Health Literacy in the COVID-19 Pandemic

Understanding the health literacy of health services users in Northern Metropolitan Melbourne

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1. Background

COVID-19 has had significant health, social and economic impacts in Australia and globally. Existing social and economic inequalities have not only increased the risk of COVID-19 exposure and infection, but have also meant that public health measures to contain the virus have disproportionately impacted vulnerable people and communities due to structural inequalities (Marmot et al. 2020; Freil & Baum 2020).

Health literacy is an important social determinant of health and has been a key factor in the inequitable impact of COVID-19. Effective public health responses to pandemics rely on everyone in the community being able to access, understand, interpret and apply pandemic related information. This includes not only information on symptoms, testing and prevention strategies, but also on the restrictions and laws in place to control the spread of infection. However, significant proportions of the population have limited health literacy and are likely to face major challenges accessing and understanding health information in a public health crisis. These challenges are compounded when governments, service providers and other authorities fail to respond to the varying health literacy capacities and needs of individuals and communities (Trezona et al. 2020; Kosir & Sorensen 2020).

There has been no shortage of information on COVID-19, in fact there is evidence of a COVID-19 'infodemic' – the overabundance of information that is spread in a pandemic, some of which is accurate and reliable and much of which is not (Tangcharoensathien et al. 2020). Infodemics and the deliberate transmission of intentionally misleading information pose obvious challenges to people being able to find information that is credible and trustworthy, which makes the role of governments in communicating timely and consistent information to the public even more important. However, public health advice and other information disseminated by state and national government in Australia has often been difficult to access, understand and follow. The situation has been complicated further by the fact official advice is changing rapidly and key messages are often confusing and contradictory.

Study purpose
In order to understand the way people sourced and used health information during the COVID-19, Northern Health conducted a study involving their highest health system users between July and August 2020. The primary aim of the study was to determine how participants source information about COVID19, the extent to which they interpret and apply this information as intended, and how they determine whether the information is trustworthy. The study also aimed to determine how participants engaged with health services during the pandemic and whether there is any association between their access and use of information and their subsequent use of health services.

Purpose of this paper

This paper provides a brief summary of the preliminary study results with a specific focus on people's knowledge and understanding of COVID-19 information, and engagement with health services during the pandemic. This summary has been prepared for the Inner North West, HealthWest and Hume Whittlesea PCPs to inform approaches to health information provision and communication with communities, as they continue to support them through the COVID-19 response and recovery.

The research team is currently developing a series of publications that will provide a more detailed overview of the findings and their implications for addressing the health literacy needs of communities during future outbreaks of COVID-19 and other pandemics.

2. Methods

2.1 Setting and participants

This study was conducted in the Northern Metropolitan Region (NMR) of Melbourne involving residents who frequently attend services at Northern Health. Northern Health is a major provider of acute, sub-acute and ambulatory specialist services in NWMR. The NMR has a culturally diverse population, where people were born in more than 165 countries and speak more than 100 languages. The area also has lower levels of income, educational attainment and health literacy and higher rates of unemployment than the Victorian state average. The Northern Metropolitan Region (NMR) of Melbourne is made up of approximately 10 per cent of the Victorian population, however nearly a third of all COVID-19 cases occurred in this area at the peak of the pandemic.

Participants were randomly selected from the most frequent users of impatient care at Northern Health, and stratified according to chronic conditions, age and gender to ensure the sample was representative of the population. In addition, participants were purposively selected to ensure that more than 50 per cent of participants represented at least one of the top ten languages spoken at home in the region (English, Arabic, Italian, Assyrian, Turkish, Greek, Macedonian, Mandarin, Persian, Vietnamese and Hindi/Punjabi/Urdu).

2.2 Data collection and analysis

Data was collected using an adapted version of the World Health Organisation survey tool called 'Rapid, simple, flexible behavioural insights on COVID-19', which was developed to enable monitoring of knowledge, risk perceptions, preventative behaviour and people's level of trust in information and subsequently inform pandemic outbreak responses. The survey was administered over the phone by researchers at Northern Health, who were provided with training on how to use the

survey instrument. Interpreters were also involved in the interview process for those participants who speak a language other than English at home.

The data was analysed using descriptive statistics to provide an overall summary of the way people access and use health information, as well as differences between population groups based on their age, gender and language spoken at home.

3. Key findings

3.1. Knowledge of COVID-19 symptoms

To determine level of knowledge about COVID-19 symptoms, participants were provided with a list of ten symptoms and asked which of them can be symptoms of COVID-19? The large majority of participants were aware of the three most common symptoms (as specified by the World Health Organization, with 89 per cent of all participants identifying fever, 85.5 per cent identifying dry cough, and 79 per cent identifying sore throat as symptoms (WHO 2020).

