

Symptoms and quality of life following hospitalisation for COVID-19  
(Post COVID-19 Syndrome/Long COVID)  
preliminary results from the ISARIC Clinical Characterisation Protocol UK



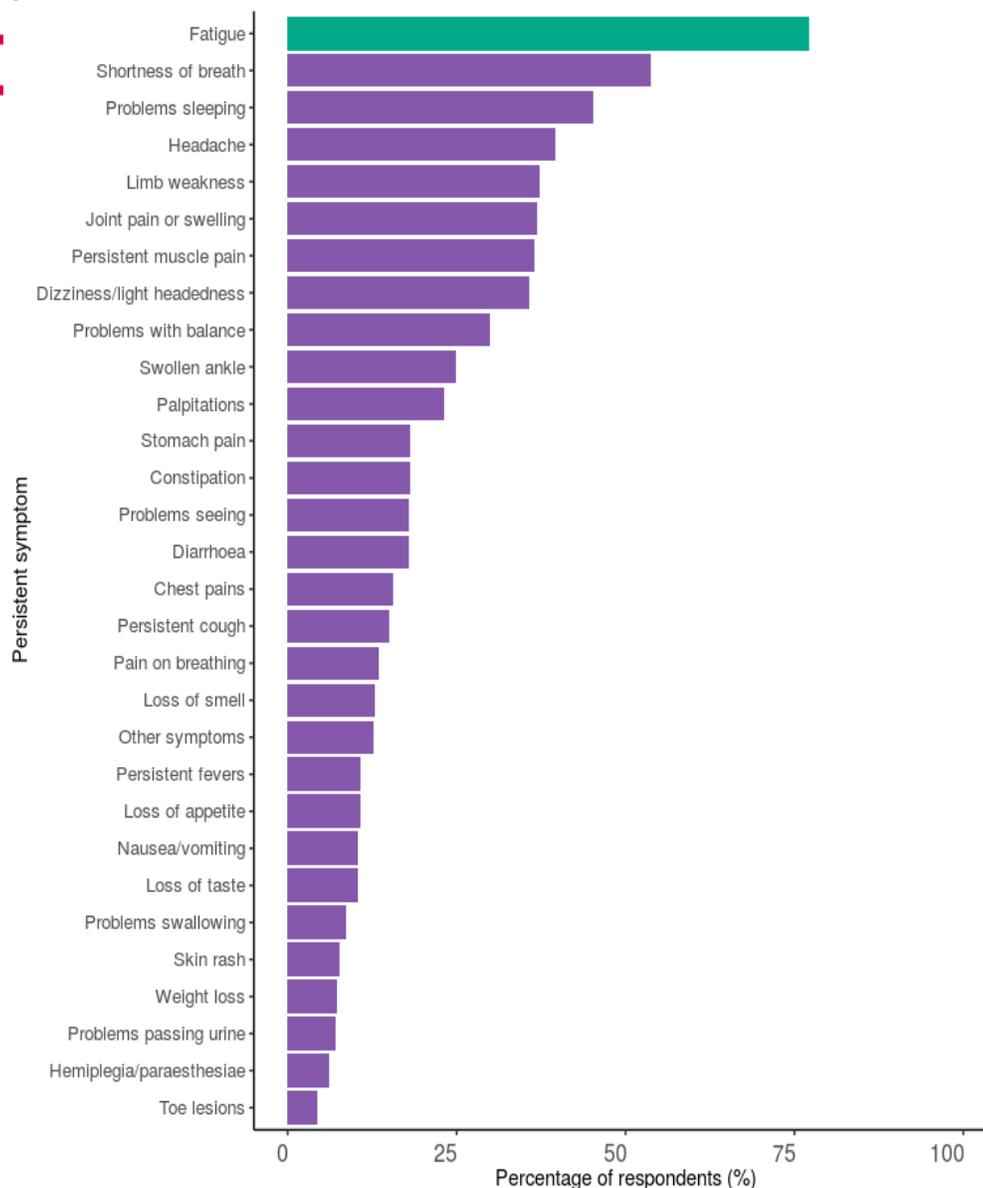
[ISARIC4C.net](https://www.isaric4c.net)

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# Post COVID-19 Symptoms @ 4-11 months

