SafeACTiVE Study #2:

An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe:: a THiNK Active report

Version 1.1 - 16 December 2021

Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F. Luque, A., Broughton, L., Wade, M., Shakespeare, J., Copeland, R.J.

Supported by:

Principal Investigators:

Prof. Alfonso Jimenez
THiNK Active Research Centre, Centre for Sport Studies, King Juan Carlos University, GO fit LAB, AWRC-Sheffield Hallam University

Dr. Xian Mayo
Centre for Sport Studies, King Juan Carlos University

Co-investigators:

Prof. Robert J. Copeland
AWRC-Sheffield Hallam University

Dr. Alejandro Lopez-Valenciano
Centre for Sport Studies, King Juan Carlos University, GO fit LAB

Research team:

Dr. Caroline Dalton
AWRC-Sheffield Hallam University

Prof. Fernando Del Villar
Centre for Sport Studies, King Juan Carlos University

Dr. Antonio Luque
Centre for Sport Studies, King Juan Carlos University

ukactive Research Institute:

Lizzie Broughton
Strategic Lead - Insight (Principal Investigator)

Dr. Matthew Wade
Head of Research and Development (Co-Investigator)

Jack Shakespeare
Director of Research, Policy and Communications (Co-Investigator)

Contents

Preface

Since March 2020 the European fitness and physical activity sector has been going through its toughest period ever. The pandemic and the necessary measures implemented by national and EU authorities to protect society from Covid-19 have negatively impacted the physical, social and mental health and wellbeing of Europeans. EuropeActive's academic partner institutions across Europe, as well as national health authorities, are reporting alarming drops in physical activity levels and growing anxiety caused by the uncertainty of ever-changing circumstances beyond our control.

To ensure that public measures countering the coronavirus do not generate secondary effects, which are detrimental to public health in Europe long-term, it is essential that European society, and notably public health authorities, ensure that opportunities are available for the public to engage in regular physical activity. The fitness and physical activity sector is remarkably effective at motivating citizens of all ages and backgrounds to be physically active in various ways that suit their individual lives. This is why it is essential that European fitness and health clubs continue to remain open to welcome tens of millions of Europeans who regard their local fitness club as their preferred place of exercise. In doing so, everyone can benefit from the positive effects of physical activity on physical and mental wellbeing and importantly here, immune function.

Under the leadership and coordination of our sector's trade associations, our industry across Europe has clearly acted as socially responsible 'active citizens' of our communities during the pandemic. We have ensured that the environments within which the public exercises across our venues are safe and that the hygiene standards of fitness facilities are world-leading. This social outlook and responsibility of our sector has been essential to society's and political decision-makers' trust in our sector since March 2020. This has been decisive for our dialogues with political decision-makers and authorities during the pandemic. It paves the way for the important role our sector should play in rebuilding and improving public health in Europe during and after these challenging times.

Evidence drives what we do. This is why THiNK Active, EuropeActive's new research centre, in partnership with ukactive's Research Institute, King Juan Carlos University and the Advanced Wellbeing Reesearch Centre (AWRC) at Sheffield Hallam University provided data and facts on COVID-19 risk and safety in European fitness and health clubs in the first SafeACTiVE report from the autumn of 2020. THiNK Active is now ready to present its second SafeACTiVE report, with the continued support of ukactive's Research Institute, King Juan Carlos and the AWRC, to EuropeActive's national trade association partners and countless other key members, partners and stakeholders.

We are extremely grateful for all the efforts Prof. Alfonso Jimenez and academic partners of the SafeACTiVE project group for realising this second edition of the SafeACTiVE report. In total more than 185 million visits to European fitness clubs and data from public health authorities across Europe have been analysed. This report, which documents the safety standards in our sector's places of business during the pandemic, is generously funded by 4Global, Boddy, BRP Systems, FIBO, Matrix, Myzone, Perfect Gym, Schwa-Medico, Sport Alliance, Technogym, Urban Sports Club and Xplor, all as members of EuropeActive's President's Council for Suppliers, Digital & Tech.

We look into what will hopefully be the last winter overshadowed by COVID-19 in Europe and encourage leaders and colleagues across the fitness and physical activity sector to show solidarity and support each other during these challenging times. The compassion, kindness, and willingness to listen to a colleague can have an immensely positive effect on another.

We wish you and all of EuropeActive's members, partners and stakeholders across the European fitness and physical activity sector a very merry Christmas, enchanting holiday time and a joyful new year,

David Stalker, President

Andreas Paulsen, CEO

Format of the THiNK Active report #2

This is a large report, with a substantial volume of data presented. Therefore, it is important to provide clarity on which data is being presented in the different sections.

- In section 2.0, we present attendance data from facilities across mainland Europe. This data was collected as part of the 'SafeACTiVE study #2' developed and delivered by the Centre for Sport Studies at King Juan Carlos University and the Advanced Wellbeing Research Centre at Sheffield Hallam University. The sample presented includes close to 59.5 million visits from 8 countries. This data was collected from 4th January to 27th September 2021.
- In section 3.0, we present data from the United Kingdom (UK). This data was collected by the ukactive Research Institute. This data represents 126 million visits collected from of 12th of April (when facilities were permitted to reopen) to 21st November 2021.
- In section 4.0, we present outcomes from the combined dataset (mainland Europe and UK) of more than 185.8 million visits.

Disclaimer

The statistical information contained in this second report is representative of the individuals and organisations responding to the 2021 survey. All reasonable efforts were taken by the research teams to ensure data comparability within the scope and limitations of the reporting processes described herein. The data contained in this report, however, is not necessarily based on third-party audited data. The statistical validity of any given number varies depending upon sample sizes and degree of consistency among responses for any data point.

THiNK Active, ukactive Research Institute, the Centre for Sport Studies at King Juan Carlos University and the Advanced Wellbeing Research Centre at Sheffield Hallam University, therefore make no representations or warranties with respect to the results of this study and shall not be liable to clients or anyone else for any information inaccuracies, or errors or omissions in content, regardless of the cause of such inaccuracy, error or omission. In no event THiNK Active, ukactive Research Institute, the Centre for Sport Studies at King Juan Carlos University and the Advanced Wellbeing Research Centre at Sheffield Hallam University shall be liable for any consequential damages.

Executive Summary

This second THiNK Active report sets out to understand the extent that gyms, fitness clubs and leisure centres - during the COVID-19 pandemic - provide individuals with a safe environment in which to be physically active. This comprehensive report using data from across the health and fitness sector in Europe explored COVID-19 reported cases in comparison with number of visits over an 11-month period. The self-reported incidence rate of positive COVID-19 cases was **0.88 cases per 100,000 visits** for the combined SafeACTiVE study #2 and ukactive data sets. This was taken from a total sample of more than 185.8 million visits across 9 countries. These data – albeit self-reported – suggest that fitness clubs and leisure centres (where industry standard mitigation is in place) continue to provide safe public spaces in which to exercise, with low self-reported cases of COVID-19.

A partnership of research and evaluation teams from the Centre for Sport Studies at King Juan Carlos University (Spain), the Advanced Wellbeing Research Centre at Sheffield Hallam University (UK) and ukactive Research Institute worked together on this report from THiNK Active, EuropeActive´s Research Centre. They employed robust data collection methods and their findings are consistent with findings from public health sources.

Section 1.0 – Introduction

1.1 Introduction: the current context

The world is experiencing an extraordinary, life-altering challenge due to the COVID-19 pandemic (WHO, 2020)[1]. According to WHO Epidemiological Weekly Report (edition 67)[2], published on 21st of November 2021, over 256 million confirmed cases and over 5.1 million deaths have been reported globally in relation to COVID-19.

The European Region continues to show an increase in COVID-19 cases and deaths, with over 2.4 million new cases (an increase of 11% compared to the previous week) and over 29 000 new deaths reported (similar to previous week's figures) since October 2021. Nearly 40% of countries in the Region (24/61) reported an increase in new cases of over 10%. Just over a third of all new cases are from three countries: Germany (333 473 new cases; 401.0 new cases per 100 000; a 31% increase), the United Kingdom (281 063 new cases; 414.0 new cases per 100 000; an 11% increase), and the Russian Federation (260 484 new cases; 178.5 new cases per 100 000; similar to the previous week's figures). A quarter of countries in the Region reported an increase in new deaths of more than 10% in the past week, with the greatest change seen in the Faroe Islands (a 150% increase), Denmark (an 88% increase), and Poland (a 76% increase). The countries reporting the highest numbers of new deaths included the Russian Federation (8709 new deaths; 6.0 new deaths per 100 000; similar to the previous week's figures), Ukraine (4567 new deaths; 10.4 new deaths per 100 000; similar to the previous week's figures) and Romania (2002 new deaths; 10.4 new deaths per 100 000; a 15% decrease). The evolution of Covid-19 in Europe is shown in Figure 1.0.

Figure #1: Evolution of COVID-19 cases and deaths in the European Region (WHO´s Epidemiological weekly report, #67; November 2021)

1 World Health Organization. Coronavirus disease (COVID-19) Pandemic. https://www.who.int/emergencies/diseases/novel-coronavirus-2019 2020.

2 WHO Epidemiological Weekly Report (edition 67). https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---23-november-2021

The epidemiology of the virus highlights that age and inequalities in health, wellbeing and economic status makes people more vulnerable. The disease can be particularly severe for those that are older, obese, those with a health condition and people of black and minority ethnic backgrounds. As we discussed in our previous report (Jimenez et al., 2020)[3], the conditions created by the pandemic has raised the **importance of physical activity and wellbeing for society. Now is the time to translate this elevated profile into tangible social, behavioural and environmental change.**

From the 10 guiding objectives identified at the European Union Work Plan for Sport for the period from 1 January 2021 to 30 June 2024[4], three are directly related to the impact of COVID-19 and the positive role that an active lifestyle will play for the European citizens:

- Strengthen the recovery and the crisis resilience of the sport sector during and in the aftermath of the COVID-19 pandemic.
- Increase participation in sport and health-enhancing physical activity, in order to promote an active and environment-friendly lifestyle, social cohesion and active citizenship.
- Ensure, through cross-sectoral cooperation, the awareness of other EU policy domains of the important contribution that sport can make to Europe´s socially and environmentally sustainable growth, digitalisation as well as recovery from the COVID-19 pandemic and future resilience, as well as to achieve the SDGs.

Our role as a proactive and responsible industry is to communicate these facts effectively, and to create the conditions that make activity easy, attractive, social and safe. This so that individuals can engage in and benefit from the protective effects of regular physical activity from communicable and non-communicable disease (Jiménez et al., 2020).

1.2. Role of regular physical activity and exercise protecting individuals from infection

Physical activity is essential amid the COVID-19 pandemic, as large observational studies suggest that exercise can reduce the risk of mortality of hospitalized patients with COVID-19 (Salgado-Aranda et al., 2021). Physical activity has a crucial role in strengthening and improving immune function and lowering the risk of viral illness (Nieman, Wentz 2019). Physical activity also plays a central role in maintaining physical health throughout life (WHO, 2020). Being physically active helps individuals prevent and manage cardiovascular and metabolic conditions including some cancers. Physical activity has also been shown to build resilience for people working in stressful environments (WHO GAPPA, 2018), improve acute and chronic mental health and enhance social well-being (Chekroud et al., 2018). The benefits to mental health, are particularly important given the negative impact on individuals and society during periods of lockdown and under public health restricitions. Therefore, physical activity (together with vaccination and

3 Jimenez, A., Mayo, X., Copeland, R.J. "The Economic and Social Impact of promoting active living after the COVID-19 crisis. The role, value and impact of a proactive and responsible health and fitness industry"
https://www.europeactive.eu/sites/europeactive.eu/files/covid19/Economic-Social-Impact_050620.pdf
4 Resolution of the Council and of the Representatives of the Governments of the Member States meeting within the Council on the European Union Work Plan for Sport (1 January 2021-30 June 2024). 2020/C 419/01. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:42020Y1204(01)

Our role as a proactive and responsible industry (Jimenez, Mayo, Copeland, 2020) is to communicate the benefits of PA effectively, and to create the conditions that make activity easy, attractive, social and safe.

This is so that individuals can engage in and benefit from the protective effects of regular physical activity from communicable and non-communicable disease, as well as the wider social returns that come from an active society (Sport England, 2020).

face mask protection in indoors) is one of the most important means of controlling risk factors that predispose individuals to severe COVID-19 related morbidity and mortality. This perhaps explains why remaining active once a day has been a key feature of public health policy, even during periods of lockdown due to COVID-19.

1.2.1. Summary of the positive impact of regular exercise improving and reinforcing immune function (Jiménez, Mayo, Copeland, 2020)

In August 2020, we published a THiNK Active brief report (Jiménez, Mayo, Copeland, 2020[5]) focused on the positive impact of physical activity and exercise on immune function, identifying its critical role as a key prevention and recovery tool to fight a potential second wave of COVID-19 in the autumn of 2020 that was quite aggressive across Europe. In this document we summarized several studies that, taken collectively, support the view that **regular physical activity and maintenance of a healthy weight improve immune health while reducing the risk for several types of respiratory illnesses** (Nieman, Wentz, 2019[6]). As discussed extensively in the report, "these primary prevention strategies against respiratory illnesses are particularly important in aging societies with a high prevalence of obesity and related comorbidities and are essential adjuvants to mitigation practices" (Nieman, 2020[7]). Figure #2 summarises, six key areas of positive impact of regular physical activity on improving and reinforcing immune function:

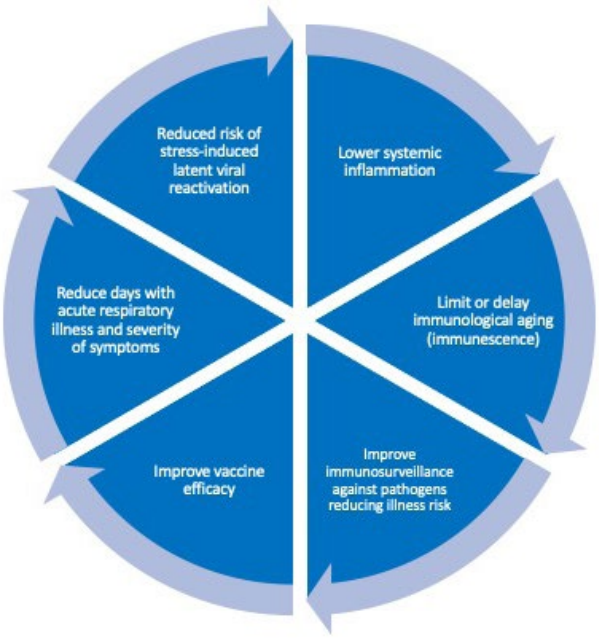


Figure #2:
Areas of positive impact of regular exercise improving and reinforcing immune function
(Adapted from evidences reported by: Nieman, Wentz, 2019; Duggall et al., 2019 [8]; Zbinden-Foncea et al., 2020[9] ; and Nieman, 2020).

5 Jimenez, A., Mayo, X., Copeland, R.J. (2020) The positive impact of physical activity and exercise on immune function; The critical prevention and recovery tool to fight a second wave of COVID-19. EuropeActive THiNK Active, Brussels. DOI: 10.13140/RG.2.2.20083.96800

https://www.europeactive.eu/sites/europeactive.eu/files/covid19/ThinkActive/The_positive_impact_of_physical_activity_and_exercise_Aug2020_web.pdf

6 Nieman, D.C., Wentz, L.M. The compelling link between physical activity and the body's defense system. J Sport Health Sci, 8 (2019), pp. 201-217.

7 Nieman DC. Coronavirus disease-2019: A tocsin to our aging, unfit, corpulent, and immunodeficient society. J Sport Health Sci, 2020; 9:293-301.

