

# Health Literacy: an opportunity for better outcomes for all



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# Overview

1. Health literacy 101 – what is health literacy and why does it matter?
2. An example: public health messaging for COVID-19 and health literacy.
3. What we can learn from health literacy research about how to communicate more effectively?

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# WHAT IS HEALTH LITERACY?

‘The cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health....it means more than being able to read pamphlets....By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.’

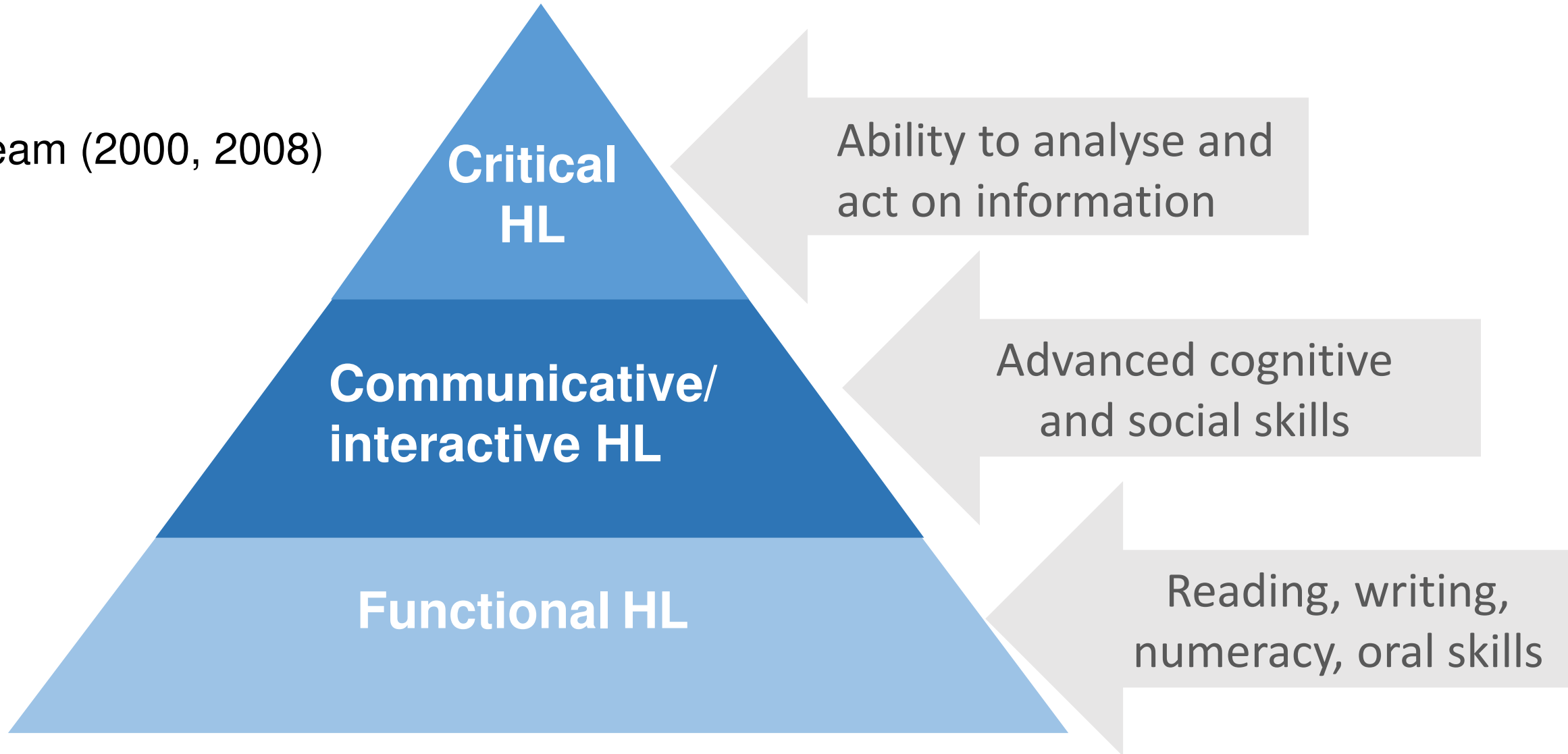
(WHO Nutbeam 1998)

## **Health literacy is content and context specific**

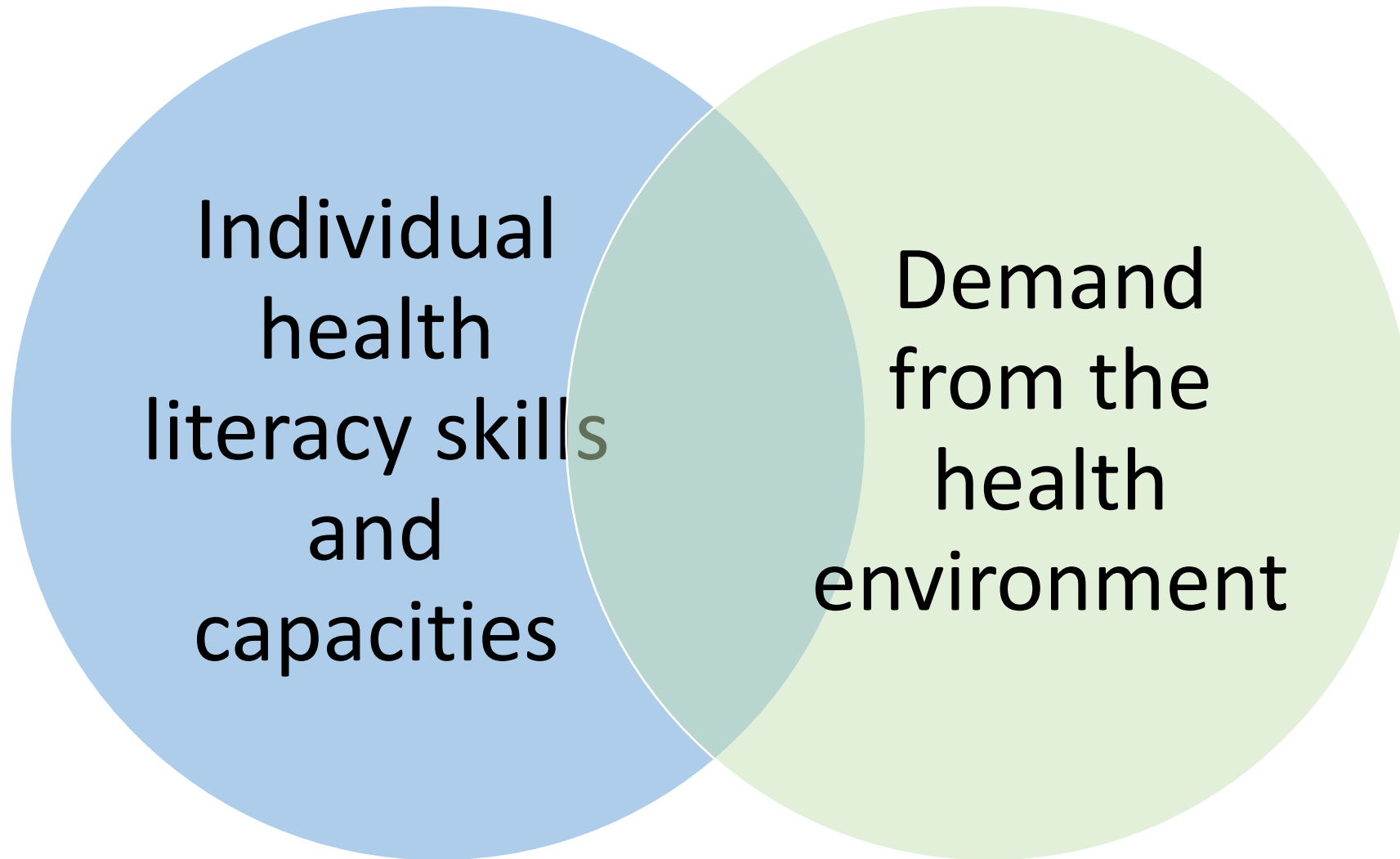
Even where a person has advanced literacy skills, their ability to obtain, understand and apply health information in a specific health context may be poor.