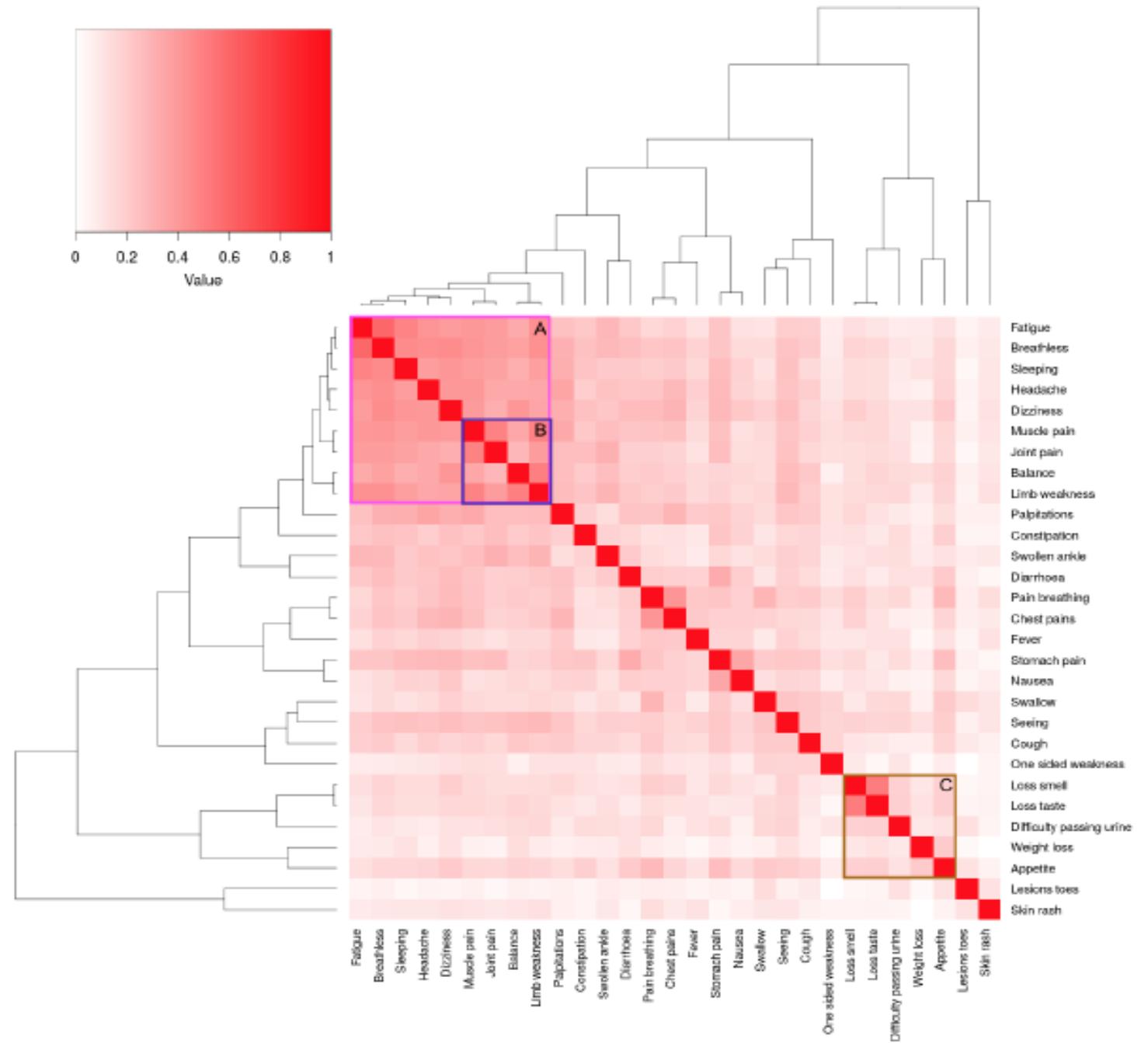


- $\frac{1}{2}$  of participants were not fully recovered at 7 months (median)
- $\frac{3}{4}$  were experiencing fatigue
- $\frac{1}{2}$  were breathless on exertion
- $\frac{1}{4}$  had a new disability in sight, walking, memory, self-care and/or communication