As shown in Table 1, there was significant variation in knowledge about COVID-19 symptoms by age and language spoken at home. People under the age of 64 years were more likely to accurately identify COVID-19 symptoms than older people, while people who speak English were more likely to know the symptoms than people who speak a language other than English at home. While the gap in knowledge was smaller in terms of gender, women were more likely to accurately identify the three most common COVID-19 symptoms than men.

Table 1: Knowledge of the three most common COVID-19 symptoms

Symptom	Age		Gender		Language spoken at home	
	Under 64 (N=81)	65+ (N=119)	Men (N=103)	Women (N=97)	English (N=85)	Other language (N=115)
Fever	96.3%	84.0%	87.4%	90.7%	94.1%	85.2%
Dry cough	92.6%	80.7%	82.5%	88.7%	90.6%	81.7%
Sore throat	85.2%	74.8%	73.8%	84.5%	90.6%	70.4%

3.2. Knowledge of COVID-19 prevention strategies

In order to understand participants' knowledge of COVID-19 prevention strategies, they were asked to identify the measures that were effective in preventing the spread of COVID-19 from a list of 15 possible prevention measures, some of which are not included in official advice by relevant authorities. State government advice and health information sources varied in their recommendations on prevention strategies over time, notably the change in recommendations on mask wearing at the start of the second wave in Melbourne. Given the most commonly recommended strategies across official sources were hand washing, physical

distancing, stay at home when sick, avoid touching your face, disinfect surfaces, and wear a face mask, the results for those strategies are reported here. Overall, knowledge about COVID-19 prevention strategies was high among participants:

- ➢ Hand washing – 87.5 per cent
- ➢ Wearing a facemask – 84 per cent
- ➢ Physical distancing – 85 per cent
- ➢ Avoid touching your face – 79.5 per cent
- ➢ Staying home when sick – 85 per cent
- ➢ Disinfecting surfaces – 80 per cent

The results show that knowledge about COVID-19 prevention strategies vary significantly by age and language spoken at home, with people aged under 64 years and people who speak English at home more likely to accurately identify strategies than participants overall. Knowledge of prevention strategies was relatively similar between men and women, with the exception of wearing a facemask and staying home when sick, which was 5 per cent higher among women.

Table 2: Knowledge of the main COVID-19 prevention strategies

Prevention strategy	Age		Gender		Language spoken at home	
	Under 64 (N=81)	65+ (N=119)	Men (N=103)	Women (N=97)	English (N=85)	Other language (N=115)
Hand washing	95.1%	82.4%	87.4%	87.6%	94.1%	82.6%
Wearing a facemask	87.7%	81.5%	81.6%	86.6%	89.4%	80.0%
Physical distancing	96.3%	76.5%	85.4%	84.5%	94.1%	78.3%
Avoid touching your face	92.6%	70.6%	78.6%	80.4%	91.8%	70.4%
Staying home when sick	90.1%	81.5%	82.5%	87.6%	95.3%	77.4%
Disinfecting surfaces	90.1%	73.1%	78.6%	81.4%	90.6%	72.2%

3.3. Understanding of COVID-19 restrictions

COVID-19 restrictions have varied in scope and timing across Australia and in other countries, which requires people to have access to locally relevant information. At the time of conducting interviews for this study, Melbourne was in stage 3 lockdowns, during which time people were only able to leave the house for four main reasons: i) to go to work; ii) to shop for essential items; iii) to exercise; and iv) to provide care, for compassionate reasons and to seek medical treatment. To

determine the extent to which people understood these restrictions, participants were provided with the list of four reasons and asked to identify which ones applied during stage 3 restrictions? Overall, understanding of COVID-19 restrictions was low, with the exception of shopping for essential supplies, which was identified by 79.4 per cent of participants. Just under two in three people (65.7%) identified providing care, compassionate reasons and medical care as a permitted reason for leaving home, while under half identified exercise (48.7 per cent) and less than one in three (31.5 per cent) identified work as a valid reason to leave home during lockdown.

The results also indicate that understanding of COVID-19 restrictions varied across population groups, and that there was inconsistent understanding of each restriction within groups (Table 3). Age was associated with a greater understanding of restrictions across all four reasons to leave home. People aged under 64 years and people who speak a language other than English at home were more likely to accurately identify being able to leave home for work than other participants, while men were slightly more likely than women to identify this as a reason to leave home. Men were also more likely to identify being able to exercise than women, whereas women were more likely than men to identify shopping for essential items and providing care/seeking medical care as reasons to leave home. The groups least likely to report being able to leave home to provide care, compassion or seek medical care were people who speak a language other than English at home, men, and people aged over 65 years.