# MULTI LEVEL MODEL OF HEALTH LITERACY

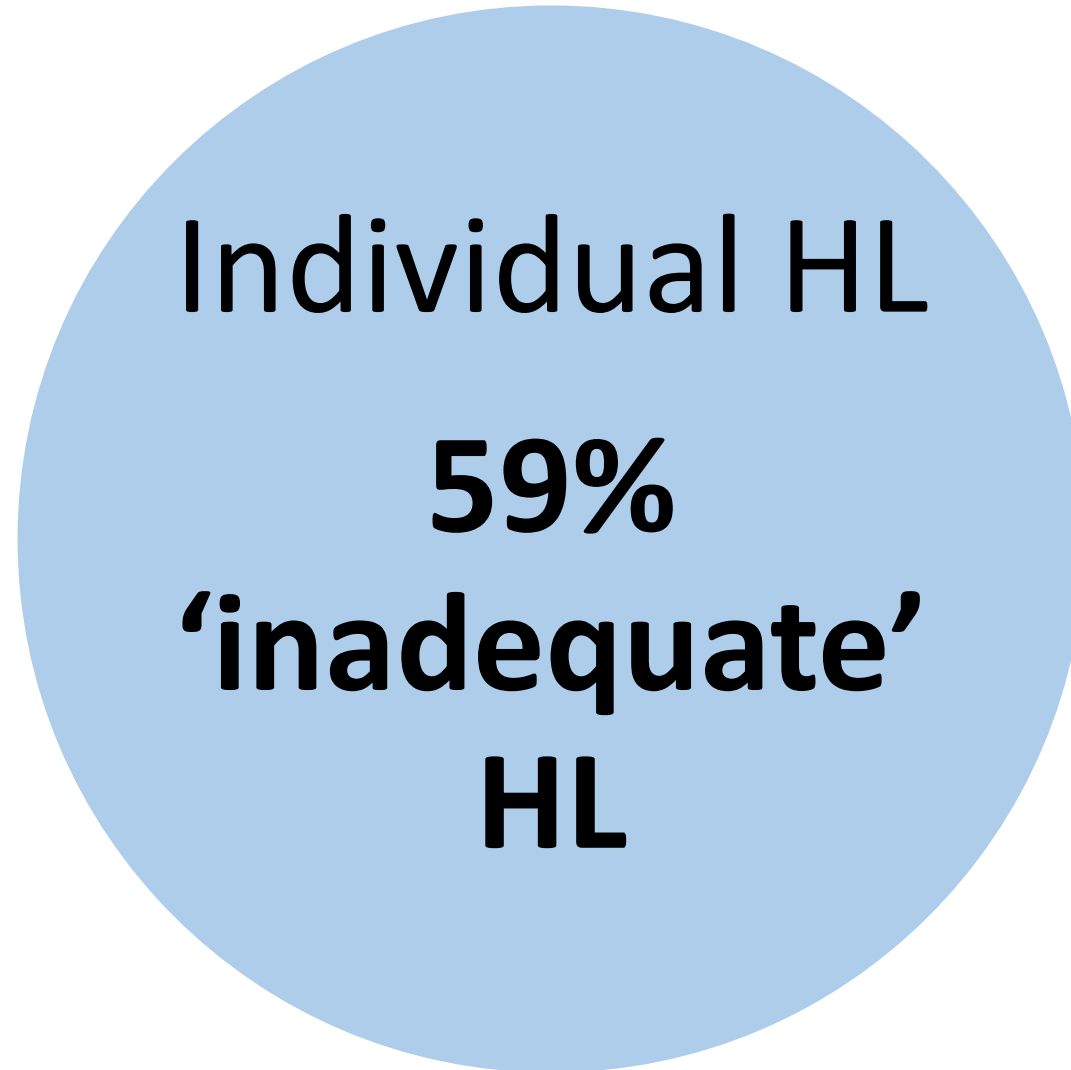
Nutbeam (2000, 2008)