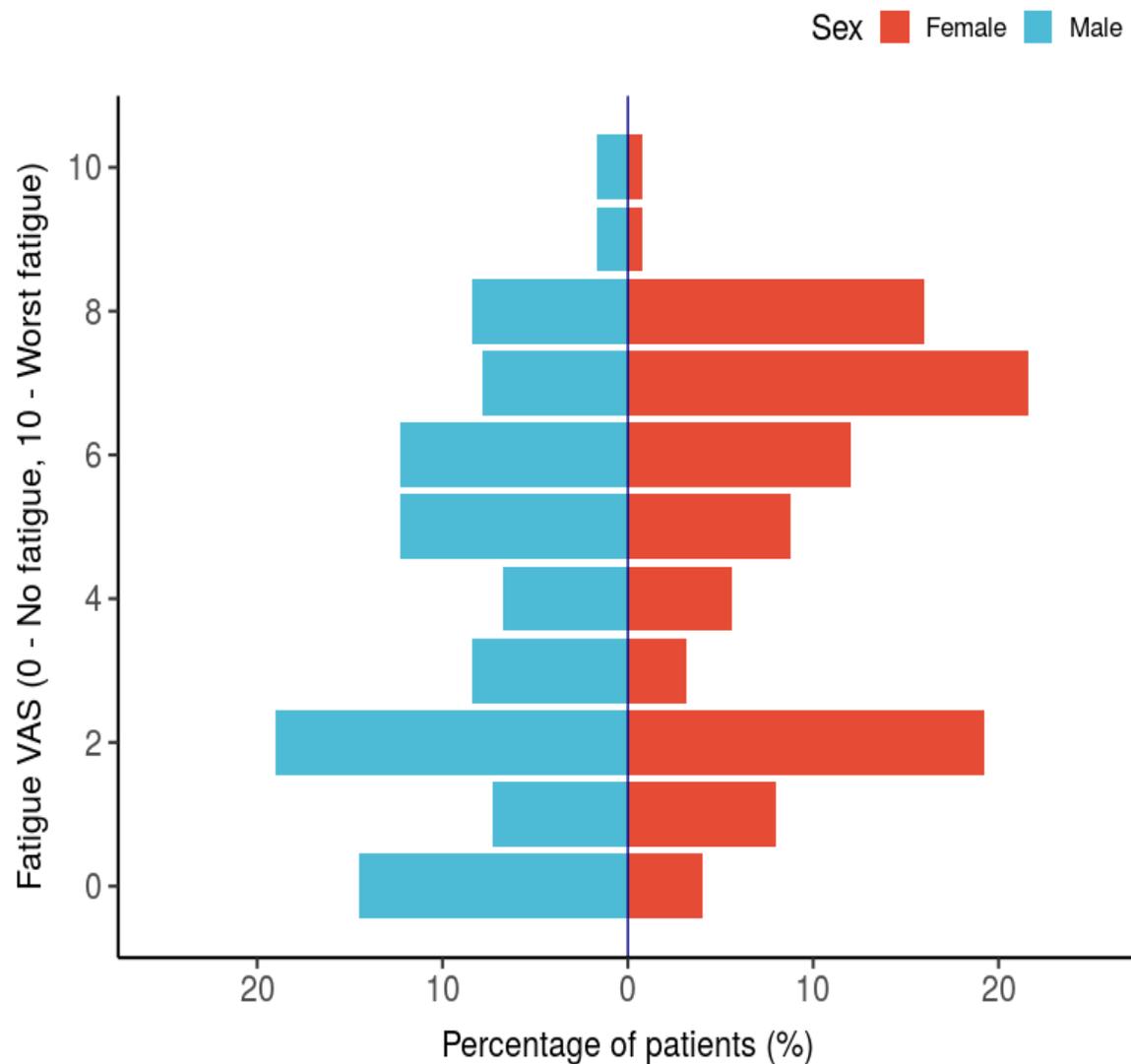
# Heatmap dendrogram of co-occurring symptoms.

Colour intensity represents the Jaccard index, where 0 (white) is no cooccurrence and 1 (red) is where a symptom always cooccurs.

Fatigue and breathlessness were most commonly found together and with other neurological and pain symptoms.