Table 3: Understanding of COVID-19 restrictions by demographics

Reason to leave home	Age		Gender		Language spoken at home	
	Under 64 (N=81)	65+ (N=119)	Men (N=103)	Women (N=97)	English (N=85)	Other language (N=115)
To work	48.1%	20.2%	32.0%	30.9%	29.4%	33.0%
To shop for essential items	90.0%	72.3%	77.5%	81.4%	84.7%	75.4%
For exercise	55.0%	44.5%	51.0%	46.4%	52.9%	45.6%
Provide care, compassionate and medical purposes	71.3%	62.2%	61.8%	70.1%	78.8%	56.1%

3.4. Accessing and using information

Knowledge and understanding of COVID-19 symptoms, prevention strategies and restrictions and the ability to act on them depends on people having access to timely, relevant and appropriate information, which is influenced by the way information is provided, individual preferences and engagement practices, and the extent to which people trust the provider of the information provider.

Participants were asked a series of questions to determine the types of information people were looking for during the COVID-19 pandemic, the way they sourced information, and their level of trust in the information. To understand information seeking practices, participants were asked about where they have looked for information since the pandemic started. The medium most commonly used to find COVID-19 information was the Internet (72%), followed by general practitioners (43%), newspapers (36%) and television (25%).

Table 4 shows the number of participants who reported using a particular medium to obtain COVID-19 information, as well as the proportion of users who speak English or who speak a language other than English at home for each medium. The results indicate that while use of the Internet and television was relatively even for English speaking and non-English speaking participants, the use of other mediums varied quite substantially. Specifically, people who speak English at home were far more likely to report the radio as a key information medium, while people who speak a language other than English at home were more likely to report seeking information through newspapers, general practitioners and religious/cultural groups.

Table 4: Preferred medium for seeking COVID-19 information

Source	No. of users	English at home (N=85)	Other language (N=115)
Internet	144	52%	48%
General practitioner (GP)	87	39%	61%
Newspaper	73	23%	77%
Television	50	54%	46%
Radio	26	65%	35%
Religious or cultural group	21	19%	81%
Family	6	50%	50%

These differences in information seeking practices were likely influenced by many factors, but one factor may be the extent to which people trust the information. To understand the way trust influenced the way people sought and used COVID-19 information, participants were asked – 'How much do you trust the information you have been reading? Overall, 48 per cent of people said they trust everything, 13 per cent said they partially trust information depending on the source, and 39 per cent said they 'don't trust anything'. People who speak a language other than English at home were more likely to report not trusting anything they read (54%) than those who speak English at home (46%).

3.5 Engagement with health services

To determine the extent to which people had engaged with health services during the pandemic, and potential fears or misconceptions about engaging with services,

participants were asked about four specific actions they may have taken during the pandemic: i) attended appointments at hospital; ii) made new appointments at hospital; iii) attended an appointment with a health provider; and iv) avoided going to the doctor for issues that were not urgent.

The results indicate that a large proportion of participants continued to engage with health services during the pandemic, with 67.5 per cent attending an appointment with primary heath care provider (i.e. GP, community health), and 43.5 per cent attending an appointment at the hospital. In addition, 37 per cent of participants made new appointments with the hospital. However, just over one in three participants (35%) reported that they had avoided going to the doctor for non-urgent issues (i.e. vaccinations, screening).

As shown in Table 5, people aged under 64 years were significantly more likely to attend an appointment with the primary health care provider than other participants (77.8%), while people aged over 65 were the least likely to attend (60.5%). Men were more likely to attend both primary care health and hospital services than women during the pandemic, while people who speak English were more likely to engage with health services than people who speak a language other than English at home. In terms of delaying help-seeking, people aged under 64 years, women and people who speak English at home were significantly more likely to avoid engaging with health services for non-urgent reasons during the pandemic.

Table 5: Engagement with health services during COVID-19 by demographics

Reason to leave home	Age		Gender		Language spoken at home	
	Under 64 (N=81)	65+ (N=119)	Men (N=103)	Women (N=97)	English (N=85)	Other language (N=115)
Attended appointments at hospital	48.1%	40.3%	45.6%	41.2%	44.7%	42.6%
Made new appointments at hospital	42.0%	33.6%	39.8%	34.0%	40.0%	34.8%
Attended an appointment with a health provider	77.8%	60.5%	68.0%	67.0%	70.6%	65.2%
Avoided going to the doctor for non-urgent issues	40.7%	31.1%	31.1%	39.2%	40%	31.3%

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