# Health Literacy



# Low health literacy is common (ABS 2006)



Most recent  
'performance-based'  
assessment of health  
literacy in Australia

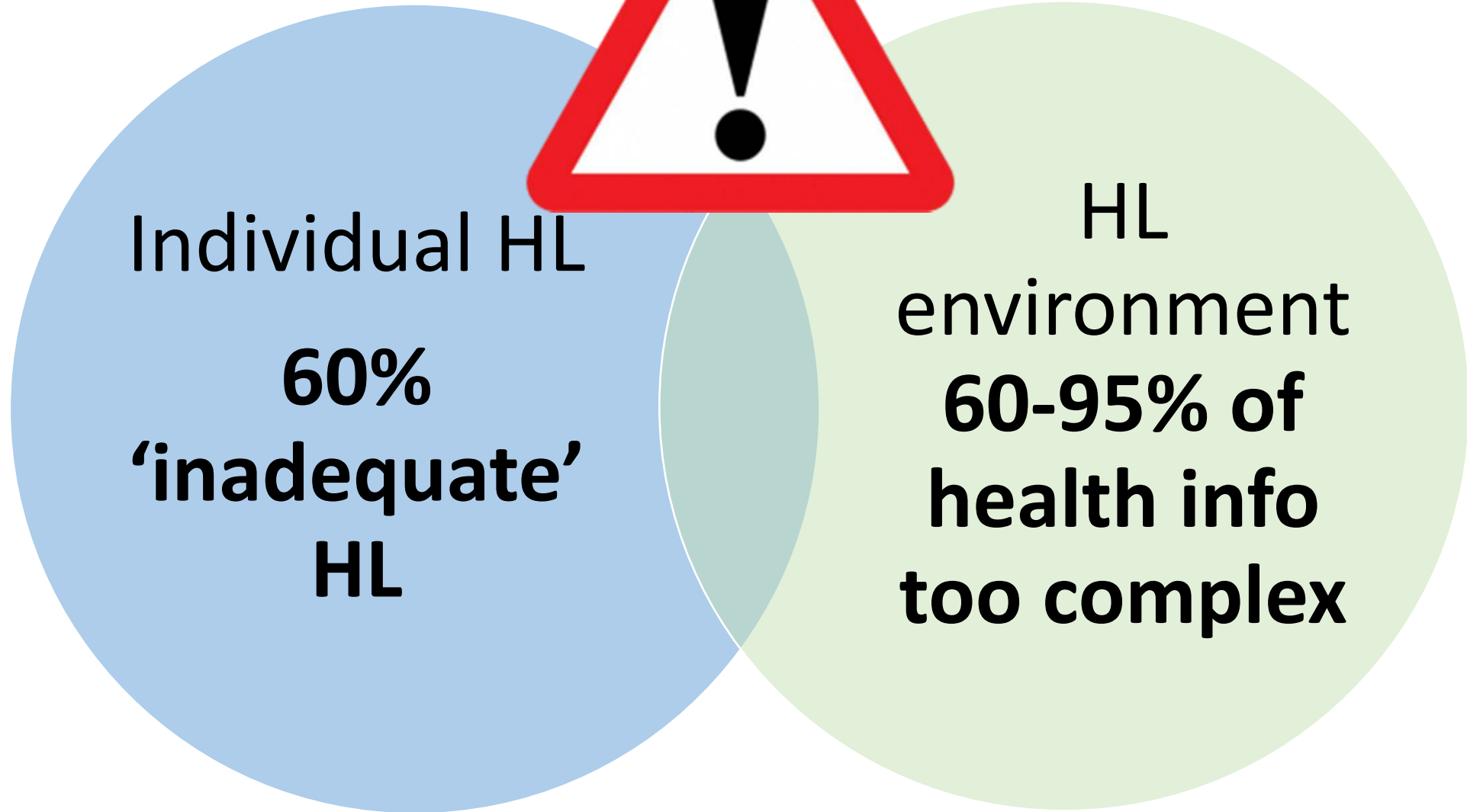
Health literacy environment is too demanding  
for most consumers

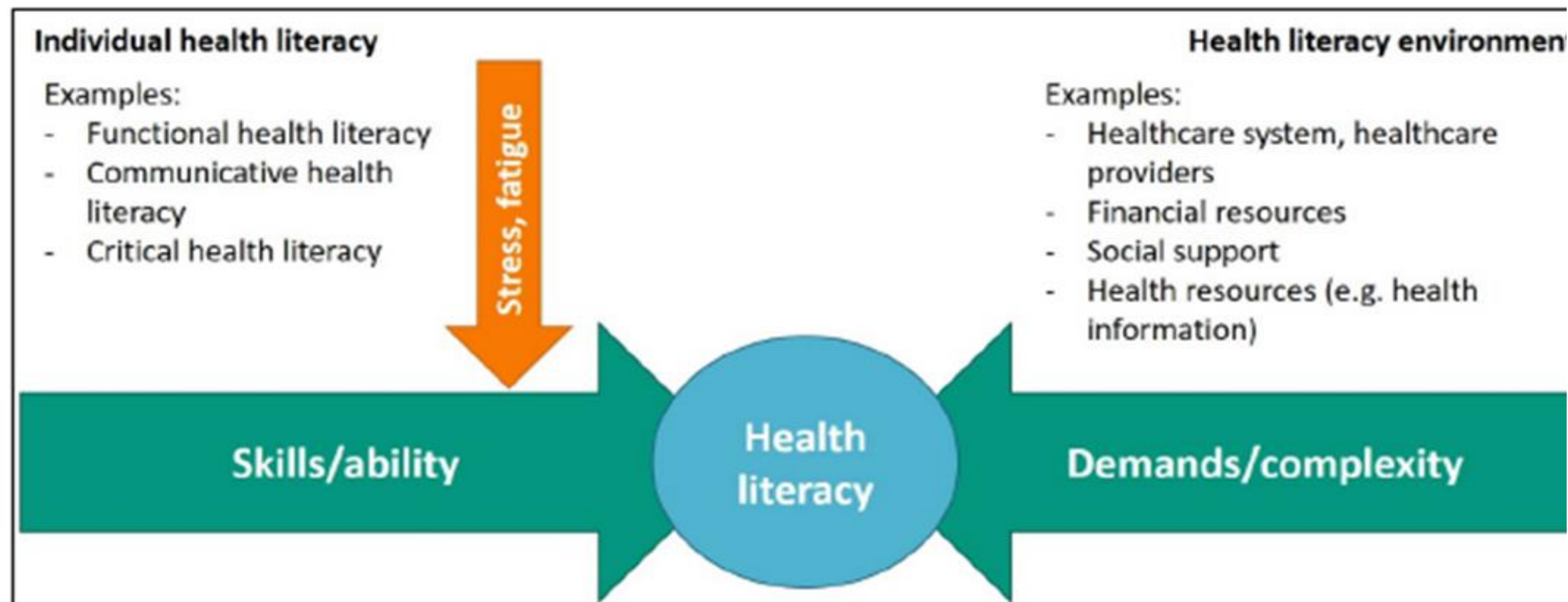


HL  
environment  
**60-95% of  
health info  
too complex**



**PROBLEM!**





**Figure 2. Individual health literacy and the health literacy environment** (adapted from Parker and Ratzan(75)).

# WHY DOES HEALTH LITERACY MATTER?

**Low literacy associated with poor health** independently of all other known risk factors:

- Higher rates of chronic illness (e.g. CVD, diabetes, obesity)
- Higher rates of mortality (all cause)
- Higher hospitalisation rates and use of emergency services
- Lower rates of preventive services such as screening
- Poorer self management skills
- Greater medication errors
- Lower levels of knowledge about disease
- Lower ratings of satisfaction with doctor-patient communication (AHRQ DeWalt et al 2004; Berkman et al 2011)