8 Duggal, N.A., Niemiro, G., Harridge, SDR, Simpson, RJ, Lord, JM. Can physical activity ameliorate immunosenescence and thereby reduce age-related multi-morbidity. Nat Rev Immunol, 19 (2019), pp. 563-572

9 Zbiden-Foncea, H., Francaux, M., Deldicque, L., Hawley. J. A. Does high cardiorespiratory fitness confer some protection against pro-inflammatory responses after infection by SARS-CoV-2? Obesity. First published:23 April 2020. https://doi.org/10.1002/oby.22849

1.2.2. Brief update on recent studies showing the protective role of physical activity and exercise against COVID-19

Results from an extensive systematic review and meta-analysis (Chastin et al., 2021[10]) revealed that regular physical activity increases resistance to infectious disease in the general population. In this case, researchers aimed to examine the association between habitual physical activity and (1) the risk of community-acquired infectious disease, (2) laboratory-assessed immune parameters, and (3) immune response to vaccination. To answer these questions, they conducted a systemic review and meta-analysis according to PRISMA guidelines. They searched seven databases (MEDLINE, Embase, Cochrane CENTRAL, Web of Science, CINAHL, PsycINFO, and SportDiscus) up to April 2020 for randomised controlled trials and prospective observational studies. Studies were included if they compared groups of adults with different levels of physical activity and reported immune system cell count, the concentration of antibody, risk of clinically diagnosed infections, risk of hospitalisation and mortality due to infectious disease. The results showed that higher level of habitual physical activity is associated with a **31% risk reduction of community-acquired infectious disease** (hazard ratio 0.69, 95% CI 0.61–0.78 data from 6 studies, with a total sample of n=557,487 individuals), and **37% risk reduction of infectious disease mortality** (hazard ratio 0.64, 95% CI 0.59–0.70, data from 4 studies, with a total sample of n=422,813 individuals). Physical activity interventions resulted in increased CD4 cell counts (32 cells/μL, 95% CI 7–56 cells/μL, 24 studies, n=1112 individuals) and salivary immunoglobulin IgA concentration (standardised mean difference 0.756, 95% CI 0.146–1.365, 7 studies, n=435 individuals) and decreased neutrophil counts (704 cells/μL, 95% CI 68–1340, 6 studies, n=704 individuals) compared to controls. Antibody concentration after vaccination is higher with an adjunct physical activity programme (standardised mean difference 0.142, 95% CI 0.021–0.262, 6 studies, n=497 individuals).

According to their conclusions:

> ***"Regular physical activity should be promoted in the general population to decrease the risk of community-acquired infection and infectious disease mortality, strengthen the potency of immunization programmes and help lessen the impact of pandemics such as the recent COVID-19"***
> (Chastin et al., 2021)

Another key study from Salgado-Aranda et al. (2021)[11] aimed to explore the influence of baseline physical activity level (BPAL) on the course of SARS-CoV-2 infection. The research team analysed the evolution of the patients admitted to a hospital in Madrid (n=520) during the first wave of the SARS-CoV-2 pandemic with a diagnosis of COVID-19 infection. Patients were divided into two categories according to the level of physical activity: group 1 or sedentary patients (n=297), and group 2 or active patients (n=223).

10 Chastin, S.F.M., Abaraogu, U., Bourgois, J.G. et al. Effects of Regular Physical Activity on the Immune System, Vaccination and Risk of Community-Acquired Infectious Disease in the General Population: Systematic Review and Meta-Analysis. Sports Med 51, 1673–1686 (2021). https://doi.org/10.1007/s40279-021-01466-1

11 Salgado-Aranda, R., Pérez-Castellano, N., Núñez-Gil, I. et al. Influence of Baseline Physical Activity as a Modifying Factor on COVID-19 Mortality: A Single-Center, Retrospective Study. Infect Dis Ther 10, 801–814 (2021). https://doi.org/10.1007/s40121-021-00418-6

The main findings of their study were: (1) despite similar symptoms at admission, sedentary patients had poor in-hospital outcomes with increased SIRS, renal failure, and respiratory failure; (2) overall mortality was higher in sedentary patients; (3) sedentary lifestyle was an independent predictor of mortality (on multivariate Cox regression analysis).

A few weeks later Sallis et al. (2021[12]), in another relevant study entitled "Physical inactivity is associated with a higher risk for severe COVID-19 outcomes: a study in 48,440 adult patients", found that consistently meeting PA guidelines was strongly associated with a reduced odds for severe COVID-19 among infected adults. Specifically, when authors compared with those who reported being consistently inactive, those who were consistently meeting PA guidelines had lower odds of being hospitalised, requiring ICU admission, and dying from COVID-19. Even activity levels that did not meet the PA guidelines were significantly associated with reduced odds of hospitalisation and death.

As the research team highlighted in their conclusions: "It is notable that being consistently inactive was a stronger risk factor for severe COVID-19 outcomes than any of the underlying medical conditions and risk factors identified by CDC except for age and a history of organ transplant (CDC, 2020)[13]. In fact, physical inactivity was the strongest risk factor across all outcomes, compared with the commonly cited modifiable risk factors, including smoking, obesity, diabetes, hypertension, cardiovascular disease and cancer".

This evidence that physical inactivity is a strong modifiable risk factor for severe COVID-19 contrasts with the limited efforts by US public health authorities to educate the population about the benefits of PA related to adverse COVID-19 outcomes or to systematically promote regular PA during the pandemic. The authors recommend that public health authorities inform all populations that short of vaccination and following public health safety guidelines such as social distancing and mask use, **engaging in regular PA may be the single most important action individuals can take to prevent severe COVID-19 and its complications, including death**. This message is especially important given the increased barriers to achieving regular PA during lockdowns and other pandemic restrictions.

Taken together, the results from Chastin yet al. (2021), Salgado-Aranda et al. (2021) and Sallis et al. (2021) studies suggest a clear and actionable guideline for reducing the risk of severe COVID-19 outcomes, to promote engagement in daily physical activity and regular exercise.

12 Sallis R, et al. Physical inactivity is associated with a higher risk for severe COVID-19 outcomes: a study in 48,440 adult patients. Br J Sports Med 2021;55:1099–1105. doi:10.1136/bjsports-2021-104080

13 Centers for Disease Control and Prevention. COVID-19 people of any age with underlying medical conditions. Available: https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html

1.2.3 The impact of physical activity on the economy

As highlighted by Hafner et al (2020)[14] in a novel study assessing the economic benefits of increased physical activity on a global scale for the next 30 years:

> ***"There are numerous benefits of improving physical activity, from better mental and physical health, lower all-cause mortality rates and higher workplace productivity to improved life satisfaction. While the direct economic benefits associated with lower cost of healthcare have been thoroughly investigated in prior literature, the broader macroeconomic benefits presented in this study have been missing from the overall picture. Our analysis suggests that improving physical activity in the population, for example, by making everyone adhere to the lower threshold of the 2020 WHO guidelines range (150 minutes/ week of moderate physical activity, equivalent to 600 MET-minutes)[15] could be associated with economic benefits, potentially adding trillions of dollars in added economic output over a 30-year period and providing a range of other benefits to the people affected".***

In fact, the study concludes that increasing the physical activity of the world's population to at least the lower threshold of the 2020 WHO guidelines is estimated to contribute up to **US$8.6 trillion to the global economy cumulatively by 2050** (in 2019 prices). This suggests a potential economic benefit of policies promoting physical activity, particularly in high-income countries with currently lower physical activity levels. The health and fitness sector has a huge part to play therefore, in delivering the economic benefits to society (as reported regularly by Sport England, based on its Social Return of Investment -SROI-modelling)[16]. Indeed, a recent report from Sport England (2020) found that every £1 spent on community sport and physical activity generates nearly £4 for the economy and society[17].

14 Hafner M, et al. Estimating the global economic benefits of physically active populations over 30 years (2020–2050). Br J Sports Med 2020;54:1482–1487. doi:10.1136/bjsports-2020-102590

15 Bull FC, Al-Ansari SS, Biddle S, et al. World Health organization 2020 guidelines on physical activity and sedentary behaviour. Brit J Sport Med. doi: 10.1136/bjsports-2020-102955.

16 https://www.sportengland.org/news/why-investing-physical-activity-great-our-health-and-our-nation

17 https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-09/Social%20return%20on%20investment.pdf?VersionId=5BgvLn09jwpTesBJ4BXhVfRhV4TYgm9E

SafeACTiVE Code of Ethics Declaration:

"The reporting of data should be done with honesty and integrity, and every effort should be made to report data in the scientifically most accurate method (Marco and Larkin, 2000).

The SAFEActive study research team will only be able to provide conclusions that are supported by accurate data.

The participant should make every effort to preserve the integrity and security of the reported data provided for this study".

1.3. A description of the studies included in this #2 THiNK Active report

This second THiNK Active report presents data on COVID-19 self-reported cases in comparison with number of visits in fitness facilities and leisure centres across Europe. As per our previous report (https://www.europeactive.eu/sites/europeactive.eu/files/covid19/ThinkActive/SAFE-Active-Study-FINAL_web.pdf), the aim of the report was to understand to what extent the sector provides individuals with a safe environment in which to be physically active. In this case, we have integrated within our analysis the weekly vaccination levels per country and per week (considering official vaccination data from the European Center for Disease Control and Prevention[18]). It is hoped that data here will contribute to government policy and public perception regarding the risk presented by the fitness and leisure sector in terms of COVID-19.

The report includes data from two studies, drawing from independent databases:

1. In **section 2.0**, we present data from the SafeACTiVE Study #2. This study explored attendance data across mainland Europe, including 59.5 million visits from 8 countries. This data was collected in the broad open period of operations from 4th January to 3rd October (week #1 to week #39 of 2021) directly by academics from Universidad Rey Juan Carlos and Sheffield Hallam University's Advanced Wellbeing Research Centre.

2. In **section 3.0**, we present data from a study conducted by the ukactive research institute. This study explored UK data, including more than 126.3 million visits collected in the open period of operations from of 12th April to 21st November (when facilities were permitted to reopen) (week #15 to week #46 of 2021).

To provide a view of the number of self-reported cases of COVID-19 across mainland Europe and the UK, **section 4.0**, presents outcomes from a combined dataset (mainland Europe and UK). Taken collectively, the total sample (mainland Europe and UK data) comprises 3,043 fitness clubs and leisure centres from 9 different European countries. A total of 185.8 million visits in the broad open period of operations from 4th January to 21st November 2021 (week #1 to week #46 of 2021) were recorded. This sample represents **4.78%** of the total number of fitness clubs and leisure centres across Europe (63,644 centres - EuropeActive, Deloitte, 2020)[19].

18 https://www.ecdc.europa.eu/en/covid-19/country-overviews

19 EuropeActive, Deloitte. 2020 European Health & Fitness Market Report, Brussels, 2020.

Section 2.0 – Data on self-reported COVID-19 cases from visits to facilities in mainland Europe – the SafeACTiVE Study #2.

The description of the methods included in Section 2.0 pertains to the collection of data from mainland Europe only. This is termed the SafeACTiVE Study #2 and was a discrete piece of research.

2.1. Study design

The SafeACTiVE #2 Study adopted a repeated measures cross-sectional survey design. The survey was informed by a rapid review of published evidence on COVID-19 transmission and via extensive interaction with sector stakeholders prior to the study commencing. The questionnaire was then built as a digital data collection platform designed to support research interventions based on surveys (JISC, https://www.onlinesurveys.ac.uk/about/) [20].

Participating organisations were asked to provide information on; total visits on a week-by-week basis, and by using data provided by their access/membership systems, confirmed COVID-19 cases in their members and staff on a weekly basis. The location, type of facility, size of facility, staffing, population groups served and COVID-19 safety and protection measures in place were also recorded. To provide reliable information to policy makers and the public, we only considered official data of positive COVID-19 cases that was available on health authorities public data repositories (i.e. the European Centre for Disease Prevention and Control (ECDC)[21] https://www.ecdc.europa.eu/en/publications-data/COVID-19-testing). Whilst a direct comparison cannot be drawn between these two data sets as they use different methodologies, it is useful to present the officially reported rate (per 100,000 population) alongside the facility specific rate (per 100,000 visits) to monitor the change in each over the weeks and to identify if the pattern of cases within facilities across countries in Europe is similar to the overall pattern across the continent. In that regard, exploring 'population groups served' intended to help contextualize the overall impact of COVID-19 infection rates in fitness facilities and leisure centres.

---

20 To access the data collection JISC platform please go to: https://lab-2021.onlinesurveys.ac.uk/safeactive-study

21 ECDC is an EU agency aimed at strengthening Europe's defences against infectious diseases. The core functions cover a wide spectrum of activities: surveillance, epidemic intelligence, response, scientific advice, microbiology, preparedness, public health training, international relations, health communication, and the scientific journal Eurosurveillance. (https://www.ecdc.europa.eu/en/about-ecdc)

The number of weekly cases per used to estimate weekly test positivity per country is based on data collected by ECDC Epidemic Intelligence. The information sources are Ministries of Health or National Public Health Institutes (websites, twitter official accounts or Facebook official accounts), and the obtained data is systematically cross checked with data from WHO. More information is available at https://www.ecdc.europa.eu/en/COVID-19/data-collection

The main source of total tests per country per week is aggregate data submitted by Member States to TESSy or obtained directly from Member States via surveys. However, when not available, ECDC compiles data from public online sources. These data have been automatically or manually retrieved ('web-scraped') daily from national/official public online sources from EU/EEA countries and the UK. It should be noted that there are several limitations to this type of data. Scraped data are not available for all variables and/or countries due to content variability on national websites. Additionally, the data collection process requires constant adaptation to avoid to interrupted time series (i.e. due to modification of website pages, types of data).

The study survey was designed to take no more than 15 minutes to complete, once the participating site had collected weekly data from its access control system. Participant organisations´ privacy was fully protected with confidentiality maintained and not linked to operator´s identity. Survey responses and email addresses were stored separately with access to this information controlled and limited only to the research team. Sponsors and supporting organizations did not have access to any data. Fitness clubs and leisure centre operators were invited to take part via email with a direct access link to the SafeACTiVE Study #2 survey platform to report data. As part of the informed consent process, participant operators had to accept and sign the following Code of Ethics Declaration:

> ***"The reporting of data should be done with honesty and integrity, and every effort should be made to report data in the scientifically most accurate method. The SAFEActive study #2 research team will only be able to provide conclusions that are supported by accurate data. The participant should make every effort to preserve the integrity and security of the reported data provided for this study. medical research, to protect future patients, and the public's trust in the research establishment (Marco and Larkin, 2000)[22]."***

Figure #3 presents a summary of the data collection process and reporting plan for the study.

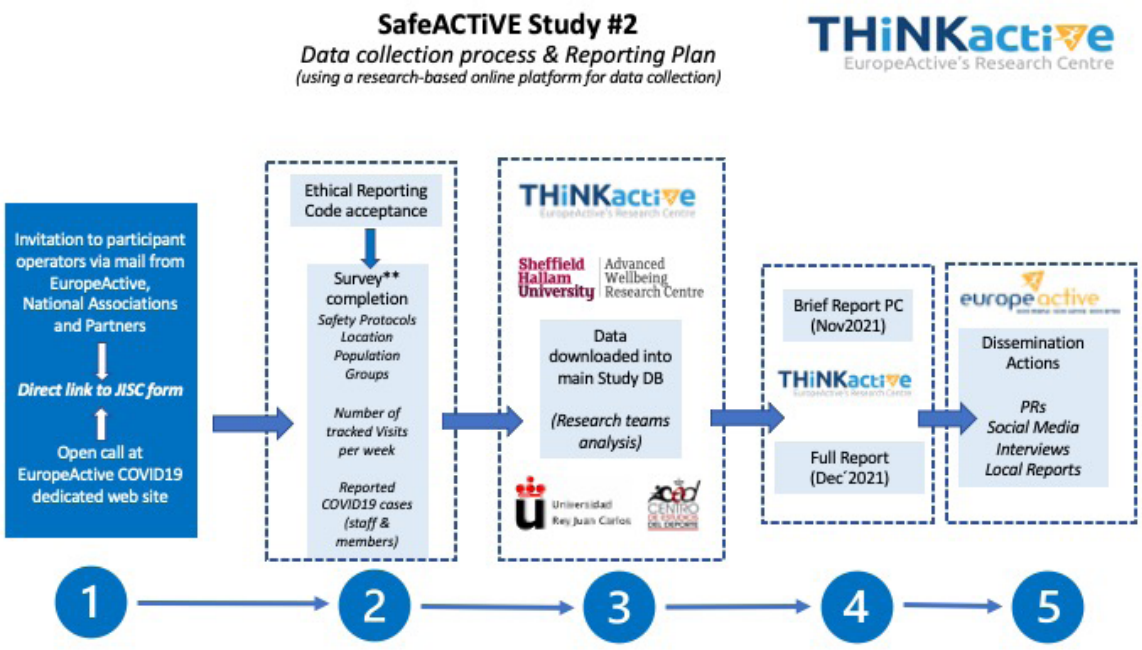


Figure #3: Summary of data collection process and reporting plan.

