

Research update

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Outline

- Scoping review on long COVID presentations in primary care
- Primary data on registrar evaluation of potential long COVID

Scoping review: background

- 'Post COVID-19 condition' (WHO case definition):

Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis. Common symptoms include fatigue, shortness of breath, cognitive dysfunction but also others which generally have an impact on everyday functioning. Symptoms may be new onset, following initial recovery from an acute COVID-19 episode, or persist from the initial illness. Symptoms may also fluctuate or relapse over time. A separate definition may be applicable for children.¹

Scoping review: background

- As of 9 January 2024:
 - Difficult to get accurate up-to-date global incidence data now, many countries have transitioned to providing the WHO with weekly reports and data from many regions is lagging/missing (e.g. Australia reported 0 cases to the WHO for the week to 31 December 2023²)
 - Assuming a rough estimate of current global weekly new cases of 260,000, if only 2% develop post COVID symptoms lasting only 2 months:
$$260,000 \times 2\% \times \frac{60}{7} = 44,571$$
- **Fatigue** is most common symptom with the highest QOL burden
- '31,000 Australians a day [are] calling in sick because of long COVID' (Jim Chalmers, 26 August 2022)³
- How have GPs changed their approach to common presentations like fatigue in light of this new and significant differential diagnosis?

Scoping review: plan

- Aim: map the existing primary research on the presentation and initial evaluation of patients with potential long COVID in primary care
- Following the JBI methodology for scoping reviews⁴
- 'Presentation and initial evaluation of patients with potential long COVID in primary care'
 - Population: patients with potential long COVID
 - Concept: presentation (who/when/how many/what symptoms/how morbid) and initial evaluation (process/history/exam/differentials/tests)
 - Context: primary care

Scoping review: progress

- Final database search run on 31 October 2023 (MEDLINE, Embase, Cochrane library, Scopus, Web of Science)
- 481 sources found after de-duplication
- Currently in process of screening sources (consensus decision of two authors)
- Next steps: charting included sources and writing up

Registrar evaluation of potential long COVID: background

- ReCEnT = Registrars Clinical Encounters in Training
- Cohort study of registrars in selected geographic regions, collecting data from 60 consecutive consultations in a term
- Research questions:
 - How often are GP registrars considering long COVID in patients who present complaining of fatigue?
 - How often are GP registrars diagnosing long COVID in patients who present complaining of fatigue?
 - How do patient, registrar, practice, and consult factors affect whether long COVID is considered and diagnosed in patients who present complaining of fatigue?

Registrar evaluation of potential long COVID: progress

- Data were collected from ReCEnT rounds 27 and 28, corresponding to training terms covering the second half of 2022 and first half of 2023 (exact dates dependent on the local training programme)
- Included registrars associated with the regional training organisations GP Synergy (New South Wales and Australian Capital Territory), GP Training Tasmania, Eastern Victoria GP Training, Adelaide to Outback (South Australia), and Tropical Medical Training Queensland
- If fatigue was considered to be a symptom for the consult, registrars were asked to rate how likely they considered it at the time of the consult that long COVID was the cause for the patient's fatigue ("Very unlikely", "Unlikely", "Likely", "Very likely"), or to indicate that they did not consider long COVID at all ("Didn't consider")

Registrar evaluation of potential long COVID: results

- 3,193 encounters where fatigue was considered a symptom
- Long COVID was considered as a differential in 2,563 of these encounters (80.27%, 95% CI 78.85–81.64%)
- Of encounters where long COVID was considered as a differential, in 465 encounters (18.14%, 95% CI 16.67–19.69%) long COVID was considered the 'likely' or 'very likely' cause for the patient's fatigue

**Next slide: Associations with long COVID
being considered as a differential diagnosis
for fatigue**

Variable group	Variable	Class	Univariable		Adjusted	
			OR [95% CI]	p	OR [95% CI]	p
Patient	Patient age group	15-34	1.06 (0.77, 1.45)	0.7167	1.07 (0.75, 1.55)	0.7019
		35-64	1.07 (0.78, 1.47)	0.6539	1.01 (0.70, 1.44)	0.9756
		65+	1.30 (0.89, 1.90)	0.1802	1.18 (0.77, 1.80)	0.4458
	Patient gender	Female	0.99 (0.82, 1.20)	0.9396	1.11 (0.89, 1.38)	0.3448
	ATSI	Yes	1.02 (0.59, 1.77)	0.9443	1.03 (0.56, 1.91)	0.9225
	NESB	Yes	0.68 (0.50, 0.93)	0.0167	0.73 (0.51, 1.06)	0.0957
	New to practice	Yes	0.91 (0.70, 1.17)	0.4414	0.94 (0.69, 1.29)	0.7216
	New to registrar	Yes	0.90 (0.76, 1.06)	0.1987	0.94 (0.77, 1.14)	0.5055
Practice	Rurality	Inner regional	1.16 (0.87, 1.54)	0.3097	1.07 (0.68, 1.68)	0.7637
		Outer regional remote	0.97 (0.58, 1.63)	0.9218	0.94 (0.46, 1.92)	0.8556
	SEIFA Index		1.00 (0.96, 1.05)	0.8737	1.00 (0.94, 1.06)	0.9137
	Practice routinely bulk bills	Yes	0.82 (0.60, 1.11)	0.2022	0.89 (0.61, 1.32)	0.5782
	RTP	RTP 3	1.10 (0.59, 2.06)	0.7575	1.05 (0.49, 2.22)	0.9056
		RTP 4	0.95 (0.59, 1.53)	0.8180	0.90 (0.51, 1.58)	0.7133
		RTP 6	0.99 (0.65, 1.51)	0.9622	1.14 (0.67, 1.96)	0.6245
		RTP 7	1.11 (0.72, 1.72)	0.6334	1.04 (0.63, 1.70)	0.8783
	Practice size	Small	0.99 (0.78, 1.26)	0.9212	0.99 (0.75, 1.32)	0.9667
Registrar	Registrar age		1.05 (1.02, 1.08)	0.0002	1.05 (1.02, 1.08)	0.0014
	Registrar gender	Female	0.83 (0.62, 1.11)	0.2024	0.87 (0.62, 1.21)	0.4107
	Registrar FTE	Part-time	1.02 (0.74, 1.40)	0.9248	0.87 (0.61, 1.26)	0.4656
	Training term/post	Term 2	1.08 (0.83, 1.42)	0.5586	0.87 (0.59, 1.28)	0.4679
		Term 3	1.40 (1.00, 1.95)	0.0491	1.10 (0.74, 1.64)	0.6427
	Worked at practice previously	Yes	1.12 (0.84, 1.48)	0.4423	1.26 (0.85, 1.86)	0.2512
	Qualified as doctor in Australia	Yes	0.69 (0.46, 1.02)	0.0628	0.93 (0.59, 1.47)	0.7587
Consultation	Telehealth	Yes	1.62 (1.25, 2.09)	0.0003	1.74 (1.30, 2.31)	0.0002
	Consultation duration		0.99 (0.99, 1.00)	0.0515	1.00 (0.99, 1.01)	0.5231
	Number of problems		0.93 (0.85, 1.02)	0.1446	0.98 (0.88, 1.09)	0.6706