# Health literacy costs billions.....



- Accounts for 3-5% of ALL healthcare costs – in UK GBP2.8–5 billion per year (2013-14).
- Australia: increased out of pocket costs \$143-\$7798 per person/ year.
- Cost to health and quality of life is huge

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# Health literacy and communicating about COVID-19

- Concern early on that much of the prominent (state and national) public communication about COVID-19 was not designed for diverse and hard-to-reach groups (McCaffery et al 2020)

## An urgent call for governments to improve pandemic communications, and address health literacy concerns

Editor: [Melissa Sweet](#) Author: [Kirsten McCaffery](#), [Danielle Muscat](#) and [Jan Donovan](#) on: [April 07, 2020](#)

In: Coronavirus outbreak 2019-2020, evidence-based issues, health inequalities, health literacy, public health, quality and safety of health care, Social determinants of health, social media and healthcare

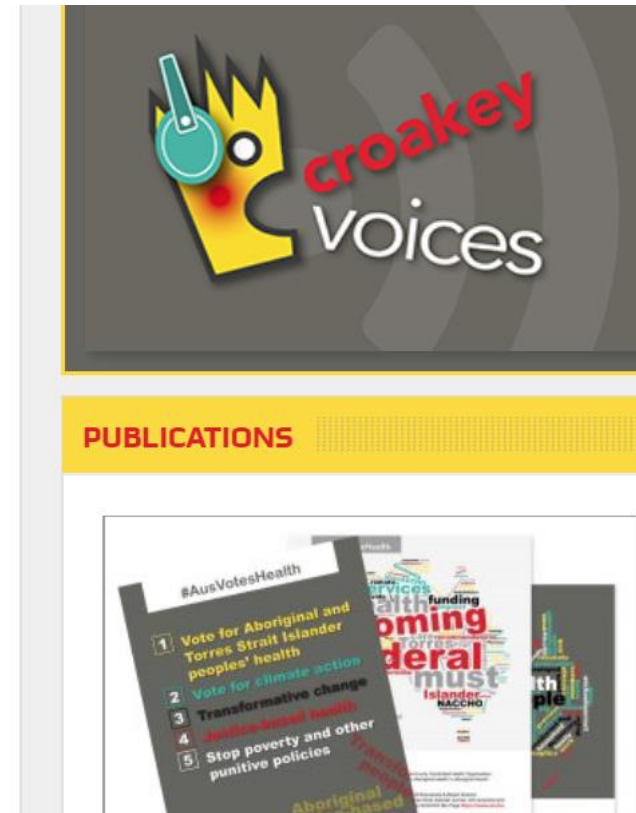
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The COVID-19 crisis is highlighting an urgent need to improve the health literacy of our institutions and the public, according to the authors below.

Millions of Australians do not have sufficient health literacy to understand complex COVID-19 communications, and this problem is exacerbated by the failure of governments to enact best practice in communications (see the Federal Health Department [website](#) for an example of this).



# Health literacy and communicating about COVID-19

- Much information was online, static web-based content and written at a level too complex for even average readers (Mishra et al 2020; Federal Dept Health website >grade 11)
- Health literacy skills of the community were not considered.
- Translated government communication resources that were available (e.g. multilingual posters) may have been underutilized
- This has resulted in people finding other (non-government) resources to fill their gaps in understanding including from their home country

JAMA  
Network | **Open**

Research Letter | Public Health

## Comparison of Readability of Official Public Health Information About COVID-19 on Websites of International Agencies and the Governments of 15 Countries

Vishala Mishra, MBBS; Joseph P. Dexter, PhD

### Introduction

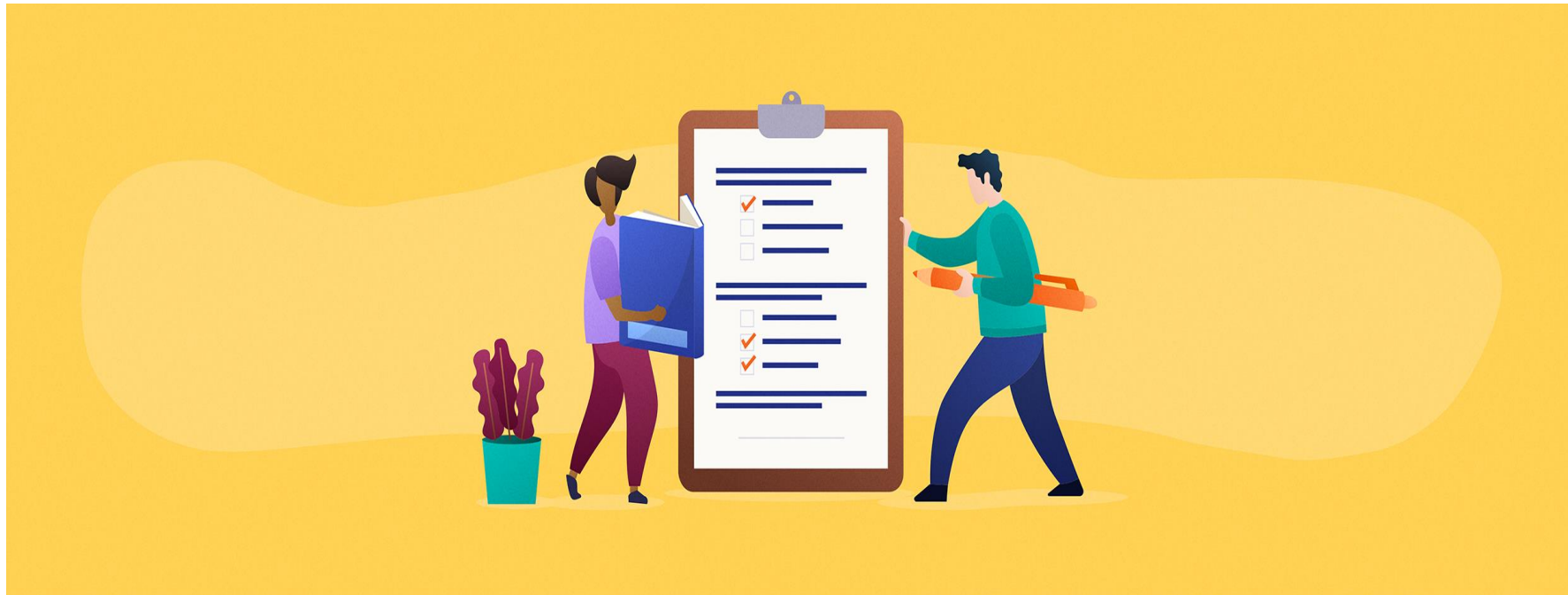
Containment strategies for the coronavirus disease 2019 (COVID-19) pandemic have required broad public compliance, yet complex, contradictory, and false information proliferates.<sup>1</sup> The American Medical Association (AMA), National Institutes of Health (NIH), and Centers for Disease Control and Prevention (CDC) recommend that medical information for the public be written at no higher than an eighth-grade reading level.<sup>2</sup> We evaluated the readability of online information about COVID-19 provided by government and public health agencies and departments.