For additional information on the data collection process please visit the SafeACTiVE Study #2 survey platform:

https://lab-2021.onlinesurveys.ac.uk/safeactive-study

22 Marco CA, Larkin GL. Research ethics: ethical issues of data reporting and the quest for authenticity. Acad Emerg Med. 2000;7(6):691-694. doi:10.1111/j.1553-2712.2000.tb02049.x

2.2. Ethical approval

The study protocol received ethical approval from the Research Ethics Committee of King Juan Carlos University. As part of the informed consent approval for the study, participant organisations were informed that non-identifiable survey data might be shared with other researchers as part of future studies. Participation was voluntary and any participating organisation could withdraw any point in time.

2.3. Quality Assurance

The Quality Assurance model followed the guidelines and recommendations defined by WHO for surveys (WHO, 2002)[23], adapting the recommended procedures to the nature of this research and the digital tool designed for the SafeACTiVE study #2.

In advance of substantive analysis of the SafeACTiVE Study #2 data, there were a number of systematic checks of data quality (named as survey metrics) providing summary indicators of data quality.

The components of survey metrics included:

- Completeness, which includes response rate (and incomplete questionnaires or item non-response).
- Reliability, which indicates replicability of results using the same measurement instrument on the same respondent at different times. This analysis used the data from the test/re-test protocol undertaken in 15% of the whole sample.
- Comparison with external validators, that is to say, comparison with other similar survey results, as well as private and public sector data.

The research team at King Juan Carlos University (responsible for data collection and data analysis) reviewed quality of data collected and any potential missing information from participant organisations on a daily basis. A complete support and follow up process was established for participant organisations to address data reporting issues. An independent researcher (i.e. not part of the study team) at King Juan Carlos University completed an aleatory quality assurance check of data collected (at least 15%) to confirm accuracy of data, completeness and reliability.

23 World Health Survey: Quality Assurance and Guidelines: Procedures for Quality Assurance Implementation by Country Survey Teams and Quality Assurance Advise. Geneva: WHO, 2002.

2.4 SafeACTiVE Study #2 Results

2.4.1. Descriptive analysis of SafeACTiVE #2 data collected

Across mainland Europe, a total of 1,458 fitness clubs and leisures centres in 9 different European countries participated in the SafeACTiVE study #2. The sample reported a total of 59,502,002 visits in the open period of operations from 4th January to 25th October (week #1 to week #39 of 2021).

NB: It is important to note that each participant operator had the option to report data from the week in which they reopened facilities after the lockdown set in their country of operation. At the same time, each operator uploaded data on the reporting platform in the defined sections with information that applied to their own particular situation. This means that the summatory value of some of the following tables could be slightly different to the overall sample size. So, information included in each table reflects the numbers supplied by participating operators.

Finally, it is important to draw the reader's attention to the fact that the information available from some countries is very limited (coming from reported data from a very small number of operators or clubs) and results therefore need to be treated with caution.

a) Total data collected at SafeACTiVE Study #2:

As summarized in table #1, a total of 59,502,002 visits to fitness clubs and leisure centres from 39 weeks (from week 1 to week 39) show a rate of positive reported COVID-19 cases of 0.98/100,000 visits (261 reported cases by members and 323 reported cases by staff).

Table #1: Total sample data collected at SafeACTiVE Study #2 survey

VISITS	Reported COVID-19 cases in members	Reported COVID-19 cases in staff	Rate reported positive cases/100.000 visits
59,502,002	261	323	0.98

Table #2 presents a summary of the comparative analysis of number of visits per week (and reported positive cases at fitness clubs, including rate per 100,000 visits) with EU published pandemic data (total number of population affected and rate per 100,000 individuals) from the 8 European countries participating in the study (Belgium, France, Germany, Greece, Italy, Netherlands, Portugal, Spain).

Table #2: Total data collected per week in the sample of participant operators from SafeACTiVE study #2 survey in 8 European countries (including weekly COVID-19 cases, infection rate per 100,000 population, visits to fitness clubs, reported cases at fitness clubs and reported rate per 100,000 visits)

	COVID-19 CASES in the 9 EU countries	Rate/100,000 population	VISITS	Reported fitness club cases	Rate/100,000 visits
Week 1	770,493	217,13	190,598	28	14,69
Week 2	759,378	214,00	355,827	15	4,22
Week 3	770,900	217,24	363,332	3	0,83
Week 4	711,517	200,51	403,776	7	1,73
Week 5	588,656	165,89	406,098	6	1,48
Week 6	459,149	129,39	303,949	5	1,65
Week 7	444,935	125,38	334,205	2	0,60
Week 8	448,393	126,36	398,695	19	4,77
Week 9	530,207	149,41	489,754	5	1,02
Week 10	616,062	173,61	350,264	2	0,57
Week 11	730,288	205,80	621,558	5	0,80
Week 12	858,056	241,80	602,640	2	0,33
Week 13	833,823	234,97	352,615	1	0,28
Week 14	737,971	207,96	206,438	3	1,45
Week 15	727,492	205,01	1,882,809	8	0,42
Week 16	667,737	188,17	2,215,347	8	0,36
Week 17	536,534	151,20	2,437,208	9	0,37
Week 18	452,029	127,38	2,392,043	13	0,54
Week 19	342,557	96,53	2,743,770	8	0,29
Week 20	299,538	84,41	3,147,104	11	0,35
Week 21	206,336	58,15	3,274,157	22	0,67
Week 22	156,645	44,14	3,010,492	24	0,80
Week 23	119,481	33,67	3,588,188	51	1,42
Week 24	77,886	21,95	4,203,608	59	1,40
Week 25	72,259	20,36	4,323,729	60	1,39
Week 26	134,798	37,99	4,362,938	86	1,97
Week 27	232,549	65,53	4,298,020	18	0,42
Week 28	404,643	114,03	2,774,517	46	1,66
Week 29	456,454	128,63	2,533,817	28	1,11
Week 30	450,028	126,82	2,508,451	20	0,80
Week 31	421,668	118,83	1,015,469	5	0,49
Week 32	419,403	118,19	981,553	5	0,51
Week 33	406,807	114,64	169,174	0	0,00

Week 34	377,526	106,39	190,581	0	0,00
Week 35	332,446	93,68	220,084	0	0,00
Week 36	281,401	79,30	404,719	0	0,00
Week 37	231,670	65,29	453,601	0	0,00
Week 38	193,620	54,56	473,786	0	0,00
Week 39	188,401	53,09	516,504	0	0,00

Figure #4 shows the evolution of COVID-19 cases per week considering positive cases (per 100,000 population) in the 8 countries of our study sample, and the reported positive cases at fitness clubs per 100,000 visits.

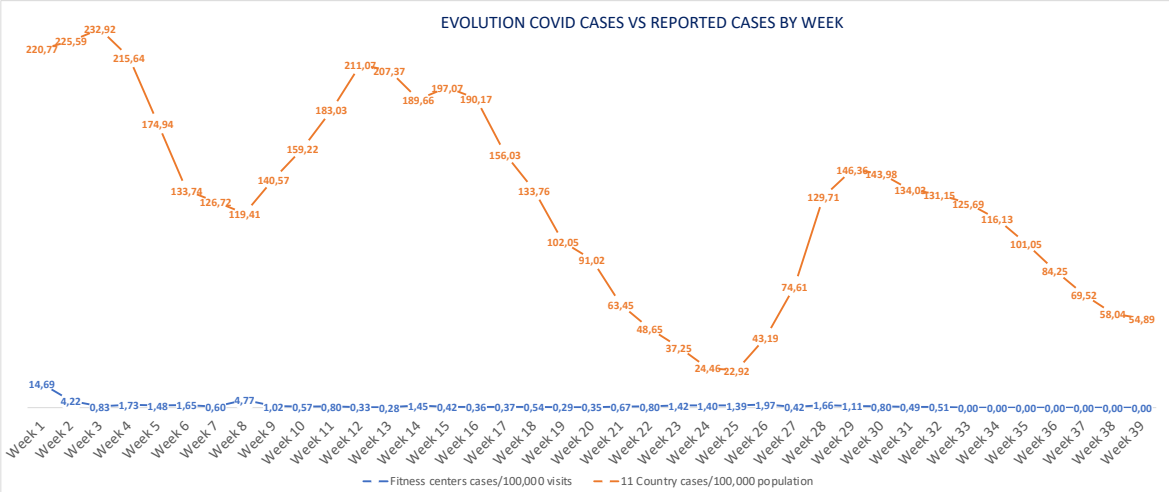


Figure #4: Evolution of COVID-19 cases per week considering positive cases (per 100,000 population) in the countries of SafeACTiVE Study #2 sample, and reported positive cases at fitness clubs (per 100,000 visits)

b) Data collected and results considering type of facility

An analysis of results considering the type of facility is included at table #3. The identification of different types of facilities is based on the definition of the health and fitness ecosystem developed by EuropeActive in partnership with Deloitte (2020).

Table #3: Total data collected per type of facility in the sample of participant operators (including total visits to different types of facilities, reported cases at each one and reported rate per 100,000 visits)

Type of facility	Number of visits	Member cases	Staff cases	Cases/100,000 visits
Boutique fitness studio (n=5)	2,639	0	0	0.0
Budget fitness club (named low-cost club as well) (n=13)	35,779,602	206	230	1.0
Community leisure centre (including indoor and outdoor facilities) (n=3)	20,513,020	47	85	0.6
Local sports club (including fitness provision) (n=5)	9,846	0	0	0,0
Medical fitness centre (n=3)	13,336	3	0	22.5
Mid-market fitness club (n=34)	2,865,215	4	6	0.4
Premium fitness club (n=22)	313,830	1	2	1.0
PT/Specialized Studio (n=2)	2,558	0	0	0.0

Figure #5 presents the rate per 100,000 visits per type of facility. The type of facility and the number of operators (between brackets) are shown in the key.

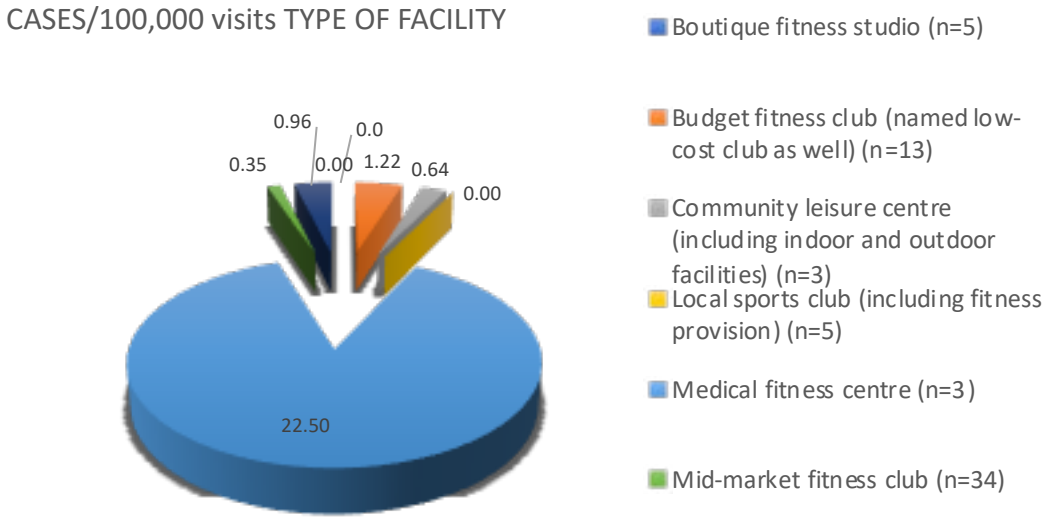


Figure #5: Distribution of positive COVID-19 reported cases in the different types of facilities.

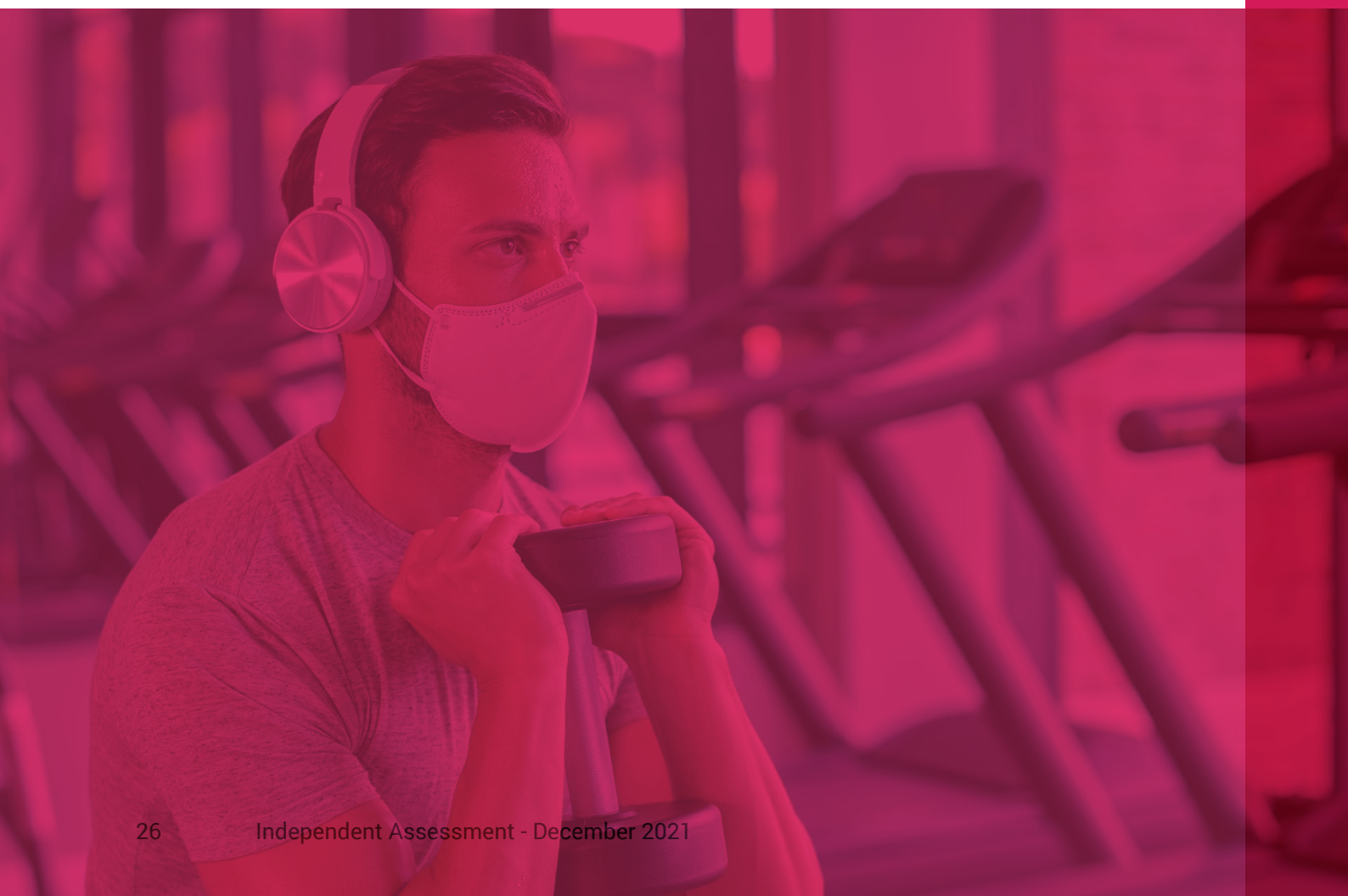
c) Data collected and results considering size of facility

An analysis of results considering the size of facility is included in table #4. The identification of different sizes of facilities is based again on the definition of the health and fitness ecosystem developed by EuropeActive in partnership with Deloitte (2020).