# Fatigue : 0 to 10 visual analogue scale (VAS).



10 : worst fatigue possible

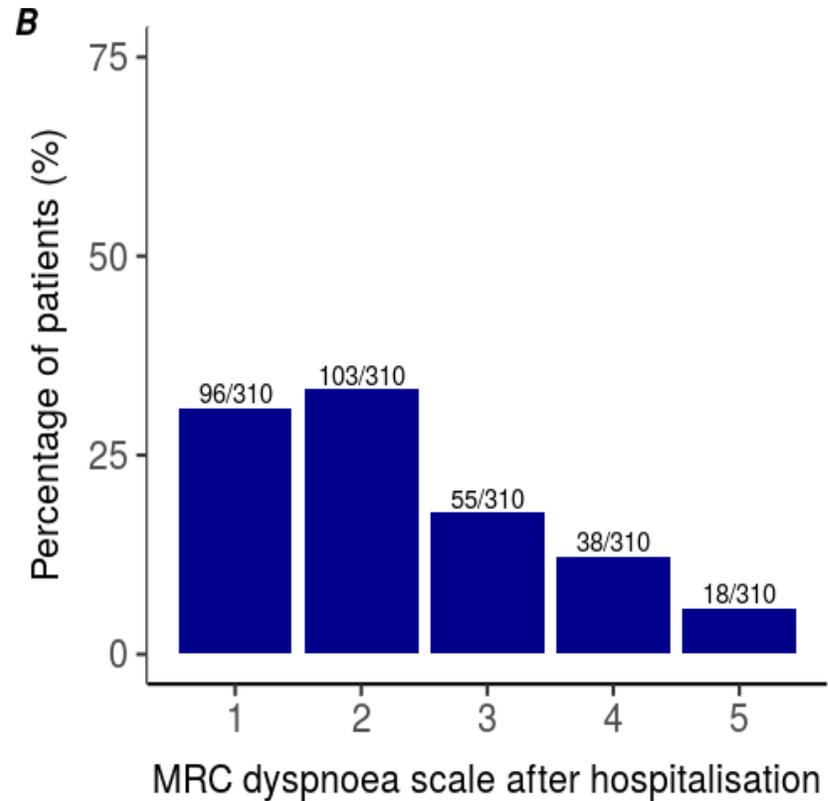
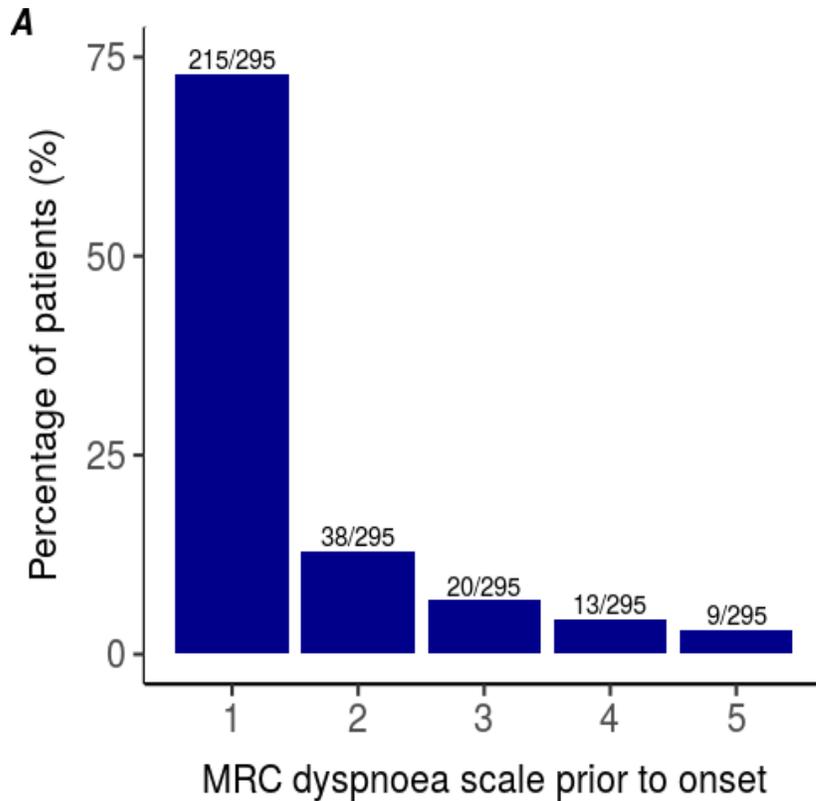
49% reported a fatigue level of 5 or higher

0 : no fatigue

# Breathlessness

Half reported an increase in MRC breathlessness grade of at least 1.

