

COVID-19 oral antiviral medications in South West Victoria: patterns, barriers, and use of targeted SMS messaging



Naomi E Clarke, Jessica O’Keeffe, Arvind Yerramilli, Caroline Bartolo, Nomvuyo Mothobi, Michael Muleme, Bridgette MacNamara, Daniel P O’Brien, Eugene Athan, Mohammad Akhtar Hussain
(Barwon South West Public Health Unit)

1. Introduction

- Oral antiviral treatments for COVID-19 are molnupiravir (Lagevrio) and nirmatrelvir + ritonavir (Paxlovid).
- Available in Australia since January 2022.¹
- Expanded eligibility criteria from 11th July 2022 include those with mild-moderate COVID-19 who are:²
 - Aged 70+ years (regardless of symptoms)
 - Aged 50-69 (and Aboriginal and Torres Strait Islander people aged 30-49) with ≥2 risk factors for severe disease
 - Aged 18 years+ and significantly immunocompromised
- Limited understanding of community awareness and uptake, as well as barriers and facilitators to treatment.
- Barwon South West Public Health Unit (BSWPHU) took a multi-pronged approach to increase uptake of antivirals.
- We implemented targeted SMS messaging to COVID-19 cases in our region, alerting them of potential eligibility for oral antiviral and prompting them to be assessed for treatment.

2. Objectives

- To investigate patterns of oral antiviral prescription in South Western Victoria following expansion of eligibility criteria
- To understand barriers and facilitators to receiving antivirals
- To examine the potential impact of targeted SMS messaging sent to COVID-19 cases by BSWPHU

3. Methods

Study design & setting

- Cross-sectional survey, 21/7/2022 to 31/8/2022
- Conducted across BSWPHU catchment area – 10 LGAs in South West Victoria (Figure 1)



Figure 1. BSWPHU catchment area.

Targeted SMS messaging

- Daily SMS sent to COVID-19 cases notified in previous 24 hours in BSW region who were:
- Aged 50+ years
 - Aboriginal and Torres Strait Islander peoples aged 30-49 years

Survey information

- SMS recipients sent link to online survey 10 days after initial SMS
- Collected information about respondents’ experiences with oral antivirals, as well as age group and postcode

Statistical analysis

Proportions + 95% confidence intervals (CIs), two sample Z-tests for proportions, generalised linear models

6. References

1. Therapeutic Goods Administration. TGA provisionally approves two oral COVID-19 treatments, molnupiravir (LAGEVRIO) and nirmatrelvir + ritonavir (PAXLOVID). Canberra, ACT: TGA, 2022.

2. Updated eligibility for oral COVID-19 treatments. Available at: <https://www.health.gov.au/health-alerts/covid-19/treatments/eligibility> (Accessed 27 September 2022)

4. Results

3829 survey responses from 7010 links sent: response rate 54.6%

Antiviral prescription rates

- 36.7% of respondents reported being prescribed oral antivirals
 - 75.4% of respondents aged 70+ were prescribed oral antivirals
 - 21.1% of respondents aged <70 were prescribed oral antivirals
- Increased significantly over the six-week survey period (Figure 2)
- 87.5% of participants obtained prescription via usual GP
- 97.2% of those prescribed antivirals completed the treatment course

