

#### CODE: COV/LTE/20/08

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#### RESEARCH PROJECT BRIEFING

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**COVID-19: Tracking Persistent Symptoms in Scotland** (TraPSS)

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# AIMS

This project aimed to enhance our understanding of long-COVID, its impacts, prevalence, and progression within the Scottish population. To do so we conducted a comprehensive scoping review, surveyed the effects of long-COVID on individuals across Scotland, and tracked symptoms over time to explore the natural course of recovery and progression from a COVID-19 infection to long-COVID.



#### **KEY FINDINGS**

- Identified over 100 Long-COVID symptoms and that their prevalence varied widely between studies
- Scottish survey shows fatigue, cognitive impairments, and breathlessness as prevalent Long-COVID symptoms.
- For many Scottish people with Long-COVID the experience severely impacted on work, study, and emotional well-being.
- Prospective symptom tracking demonstrated that recovery from COVID-19 is slower than for many other viral infections.
- Of those with symptoms, just over half recover within three months, but many experience prolonged symptoms beyond nine months.
- Results highlight the complex, variable recovery course from COVID-19, complicating Long-COVID management for non-hospitalized patients.



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#### WHAT DID THE STUDY INVOLVE?

**Systematic Scoping Review:** We published the first review of Long-COVID from all studies assessing patients at least four weeks post-initial infection, aligning with NICE guidelines. We identified over 100 different Long-COVID symptoms and establishing that symptom prevalence varied widely between studies.

**Cross-Sectional Survey in Scotland**: The second phase involved a detailed survey of the Scottish population to measure the prevalence and impact of Long-COVID symptoms and the socio-economic and emotional toll on affected individuals.

**Prospective Symptom Tracking Study**: We undertook one of the first prospective studies using validated health questionnaires using a custom mobile app to track symptoms and health impacts over nine-months after COVID-19 infection. The app was co-designed with input from a Long-COVID Public and Patient Involvement (PPI) group, ensuring that the study reflected the real-world experiences of Long-COVID sufferers.



# WHAT WERE THE RESULTS AND WHAT DO THEY MEAN?

**Slow Recovery**: Relative to other viral infections, COVID-19 exhibits a prolonged recovery timeline. While just over half of those with symptoms recovered within three months, a third required between six and nine months, and a small proportion experienced serious symptoms beyond that period.

**Persistent Symptoms**: The study fatigue, brain fog, and muscle pain being the most common and persistent symptoms. These significantly impacted daily activities and overall quality of life. Unlike studies relying on unvalidated self-reports, this study is among the few to use rigorously validated assessments.

**Socioeconomic Effects**: Recovery rates and symptom severity were consistent across age and sex; however, participants from lower socioeconomic backgrounds reported more severe symptoms, indicating that socioeconomic factors significantly influence the impact of Long-COVID.



# Monthly self-reported recovery for 287 participants following a positive test for COVID-19.

While around 50% of respondents report being recovered within the first month, a significant proportion report ongoing symptoms through to the end of the study.

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## WHAT IMPACT COULD THE FINDINGS HAVE?

- **Patients**: Highlights the need for setting realistic recovery expectations for Long-COVID, informing patients about potential long-term symptoms.
- **Policy**: Calls for policies that provide targeted resources to underserved communities, focusing on comprehensive care beyond the acute phase.
- **Practice**: Urges a multidisciplinary treatment approach for Long-COVID, guiding medical practices in creating effective long-term management plans.



### HOW WILL THE OUTCOMES BE DISSEMINATED?

Our dissemination plan includes multiple peer-reviewed publications, presentations, and media engagement. We have presented our findings to patient support groups and medical specialists enhancing knowledge transfer and shaping clinical approaches to Long-COVID. Additionally, our involvement in the Cross-Party Working Group on Long COVID ensures that our research can inform policy. Our future work will extend to other fatiguing conditions and incorporate considerations of post-viral syndromes in pandemic preparedness.



# CONCLUSION

This study has advanced our understanding of Long-COVID, highlighting its complex and protracted nature compared to other viral infections. Recovery from COVID-19 can extend well beyond the typical one-month period seen with other viruses, with many patients only beginning to recover at three-months, with others experiencing symptoms for nine months or more.

The most stubborn symptoms—fatigue, brain fog, and muscle pain—profoundly affect individuals' daily activities and quality of life, emphasizing the need for ongoing support and tailored treatment strategies. Moreover, these impacts disproportionately affect individuals from lower socioeconomic backgrounds, suggesting a need for targeted resources and interventions.

Engaging with patient groups and clinical stakeholders has enriched our understanding and developing a community-informed approach to managing Long-COVID, shaping both research and policy frameworks.



## **RESEARCH TEAM & CONTACT**

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Additional Information Project completion date December 2023 Funding Awarded £239K