**Next slide: Associations with long COVID
being considered the likely diagnosis for
fatigue**

Variable group	Variable	Class	Univariable		Adjusted	
			OR [95% CI]	p	OR [95% CI]	p
Patient	Patient age group	15-34	0.86 (0.49, 1.53)	0.6185	0.90 (0.47, 1.71)	0.7369
		35-64	1.02 (0.56, 1.84)	0.9491	0.98 (0.51, 1.89)	0.9445
		65+	1.34 (0.70, 2.55)	0.3739	1.39 (0.65, 2.96)	0.3978
	Patient gender	Female	0.76 (0.60, 0.96)	0.0193	0.81 (0.62, 1.06)	0.1296
	ATSI	Yes	1.26 (0.68, 2.32)	0.4651	1.14 (0.54, 2.43)	0.7296
	NESB	Yes	0.75 (0.45, 1.24)	0.2609	0.91 (0.54, 1.54)	0.7153
	New to practice	Yes	0.68 (0.45, 1.01)	0.0572	0.83 (0.51, 1.33)	0.4380
	New to registrar	Yes	1.09 (0.89, 1.33)	0.3954	1.21 (0.95, 1.55)	0.1182
Practice	Rurality	Inner regional	1.31 (0.96, 1.78)	0.0863	1.11 (0.70, 1.75)	0.6617
		Outer regional remote	0.61 (0.28, 1.32)	0.2101	0.56 (0.20, 1.58)	0.2695
	SEIFA Index		1.00 (0.95, 1.06)	0.9025	1.02 (0.96, 1.09)	0.5275
	Practice routinely bulk bills	Yes	1.36 (0.95, 1.94)	0.0965	2.60 (1.61, 4.18)	<.0001
	RTP	RTP 3	0.74 (0.39, 1.40)	0.3472	0.68 (0.30, 1.52)	0.3499
		RTP 4	0.76 (0.47, 1.22)	0.2528	0.56 (0.31, 1.01)	0.0521
		RTP 6	0.79 (0.50, 1.25)	0.3154	0.48 (0.28, 0.84)	0.0100
		RTP 7	1.10 (0.72, 1.68)	0.6671	0.99 (0.60, 1.63)	0.9535
	Practice size	Small	0.91 (0.67, 1.23)	0.5482	0.70 (0.51, 0.97)	0.0333
Registrar	Registrar age		1.02 (0.99, 1.05)	0.1696	1.02 (0.99, 1.05)	0.2834
	Registrar gender	Female	0.93 (0.69, 1.26)	0.6371	0.93 (0.65, 1.32)	0.6715
	Registrar FTE	Part-time	1.02 (0.72, 1.43)	0.9216	0.90 (0.61, 1.33)	0.6041
	Training term/post	Term 2	1.03 (0.73, 1.45)	0.8774	0.81 (0.53, 1.23)	0.3212
		Term 3	1.01 (0.71, 1.46)	0.9366	0.88 (0.57, 1.35)	0.5598
	Worked at practice previously	Yes	1.05 (0.78, 1.42)	0.7586	1.18 (0.78, 1.76)	0.4316
	Qualified as doctor in Australia	Yes	0.57 (0.40, 0.82)	0.0022	0.58 (0.39, 0.88)	0.0103
Consultation	Telehealth	Yes	2.37 (1.83, 3.08)	<.0001	2.33 (1.65, 3.30)	<.0001
	Consultation duration		0.97 (0.96, 0.98)	<.0001	0.99 (0.98, 1.00)	0.0465

Registrar evaluation of potential long COVID: next steps

- Write up

References

1. World Health Organisation. A clinical case definition of post COVID-19 condition by a Delphi consensus. (2021).
2. World Health Organization. WHO Coronavirus (COVID-19) Dashboard.
<https://covid19.who.int>.
3. <https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/transcripts/press-conference-logan-diggers-services-club-queensland>
4. The Joanna Briggs Institute. Methodology for JBI Scoping Reviews. in The Joanna Briggs Institute Reviewers' Manual 2015 (The Joanna Briggs Institute, 2015).