A quarter reported a new MRC breathlessness grade of  $\geq 3$



**Grade 1:** Not troubled by breathlessness except on strenuous exercise

**Grade 2:** Short of breath when hurrying or when walking up a slight hill

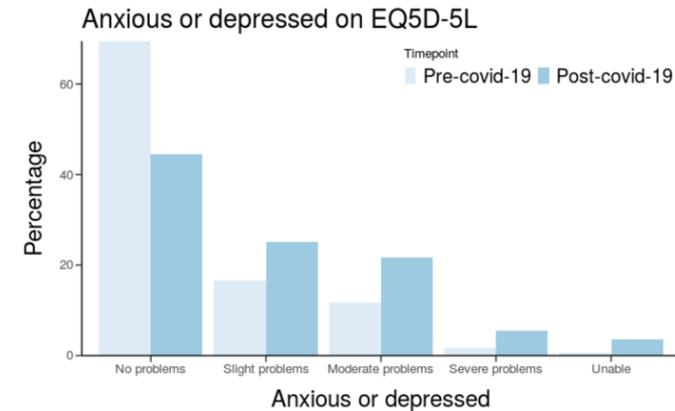
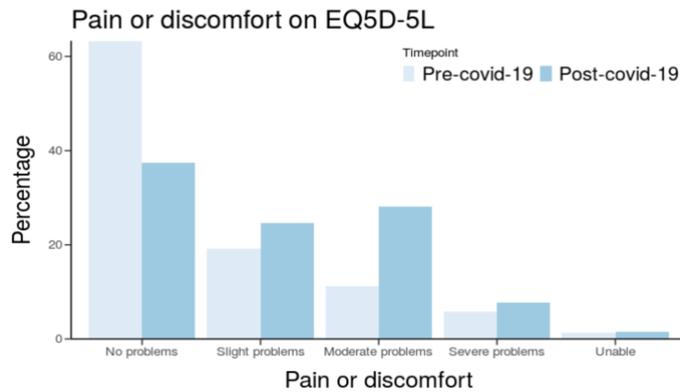
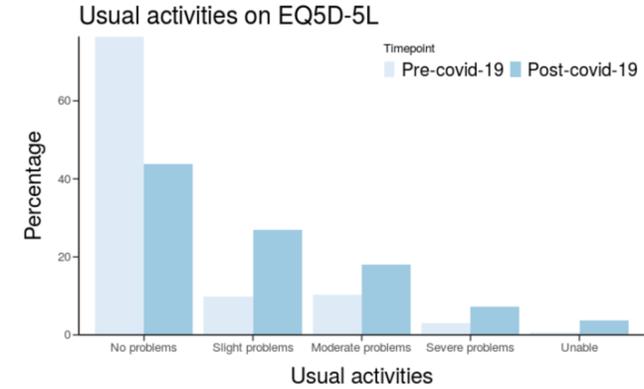
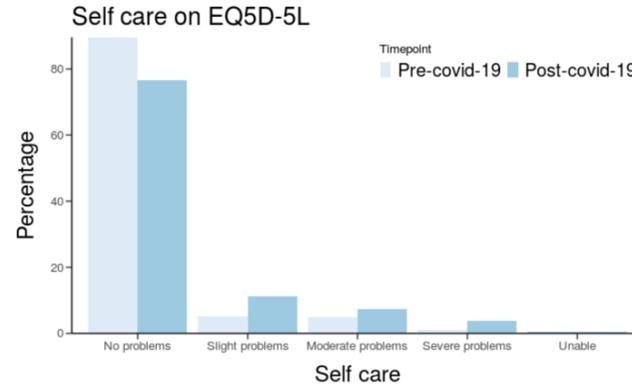
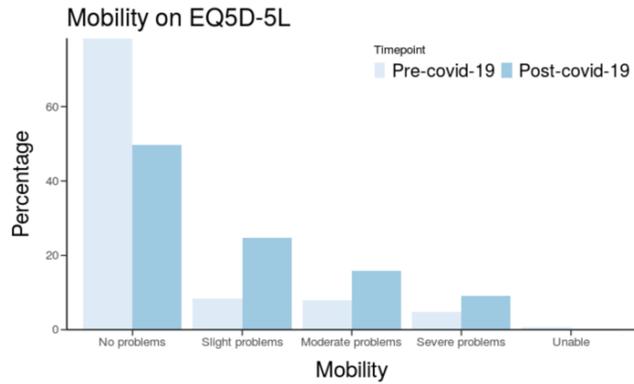
**Grade 3:** Walks slower than most people of my age because of breathlessness, or have to stop for breath when walking at own pace.