Table #4: Total data collected per size of facility in the sample of participant operators (including total visits to of facilities of different sizes, reported cases at each one and reported rate per 100,000 visits)

Size of facility (and number of operators)*	Number of visits	Member cases	Staff cases	Cases / 100,000 visits
Under 500m2 (n=11)	10,861	0	0	0.0
500 to 1,000m2 (n=38)	2,855,354	6	3	0.3
1000 to 2,000m2 (n=21)	35,878,461	195	224	1.2
2000 to 5,000m2 (n=13)	10,926,163	28	77	1.0
More than 5,000m2 (n=2)	9,797,295	32	19	0.5

**Please note that "n" refers to the number of multi-site operators reporting data.*



d) Data collected and results considering population groups served at the participant fitness clubs and leisure centres

We asked participant operators to specify the population group they served at their facilities, aiming to explore the potential implications regarding safety and protective measures in place for populations at higher risk. In this case, each participant could choose from different age groups that they were serving at their club/centre.

Table #5 shows the results obtained in the total sample considering age groups reported.

Table #5: Total data collected per reported population groups served by participant operators (including total visits in each case, reported cases and reported rate per 100,000 visits)

Age group	Number of visits	Member cases	Staff cases	Cases/ 100,000 visits
Adults: 18 to 65 years-old (n=25)	3,453,504	12	73	2.5
Adults: 18 to 65 years-old Ageing: more than 66 years-old (n=12)	62,444	0	1	1.6
Multigenerational Children: 3 to 14 years-old, Youth: 15 to 17 years-old, Adults: 18 to 65 years-old (N=1)	136	3	0	2205.8
Multigenerational Children: 3 to 14 years-old, Youth: 15 to 17 years-old,Adults: 18 to 65 years-old, Ageing: more than 66 years-old (n=17)	20,669,781	50	87	0.7
Youth: 15 to 17 years-old Adults: 18 to 65 years-old (N=7)	13,921,695	10	68	0.6
Multigenerational Youth: 15 to 17 years-old, Adults: 18 to 65 years-old, Ageing: more than 66 years-old (N=25)	21,394,442	186	94	1.3

2.4.2. Descriptive analysis of SafeACTiVE Study #2 data collected per country

As part of the SafeACTiVE study #2, we collected data from 8 different European countries. Appendix 1.0 presents facility reported positive rates per 100,000 people for each country in relation to the national weekly available data reported by the European Centre for Disease Prevention and Control (ECDC). We provide detailed information about the number of fitness clubs and leisure centre operators reporting data, total number of visits in a specific timeframe, total COVID-19 positive cases in the country in the period of reporting, total reported positive cases in members and staff in the participating facilities, weekly ratio of infection per 100,000 people compared to ratio of reported cases per 100,000 visits, and weekly vaccination status (% of vaccinated population).

NB: It is important to draw the reader's attention again to the fact that the information available from some countries is very limited (coming from reported data from a very small number of operators or clubs) and results therefore need to be treated with caution.

Section 3.0 – Data on COVID-19 cases and customer visits to UK facilities – ukactive Research Institute Study

The description of the methods included in Section 3.0 relates to the collection of data from UK only. The information presented in this section of the report is part of an ongoing data collection and analysis project conducted by the ukactive Research institute. Data is provided with permission of ukactive Research Institute solely for the purposes of this second THiNK Active report.

The ukactive study, from which this data was extracted, aims to provide an anonymised and aggregated reporting mechanism to allow analysis and discussion of sector wide data on COVID-19 cases. The ability to demonstrate the low prevalence of COVID-19 cases within UK fitness and leisure facilities on a weekly basis has allowed ukactive to support the fitness and leisure sector in validating the safety of facilities and the effectiveness of the operating procedures that are in place.

The first SafeActive report released in December 2020 demonstrated the results of the COVID data capture and analysis process that ukactive have undertaken since the initial reopening of facilities following the first national lockdown in July 2020. In that report, we were able to share data from over 55 million visits to UK facilities between July and December 2020. This data indicated a case rate of 1.41 cases per 100,000 visits to our facilities across that time period.

Since then, thanks to the ongoing cooperation and support of our members, we have continued to monitor and assess the prevalence of COVID cases within UK facilities through weekly data collection. Since the reopening of the sector after the third national lockdown in April, we have collected data from over 125 million visits to gyms, leisure centres, independent operators, boutiques and studios. This has again allowed ukactive to support the fitness and leisure sector in validating the safety of facilities and the effectiveness of the operating procedures that have been in place. Across this period from April to November the case rate per 100,000 visits was 0.83, a reduction on the equivalent figure from July-December 2020.

3.1 Data collection methods ukactive study

Data collection initially commenced in late July 2020, after fitness and leisure facilities in England and Northern Ireland were allowed to reopen (under certain restrictions). All ukactive operator members were invited to submit metrics through a standardised template on a weekly basis. The metrics included usage (visits by members and non-members) and confirmed COVID-19 cases at their facilities (as notified by NHS Test and Trace or the local authority). The number of visits from Environmental Health Officers was also collected. All data was collected on a regional basis to allow for specific geographical analysis when required. Where necessary, additional metrics were added into the data collection procedure, to include 'high risk' areas and/or to gather additional information on group exercise classes.

Following a third national lockdown which forced facilities to close from January to April 2021, data collection resumed in mid-April and has been ongoing since. This report shows data collected from the reopening of leisure centres and fitness clubs on the 12th of April (week #15) up to 21st of November (week #46).

3.2 Data analysis

Data was submitted to ukactive on a weekly basis, with submissions aggregated to produce weekly figures on sector wide COVID-19 cases and the case rate per 100,000 visits. The case rate was based on a user making one visit to a facility whilst infected with COVID-19. For contextualisation of the data, the corresponding weekly UK wide COVID-19 rate was calculated using the government published figures on cases by date reported. Whilst a direct comparison cannot be drawn between these two data sets as they use different methodologies, it is useful to present the national rate (per 100,000 population) alongside the facility specific rate (per 100,000 visits) to monitor the change in each over the weeks and to identify if the pattern of cases within facilities across regions is similar to the overall pattern across the UK.

3.3 Data sample

The ukactive database growth is presented in Figure 6. The data presented in this second report covers:

- Over 125 million visits (126,322,143) visits in the open period of operations from of 12th April to 21st November (week #15 to week #46 of 2021).
- A maximum of 1,500 sites in any single week.
- A mixture of facility types including gyms, leisure centres and boutiques.
- A mixture of operating models including private multi-site chains, public leisure trusts and independent operators and studios.
- This represents approximately 28% of the fitness and leisure sector facilities in the UK (total UK sites from Deloitte EHFM 2020).

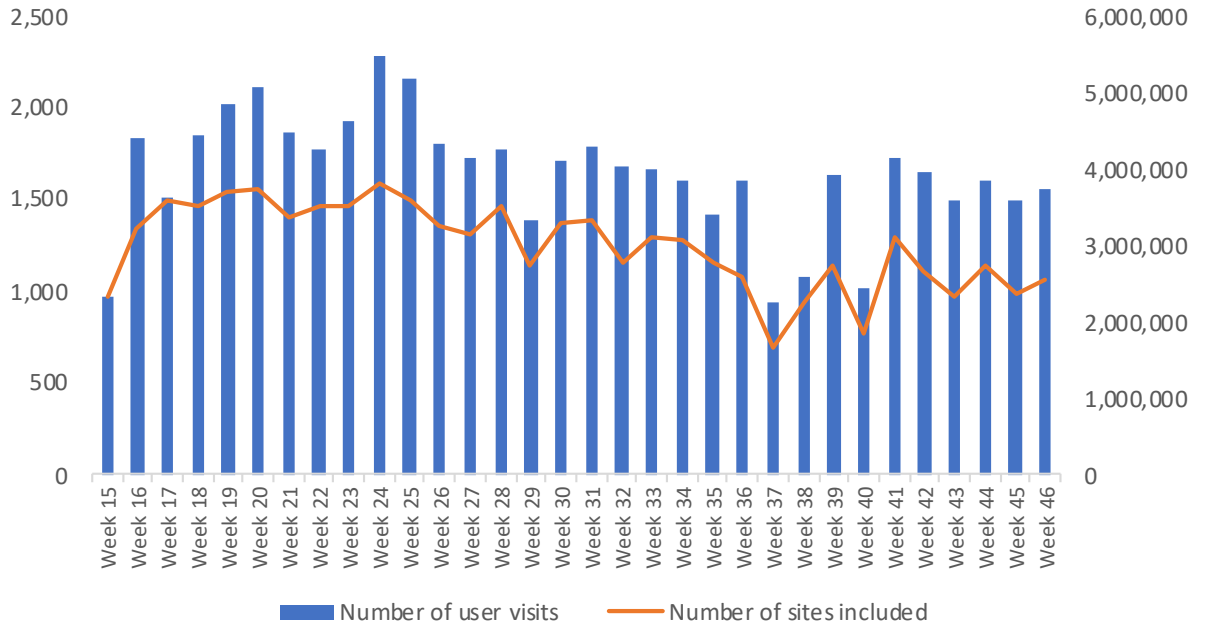


Figure #6 – Growth of ukactive COVID-19 database since April 2021

3.4 Results from UK data

Figure #7 illustrates the COVID-19 case rate per 100,000 visits for fitness and leisure facilities on a weekly basis since mid-April 2021. This is based on cases reported by customers only. The case rate is based on a user making one visit to a facility whilst infected with COVID-19. It also shows the number of visits made to facilities on a weekly basis.

The case rate has remained low over the entire period. It grew slowly on a weekly basis from May to July, where the peak of 3.86 cases per 100,000 visits was reached. This was followed by a sharp fall, and continued lower rates from the end of July onwards. Whilst there has been small week on week fluctuations in the weekly case rate since July, there is no indication to suggest that the rate is rising again.

In total from mid-April to mid-October there have been 1,044 COVID-19 cases from gym users who have visited facilities.

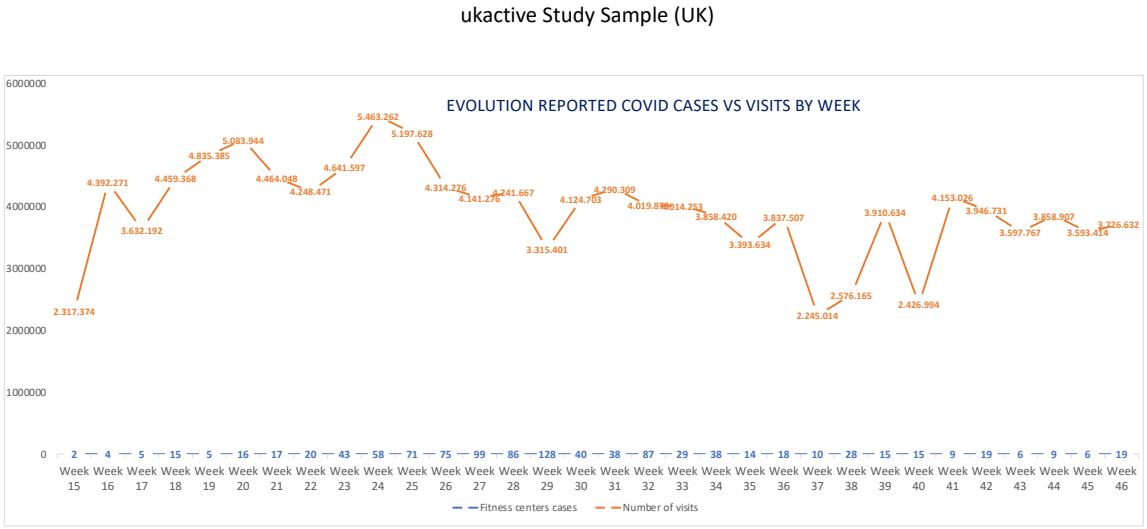


Figure #7: COVID reported case rate per 100,000 visits for fitness and leisure facilities on a weekly basis.

The overall UK population case rate shown here is different to that previously reported by ukactive as different data sources have been used which count cases using different methodologies.

The table #6 below shows the overall visits, COVID-19 cases, and case rate per 100,000 visits across the fourteen weeks of reported data.

Table #6: UK sample data collected

VISITS	Reported COVID-19 cases in members and staff	Rate positive cases/100.000 visits
126,322,143	1,044	0.83

Finally, figure #8 shows weekly data on infection rates at population levels in UK (rate/100,000 population), versus positive reported cases per 100,000 visits to leisure centres and fitness clubs, and vaccination status[24].

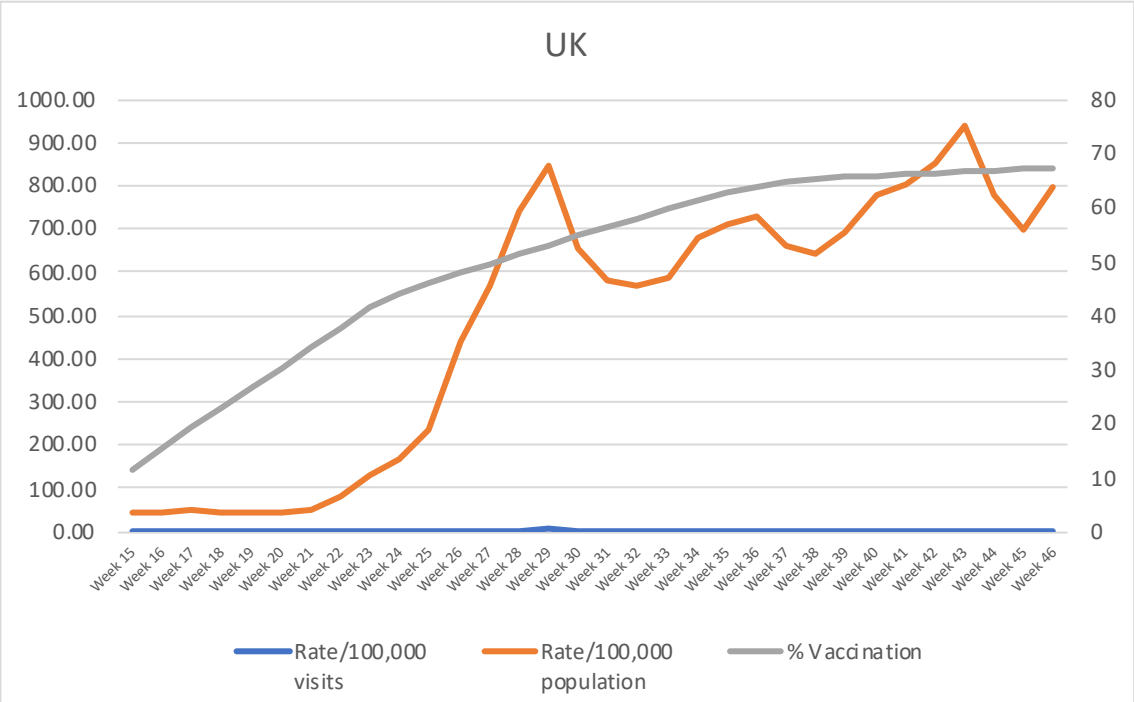


Figure #8: COVID reported case rate per 100,000 visits for fitness and leisure facilities on a weekly basis vs weekly infection rate per 100,000 population vs % of vaccination

24 *https://coronavirus.data.gov.uk/details/vaccinations*

Section 4.0 – Fitness club and leisure facility self-reported cases of COVID-19 across mainland Europe and the UK combined

To provide a view of self-reported cases of COVID-19 across mainland Europe and the UK, section 4.0, presents outcomes from a combined dataset (mainland Europe and UK). We obtained data from fitness clubs and leisure centres operators based in the following 9 countries: Belgium, France, Germany, Greece, Italy, Netherlands, Portugal, Spain, and United Kingdom.

Taken collectively, the total sample (mainland Europe and UK data) comprises 3,043 fitness clubs and leisure centres with a total of 185,824,145 visits recorded in the broad open period of operations from 4th January to 26th November (week #1 to week #46 of 2021). This sample represents 4.78% of the total number of fitness clubs and leisure centres across Europe (63,644 centres - EuropeActive, Deloitte, 2020).

As summarized in table #7, a total of **185,824,145 visits** to fitness clubs and leisure centres from 46 weeks (from week 1 to week 46) are showing a rate of positive reported COVID-19 cases of **0.88/100,000 visits** (coming from 1,628 reported cases).

Table #7: Total sample data collected
(including data from SafeACTiVE study #2 survey platform and ukactive database)

VISITS	Reported COVID-19 cases in members and staff	Rate positive cases/100.000 visits
185,824,145	**1,628**	**0.88**

Table #8 presents a summary of the comparative analysis of number of visits per week (and reported positive cases at fitness clubs, including rate per 100,000 visits) with EU published pandemic data (total numbers of population affected and rate per 100,000 individuals) from the 9 countries participating in the study.

