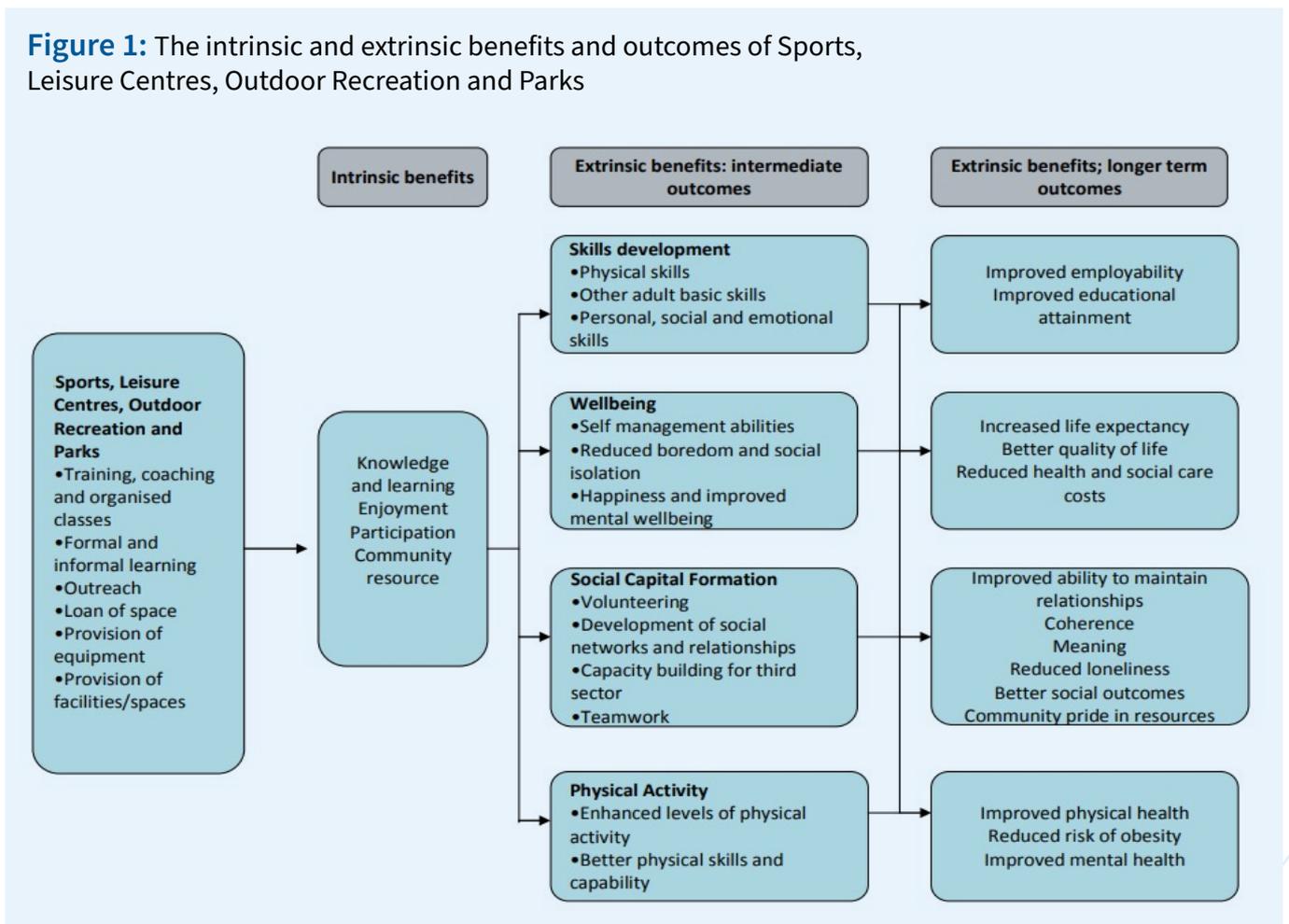
Councils in England are said to be the biggest funder of sport, leisure, parks and green spaces and are responsible for 2,727 leisure centres and 27,000 parks and green spaces which includes 33% of all swimming pools; 20% of all health and fitness facilities; 13% of sports halls; 31% of grass pitches and 66% of cancer pre and post rehabilitation services³. Research by the District Councils Network also demonstrates that 94% of council's leisure centres had been utilised in schemes to tackle health inequalities over the last 5 years with 84% confirming that their leisure centres had been utilised in projects aimed at 'hard to reach' community members over the same period. Also, 79% of leisure centres are used in social prescribing programmes³.