[+ Supplemental content](#)

Author affiliations and article information are listed at the end of this article.



## April 2020: SHeLL COVID Team launched Knowledge, Attitudes and Behaviours COVID-19 Online Survey



*SHELL COVID Team: Carissa Bonner, Julie Ayre, Erin Cvejic, Rachael Dodd, Brooke Nickel, Kristen Pickles, Tessa Copp, Carys Batchup, Sam Cornell, Thomas Dakin, Kirsten McCaffery.*



# Survey of COVID-19 knowledge, attitudes and behaviours in Australia

- Baseline survey recruited via online panel and social media resulted in 4,326 Australian adults.
- We have run further monthly waves of the survey to follow the subset recruited by social media with >1000 responses each survey.
- Note: survey created rapidly, no funding hence has limitations – notably sample is not nationally representative and our measure of CALD is limited to primary language other than English (LOTE)

*April 17-22*

**Baseline n=4326**

**\*Longitudinal SM  
n=2006\***

*May*

**Wave 2  
n=1882**

*June*

**Wave 3  
n=1369**

*July 24th*

**Wave 4  
n=1316**

# Survey results of COVID-19 knowledge, attitudes and behaviours in Australia (baseline n=4,326)

People with lower health literacy and who spoke a language other than English at home had:

- poorer understanding of COVID-19 **symptoms**
- were less able to identify **behaviours to prevent infection**
- experienced more **difficulty finding information** about COVID-19.

Variable		Knowledge and information			
		Symptoms (%)	Prevention (%)	Finding information 1-10	Understanding government messaging 1-10
Age group	18 to 25	58.0\$	66.4\$	4.4 (2.4)\$	4.8 (2.7)\$
	26 to 40	62.8	72.2	4.2 (2.5)	4.9 (2.8)
	41 to 55	64.2	76.5	3.7 (2.5)	4.4 (2.8)
	56 to 90	56.4	67.9	3.2 (2.3)	3.6 (2.6)
Gender	Male	53.1\$	60.9\$	3.8 (2.5)	4.2 (2.8)#
	Female	64.9	76.9	3.9 (2.4)	4.5 (2.8)
<b>Health literacy</b>					
	Inadequate	49.4\$	58.8\$	4.6 (2.4)\$	5.0 (2.7)\$
	Adequate	61.8	72.4	3.7 (2.4)	4.3 (2.8)
<b>Language at home</b>					
	English	60.4	72.0\$	3.8 (2.5)	4.5 (2.8)\$
	Other	58.4	50.7	4.1 (2.5)	3.7 (2.6)

^P<0.05; #P<0.01; \$P<0.001

# Survey results of COVID-19 knowledge, attitudes and behaviours in Australia

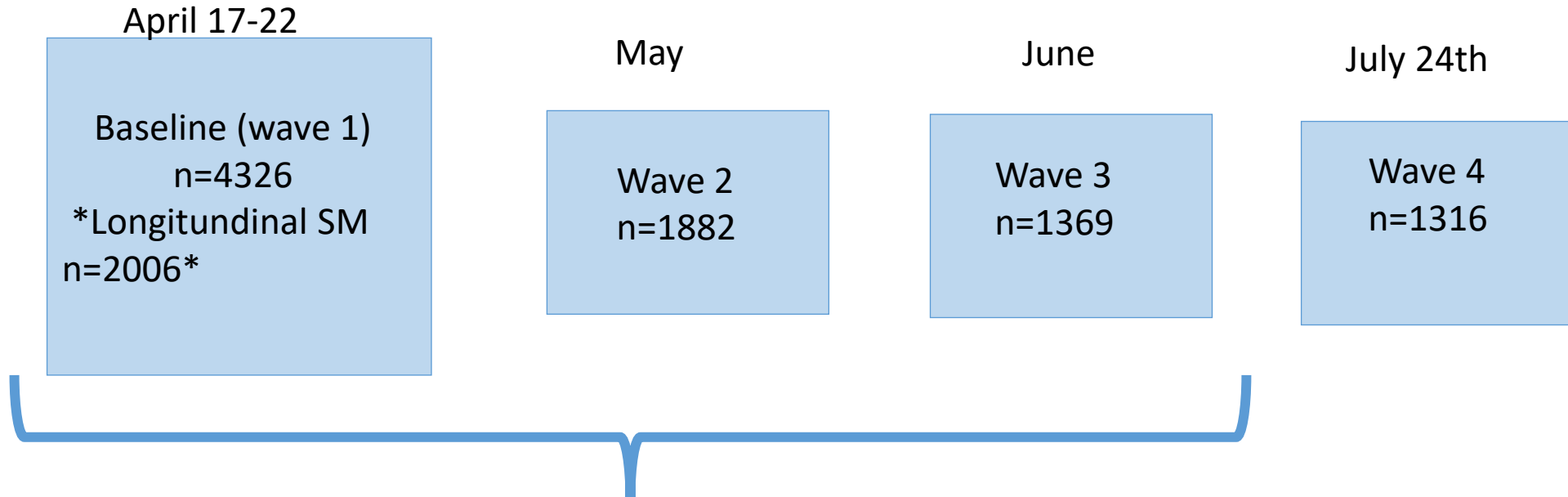
People with lower health literacy and who spoke a language other than English at home:

- were less likely to rate **social distancing as important**
- more likely to **endorse misinformation/conspiracy beliefs** about COVID-19 and vaccination.