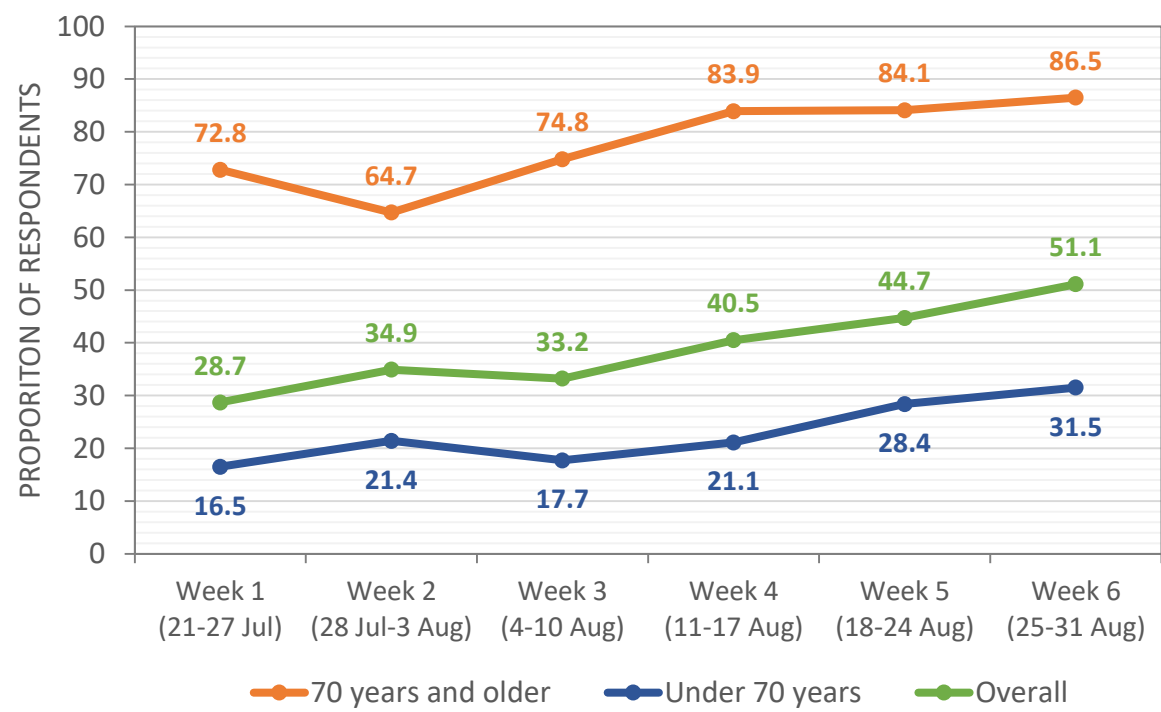


Figure 2. Proportion of respondents prescribed oral antivirals, by survey week

Adjusted odds of antiviral prescription was more than double in week 6 compared to week 1 (aOR 2.36, 95%CI 1.71-3.26)

67.1% received Lagevrio; 25.0% received Paxlovid; 7.7% couldn't recall which

Barriers and facilitators

- Main reasons for not receiving antiviral prescriptions in Table 1
- 87.3% obtained medication within 24 hours after prescription
- Those prescribed antivirals were more likely to have first heard about antivirals from their GP, or from a family member or friend

	Proportion of all survey respondents, % (95% confidence interval)*			p value
	Overall (N=3829)	70+ years (N=1078)	Under 70 years (N=2728)	
Felt well so didn't contact doctor	26.1 (24.7–27.5)	12.9 (11.0–15.0)	31.5 (29.7–33.2)	<0.001
Self-assessed as ineligible	18.2 (17.0–19.5)	1.6 (1.0–2.5)	25.0 (23.4–26.2)	<0.001
Doctor assessed as ineligible	9.1 (8.2–10.1)	1.7 (1.1–2.6)	12.1 (10.9–13.4)	<0.001
Tested late in illness	2.3 (1.8–2.8)	3.2 (2.3–4.5)	1.9 (1.5–2.4)	0.013
Delays in getting appointment	2.1 (1.7–2.6)	0.7 (0.4–1.5)	2.7 (2.1–3.4)	<0.001

Table 1. Reasons given by survey respondents for not being prescribed antivirals

Impact of targeted SMS messaging

- 23.8% (95%CI 22.5–25.2) of survey participants first heard about COVID-19 oral antivirals via the targeted SMS from BSWPHU
- Included 11.8% (95%CI 10.2–13.6) of those prescribed antivirals

5. Discussion & conclusions

- Oral antiviral uptake in the Barwon South West region was high among survey respondents, particularly those aged 70+.
- Treatment uptake significantly increased over the six week survey period, likely due in part to a concerted, multi-facteted campaign by BSWPHU to improve awareness and uptake of oral antivirals.
- GPs were the key prescribers of oral antivirals in the community.
- Learning about antivirals from a trusted source (e.g. GP, family/ friends) increased the likelihood of receiving antivirals.
- An SMS sent to newly notified COVID-19 cases is a simple, low-cost intervention that likely contributed to increased antiviral uptake.

7. Acknowledgements

We would like to acknowledge the Team Leaders, administrative staff, in-reach testing team and COVID Positive Pathways team at the BSWPHU for their work in sending out the daily SMS messages.