Table #8: Total data collected per week in the sample of participant operators from 9 countries (including weekly COVID-19 cases, infection rate per 100,000 population, visits to fitness clubs, reported cases at fitness clubs and reported rate per 100,000 visits)

	COVID-19 CASES in the 10 EU countries	Rate/100,000 population	VISITS	Reported fitness club cases	Rate/100,000 visits
Week 1	1,098,191	287,65	190,598	28	14,69
Week 2	1,019,081	266,93	355,827	15	4,22
Week 3	969,594	253,97	363,332	3	0,83
Week 4	834,513	218,59	403,776	7	1,73
Week 5	681,936	178,62	406,098	6	1,48
Week 6	490,594	128,50	303,949	5	1,65

Week 7	468,089	122,61	334,205	2	0,60
Week 8	429,193	112,42	398,695	19	4,77
Week 9	475,338	124,51	489,754	5	1,02
Week 10	530,777	139,03	350,264	2	0,57
Week 11	602,415	157,79	621,558	5	0,80
Week 12	687,176	179,99	602,640	2	0,33
Week 13	665,650	174,36	352,615	1	0,28
Week 14	598,679	156,81	206,438	3	1,45
Week 15	622,021	162,93	4,200,183	10	0,24
Week 16	603,350	158,04	6,607,618	12	0,18
Week 17	496,351	130,01	6,069,400	14	0,23
Week 18	427,047	111,86	6,851,411	28	0,41
Week 19	330,519	86,57	7,579,155	13	0,17
Week 20	292,357	76,58	8,231,048	27	0,33
Week 21	217,145	56,88	7,738,205	39	0,50
Week 22	182,816	47,89	7,258,963	44	0,61
Week 23	171,367	44,89	8,229,785	94	1,14
Week 24	132,020	34,58	9,666,870	117	1,21
Week 25	173,057	45,33	9,521,357	131	1,38
Week 26	331,252	86,77	8,677,214	161	1,86
Week 27	420,735	110,20	8,439,296	117	1,39
Week 28	712,595	186,65	7,016,184	132	1,88
Week 29	715,191	187,33	5,849,218	156	2,67
Week 30	626,626	164,13	6,633,154	60	0,90
Week 31	626,789	164,18	5,305,778	43	0,81
Week 32	577,519	151,27	5,001,426	92	1,84
Week 33	612,974	160,56	4,183,427	29	0,69
Week 34	596,524	156,25	4,049,001	38	0,94
Week 35	558,241	146,22	3,613,718	14	0,39
Week 36	507,886	133,03	4,242,226	18	0,42
Week 37	417,800	109,44	2,698,615	10	0,37
Week 38	413,406	108,28	3,049,951	28	0,92
Week 39	405,672	106,26	4,427,138	15	0,34
Week 40 (UK only)	293,089	778,04	2,426,994	15	0,62
Week 41 (UK only)	255,396	805,88	4,153,026	9	0,22
Week 42 (UK only)	324,509	852,05	3,946,731	19	0,48
Week 43 (UK only)	312,625	936,13	3,597,767	6	0,17
Week 44 (UK only)	215,610	776,13	3,858,907	9	0,23
Week 45 (UK only)	259,190	697,62	3,593,414	6	0,17
Week 46 (UK only)	284,393	798,68	3,726,632	19	0,51

Section 5.0 – Discussion

This second THiNK Active report set out to understand the extent that gyms, fitness clubs and leisure centres - during the second year of the COVID-19 pandemic (2021)- provide individuals with a safe environment in which to be physically active. This second comprehensive report using data from across the health and fitness sector in Europe, explored COVID-19 cases in comparison with the number of visits over a 11-month period. We found the reported incidence rate of positive COVID-19 cases was 0.88 cases per 100,000 visits for the combined SafeACTiVE Study #2 and ukactive 2021 data sets. This was taken from a total sample of 185 million visits across 9 countries. This data – albeit self-reported - suggests again that fitness clubs and leisure centres (where industry standard mitigation is in place) provide safe public spaces in which to exercise, with very low self-reported cases of COVID-19.

Our report adds additional insight into the positive practices to mitigate COVID-19 potential transmission that are currently being implemented across European operators in this sample, providing safe environments for people to exercise during the pandemic.

Points to consider

Whilst the data presented herein suggests that fitness clubs and leisure centres can provide safe environments for people to exercise during the pandemic, with lower rates of self-reported cases per 100,000 visits across our 2021 sample (1.12 reported cases per 100,000 visits in the previous 2020 report in a sample of 115 million visits, versus 0.87 reported cases per 100,000 visits in our current sample of more than 185 million visits), there are a number of **key learnings** from these results that are worthy of brief exploration looking to support the further development of a more proactive and sustainable industry.

5.1 Creating safe and active environments for all

It is essential to acknowledge once again the significant efforts that have been made by operators across Europe to create and re-shape the physical environments of their facilities to ensure that they are safe for members of the public during COVID-19. Adherence to the protocols outlined in the *EuropeActive Guidance for the reopening of fitness facilities (EuropeActive, 2020[25]) and CEN Technical Specification 'Fitness Centres — Guidance for safe operations during an infectious outbreak'*[26] (which was distributed by EuropeActive to its members in late 2020) have contributed with no doubt to the low numbers of cases we have reported here. Operators have met (or exceed) the existing national guidelines established by their relevant health authorities, implementing up to 51 individual measures designed to protect members and staff during exercise. The sector is to be commended again on its efforts in this regard.

25 EuropeActive (2020). A practical guide to re-opening and operating a fitness facility (e-learning programme). https://www.europeactive.eu/covid19-guidance

26 Technical Committee CEN/TC 136, Sports, Playground and other recreational facilities and equipment (2020). CEN Technical Specification 'Fitness Centres — Guidance for safe operations during an infectious outbreak'.

5.2 Continuing to deliver on the vision of ensuring equity of access

As discussed at our previous 2020 THiNK Active report, keeping people active is essential during the pandemic, especially in light of data suggesting that regular physical activity has a positive impact on immune function and in helping to protect our body from viral infections (Nieman, 2020; Nieman, Wentz, 2019; Jimenez, Mayo, Copeland, 2020[27]). The bigger picture, however, is that COVID-19 has shone a light on the inequalities that exist across our communities and countries and despite the data presented here that fitness clubs and leisure centres are safe for users, we must not take our eye of the greater goal of reducing inequalities and making our facilities and programmes accessible to all. In this regard, it is important to remember the 'inverse prevention law' (Lorenc et al., 2013)[28], which suggests that those in greatest need of benefiting from health enhancing interventions are least likely to receive them. As stated by Lorenc and colleagues (2013), even where interventions are successful at improving health across the population, we must be mindful of their potential to exacerbate health inequalities. The risk of this is particularly high, where intervention is of greater benefit to advantaged (lower-risk) groups than to disadvantaged (higher-risk) groups (Lorenc et al., 2013).

We suggest therefore, that governments across Europe, and the health and fitness sector should double their efforts to increase access to activity for all, as we learn to live with COVID-19 and its consequences.

5.3. Socioeconomic disadvantage

Once again, we report substantially lower rates of COVID-19 in fitness clubs and leisure centres than in the wider population. Some might argue that our results simply reflect the socioeconomic gradient that is emerging for COVID-19, whereby those who typically use fitness clubs on a regular basis tend to come from higher socio-economic communities, hence lower rates (COVID-19 infection rates are disproportionately higher in lower socioeconomic groups (Hawkins, Charles, Mehaffy, 2020[29]; Public Health England, 2020[30]). Furthermore, that the safety and protective anti-COVID-19 protocols and guidance that are in place at fitness clubs and leisure centres in our sample, mean those who attend are further exposed to positive and relevant public health messages on a regular basis. Perhaps reinforcing their commitment to follow current health advice and limit the spread of the virus in some kind of virtuous cycle.

---

27 Jimenez, A., Mayo, X., Copeland, R.J. (2020) "The positive impact of physical activity and exercise on immune function; The critical prevention and recovery tool to fight a second wave of COVID-19". EuropeActive THiNK Active, Brussels. DOI: 10.13140/RG.2.2.20083.96800;

28 Lorenc T, Petticrew M, Welch V, et al. What types of interventions generate inequalities? Evidence from systematic reviews. J Epidemiol Community Health 2013;67:190-193.

29 Hawkins, R.B. Charles, E.J., Mehaffey, J.H. Socio-economic status and COVID-19–related cases and fatalities. Public Health. Volume 189, 2020, Pages 129-134. https://doi.org/10.1016/j.puhe.2020.09.016

30 Public Health England. Disparities in the risk and outcomes of COVID-19. Public Health England., London, August 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf

Indeed, physical activity, amongst a number of other healthful behaviours, has been frequently shown to be directly related to socioeconomic status (Craike et al., 2018,[31]; Brouard et al, 2020[32]; Jansen et al., 2018[33]).

Whilst social gradient might help explain our results, it is essential that we do not approach this through the lens of individual responsibility, stigmatising and blaming people for their apparent 'lifestyle decisions', making the false assertion that people from lower socioeconomic groups somehow have higher rate of COVID-19 infection (and lower physical activity) by choice. It's much easier to make good choices when you have plenty of options, social support, a re-enforcing environment, and resources to do so. Instead, the conversation has to be focused on creating the conditions across our communities, and the health and fitness sector, that make it easy for everyone to enjoy better health and wellbeing through physical activity. Indeed, people's health – and physical activity behaviour for that matter - is a consequence of the economic constraints under which they live, that are created by the way that society is constructed and exacerbated by structural inequalities (Rutter, Marshall, Briggs, 2020)[34].

5.4. Aerosol transmission in gyms, the positive impact of protective measures based on air quality

A recent paper from Blocken et al. (2021[35]) highlighted the mounting evidence showing that COVID-19 can be transmitted by inhalation of saliva aerosol particles. This is because the virus in small aerosol particles can remain in the air for hours, and importantly maintain viability in such aerosols (Liu et al, 2020[36]; van Doremalen et al., 2020[37]; Morawska, Cao, 2020[38]; Hadei et al., 2020[39]; Asadi et al., 202[40]). Further, COVID-19 transmission might be similar to previous

31 Craike, M., Wiesner, G., Hilland, T.A. et al. Interventions to improve physical activity among socioeconomically disadvantaged groups: an umbrella review. Int J Behav Nutr Phys Act 15, 43 (2018). https://doi.org/10.1186/s12966-018-0676-2

32 Brouard, S., Vasilopoulos, P., & Becher, M. (2020). Sociodemographic and Psychological Correlates of Compliance with the COVID-19 Public Health Measures in France. Canadian Journal of Political Science, 53(2), 253-258. doi:10.1017/S0008423920000335

33 Jansen, T., Rademakers, J., Waverijn, G. et al. The role of health literacy in explaining the association between educational attainment and the use of out-of-hours primary care services in chronically ill people: a survey study. BMC Health Serv Res 18, 394 (2018). https://doi.org/10.1186/s12913-018-3197-4

34 Rutter, H., Marshall, L., Briggs, A. Obesity: tackling the causes of the causes. BMJ Opinion, July 2020. https://blogs.bmj.com/bmj/2020/07/30/obesity-tackling-the-causes-of-the-causes/

35 Blocken B, van Druenen T, Ricci A, Kang L, van Hooff T, Qin P, Xia L, Ruiz CA, Arts JH, Diepens JFL, Maas GA, Gillmeier SG, Vos SB, Brombacher AC. Ventilation and air cleaning to limit aerosol particle concentrations in a gym during the COVID-19 pandemic. Build Environ. 2021 Apr 15;193:107659. doi: 10.1016/j.buildenv.2021.107659. Epub 2021 Feb 4. PMID: 33568882; PMCID: PMC7860965.

36 Liu Y., Ning Z., Chen Yu. Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals. Nature. 2020;582:557–560. https://www.nature.com/articles/s41586-020-2271-3 - PubMed

37 van Doremalen N., Morris D.H., Holbrook M.G. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. New England J. Med. 2020;382:1564–1567. - PMC - PubMed

38 Morawska L., Cao J. Airborne transmission of SARS-CoV-2: the world should face the reality. Environ. Int. 2020;139:105730. - PMC - PubMed

39 Hadei M., Hopke P.K., Jonidi A., Shahsavani A. A letter about the airborne transmission of SARS-CoV-2 based on the current evidence. Aerosol Air Qual. Res. 2020;20:911–914.

40 Asadi S., Bouvier N., Wexler A.S., Ristenpart W.D. The coronavirus pandemic and aerosols: does COVID-19 transmit via expiratory particles? Aerosol. Sci. Technol. 2020;54(6):635–638. - PMC - PubMed

epidemics caused by other coronaviruses, for which human-to-human transmission occurs through droplets, aerosols, and direct contact (WHO, 2020[41]). In particular, the droplets generated during speaking, coughing, and sneezing by symptomatic patients, can spread up to 1–2 m (Singhal, 2020[42]). Another mode of transmission is enabled by the exhalation and inhalation of aerosols while breathing. Aerosols are microparticles with a diameter smaller than 5 μm, containing pathogens, which after having been released in the air, are transported by the flow of the air current (Tellier et al., 2019[43]). Finally, COVID-19 can also be transmitted through direct or indirect contact with infected people or by depositing droplets containing the virus on any person or inanimate surface (Peng et al., 2020[44]). Therefore, precautionary measures should be applied to prevent or minimize both direct transmission and airborne transmission of COVID-19.

In gyms and leisure centres, respiratory aerosol particle production and aerosol particle inhalation is expected to be more pronounced than in many other indoor environments. Although there are only a few studies of how physical activity influences the emission of respiratory droplets, they are consistent in indicating an overall substantial increase in aerosol expiration due to intensive breathing compared to tidal breathing (Blocken et al., 2021). Johnson and Morawska (2009[45]) found that deep exhalation resulted in a 4 to 6-fold increase in aerosol particle concentration. Rapid inhalation produced a further 2- to 3-fold increase in concentration, while rapid exhalation had little effect on the measured concentration. In the same paper, Blocken et al. (2021) highlights three additional aggravating factors: (i) the quantity of inhaled pollutants increases proportionally with the minute ventilation; (ii) most of the air is inhaled through the mouth and therefore by-passes the normal nasal mechanisms for filtration of large particles; and (iii) the increased airflow velocity carries pollutants deeper into the respiratory tract (Carlisle, Sharp, 2001[46]).

Gyms and leisure centres have been identified as key locations for possible infection transmission and even potential 'superspreading' events (Andrade et al., 2018[47]; Chang et al., 2020[48]; Jang, Han, Rhee, 2020[49]). For example, COVID-19 outbreaks have been reported in 12 fitness dance classes in South Korea (Jang, Han, Rhee, 2020) and in one fitness center in Belgium (Serrure, Verrycken, 2020[50]). Together with recent studies suggesting that asymptomatic carriers can

41 World Health Organization . World Health Organization; Geneva: 2020. Modes of Transmission of Virus Causing COVID-19: Implications for IPC Precaution Recommendations. Scientific Brief. www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus...

42 Singhal, T. A Review of Coronavirus Disease-2019 (COVID-19). Indian J Pediatr 87, 281–286 (2020). https://doi.org/10.1007/s12098-020-03263-6

43 Tellier R., Li Y., Cowling B.J., Tang J.W. Recognition of aerosol transmission of infectious agents: a commentary. BMC Infect. Dis. 2019;19. doi: 10.1186/s12879-019-3707-y

44 Peng, X, Xu, X, Li, Y, Cheng, L, Zhou, X, Ren, B. 2020. Transmission routes of 2019-ncov and controls in dental practice. Int J Oral Sci. 12(1):1–6.