		Behaviours	COVID-19/ Vaccination Misinformation beliefs			
		Social distancing 1-7	Vaccine effectiveness made-up (%)	COVID-19 threat greatly exaggerated (%)	Herd immunity beneficial and is covered up (%)	Gov restrictions stronger than needed (%)
<b>Age group</b>	<b>18 to 25</b>	6.4 (0.8)\$	19.4	21.2\$	22.4\$	13.2\$
	<b>26 to 40</b>	6.4 (0.8)	18.0	17.1	16.0	17.0
	<b>41 to 55</b>	6.5 (0.7)	16.0	11.0	12.8	12.9
	<b>56 to 90</b>	6.5 (0.7)	15.8	7.0	9.7	11.3
<b>Gender</b>	<b>Male</b>	6.3 (0.8)\$	19.7#	19.1\$	18.0\$	18.0\$
	<b>Female</b>	6.5 (0.7)	15.8	10.4	13.1	10.9
<b>Health literacy</b>						
	<b>Inadequate</b>	6.1 (1.0)\$	26.0\$	21.5\$	21.1\$	19.1\$
	<b>Adequate</b>	6.5 (0.7)	16.0	12.7	14.1	12.9
<b>Language at home</b>						
	<b>English</b>	6.5 (0.7)\$	16.3\$	13.1\$	14.6^	13.3#
	<b>Other</b>	6.3 (0.9)	32.1	24.8	19.7	19.3

^P<0.05; #P<0.01; \$P<0.001

# Support for misinformation beliefs over 3 months (Wave 1, 2, 3)



- Stronger agreement with misinformation associated with younger age, male gender, lower education, lower health literacy and LOTE (all  $p < 0.01$ ).
- Misinformation beliefs were associated with lower digital health literacy, lower perceived threat of COVID-19, lower confidence in government, and lower trust in scientific institutions (all  $p < 0.001$ )

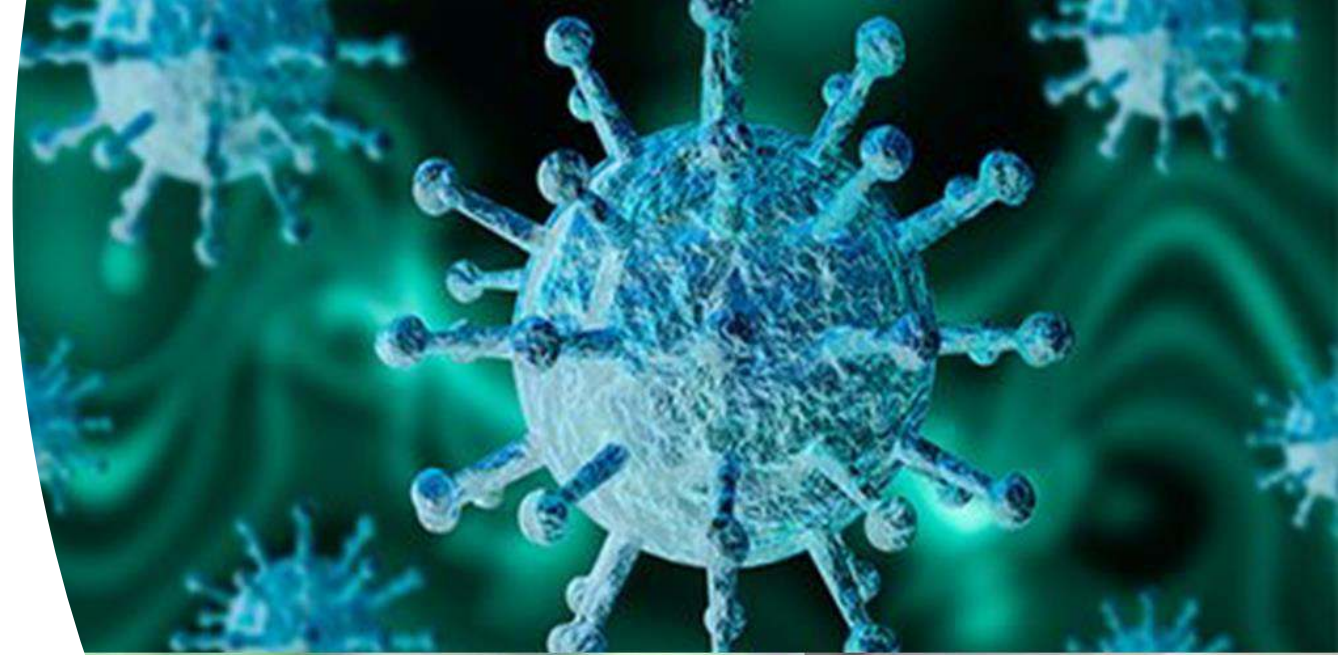
# Summary of results of COVID-19 survey in Australia

- Important disparities in knowledge, attitudes and behavioural responses by health literacy, LOTE and other risk groups (young people)
- Endorsement of misinformation beliefs consistently reported over 3 months associated with health literacy, LOTE (also education, male gender, younger age)
- Corresponds with public health communication gaps about COVID-19



# Summary of results of COVID-19 survey

- Has potential to undermine efforts to reduce viral transmission
- May lead to social inequalities in health outcomes in Australia.
- But limitations: not nationally representative sample; LOTE sample small
- Now working with WSLHD multicultural health to extend the survey using translators and interpreters - so more accessible to people who have difficulty reading and writing in English.



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# What can we do about health literacy?





# Use evidence-based interventions that work





# Improving written health information

- Use of plain language improves understanding (*Syst Rev: Sheridan et al* 2011, 2013) Eg. CDC  
[https://www.cdc.gov/healthliteracy/pdf/Simply\\_Put.pdf](https://www.cdc.gov/healthliteracy/pdf/Simply_Put.pdf)
- Avoid jargon words – see <https://www.cdc.gov/healthcommunication/everydaywords/>
- Avoid words with 4 or more syllables
- Write text at grade 5 reading level (age 11 year old)
- Use simple font (e.g. Arial or sans serif), avoid CAPS
- Use lots of white space

# Improving written health information

- Break up text and have strong contrast between text and background
- 3-5 main points maximum
- Put essential information first
- If people find text easy to read they are more willing to comply with behavioural advice
- More likely to judge information favourably

# Improving written health information

- Pay attention to images
- Must be culturally appropriate
- Need to be interpretable without text



# Improving communication of numeric health information (systematic review: Sheridan *et al* 2011, 2013)

## Factors that improve understanding for adults with low literacy

Presenting numeric information in tables or pictographs not text

Presenting numeric information in a logical order for evaluation (*ie* higher number is better)

Presenting numerical information with a consistent denominator

Using natural frequencies (1 out of 100) or simple % to help understand risks and benefits (no decimal places and round to base 10 if possible)

Adding video to verbal narratives to improve the salience

**Prescription drug labels: make content actionable**  
Instructions must be clear and precise

# Prescription drug labels: making content actionable

Instructions must be clear and precise

E.g. If instructions are precise and explicit drug label errors reduced from 50% to 11% lower literacy population (Davies et al 2008)



**YES**

take 1 at 6am and 1  
at 6pm every day  
OR  
take 1 with  
breakfast and 1  
with dinner

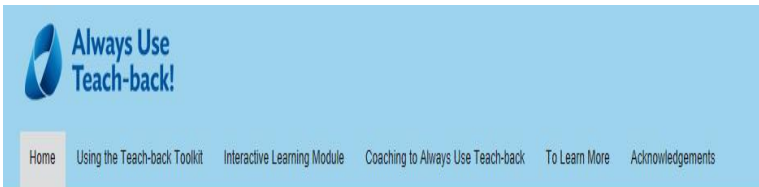
**X NO**

take twice daily  
OR  
take every 12  
hours



# Verbal communication: Use Teach Back

Patients remember/ understand <50% of what clinicians say (Ley, 1998; Kessels, 2003)



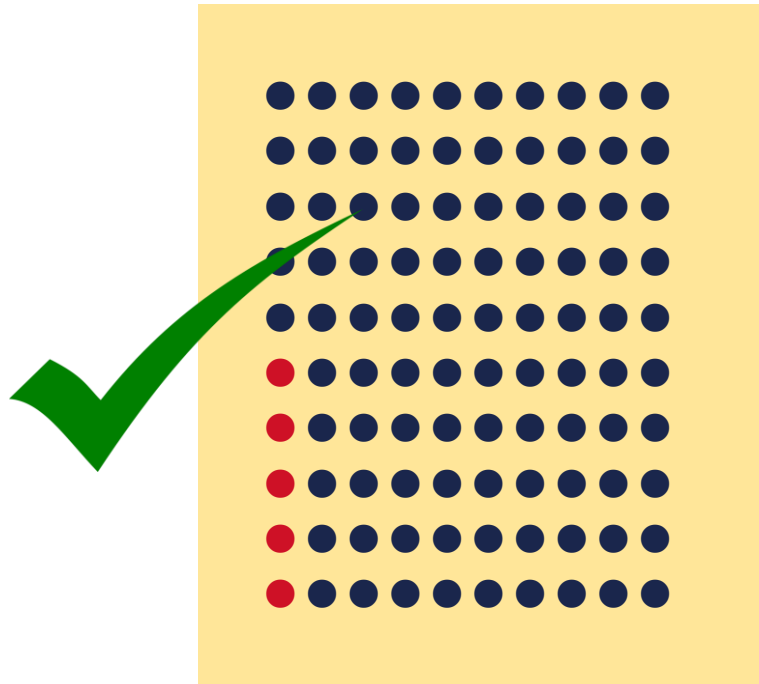
Welcome to the *Always Use Teach-back!* training toolkit



## Teach-back

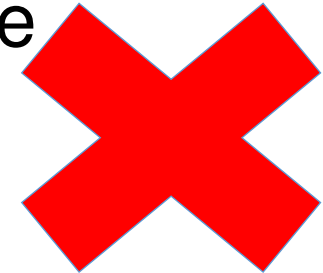
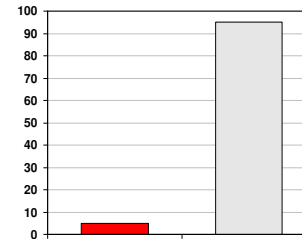
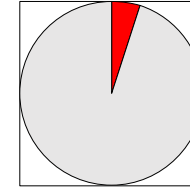
- Health Care Provider asks patient to explain in own words what they need to know or do, in a caring way.
- Improves understanding of steps to follow and trust (Morony *et al* 2018)

# RISK COMMUNICATION: use format that improve understanding (Trevena et al 2013)



*NOT*

20% less women will experience side effects



**5** out of **100** women will experience side effects or **5%.....**

# Shared Decision Making

In >100 RCTs SDM improves pt outcomes:

- Knowledge, risk perceptions, uncertainty
- Participation in DM; 'positive' Dr-patient communication
- Impact may be greatest in lower literacy/ socially disadvantaged patients

Stacy D *et al* Cochrane Review PtDAs (2017); Durand et al PLOS one (2014)



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Perspective

Shared Decision Making to Improve Care and Reduce Costs

Emily Oshima Lee, M.A., and Ezekiel J. Emanuel, M.D., Ph.D.  
N Engl J Med 2013; 368:6-8 | January 3, 2013 | DOI: 10.1056/NEJMp1209500



# Engage with the education sector

- Adult and community based education e.g. TAFE Health Literacy Program (McCaffery et al 2019; Muscat et al 2019); Skilled for Health (UK).
- Schools





## COVID-19

### JUST GOT TESTED FOR COVID-19?

#### Thank you for getting a COVID-19 test



Go straight home. You must self-isolate until you get your test result. Don't share a room or bathroom with anyone, if possible.



Self-isolation means you must not go to the shops, work, the gym, any public places, or have people over at your home or catch public transport.



Read [how on self-isolation](#).

#### How do I get my test results?

- We understand this may be a stressful time. You will usually get your COVID-19 result within 24-72 hours.
- If you don't receive your result after 72 hours, follow up with the clinic where you were tested.
- If you registered for an SMS service, you will receive an SMS result.
- If your COVID-19 test is positive, a public health official will contact you as a priority and tell you what to do next. You might be contacted from a private number so please pick up private calls when waiting to hear back about test results. Any treatment costs will be waived, even if you don't have a Medicare card or insurance.



#### Still have questions?

Call the National Coronavirus Health Information line: **1 800 020 080** or visit [www.nsw.gov.au/COVID-19](http://www.nsw.gov.au/COVID-19)

Don't forget to follow NSW Health on **Twitter**, **Facebook** and **Instagram** for important updates and live information.

#### I was a close contact of a confirmed COVID-19 case BUT my test is negative

A close contact means you were near a person with COVID-19 while they were infectious, and have a reasonable chance you were infected with COVID-19.



- **IF YOU'RE A CLOSE CONTACT, YOU MUST SELF-ISOLATE EVEN IF YOUR COVID-19 TEST IS NEGATIVE AND YOU ARE FEELING WELL AND HAVE NO SYMPTOMS.**
- You need to self-isolate until 14 days after you last saw the confirmed COVID-19 case or attended a location where that person visited.
- Home isolation for close contacts is enforceable under the [Public Health \(COVID Self-Isolation\) Order \(No 3\) 2020](#). Not following these rules is a criminal offence and attracts heavy penalties.
- Read more [information on close contacts](#).