Sport England estimates the social and economic value of community sport and physical activity in England at £85.5bn of which £9.5bn relates to the value improvement impact on physical and mental health⁴. Estimates suggest that for every £1 invested in local authority funded leisure services up to £23 of value is created⁵.

The figure below by Higgins et al (2015)⁶ highlights the intrinsic and extrinsic benefits and outcomes of Sports, Leisure Centres, Outdoor Recreation and Parks.



Figure 1: The intrinsic and extrinsic benefits and outcomes of Sports, Leisure Centres, Outdoor Recreation and Parks



Evaluation method

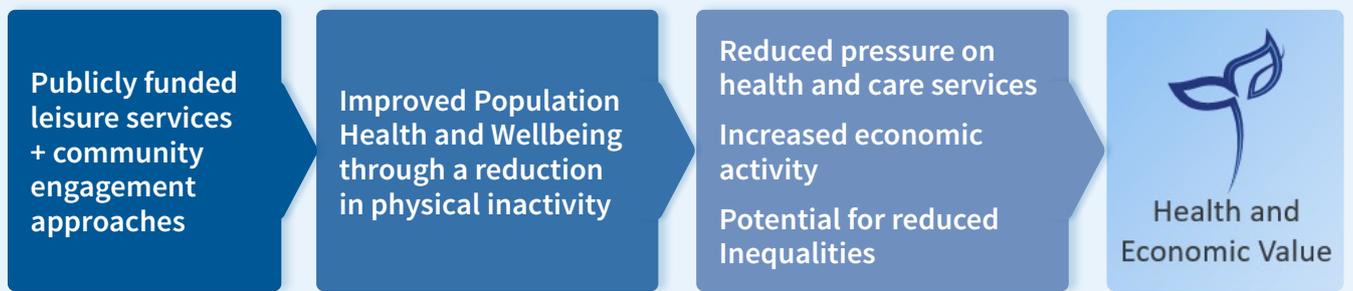
Our Approach

The aim of the economic evaluation is to demonstrate the effect that publicly funded community leisure services can potentially have on health, the health system and health inequalities.

The health and health system analysis involves modelling the impact of increasing physical activity on a hypothetical population cohort using the MOVES model. For this analysis, physical

activity is taken as a proxy for general participation in leisure services. The reported outcomes include incidence of diseases avoided, quality-adjusted life years (QALYs) gained and cost saving to the NHS. This result provides a valid evidence base for a council's involvement with the ICS if a targeted joined-up strategy to increase physical activity (through participation in leisure services) is put in place in partnership with local GPs.

Figure 2: Analysis rationale



The health inequalities analysis involves modelling the impact of improving relative access and participation for disadvantaged groups and assessing the associated impact on life expectancy.

MOVES Model

MOVES^a was developed by the University of East Anglia's Medical School specifically for Sport England to demonstrate the health and economic benefits of participating in organised sports and physical activities in the community. It uses Metabolic Equivalent Tasks (METs) to equate the diverse range of sports activities to determine the impact on the number of cases of disease and injury prevented by the programme. The model compares groups that engage in physical activity with the same group as if they had not taken part. It makes a strong conservative assumption that only those completing the full course of a programme over a year will acquire the health benefits. MOVES is intended for a general population and not specific population or treatment albeit for the purpose of this analysis, a non-specific composition of a population cohort is assumed. MOVES takes a cohort of individuals for

a particular year and measures the impact of the health benefit of increased physical activity over a period of time.

MOVES estimates the reduction in risks of seven long-term conditions (Type 2 Diabetes, Coronary Heart Disease, Stroke, Breast Cancer, Colorectal Cancer, Dementia, Depression and Hip Fracture) resulting from increased physical activity. It calculates the number of new cases averted for an increase in physical activity by multiplying the relative risk reduction for each disease by the population incidence (adjusted for age/sex) adjusting for lag. Estimates are generated not only for the number of cases of disease averted but also the health gains measured by QALYs, the health care cost avoided and the financial gains through better quality of life. The model however does not include additional benefits (i.e. community and social benefits) and general wellbeing impact of increased physical activities.

^aAdditional information about the MOVES model is available [here](#)

Population assumption

The level of physical inactivity in England is rising, with Active Lives Survey Report² estimating that 27.5% (approximately 12.5 million) of adults are classified as inactive. Inactivity is measured as adults reporting less than an average of 30 minutes of physical activity a week. Physical inactivity is reportedly higher in the lower socio-economic (SE) group with a distribution of 16%, 24% and 31% in the upper, middle, and lower socioeconomic group respectively.

