

Reducing the impact of COVID-19 on physical activity and mental health

**in individuals with long
term conditions: a mixed
method study.**



POLICY CHALLENGES

Regular physical activity (PA) participation has been shown to prevent and manage multiple long term conditions (LTCs), including heart disease, stroke, diabetes, and several cancers (1).

Throughout the initial stages of the COVID-19 pandemic, the Secretary of State for Health and Social Care and the UK Government's Chief Medical Officer along with the UK's Prime Minister released regular guidance on how to limit the spread of COVID-19. This guidance included measures such as social distancing, self-isolation and/or shielding, with and without periods of 'lockdown' for the general population, including those living with LTCs (2).

A consequence to these interventions which understandably focused on reducing the spread of COVID-19 have been shown to exacerbate poor lifestyle behaviors, namely less PA, impaired physical and psychological health, and higher mortality (2).

Mental health is an important parameter to monitor during the COVID-19 pandemic as it provides an indication of how people can cope with normal stresses of life (WHO, 2021b). Negative changes in PA and exercise behaviour may promote the development and/or worsening of many LTCs, which may also contribute to potentially poorer outcomes in those who contract COVID-19 (1). It is important, therefore, to understand the impact of COVID-19 on PA and mental health in those living with LTCs.

Key definitions

COVID-19: Coronavirus disease-2019 (COVID-19) is a contagious disease caused by severe coronavirus 2 acute respiratory syndrome (SARS-CoV-2). (2)

Physical activity: Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure, whereas exercise is a subcategory of PA that is planned, structured and repetitive, and aims to improve or maintain one or more components of physical fitness. (1)

Long term conditions: Long term conditions are conditions for which there is currently no cure, and which are managed with drugs and other treatment, for example: diabetes, chronic obstructive pulmonary disease, arthritis and hypertension. (4)

OUR KEY FINDINGS

Based on a national online survey (March – July 2021) and qualitative interviews (January and April 2022), we found the following findings:

- A. General PA guidelines are not suitable for people with LTCs.** Existing generic PA guidelines by the World Health Organization are not suitable for everyone as differences in age, gender, physical abilities, PA preferences, and LTC severity may underpin different reasons why people choose not to exercise (5).
- B. Online resources are not accessible for all populations.** During COVID-19 pandemic, provision of PA information was most commonly available online. Hence, PA programmes designed for the general population may not be appropriate for clinical groups from a safety perspective (5).
- C. People living with multiple LTCs.** People living with one LTC engaged in more moderate and high intensity PA compared to those with multiple LTCs.

People living with one LTC were more physically active (mean difference [95% CI]; 945 min [434, 1455]), and spent less time sitting (-64 min [-107, -21]), than those with two or more LTC's. IPAQ-SF category data demonstrated that people living with one LTC engaged in more moderate and high intensity PA compared to those with two or more LTC's (LTC1 moderate PA 50.3%, LTC2+ 43.6%; LTC1 high PA 27.8%, LTC2+ 19%).

- D. People living with one LTC** present better overall quality of life and lower anxiety and depression than those living with multiple LTCs.

Participants' wellbeing was significantly higher (12.8 % [8.3, 17.2]), while mental health (-1.4 [-2.3, -0.5]; $p < 0.01$), was significantly better for participants with only one LTC. People with one LTC reported better overall QoL than people with two or more LTC's (0.03 [0.005, 0.06; $p = 0.0204$]).

- E. COVID-19 pandemic impact.** COVID-19 lockdowns meant the sudden loss of opportunities to be active along with the social interaction and motivation usually in place to support activity. However, as the pandemic progressed, participants found or created opportunities to be active or adapted how they had exercised pre-pandemic to maintain their fitness and mental wellbeing. For some, this was difficult because they lacked motivation or resources.
- F. PA guidelines should be specific.** Local and national government guidelines were identified as unclear for those living with LTCs and should be more specific regarding what people who were shielding could and could not do.



“Yes. I find, if I don't exercise or do something, I get very grumpy, bad tempered because I'm used to exercising, all my life. So, when I couldn't, it was difficult. If you're not happy, you can go for a very long walk, until you felt better”

Participant n°4, Male,
61y, living with Parkinson's disease

PROPOSED RECOMMENDATIONS



In line with our key findings A and B ... **More suitable and accessible PA guidelines** for people with LTCs is recommended. Routinely offering offline methods (paper based) of delivery of information in addition to online format or network television may be useful to reach a broader population, both with and without LTCs during COVID-19 or future pandemics.



Based on findings C... **Less is more.** Simple strategies such as 'move more and sit less' or 'breaking up sitting time' could be promoted as safe and accessible options for those living with LTCs, to counter physical inactivity and encourage PA while at home during the COVID-19 pandemic or other individual mobility restrictions such as very poor weather, industrial action or future public health emergencies.



In line with our findings D ... **Tailored PA guideline** are recommended. PA guidelines that are specific to certain clinical groups such as people living with LTCs, should be developed. For individuals who are advised to shield, guidance should be provided on how they can be physically active within and around their homes. For example, tailor their PA according to how they manage and cope with their LTC and its changeability is recommended.



Based on findings ... **Multidisciplinary and multisectoral teams** are suggested for service delivery. Role substitution of primary healthcare services by non-medical health professionals should be a way to answer the needs of people living with one or more LTCs. The inclusion of medical and non-medical healthcare professionals like volunteers, community groups as well as exercise and leisure services when developing PA guidelines or recommendations for those living with LTCs is recommended.



According to findings E ... **Prioritizing vulnerable groups** is recommended. Prioritizing people with multiple LTCs for support with PA uptake and maintenance could have avoided the worsening of emotional wellbeing, and quality of life. Therefore, people with LTCs are an important and specific group to consider when designing and delivering PA guidelines during shielding or social-distancing periods.



Based on findings F ... **UK government role is key.** Government and public health authorities should consider charities and LTC voluntary organizations to design bespoke PA recommendations and guidelines for those shielding at home and living with LTCs. Also, a better use of safe green spaces should be considered to let populations including those with LTCs exercise locally and safely.

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