**Grade 4:** Strops for Breath after walking 90-100meters or after a few minutes on level ground

**Grade 5:** Too breathless to leave the house or breathless when dressing/undressing

# Quality of Life

*Deterioration seen in all five domains.*



*Levels are: No problems, Slight problems, Moderate problems,  
Severe problems and unable to do.*

# At risk groups

Females under 50.

Lack of Co-morbidities does not protect

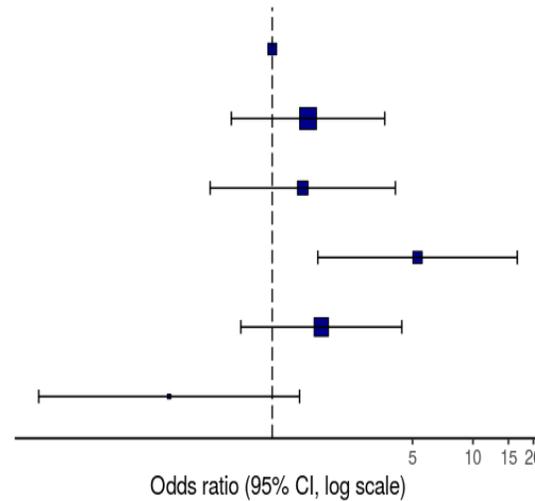
- Outcomes were worse in females versus males.

Women under 50 were:

- 5x most likely to report incomplete recovery
- 5x more likely to report a greater disability
- 2x as likely to report worse fatigue
- 6x more likely to become more breathless than men.

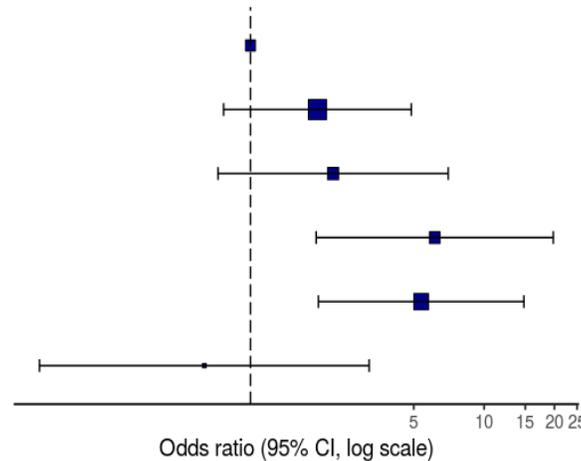
Self-reported recovery: OR (95% CI, p-value)

Sex at Birth:Age	Male   Under 50	-
	Male   50 to 69	1.51 (0.63-3.63, p=0.360)
	Male   Over 70	1.42 (0.49-4.10, p=0.519)
	Female   Under 50	5.29 (1.69-16.60, p=0.004)
	Female   50 to 69	1.76 (0.70-4.42, p=0.232)
	Female   Over 70	0.31 (0.07-1.37, p=0.121)



Change in breathlessness after COVID-19: OR (95% CI, p-value)

Sex at Birth:Age	Male   Under 50	-
	Male   50 to 69	1.94 (0.77-4.88, p=0.162)
	Male   Over 70	2.26 (0.73-7.02, p=0.159)
	Female   Under 50	6.15 (1.91-19.77, p=0.002)
	Female   50 to 69	5.38 (1.95-14.80, p=0.001)
	Female   Over 70	0.63 (0.12-3.22, p=0.583)



- Co-morbidities before acute COVID-19 did not predict the probability of post COVID-19 Syndrome

# Summary

- Half of participants were not fully recovered at 7 months.
- Three quarters were experiencing fatigue and half were breathless on exertion and a quarter had a new disability in sight, walking, memory, self-care and/or communication
- Fatigue and breathlessness were most commonly found together and with other neurological and pain symptoms
- Outcomes were worse in females versus males; women under 50 were five times most likely to report incomplete recovery and greater disability, twice as likely to report worse fatigue, and six times more likely to become more breathless than men.
- Participants who had required invasive ventilation were 4 times more likely to report an incomplete recovery compared to those who had not required oxygen