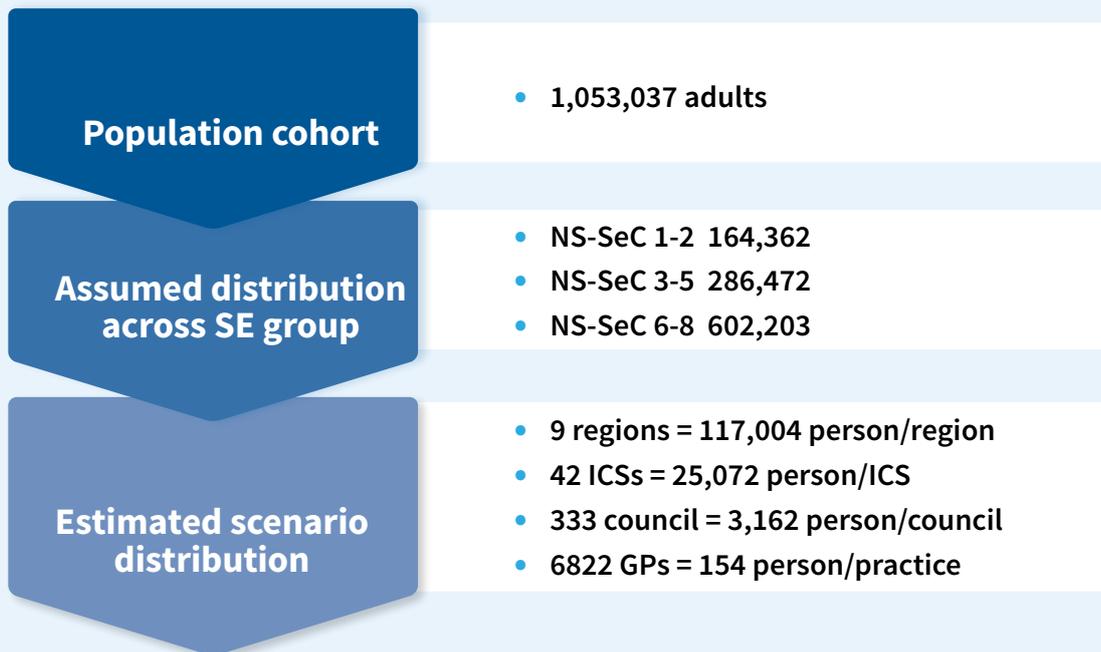
Given the above inactivity statistics and using ONS population data:

- we estimated the number of adults (16+) in England that currently fall within the three socio-economic groups that are classified as inactive

- we assumed a disproportionate reduction in physical inactivity levels by 1%, 2.5% and 5% in the upper, middle, and lower SE groups respectively resulting from improved access to services for those who might otherwise not be able or willing to participate
- we then applied this percentage reduction to population data to generate inputs for analysis using the MOVES model

This implies that if an additional 1% of the upper SE group (NS-SeC 1-2); 2.5% of the middle SE group (NS-SeC 3-5) and 5% of the lower SE group (NS-SeC 6-8)^b of adults become physically active, this would result in an additional 1,053,037 active adults. Assuming an equal distribution of population in England, we estimated further breakdown of this cohort across regions, ICSs, councils, and GP practices.

Figure 3: Population cohort breakdown



^bDetails of socio-economic grouping can be found in [Appendix 1](#)

Model assumptions

For MOVES model input we assumed:

- i. Starting activity level = inactive
- ii. Type of activity = general gym fitness and conditioning
- iii. Participant exercise 5 days/week for 30mins
- iv. Participation rate reduces by 25% by the end of first year
- v. There is a subsequent annual drop-off rate of 6.7%

It should be noted that this is an ambitious and perhaps challenging target in terms of engagement of inactive people across the socio-economic spectrum. However, we believe it to be realistic if exercise referral is comprehensively integrated into primary care networks, and leisure services are targeted towards these hard-to-reach inactive groups.