45 Johnson G.R., Morawska L. The mechanism of breath aerosol formation. J. Aerosol Med. Pulm. Drug Deliv. 2009;22(3):229–237. - PubMed

46 Carlisle A.J., Sharp N.C.C. Exercise and outdoor ambient air pollution. Br. J. Sports Med. 2001;35:214–222. - PMC - PubMed

47 Andrade A., Dominski F.H., Pereira M.L. Infection risk in gyms during physical exercise. Environ. Sci. Pollut. Control Ser. 2018;25:19675–19686. - PubMed

48 Chang S., Pierson E., Koh P.W. Mobility network models of COVID-19 explain inequities and inform reopening. Nature. 2020;589:82–107. - PubMed

49 Coronavirus Disease Associated with Fitness Dance Classes, South Korea. - DOI - PMC - PubMed

50 Serrure B., Verrycken R. Dutch: Hoe de Epidemie Ontspoorde in Antwerpen) Newspaper De Tijd; 2020. How the epidemic got derailed in Antwerp.https://www.tijd.be/dossiers/coronavirus/hoe-de-epidemie-ontspoorde-in-a...

transfer SARS-CoV-2 (Ye et al., 2020[51]; Rothe et al., 2020[52]), these studies have fueled concerns on SARS-CoV-2 spreading in fitness centers. However, data suggests that the potential risk of virus transmission while exercising at gyms or leisure centres, when providing good hygiene and distancing measures, is very low, and outweighs the negative health impact of physical inactivity. A randomised control trial involving 3,764 participants (Helsingen et al., 2020[53]), showed no virus transmission nor any increase in COVID-19 disease related to the opening of training facilities that provided good hygiene and distancing measures. This trial supports the argument that facility-based physical activity can be undertaken safely, with limited risk. Moreover, it is unnecessary to close training facilities, which will likely lead to increases in inactivity and further exacerbate COVID-19 related risk. Instead, COVID-19 risk can be mitigated to allow individuals continued access to a safe environment for physical activity so to experience the known physical, psychological and social-emotional benefits.

To facilitate safe environments for physical activity, EuropeActive, the International Health Racquet and Sports Clubs Association (IHRSA), and the World Federation of the Sporting Goods Industry (WFSGI), developed Guidance on the key considerations on the health and safety aspects of the operation of sports, fitness, aquatics, thermal facilities/clubs in the context of COVID-19 (EuropeActive, IHRSA, WFSGI, 2020[54]). This document, together with an accompanying COVID-19 Risk Assessment Tool and Mitigation Checklist, aimed to support club/facility operators to make evidence-based decisions on the risks associated with reopening facilities. Our previous independent THiNK Active assessment (Jimenez et al., 2020[55]) was undertaken six months later and the collected data suggested that the self-reported incidence rate of positive COVID-19 cases was very low (1.12 cases per 100,000 visits). Our current self-reported data supports previous findings that gyms and leisure centres (where industry standard mitigation is in place) provide safe public spaces in which to exercise, with very low self-reported cases of COVID-19 (0.87 reported cases per 100,000 visits).

It is important to note that the safety of exercise in indoor leisure centres, gyms, and fitness clubs is **dependent on the safety and protective protocols in place**. In fact, a number of relevant studies linked outbreaks to gym facilities and group exercise sessions at the early stages of the pandemic (i.e. Jang, Han, Rhee, 2020), when protective and safety requirements from health authorities were not defined and industry guidelines were not yet in place.

51 Ye F., Xu S., Rong Z. Delivery of infection from asymptomatic carriers of COVID-19 in a familial cluster. Int. J. Infect. Dis. 2020;94:133–138. - PMC - PubMed

52 Rothe C., Schunk M., Sothmann P. Transmission of 2019-ncov infection from an asymptomatic contact in Germany. N. Engl. J. Med. 2020;382(10):970–971. - PMC - PubMed

53 Helsingen L.M. et al. (2020). The TRAiN Study Group. Randomized Re-Opening of Training Facilities during the COVID-19 pandemic. https://www.medrxiv.org/content/10.1101/2020.06.24.20138768v2.full.pdf

54 IHRSA, EuropeActive, WFSGI, et al. (2020) Key considerations for sports, fitness, aquatics, thermal facilities/clubs in the context of COVID-19. https://cdn2.hubspot.net/hubfs/167081/Advocacy/Letter%20PDFs/Key%20Considerations%20for%20Sports%20Fitness%20Aquatics%20Ancillary%20Facilities%20Clubs%20in%20the%20Context%20of%20COVID-19_May_2020.pdf

55 Jimenez, A., Mayo, X., Lopez-Valenciano, A., Dalton, C., Del Villar, F., Luque, A., Broughton, L., Made, M., Shakespeare, J., Copeland, R.J. An independent assessment of COVID-19 cases reported in fitness clubs and leisure facilities across Europe: a THiNK Active report. EuropeActive, Brussels, v.1.1. 17th December, 2020. DOI: 10.13140/RG.2.2.13203.71207 https://www.europeactive.eu/sites/europeactive.eu/files/covid19/ThinkActive/SAFE-Active-Study-FINAL_print.pdf

5.4.1 The value of wearing a face-mask on safety during exercise

As sports clubs, gyms, and public spaces could serve an important source of viral transmission, wearing of a face-mask has become an integral part of physical activity during the pandemic (Gontjes et al., 2020)[56]. This measure might be even more important during aerobic activity, such as running or biking, as some preliminary studies show that small droplets can spread as far as 5 meters while walking at a pace of 4 km/h and 10 meters when running at 14.4 km/h (Blocken et al., 2020)[57].

A relevant study published last year (Epstein et al., 2020)[58] concluded that in healthy subjects, aerobic exercise with either a surgical mask or N95 respirator is safe and feasible. Although it may be associated with some discomfort, wearing a face-mask has only minor effects on physiological parameters during exercise. Participants with obstructive lung diseases such as asthma or COPD and heart diseases should undergo meticulous evaluation before attempting physical activity with a mask.

5.5 Strengths and limitations

This second SafeACTIVE report should be viewed in the light of a number of strengths and limitations. This is the second report to attempt to explore reported cases per number of visits in fitness clubs and leisure centres during COVID-19 across Europe and UK. The size of sample drawn from the two studies included here represents a substantial volume of data, with 185 million visits recorded over a 11-month period. The reach of the report is also broad, covering 9 countries and yet the sample only represents 4.78% of the total number of fitness clubs and leisure centres across the continent. We therefore make no strong claims about its representativeness. It is essential to recognise that the data provided was self-reported and it is in the interests of providers to demonstrate their ability to provide safe environments. Our findings should be considered in light of the inherent biases that exist with this form of data. That said, we employed robust data collection methods and our findings are consistent with findings from public health sources and so this should add some confidence in our outcomes. The majority of operators who provided data here were from large organisations whose facilities were over 1,000m2 in size. This means that implementing social distancing measures were likely to have been made easier logistically compared to smaller venues. Furthermore, larger operators might have the resources to implement extensive safety measures – such as those set out in the EuropeActive guidance for the reopening of fitness facilities (EuropeActive, 2020) - compared to independents, although we do not have data to substantiate this. What is clear, is that across the industry providers sampled here, there have been significant attempts to implement best practice in reducing COVID-19 cases in venues.

---

56 Gontjes KJ, Gibson KE, Lansing B, Cassone M, Mody L. Contamination of common area and rehabilitation gym environment with multidrug-resistant organisms. J Am Geriatr Soc. 2020;68:478-485.

57 Blocken, B., Malizia, F., Druenen, T.V., & Marchal, T. (2020). Towards aerodynamically equivalent COVID-19 1.5 m social distancing for walking and running. Pre-print at Semantic Scholar. https://www.semanticscholar.org/paper/Towards-aerodynamically-equivalent-COVID-19-1.5-m-Blocken-Malizia/bea48447764cd4ce84ac9d0e9fa2201a40160fc5

58 Epstein D, Korytny A, Isenberg Y, et al. Return to training in the COVID-19 era: The physiological effects of face masks during exercise. Scand. J. Med. Sci. Sports. 2020;00:1–6. https://doi.org/10.1111/sms.13832

Section 6.0 - Conclusions

We completed a second independent evaluation of the number of reported cases of COVID-19 in fitness clubs and leisure facilities across Europe, combining mainland Europe data (collected as part of the SafeACTiVE study #2) and UK data (collected by the ukactive Research Institute).

We employed robust data collection methods and our findings are consistent with findings from public health sources.

The size of sample drawn from the two studies included in this report represents a substantial volume of data (185.8 million visits) recorded over a 11-month period. The report is including data from 9 countries, although the sample of participant operators (3,043 organisations) only represents 4.78% of the total number of fitness clubs and leisure centres across the continent. We therefore make no strong claims about the representativeness of our results.

A total of 185,824,145 visits to fitness clubs and leisure centres from 46 weeks (from week 1 to week 46 of 2021) showed a rate of positive reported COVID-19 cases of 0.88/100,000 visits (coming from 1,628 reported cases by members and staff).

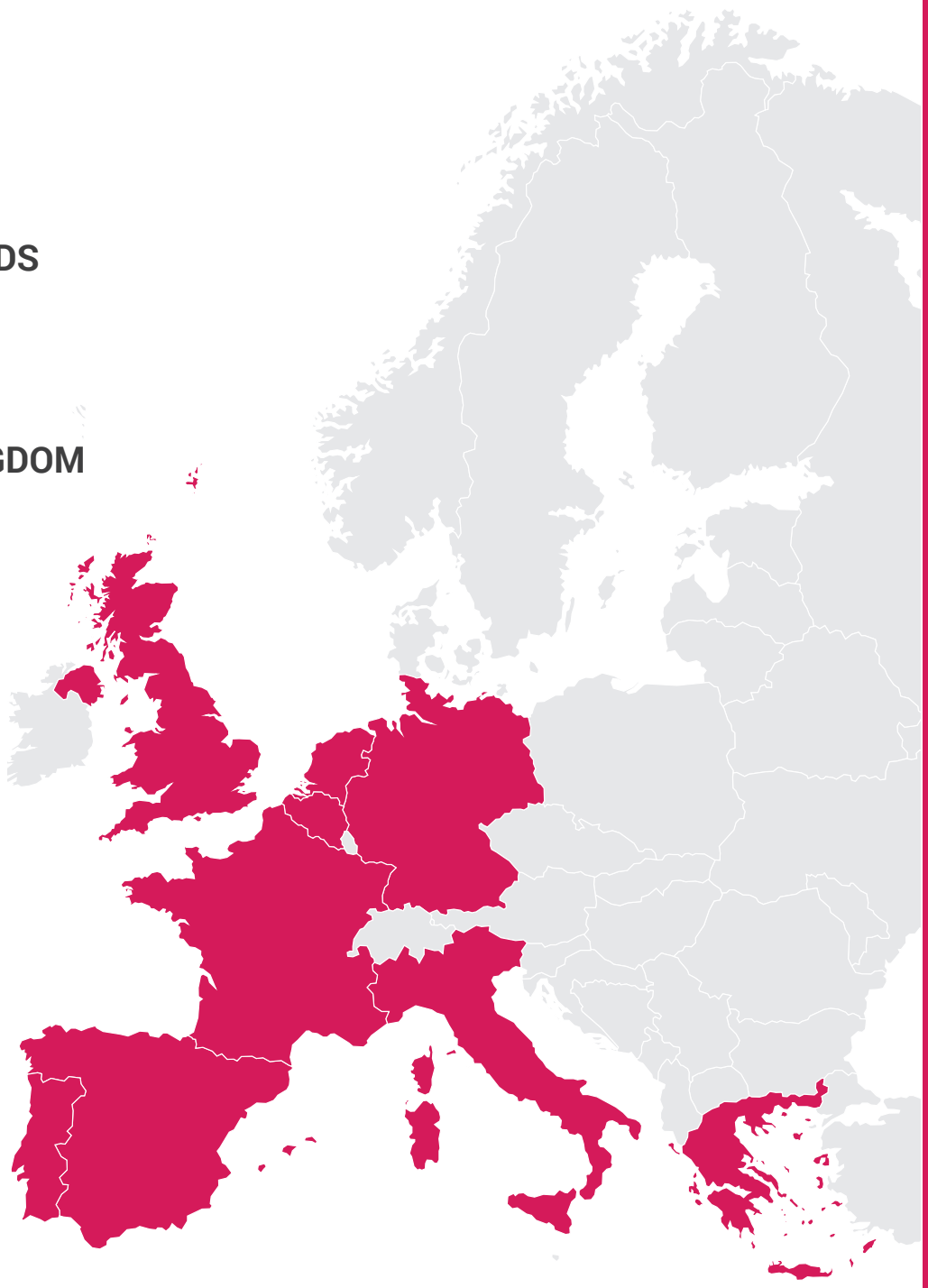
We identified significant attempts to implement best practice in reducing COVID-19 cases in venues following industry guidelines.

Our data shows a stable flat trend on reported cases at fitness clubs/leisure centres independently of the evolution of the pandemic and vaccination status across each of the 9 countries included in our sample (considering the collective pandemic situation in these countries or the particular situation in each of them). This flat trend is especially relevant when new waves of infections arrived across the whole of Europe during 2021.

Appendix 1.0 individual country information presented in alphabetic order.

The individual country information is presented in alphabetic order in the following pages.

1. BELGIUM
2. FRANCE
3. GERMANY
4. GREECE
5. ITALY
6. NETHERLANDS
7. PORTUGAL
8. SPAIN
9. UNITED KINGDOM
   see section 3



BELGIUM

NUMBER OF VISITS: **2,056,455**
NUMBER OF OPERATORS/CLUBS: **214**
REPORTED COVID-19 CASES: **2 TOTAL (0 STAFF; 1 MEMBERS)**
RATE COVID-19 CASES/100,000 VISITS: **0,0486 CASES/100,000 VISITS**

Figure #9: Belgium country cases/100,000 population vs reported cases at fitness clubs/100,000 visi

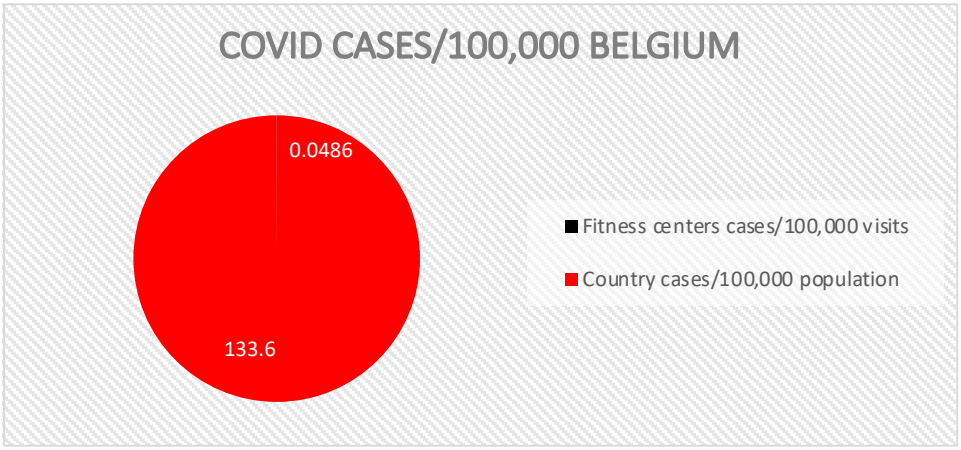
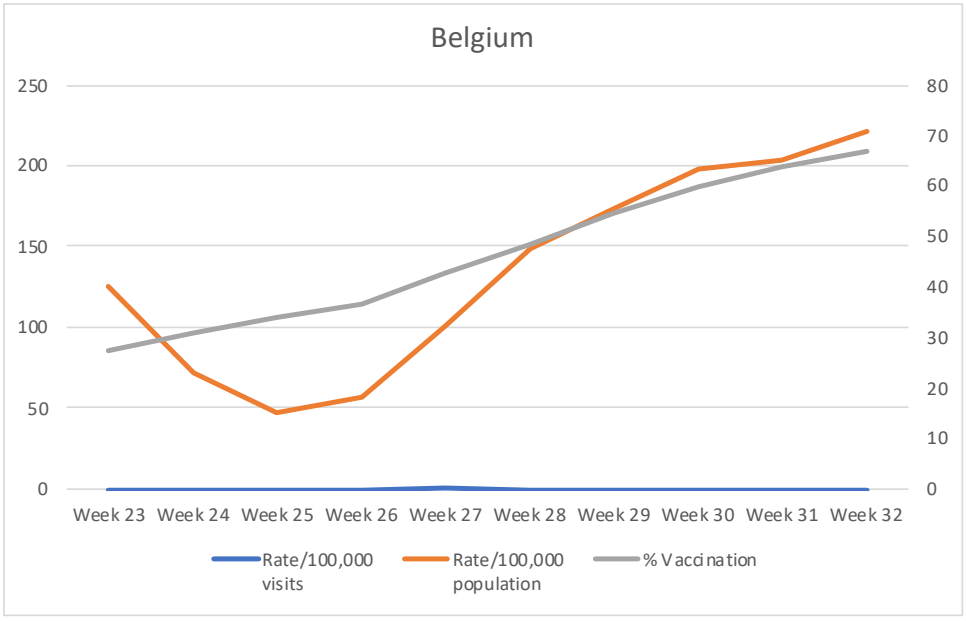