#### My COVID-19 test is negative AND I no longer have symptoms

If your test is negative and you are not a close contact of a confirmed COVID-19 case, you do not need to self-isolate further. You should continue to watch for COVID-19 symptoms, and if you get symptoms again, get re-tested.

#### My COVID-19 test is negative AND I still feel unwell

If you're still feeling unwell, you should talk to your GP. If your symptoms become serious (e.g. shortness of breath at rest or difficulty breathing), you should call Triple Zero (000).


Remember: If you feel unwell again with even the mildest of symptoms - don't go out, don't see family or friends - get re-tested.

#### Help and support is available - Speak to a counsellor 24/7

Lifeline **13 11 14** [lifeline.org.au](http://lifeline.org.au) or Beyond Blue **1800 512 348** [coronavirus.beyondblue.org.au](http://coronavirus.beyondblue.org.au)

What improvements could we make if we followed health literacy advice?

# Some examples


 World Health Organization

## Home care for people with suspected or confirmed COVID-19


Take care of yourself and your family

**For ill people**


If you are ill with fever and cough




Clean hands frequently with soap and water or with alcohol-based hand rub.



Stay at home; do not attend work, school or public places. Rest, drink plenty of fluids and eat nutritious food.



Stay in a separate room from other family members, but if not possible wear a medical mask and keep a distance of at least 1 meter (3 feet) from other people. Keep the room well-ventilated and if possible use a dedicated bathroom.



When coughing or sneezing, cover mouth and nose with flexed elbow or use disposable tissue and discard after use. If you experience difficulty breathing, call your health care facility immediately.



## Be **SAFE** from #coronavirus

if you are 60+ or if you have an underlying condition like:

-  Cardiovascular disease
-  Respiratory condition
-  Diabetes

by avoiding crowded areas or places where you might interact with people who are sick.

Learn more to Be **READY** for #COVID19:  
[www.who.int/COVID-19](http://www.who.int/COVID-19)

 UNITED NATIONS

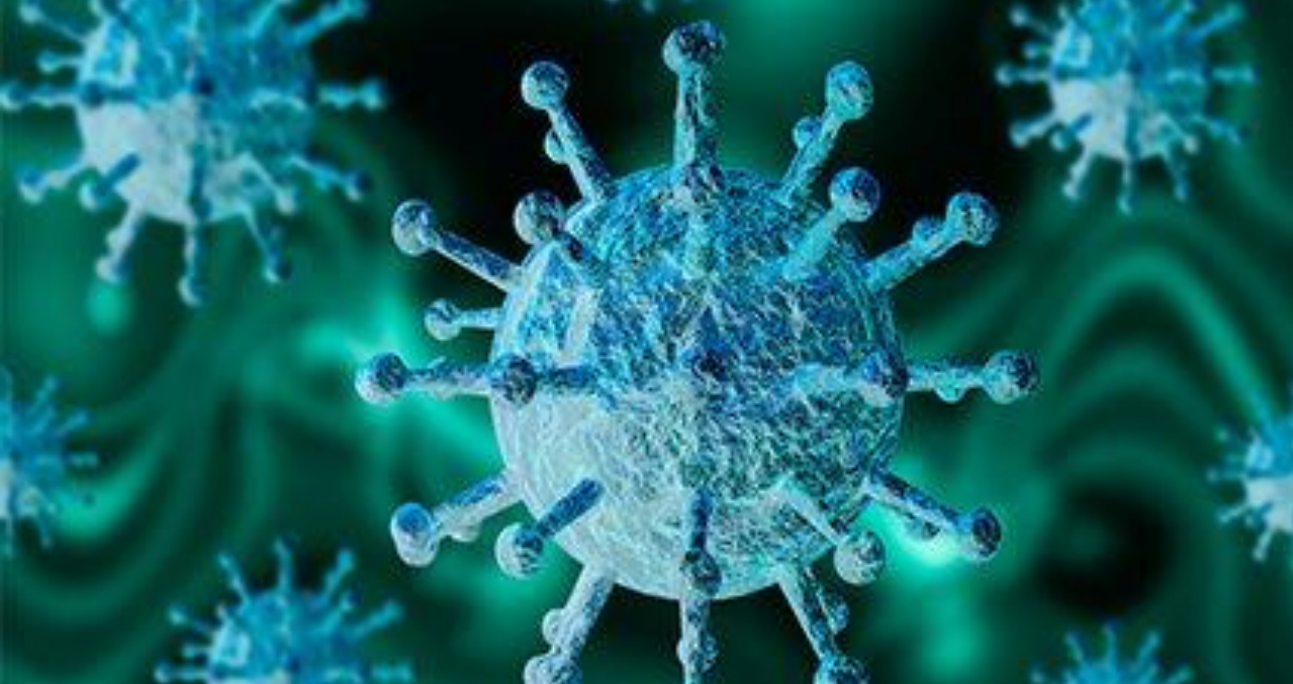
 World Health Organization



**Good health literacy has never been so important**

**SW face an added challenge**

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# Thank you



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Research Letter | Public Health

## Comparison of Readability of Official Public Health Information About COVID-19 on Websites of International Agencies and the Governments of 15 Countries

Vishala Mishra, MBBS; Joseph P. Dexter, PhD

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[+ Supplemental content](#)

Author affiliations and article information are listed at the end of this article.

# Functional literacy – the evidence

Literacy and health literacy must be considered when engaging patients

## PROSE SKILL LEVEL: SELECTED COUNTRIES AND AUSTRALIA - 2006

Country	Prose literacy level			
	Level 1	Level 2	Level 3	Level 4/5
	%	%	%	%
Australia	14.5	29.0	38.8	17.7
Bermuda	12.5	25.6	35.6	26.3
Canada	14.6	27.3	38.6	19.5
Italy	47.0	32.5	17.0	3.5
Norway	7.9	26.2	45.3	20.6
Switzerland	15.9	36.3	35.7	12.1
United States	20.0	32.6	34.6	12.8

**Trouble understanding bus timetable**

**Cannot understand weather map or summarise text**

**Trouble interpreting pie chart, or extracting information from pamphlet.  
Minimum level for coping**



# Teach questions, not answers: science literacy is a crucial skill

August 24, 2020 6.05am AEST

Updated August 24, 2020 10.08am AEST