Result

The result presented in this report focuses solely on the health impact of improved physical activity on the specified cohort of inactive adult population. The output from the MOVES model have been compiled and tabulated. The results have been adjusted for duration, discounting, and drop-off. Costs and benefits are discount using 3.5% discount rate. It should be noted that the conservative assumption of a 25% drop-out rate by the end of the first year implies that **the reported impact is for ~790,000 adults (75% of the cohort) that remain active beyond the first year.**

Impact on diseases and the health sector

For the given cohort of 1m active adults, a significant number of disease incidence would be avoided both in the short and long-term projection from the model. These diseases avoided will consequently result in a reduction in NHS health expenditure. Table 1 below represents the cumulative disease cases avoided and the corresponding cost of treatment that would be saved. A discount rate of 3.5% has been applied to reflect the present value of these savings to the NHS. All values are based on prices in 2020.

Table 1: Cumulative disease cases avoided and reduction in NHS expenditure

Duration (years)	Cumulative diseases avoided		Reduction in NHS health expenditure	
			Discounted prices*	Undiscounted current prices
1	6,882	• Type 2 Diabetes	£21,285,458	£22,030,450
5	28,572	• Coronary Heart Disease • Stroke	£133,117,713	£158,102,085
10	44,885	• Breast Cancer • Colorectal Cancer	£222,324,514	£313,610,684
15	54,157	• Dementia • Depression	£242,862,691	£406,879,725
20	59,820	• Hip fracture	£232,559,159	£462,743,625

*These discounted costs have been calculated from the output (actual values) of the model and presented separately as the model recognises these costs as freed up resources that will be diverted to other needs and used up within the year in which they are saved. They are however presented here to provided clearer perspective for planning purposes.

Impact on quality of life

QALYs measures the value of health outcomes by combining both the quantity and quality of life into a single measure. A year of life in perfect health is equal to one QALY while death is zero. A QALY can be expressed as a sum of all QALYs obtained from an intervention i.e., 1.5 QALYs gained could be equal to 5 years of additional 0.3 QALYs. The QALY is the unit of common outcome measurement in national policy making both from the public health perspective (using NICE threshold) and the economic perspective (using Treasury threshold). It is a useful for comparing wide health benefits across different sectors. From a healthcare

perspective, NICE willingness to pay (WTP) for a QALY is £20,000, this represents the value placed on the benefits that are gained as a result of an intervention. From an economic perspective the Treasury’s monetary value for a QALY is £60,000 representing the value the society places on a life.

Table 2 below represents the cumulative QALYs gained from the cohort over a given period and the corresponding monetary values. The cost and benefit are discounted at a rate 3.5% and values are based on 2020 prices.

Table 2: Cumulative QALYs gained and their corresponding value

Cumulative QALYs gained	Health value of QALYs gained	Cumulative QALYs gained
1 year: 1,721.4	£33.3m* £ 34.4m	£100m* £103.3m
5 years: 23,382.9	£393.8m* £467.7m	£1.2b* £1.4b
10 years: 70,239.4	£995.9m* £1.4b	£3.0b* £4.2b
15 years: 121,056.2	£1.5b* £2.4b	£4.3b* £7.3b
20 years: 193,850.2	£1.7b* £3.3b	£5.0b* £9.9b

Health Inequalities

Life expectancy at birth in England was estimated to be 78.6 years for males and 82.6 years for females in year 2020. People living in more affluent areas of England live significantly longer than people in the deprived areas. Healthy life expectancy which refers to how long a person can expect to live in good health is a significant measure of quality of life. On average, the difference in healthy life expectancy at birth between the least and most deprived in England is about 12 years⁷.

There are several factors that affect healthy life expectancy one of which is physical activity. A study by Reimers et al⁸ estimates that regular physical activity is associated with an increase in life expectancy of between 0.4 to 6.9 years. Given that our cohort includes a larger proportion of inactive adults in the lower SE group, there is potential to reduce the healthy life expectancy gap for selected individuals by an average of 3.7 years.

Summary of Modelling Output

Figure 4: Result summary^c



Additionally, if annual drop-off rate is kept to a maximum of 3.5% there is the potential to increase diseases avoided in the long run by up to 33% leading to a further 18% increase in the value of QALY gained and 23% increase in reduced NHS expenditure.

^cReported benefit and impact applies to approximately 75% of the cohort that remain active beyond the first year

Overview of Publicly Funded Community Engagement Activities

Over time, publicly funded leisure services have continued to extend their role in relation to general wellbeing and not just fitness. This has involved diversifying their responsibility within the community and being at the forefront of driving community engagement. The opportunities are manifold and largely reflect expressed local community needs which includes linking up with, or leading new community initiatives as part of innovative partnerships with Public Health, CCGs, and Active Partnership with the shared goal of levelling up social inequalities that exists across various regions. Beyond providing access to physical activity infrastructure such as gyms and swimming pools, publicly funded leisure services, working collaboratively with system partners have a far-reaching impact in driving community engagement with a unique advantage of influencing the wider determinants of health. The examples below highlight some community engagement activities.