Figure #10: Belgium fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



FRANCE

NUMBER OF VISITS: **6,118,869**
NUMBER OF OPERATORS/CLUBS: **809**
REPORTED COVID-19 CASES: **44 TOTAL (33 STAFF; 11 MEMBERS)**
RATE COVID-19 CASES/100,000 VISITS: **0.719 CASES/100,000 VISITS**

Figure #11: France country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

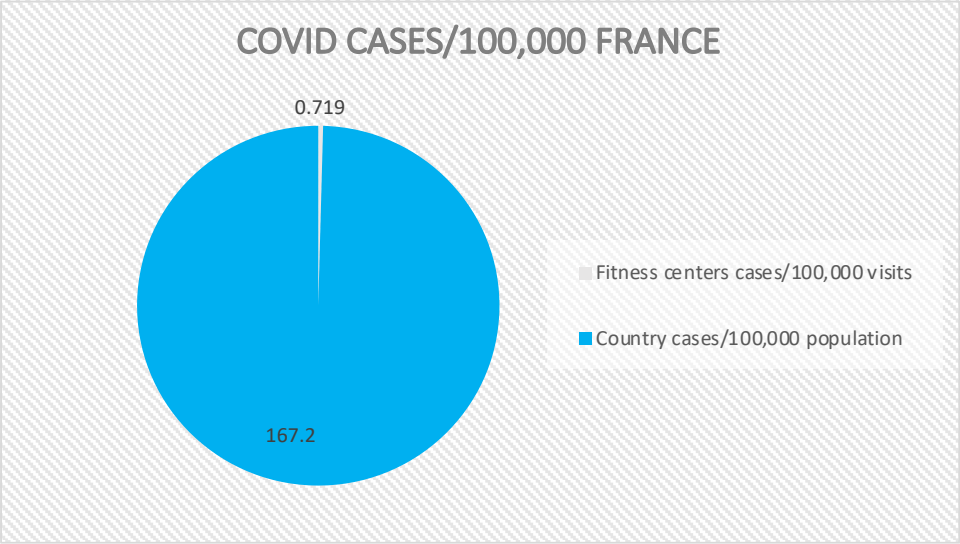
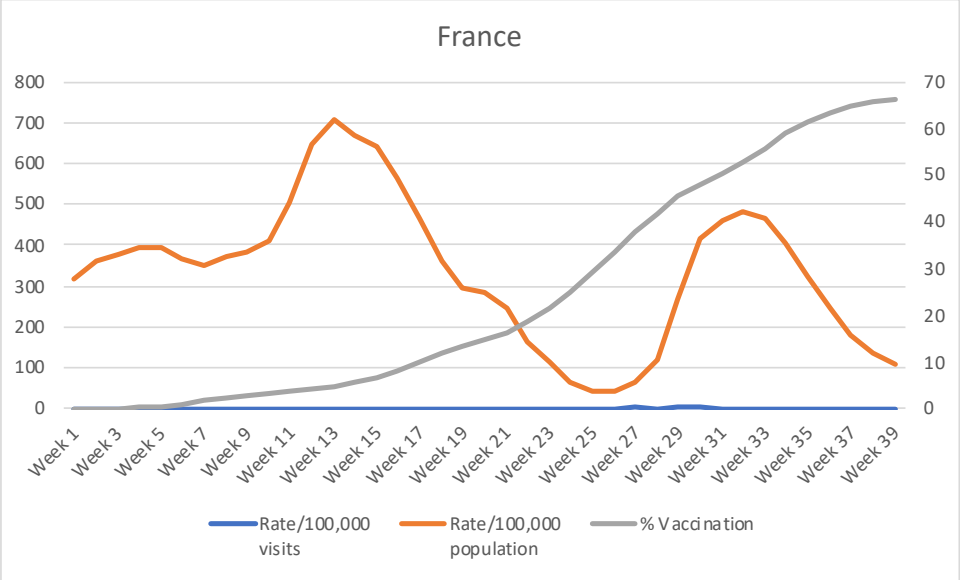


Figure #12: France fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



GERMANY

NUMBER OF VISITS: **222,163**
NUMBER OF OPERATORS/CLUBS: **37**
REPORTED COVID-19 CASES: **1 TOTAL (1 STAFF; 0 MEMBERS)**
RATE COVID-19 CASES/100,000 VISITS: **0.450 CASES/100,000 VISITS**

Figure #13: Germany country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

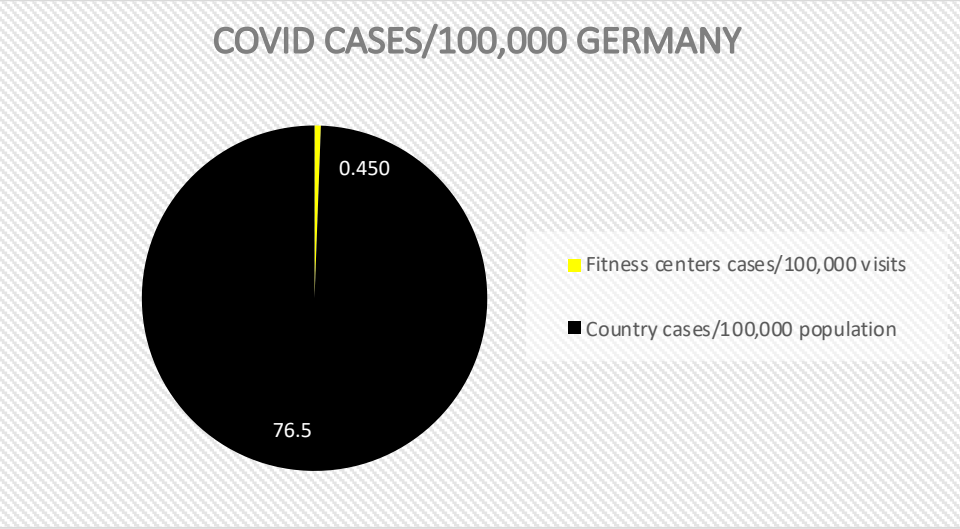
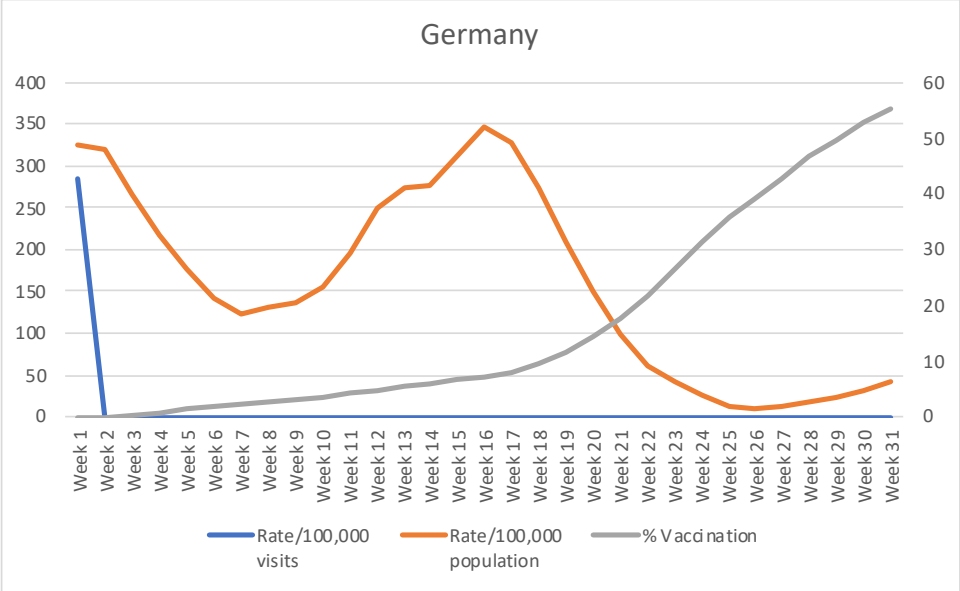


Figure #14: Germany fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



GREECE

NUMBER OF VISITS: **6,045**
NUMBER OF OPERATORS/CLUBS: **3**
REPORTED COVID-19 CASES: **0 TOTAL (0 STAFF; 0 MEMBERS)**
RATE COVID-19 CASES/100,000 VISITS: **0.0 CASES/100,000 VISITS**

Figure #15: Greece country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

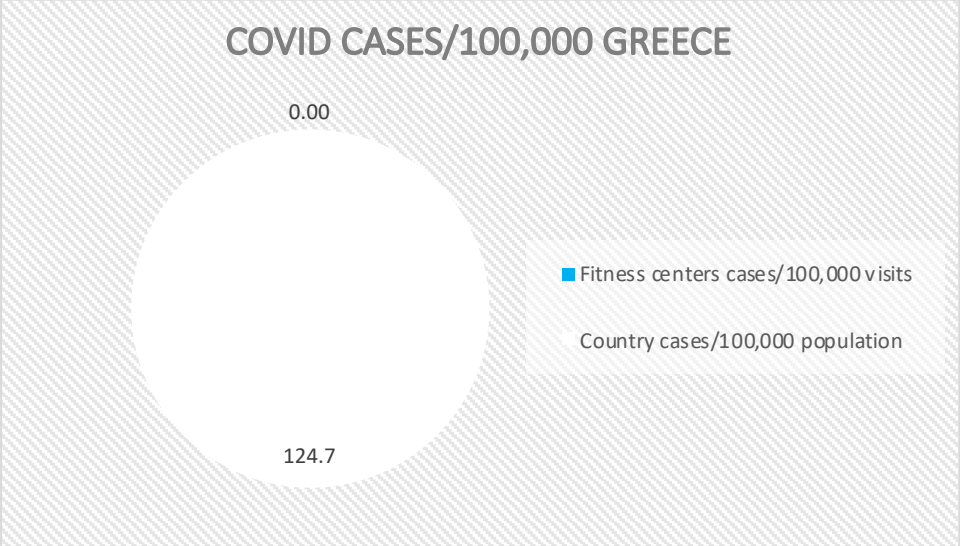
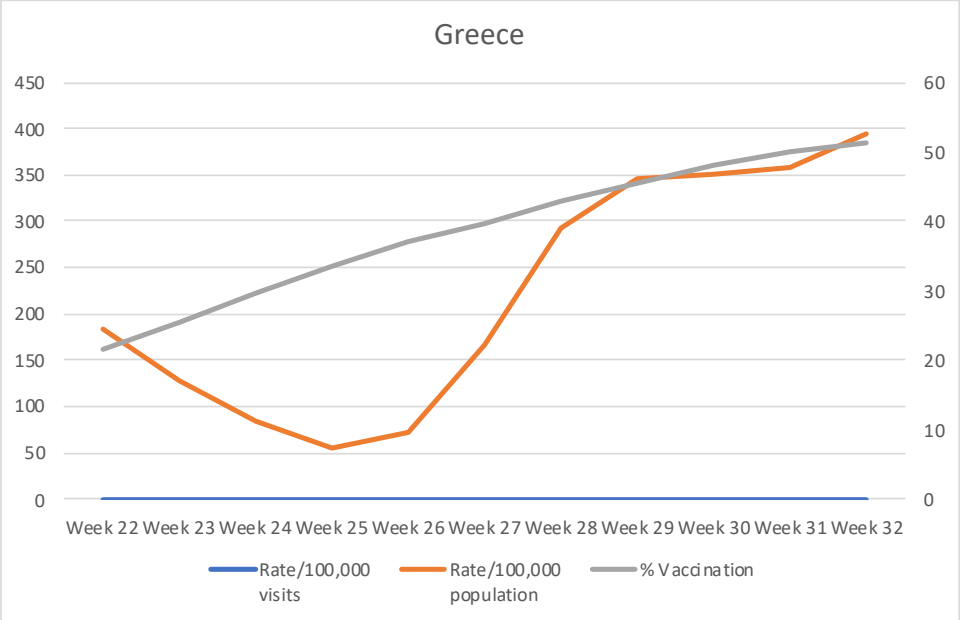


Figure #16: Greece fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



ITALY

NUMBER OF VISITS: **321,319**
NUMBER OF OPERATORS/CLUBS: **61**
REPORTED COVID-19 CASES: **5 TOTAL (1 STAFF; 4 MEMBERS)**
RATE COVID-19 CASES/100,000 VISITS: **1.556 CASES/100,000 VISITS**

Figure #17: Italy country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

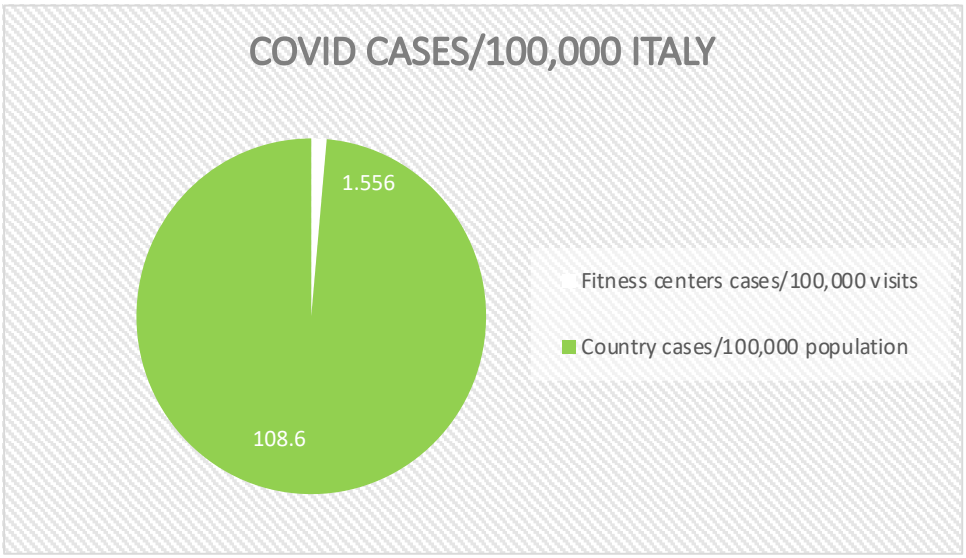
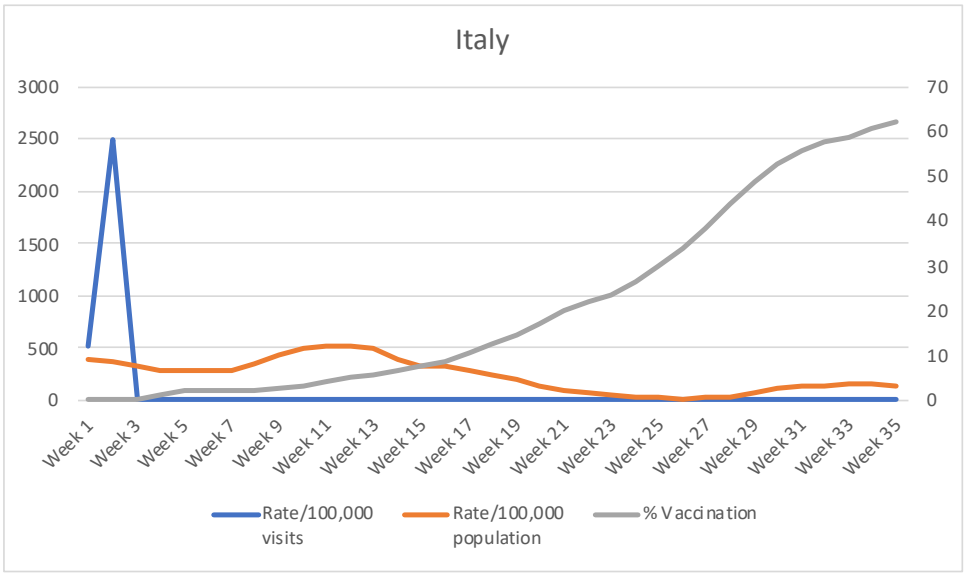