1. The Leicestershire and Rutland⁹ Annual Review 2020/21 on physical activity and sport shows the impact of local authorities working cohesively and collectively with key partners to stimulate innovation and local delivery across its region for a twelve-month period. Community engagement included activities targeted at young people (i.e., virtual school sport and physical activity), activities for women and girls (i.e., ‘Move this March’) with its own dedicated hashtag - #Thisgirlcan – with a dedicated Facebook group providing encouragement and support. There was also the launch of the LRS Active Together campaign to raise awareness of physical activity. The infographic below provides a comprehensive picture and highlights key achievements that the local authority working with system partners has helped shape and deliver.

Figure 6: 12 months of impact across Leicestershire, Leicester, and Rutland



2. The FAST programme (Families Active Sporting Together) is an exciting programme spearheaded by Cherwell District Council and funded by and working in partnership with Sport England and aiming to make it easier for families to access and enjoy physical activity and sport together. FAST works with local schools to provide families with school-based physical activity sessions delivered in 12-week blocks by Youth Activators, who are highly trained and create a friendly environment in which parents and children of all ages can come together and enjoy moving. The programme has also worked closely with local community centres and places of worship to successfully engage families from all backgrounds. The programme continued over lockdown, working with local families to help encourage new physical activity behaviours and to help already active families sustain their progress¹⁰.

3. The 2020 summer holiday programme organised by Abbeycroft Leisure, Babergh and Mid Suffolk's Leisure provider, included community activities such as Family Park Cooking sessions and Adventure Days. Feedback from the cooking session showed great appreciation and enthusiasm from the local community as the programme was targeted at those who had experienced hardship during the pandemic. The cooking programme was family friendly and kept kids engaged. It provided a 5-day ingredient box (to feed a family of four) for each family that attended as well as recipe cards. Adventure Days were an engaging outdoor summer experience for young people within the local area and delivered over 85 sessions across 7 sites, offering a total of 880 funded places to children from disadvantaged background.



4. Brimhams Active, Harrogate Borough's health and wellbeing company have created a holistic approach targeting hard to reach community members. This uses public health local data, health profiles and links with the hospital and other health care providers to establish a targeted programme focused on using physical activity and social connections to help people get stronger physically and mentally. Activities range from specialised exercise sessions, to tea and talk sessions, to dog walking and cooking activities. In addition to health partners, Brimhams has strong links within the community as well as social care colleagues to ensure multiple pathways into activities.



Conclusion

The COVID-19 pandemic has put the spotlight on the level of health and social inequalities that exists within regions and communities, a phenomenon that is consistent across the globe. The UK government over decades have struggled at grassroot levels to lower the stagnating levels of physical inactivity. A recent House of Lords report¹¹ emphasises the government's concern about the high levels of inactivity among certain groups, these include women and girls, ethnic minorities, disabled and older people as well as people from less affluent backgrounds. The report calls for a whole-systems place-based approach which looked at ways to enable people participate in sports and physical activity and to lead healthy lifestyles. It also recommends that the Government introduce a statutory requirement on local authorities to provide and maintain adequate facilities for sport- and physical activity with the provision of adequate financial support from the Treasury.

A recent 'Active Together' report appropriately stress that reducing levels of physical inactivity is a complex challenge that no one single organisation can provide a solution to on its own. It also emphasises that physical inactivity be viewed as a system wide responsibility to be tackled by a collaborative leadership approach involving shared resources and a broad range of skills and expertise¹².

To this end, the benefits of publicly funded leisure services cannot be overemphasized and continuous increase in the provision of its core services aimed at improving health and wellbeing has great potential to accelerate its impact in the wider conversation to level up. This report has only modelled the potential health benefit of increasing physical activity in a hypothetical cohort. However,

the results from our analysis are aligned with some of the core purposes of the ICSs which includes improving population health and healthcare outcomes, tackling inequalities, and enhancing productivity. Although it does not cover the full future potential which with the right drivers could deliver wider and deeper benefits.

One limitation of our analysis is that specific recommendation has not being provided as to the form in which this scheme might be delivered, which was beyond the scope of this report. A method of delivery to achieve these results could be through social prescribing, with recent report by ukactive¹³ highlighting the success of such a programme as well as suggested actions. The Government's recent Levelling Up White Paper¹⁴ also proposes an expanded national programme of social prescription, increasing link workers by 1000, and aiming to see 900,000 people referred by 2023-24. This report does demonstrate the impacts that might be seen via referral to council leisure services if this new national programme goes forward. Additionally, the associated investment cost of delivery was not factored into our modelling. However, we assume this will be consistent with the recent findings by Sheffield Hallam for Sport England¹⁵ which shows that for every £1 spent on community sport and physical activity in England, an economic and social return on investment of £3.91 is generated⁴.

The DCN will be authoring some policy recommendations based on these findings and is committed to working with sector partners to aid their members to deliver the results such as those outlined in this report.

References

1. Marmot M, Donkin A, Goldblatt P. *Inequalities Update - Marmot Indicators Analysis.*; 2017. Accessed January 6, 2022. <https://www.instituteofhealthequity.org/resources-reports/inequalities-update-marmot-indicators-analysis-2017>
2. *Active Lives Adult Survey May 2020/21 Report.*; 2021. Accessed December 1, 2021. <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2021-10/Active Lives Adult Survey May 2020-21 Report.pdf>
3. *Securing the Future of Public Sport and Leisure Services A Report on Behalf of APSE, the LGA and CLOA.*; 2021. Accessed January 5, 2022. [https://www.apse.org.uk/apse/assets/File/Securing the future of public sport and lesiure services Summary Report NEW\(1\).pdf](https://www.apse.org.uk/apse/assets/File/Securing the future of public sport and lesiure services Summary Report NEW(1).pdf)
4. Sheffield Hallam University. *Summary: Social and Economic Value of Community Sport and Physical Activity in England.*; 2020. Accessed January 6, 2022. <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-09/Social and economic value of sport and physical activity - summary.pdf>
5. Buck D. Talking about the ‘return on investment of public health’: why it’s important to get it right | The King’s Fund. The King’s Fund. Published April 23, 2018. Accessed January 6, 2022. <https://www.kingsfund.org.uk/blog/2018/04/return-investment-public-health>
6. Higgins M, Arnott J, Douglas MJ. *Community Venues and Facilities for Sports, Leisure and Culture-Impacts on Health: A Guide.*; 2015.
7. Marmot M, Allen J, Boyce T, Goldblatt P, Morrison J. *Health Equity in England: The Marmot Review 10 Years On - The Health Foundation.*; 2020. Accessed January 6, 2022. <https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on>
8. Reimers CD, Knapp G, Reimers AK. Does physical activity increase life expectancy? A review of the literature. *J Aging Res.* 2012;2012. doi:10.1155/2012/243958
9. *Annual Review 2020/21 - Physical Activity and Sport in Partnership.*; 2021.
10. *Families Active, Sporting Together: An Introduction to FAST.* Accessed February 3, 2022. <https://www.activeoxfordshire.org/uploads/introducing-fast-programme.pdf>
11. House of Lords. *A National Plan for Sport, Health and Wellbeing.*; 2021. Accessed December 13, 2021. <https://members.parliament.uk/members/lords/interests/register-of-lords-interests>
12. Partnership AT. *Physical Activity Framework 2022 and Beyond.*; 2022.
13. *Leading the Change | Social Prescribing within the Fitness and Leisure Sector.*; 2022. Accessed January 31, 2022. <https://www.ukactive.com/reports/leading-the-change/>
14. HM Government. *Levelling up the United Kingdom.*; 2022. Accessed February 4, 2022. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1052064/Levelling_Up_White_Paper_HR.pdf
15. Bickerdike L, Booth A, Wilson PM, Farley K, Wright K, Wilson P. Social prescribing: less rhetoric and more reality. A systematic review of the evidence. *BMJ Open.* 2017;7(e013384). doi:10.1136/bmjopen-2016

Appendix

1. Socio-economics group classification

NS-SeC

All categories: NS-SeC

1. Higher managerial, administrative, and professional occupations
- 1.1 Large employers and higher managerial and administrative occupations
- 1.2 Higher professional occupations
2. Lower managerial, administrative, and professional occupations
3. Intermediate occupations
4. Small employers and own account workers
5. Lower supervisory and technical occupations
6. Semi-routine occupations
7. Routine occupations
8. Never worked and long-term unemployed