Figure #18: Italy fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



NETHERLANDS

NUMBER OF VISITS: 5,837,487
NUMBER OF OPERATORS/CLUBS: 256
REPORTED COVID-19 CASES: 55 TOTAL (45 STAFF; 10 MEMBERS)
RATE COVID-19 CASES/100,000 VISITS: 0.942 CASES/100,000 VISITS

Figure #19: Netherlands country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

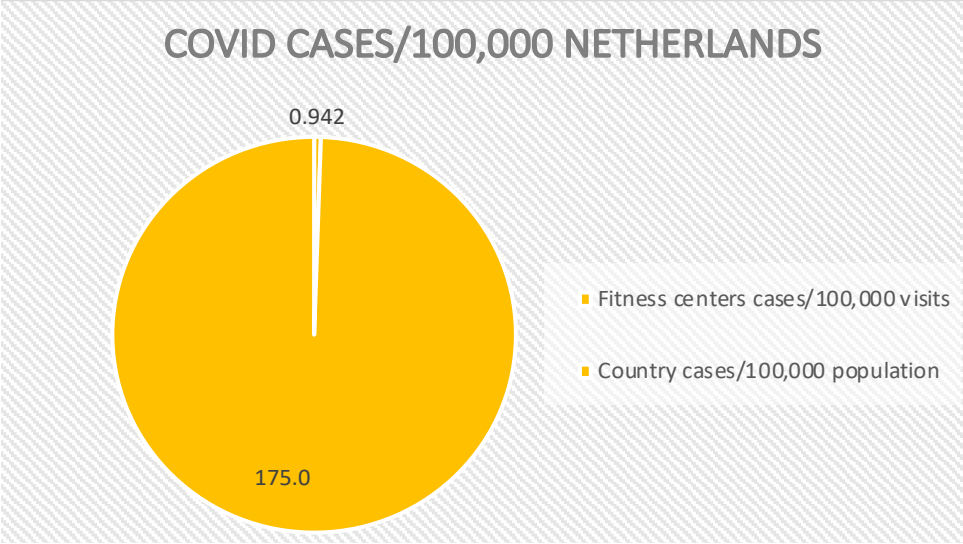
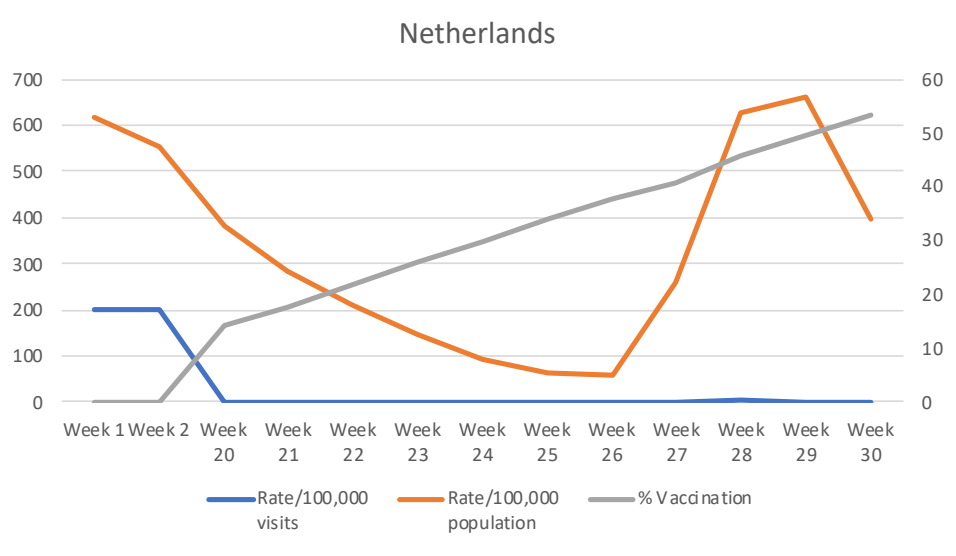


Figure #20: Netherlands fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



PORTUGAL

NUMBER OF VISITS: 68,165
NUMBER OF OPERATORS/CLUBS: 11
REPORTED COVID-19 CASES: 5 TOTAL (2 STAFF; 3 MEMBERS)
RATE COVID-19 CASES/100,000 VISITS: 7.335 CASES/100,000 VISITS

Figure #:21 Portugal country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

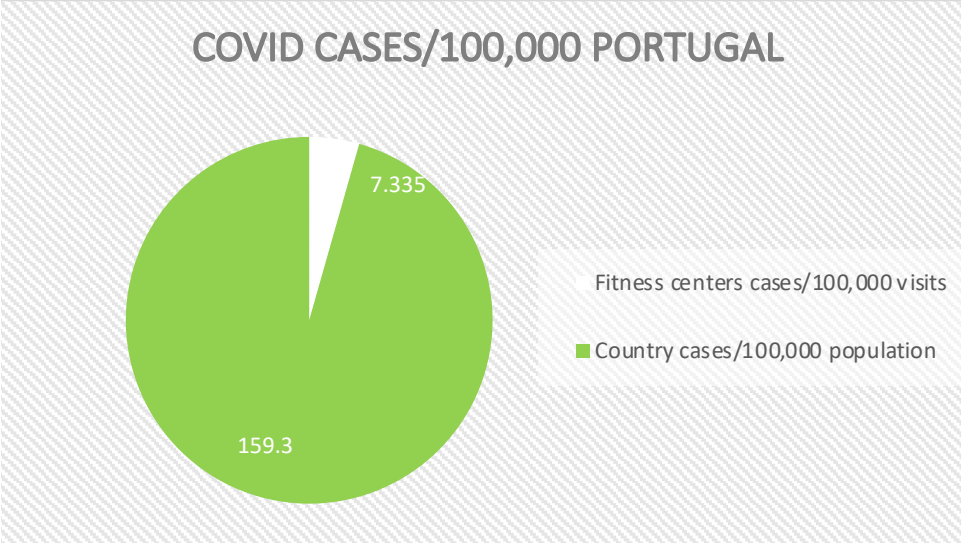
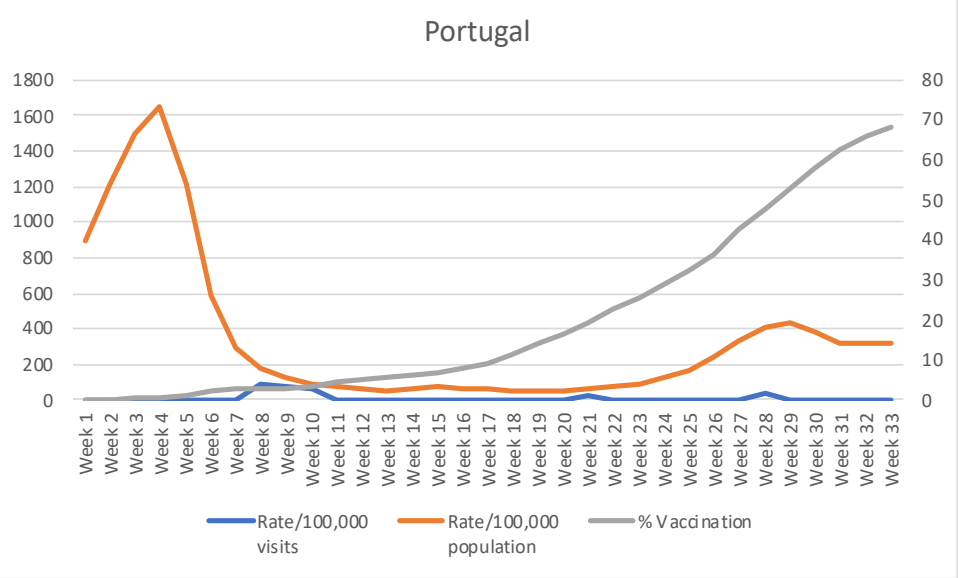


Figure #:22 Portugal fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated



SPAIN

NUMBER OF VISITS: 12,882,960
NUMBER OF OPERATORS/CLUBS: 62
REPORTED COVID-19 CASES: 113 TOTAL (81 STAFF; 32 MEMBERS)
RATE COVID-19 CASES/100,000 VISITS: 0.887 CASES/100,000 VISITS

Figure #23: Spain country cases/100,000 population vs reported cases at fitness clubs/100,000 visits

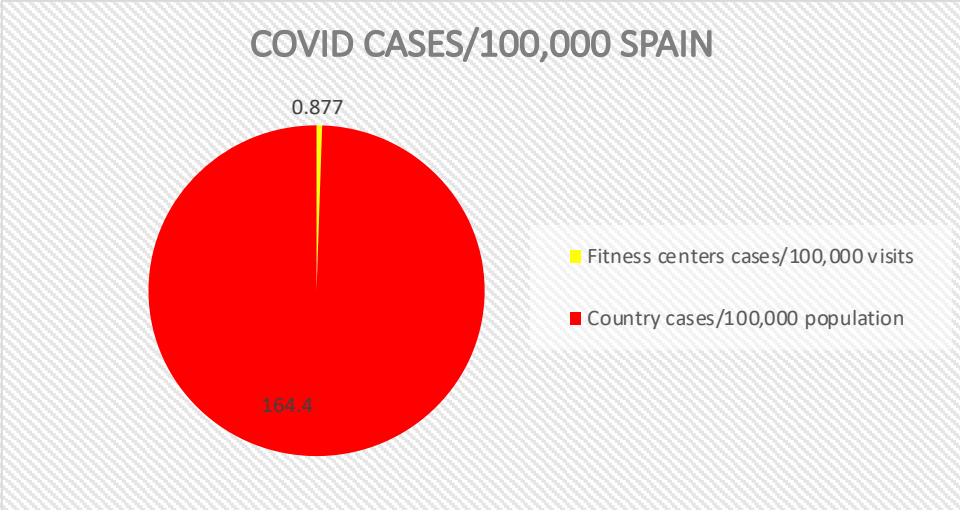
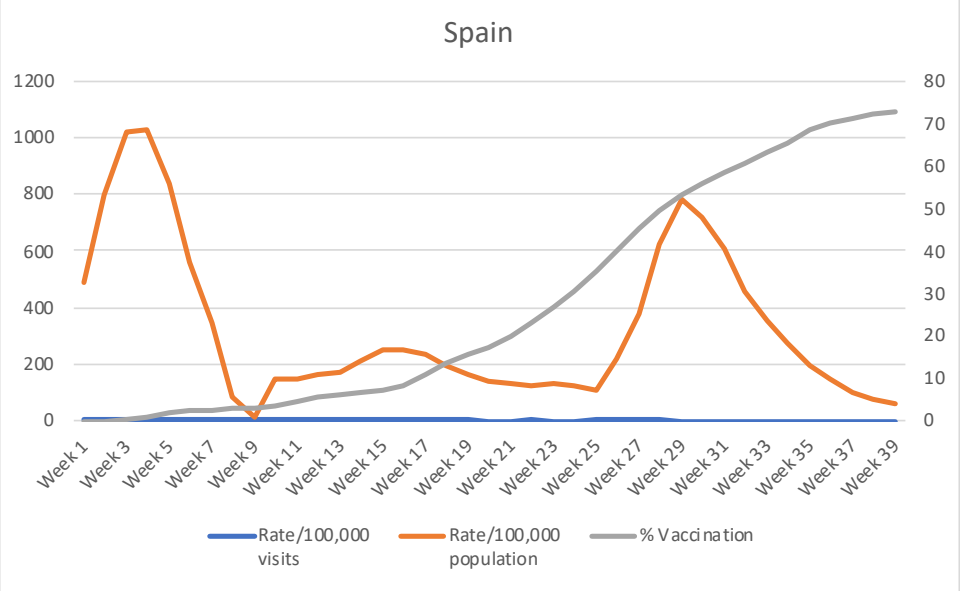
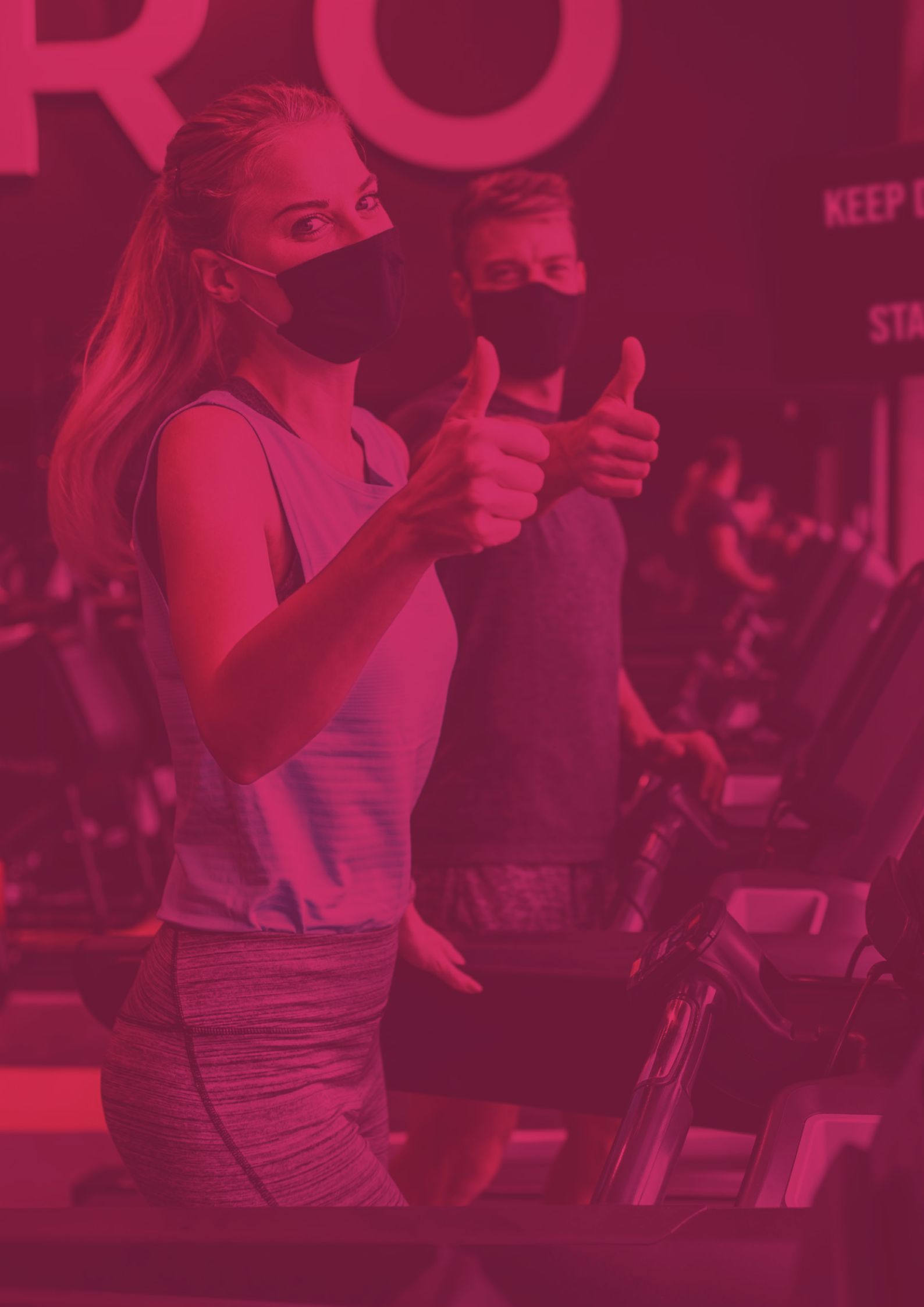


Figure #24: Spain fitness reported cases/100,000 visits vs country weekly infection rate/100,000 population vs % of population vaccinated





THiNK active

EuropeActive's Research Centre

THiNK Active is the new Research Centre for EuropeActive, a unique project to provide evidences and promote best practices for the fitness and physical activity sector across Europe and beyond.

The fitness and physical activity sector is committing resources in the development of evidence-based research supporting its capacity to deliver meaningful and sustainable public health outcomes.

europe active

MORE PEOPLE | MORE ACTIVE | MORE OFTEN

House of Sport
Avenue des Arts /Kunstlaan 43,
B-1040 Brussels, Belgium

T: +32 (0) 2649 9044
www.europeactive.eu
www.ereps.eu

Supported by: