HEALTH LITERACY AUDIT OF

NPS MEDICINEWISE CONSUMER RESOURCES

Report of findings and recommendations

December 2021 | v0.1

Acknowledgments

Thank you to the project team, consumer representatives who attended the workshops and other NPS MedicineWise staff for assessing the resources included in this audit and providing expert advice and input into the recommendations.

As a national organisation, NPS MedicineWise acknowledges the traditional owners of the lands across Australia and pay our respects to their Elders past and present. Our offices are located on the lands of the Gadigal people, the Wurundjeri people and the Ngunnawal people.

Contents

EXECUTIVE SUMMARY

This report is an internal document for use by NPS MedicineWise staff. It outlines the project objectives, process, findings, recommendations, and proposed implementation strategy.

NPS MedicineWise has the following grant agreement performance indicators related to health literacy:

▷ Consumer awareness of QUM shows consistent improvement over time

▷ Consumer health literacy shows consistent improvement over time.

This project aims to build upon previous work in the area by:

▷ systematically assessing existing NPS MedicineWise consumer content and resources to find out to what extent they contribute to building the health literacy of consumers and

▷ develop recommendations to guide the update and adaptation of existing content to better support health literacy, to identify content gaps, and to suggest resources that may no longer be fit for purpose.

Working in partnership with the Sydney Health Literacy Lab, there were three distinct phases to this project:

1. Gather and map resources: Identify currently available NPS MedicineWise consumer resources produced under the QUM Department of Health grant and map them to the QUM Health Literacy indicators identified through our previous work with Consumers Health Forum (CHF) and the National Consumer Survey (NCS). Web metrics and statistics were also gathered and mapped.

2. Refine and assess: Work with a discrete group of consumers and NPS MedicineWise staff to identify a sub-group of resources to perform a more in-depth health literacy assessment, using standardised tools. Information gathered during phase one was reviewed and used to support the choice of resources to include in the sub-group.

3. Review and recommend: Present and discuss the results of the in-depth assessments during a series of interactive workshops. Participants included 12 consumers (with a broad background of cultures, experiences, and levels of health system interaction) and 6 NPS MedicineWise staff. The aim of the workshops was to establish recommendations for what content is adapted, created and disinvested.

Findings

▷ There are few resources developed for key consumer audiences and communities at greatest risk of low health literacy

▷ One third of the health literacy indicators has less than 20% coverage across consumer content

▷ On average, NPS MedicineWise consumer content did not meet requirements for reading grade, complex language, or passive voice

▷ Overall, card stacks performed more poorly than other formats for readability, actionability and understandability

▷ There is room for significant improvement in readability (reading grade, complex language and passive voice), understandability (through the use of visual aids) and actionability (through the development of tangible tools).

Key Recommendations

The following recommendations have been established through the course of the project:

	Developing new content	Adapting existing content
Prioritise adaptation of card stacks to improve actionability, visual aids and readability		y
Consider the best way(s) to meet the information needs of communities at greatest risk of low health literacy	y	
Focus on increasing content on health literacy indicators with less than 20% coverage	y	y
All new content created must pass assessment using PEMAT and SHeLL editor	y	
Expand the diversity of images to represent Australian population including	y	y

Implementing Recommendations

These recommendations will be implemented by:

Activities	Performance Measures
Findings of the project will be disseminated widely across the organisation for gaps and opportunities to be considered within existing programs (e.g., Good Medicines Better Health and Topic selection processes) and new activities for 2022-23 workplans.	# staff attend information sessions
Updating 'priority 1 card stacks' between January and June 2022, as identified in *Schedule 7c: Digital Content workplan 2021-2022*. Update to priority 2 and 3 card stacks will be included into future workplans	# card stacks updated by June 2022 Approved workplans for future improvements
Adaptation of Promapp processes to include the use of SHeLL editor and PEMAT	Processes adapted
SHeLL and PEMAT will be added as an essential requirement to the sign off processes for developing new consumer content and recommended for new health professional content	Usage in sign off process
Staff training on the use of SHeLL editor and PEMAT will occur: ▷ initially through Consumer Engagement Champion training and all staff lunch n learn ▷ on an ongoing basis through staff indication and public training events hosted by Sydney Health Literacy Lab ▷ an ad hoc basis by the Consumer Engagement Lead where additional support is required.	# staff attend training sessions
Access to the SHeLL editor (free of charge) from January 2022 for a 12-month period	Usage of SHeLL Editor

INTRODUCTION

Objectives

This project primarily aims to:

▷ systematically assess currently available consumer content and resources developed by NPS MedicineWise, to find out to what extent they contribute to building the health literacy of consumers

▷ develop recommendations to guide the update and adaptation of existing content to better support health literacy, to identify content gaps, and to suggest resources that may no longer be fit for purpose.

Background

Health Literacy at NPS MedicineWise

Between July 2020 and June 2021 NPS MedicineWise completed three key pieces of work in relation to health literacy.

▷ Worked closely with Consumers Health Forum (CHF) on a research project that explored levels of consumer health literacy and activation as it relates to quality use of medicines. This research also recommended indicators for measuring health literacy as it relates to QUM and awareness of QUM (September 2020).

▷ Conducted (December 2020) an online National Consumer Survey (NCS) with a representative sample of consumers from the Australian population, to measure consumer awareness and understanding of quality use of medicines (QUM) and health literacy as it relates to QUM. The survey will be repeated at the end of this year to assess and identify trends.

▷ Developed an organisational Health literacy Implementation Strategy that outlines how NPS MedicineWise can contribute to building health literacy at 3 levels: individual level, organisational level and at a sector/ systems level.

To build on the results and findings of these three pieces of work, the NPS MedicineWise Consumer Advisory Group recommended a review of currently available NPS MedicineWise web-based resources to determine health literacy gaps and opportunities to improve of the content.

A workplan describing key steps and deliverables for a health literacy audit of consumer resources was prepared for inclusion within Schedule 7(c) Digital Content and approved by the Department of Health QUM branch on 29 June 2021. This included the involvement of researchers from the University of Sydney.

Partnership with Health Literacy Lab

The Health Literacy Lab (HLL) are a research group at the University of Sydney School of Public Health. Their mission is to build health literacy skills and capacities in the population and ensure the healthcare environment is sensitive to the needs of the whole community.

They have recently developed an online health literacy tool (SHeLL editor), that provides real-time feedback on how easy the selected text is to understand. In addition to providing a reading score, the editor also points out uncommon words, public health jargon (and give alternatives where available), passive voice, and use of acronyms.

The HLL provided NPS MedicineWise with free access to the SHeLL editor to support objective assessment of our consumer resources. Data gathered during the audit process with respect to readability, jargon, passive voice etc will be used by the HLL to evaluate the use of the Editor tool in 'real life'. It is anticipated that the findings of this evaluation will contribute to future publications produced by the HLL in collaboration with NPS MedicineWise.

AUDIT PROCESS

There are three distinct phases to this project:

1. Gather and map resources: Identify currently available NPS MedicineWise consumer resources produced under the QUM Department of Health grant and map them to the QUM Health Literacy indicators identified through our previous work with Consumers Health Forum (CHF) and the National Consumer Survey (NCS). Web metrics and statistics were also gathered and mapped.

2. Refine and assess: Work with a discrete group of consumers and NPS MedicineWise staff to identify a sub-group of resources to perform a more in-depth health literacy assessment, using standardised tools. Information gathered during phase one was reviewed and used to support the choice of resources to include in the sub-group.

3. Review and recommend: Present and discuss the results of the in-depth assessments during a series of interactive workshops. Participants included 12 consumers with a broad background of cultures, experiences and levels of health system interaction, and 6 NPS MedicineWise staff. The aim of the workshops was to establish recommendations for what content is adapted, created and disinvested.

Gather and Map NPS MedicineWise Consumer Resources

A search of the NPS MedicineWise website and You Tube channel was performed during July to identify consumer resources. These assets included web content, factsheets, patient action plans, patient decision aids and videos developed for social channels and the web site.

During August 2021, NPS MedicineWise staff mapped the identified consumer content according to the 25 health literacy indicators established through the CHF and NCS projects described previously. Web metrics and statistics were also collated and added to the database. It was anticipated that this information could support future discussions around the selection of assets for in-depth assessment. Appendix A provides a snapshot of the data collected with the full data available in this spreadsheet.

The types and role/function of these resources is outlined below. The colours also correspond to information presented in Appendix A.

Type	Role/ function of resource
Card stack	How most consumer information is presented on the NPS MedicineWise website. Multiple cards comprise a 'stack'. Information is delivered as packages of information – often using a question for each subheading. Navigation mimics the 'swiping' movement familiar to most users of digital mobile technology. The content in these cards is typically more 'evergreen' – that is – it is written to be available as a long-term information source. General criteria – maximum 200 words to a single card, include visuals, embedded links, typically no more than 10 cards in a stack.
Patient action plan (PAP)	Majority of PAPs are in editable pdf format. They can be downloaded by a health professional or consumer and saved to a computer or mobile device or be printed. Typically designed to be 2 A4 pages. The front page was traditionally written for the health professional to provide advice on how to incorporate the back page into shared decision making and agree actions with the consumer/patient. Information on the front page helps to guide conversations between the healthcare provider and their patient and can also be used as a reminder of what was discussed.

	The back page is designed to involve the patient in decisions about their health care goals and needs, and to encourage commitment regarding required or desired actions to support adherence between medical visits/consultations. The format and style of these resources has changed over the years and while still designed to facilitate a discussion between health professionals and consumers, they are more accessible to consumers without health professional intervention today than they were before.
Patient decision aid (PDA)	NPS MedicineWise has only produced a few PDAs. These resources are tools that help people become involved in health care decision making. They are designed to complement, rather than replace, counselling from a health practitioner. Key elements of PDAs are to: 1) explain clearly the decision that needs to be made 2) provide information about any options, the benefits and risks of these options 3) clarify personal values and preferences relating to the options available 4) support next steps for the patient regarding the decision.
Fact sheet	A pdf file that can be downloaded or printed. Summarises key information for a consumer on a particular topic that may be easier to access than 'looking up' a webpage. Pdfs can be easily shared with others. Often used as a discussion tool by health professionals who then can print or send to consumer/patient for future reference. Typically, 2 pages although they may be longer on occasion.
Miscellaneous pdf	For some programs, additional content has been made available for download. Also include 'one-off' products such as Medicines List.
Video	An alternative media format for delivering information. Can appeal to people with lower literacy levels, as fewer text words and fewer calls to action to retain. Can help to highlight key messages from other longer form products – such as card stacks. Also supports multimodal learning styles.
Social media	Very short videos embedded in Facebook, Twitter or other social medial applications. Often uses an emotional trigger to encourage interest and follow a call to action.

Refine and Select Resources for Additional Assessment

A workshop was held in August 2021 to discuss the results of the resource mapping. Participants included consumers, a representative from the Health Literacy Lab and NPS MedicineWise staff. The outcome of this workshop was to agree to a final subset of resources that would be used in the next phase of the audit project.

Resources were selected to meet as wide a range of parameters as possible, including:

▷ Developed for specific audiences and over a person's lifespan

▷ High, low number or range of indicators identified

▷ Topic of interest, either identified by NPS MedicineWise, Advisory Groups or external organisations

▷ High or low unique page views or a large difference between years

▷ High or low average time on page

▷ Created over a range of time periods

The resources selected for the in-depth health literacy assessment and the reason for selection are listed in Appendix B

Key criteria discussed during the workshop and used to inform the final selection of resources have been listed below, along with definition, purpose and potential limitations.

Criteria	Definition & purpose	Limitation(s)
Specific audience(s)	Highlight which resources have been developed for a specific audience e.g., Aboriginal and Torres Strait Islanders, Culturally and Linguistically Diverse (CALD) communities and Carers	
Health Literacy indicator	A measure of health literacy or awareness of QUM as identified in the CHF Consumer Health Literacy Segmentation research (see pages 33 & 34). Illustrates the number and range of health literacy indicators each resource (and collectively) contributes to.	▷ Manual review is a subjective assessment/ interpretation of content intent ▷ Not all indicators are relevant for each resource e.g., active ingredient for imaging/ medical tests
Unique Page views	How many people viewed a specific page during a single visit to the web site. This metric can help work out how 'popular' a page/resource is.	▷ Data only available for card stacks ▷ Page views are often highly dependent on marketing activities and budget
Average time on page	Average amount of time spent on a single page by all users.	▷ If someone keeps a page open in their browser but is not actively looking – this still contributes to time on page.

Criteria	Definition & purpose	Limitation(s)
	Can help to understand how users are engaging/interacting with our content.	▷ If a person only looks at a single page on the website – no time is recorded. This may mean this metric is underestimated.
		▷ Interpretation of average time can vary depending on complexity of information and level of interest
		▷ Data only available for card stacks
Entrances	Number of users began their session with a specific page. Entrance Paths give an important insight into how the websites landing pages are performing.	▷ Data only available for card stacks
		▷ Can be highly dependent on campaigns or promotion to drive people to that particular page.
Bounce rate	Percentage of single-page visits by visitors. It is calculated by dividing bounces into entrances.	▷ Data only available for card stacks
		▷ A high bounce rate is not necessarily a bad thing. People viewing the page could have found what they wanted and left. This measure should be used in conjunction with other metrics such as average time on page.
Unique Events	Interactions with content by a single user within a single session that can be tracked separately from pageviews. A way of measuring if users looked at/downloaded pdf content.	▷ Data only available for card stacks pdfs
		▷ Does not measure if the same user interacted with the resource multiple times in a single session – i.e., cannot tell us if they downloaded more than once.
		▷ No information about downloads or views from other sources such as clinical software, or other websites that have the pdf embedded.
Year created	The year the resource was first developed or published on our current content management system. Changes over time to process and format of development. Indicator for the level of consumer engagement through the process, with more recent resources having greater consumer input	▷ Some pdfs, factsheets, patient action plans were created earlier than the date included in the spreadsheet, but unable to find or confirm actual creation date.
		▷ Some Patient Action Plans come with a front page which is more tailored to Health Professionals to guide discussion. Newer resources are more consumer facing.
		▷ For videos, the year created represents the year it was uploaded to the NPS MedicineWise You Tube channel
Year updated	The year the content was last reviewed, and changes made to the resource. The content may have been created many years ago, however it has been maintained and updated based on new or emerging evidence.	▷ Multiple updates in between creation and latest version have not been recorded. Some updates may be for minor issues such as changed URLs or typos, other updates reflect more significant information change s- however the reasons are not recorded.

In-depth Health Literacy Assessment

The resources selected for the audit were assessed using The Patient Education Materials Assessment Tool (PEMAT) and SHeLL editor.

In September 2021 a group of five consumers were trained to use the PEMAT tool by Dr Julie Ayre (Health Literacy Lab, University of Sydney). Each consumer was assigned a set of resources, and each resource was assessed independently by two consumers. All discrepancies between assessors were identified and discussed to reach a consensus.

During September and October 2021, the Health Literacy Lab provided NPS MedicineWise staff with access to the SHeLL Editor to support assessment of the selected resources.

PEMAT assessment

The PEMAT assesses the usability and actionability of print and audio-visual patient education materials. It is a globally recognised, systematic method to evaluate and compare the *understandability* and *actionability* of patient education materials.

▷ **Understandability**: Patient education materials are understandable when consumers of diverse backgrounds and varying levels of health literacy can process and explain key messages.

▷ **Actionability**: Patient education materials are actionable when consumers of diverse backgrounds and varying levels of health literacy can identify what to do based on the information presented.

The PEMAT does not assess accuracy or comprehensiveness or perform readability tests. For example, a material could be very understandable but contain inaccurate information. It should be supplemented with additional assessments e.g., readability tests.

The results from the PEMAT assessment can be found in Appendix C and the full assessment can be found at Asset assessment.xlsx.

SHeLL editor

The SHeLL Editor has been developed by the Health Literacy Lab (University of Sydney) to support development of easy-to-understand health materials. Key elements assessed by the Editor include:

▷ **Readability scores**: how easy the text is to read and understand. This is often presented as a 'grade reading score'. A lower grade reading score means the text is easier to read.

▷ **Complex language**: identifies words that are uncommon in English, and words with public health thesaurus entries. Some complex language is inevitable in health information.

▷ **Passive voice**: text is easier to understand and act on when we use active voice.

The results of the SHeLL editor assessment can be found in Appendix C and the full summaries can be found at
https://npsmedicinewise.sharepoint.com/:f:/r/ws/c/ConsumerQUMEActivity/Docs/Health%20Literacy%20Audit/SHeLL%20editor%20results?csf=1&web=1&e=vDodzo.

Review and Recommend

In October and November 2021, workshops were conducted to collect consumer-led guidance:

▷ on health literacy gaps identified in phase 1 of this project and actions that NPS MedicineWise could take to address these

▷ on opportunities to adapt existing resources that had lower actionability and readability according to PEMAT and SHeLL Editor data obtained during phase 2.

▷ on content change priorities including possible dis-investment of some content (subject to further discussion with the Department)

Information and guidance gathered during the October and November workshops has been summarised in the next section Gaps and Opportunities.

Audit project recommendation

All new content created must pass assessment using PEMAT and SHeLL editor.

GAPS AND OPPORTUNITIES

Audiences

Aboriginal and Torres Strait Islander Communities

Only one resource specifically designed for Aboriginal and Torres Strait Islanders was identified during the audit - *About depression medicines – what you need to know about your antidepressant.*

The following topics were identified in the workshop by First Nations participants, as those of greatest interest for this community group:

General QUM information:

▷ Making wise choices of medicines

▷ Keeping medicines safe (e.g. storage)

▷ Managing medicines

▷ Keeping medicine costs down

▷ Closing the gap subsidy information

▷ How to give medicines to children

▷ Medicines List

▷ Understanding medical tests (there is much anxiety regarding long distance travel and leaving country)

▷ Questions to ask your doctor/ HP

▷ Medicines and alcohol (expand to other drugs)

Condition specific:

▷ Treating my child's pain/ fever

▷ Pain and opioids

▷ Depression and anxiety

▷ Heart Health (understanding blood pressure)

▷ COVID-19 (dispel myths and increase immunisation rates)

▷ Coughs/ colds and earaches (earache very prevalent in Aboriginal communities)

▷ Asthma

▷ Type 2 diabetes (lifestyle changes/ choices/ traditional medicines

Additional resources for Aboriginal and Torres Strait Islander people are currently being developed as part of the QUM grant funded Good Medicine Better Health (GMBH) project. A Medicines List created specifically to support conversations and curation of information between First Nations healthcare providers and their patients is now available. An additional 8 consumer resources will be developed by as part of the GMBH project by end of June 2021, covering topics such as heart health, depression and quality use of medicine.

In addition, the next upcoming national education program has been approved as Chronic Kidney Disease, which disproportionately affects this community group, therefore it is expected that this program will provide opportunities for culturally appropriate materials to be co-designed with consumers.

Culturally and Linguistically Diverse Communities

Only two resources were identified as available in other languages:

▷ Active ingredient prescribing: all you need to know (translated into 10 languages)

▷ 5 questions to ask your doctor or other health care provider before you get any test, treatment or procedure (translated into 12 languages)

Medicines Lists (in 10 languages) and two other non-grant funded translated resources are also available:

▷ Antibiotics: the facts (3 languages)

▷ Codeine availability (9 languages)

Opportunities for NPS MedicineWise to develop content specific to the needs and culture of CALD communities was discussed during the workshops. Three potential methods considered worth further exploration were:

- ▷ adding a standard tagline on NPS MedicineWise content promoting the [Translating and Interpreting Service](#) (TIS) and [National Relay Service](#) (NRS).
- ▷ development of condition specific content within national education programs, by funding grassroots community groups to design, develop and implement strategies tailored to the needs of their community
- ▷ working in partnership with key stakeholder organisations e.g., Federation of Ethnic Communities' Councils of Australia (FECCA) to identify key QUM issues and co-design materials accordingly.

Other audiences

Consumer participants identified a range of other audiences with health needs who could benefit from NPS MedicineWise content:

- ▷ Intellectual and physical disabilities: NPS MedicineWise web content is currently developed to comply with AA accessibility standards. An audit of 'old' content was conducted in 2017 to identify resources that do not comply. Since this time, some resources have been updated and made accessible where required, however another audit is due.
- ▷ Low literacy levels: Low socioeconomic status, low education levels, low literacy levels, and low health literacy are interrelated, and have an independent and cumulative impact on health outcomes. Education materials designed for people with low literacy levels are recommended to have a reading grade of 6 (in comparison to reading grade 8 for the mainstream population).
- ▷ Low digital access: According to the [Australian Digital Inclusion Index](#) (2021), 1 in 4 people in Australia are still digitally excluded. People with low levels of income, education and employment, those living in some regional areas, people aged over 65 and people with a disability are at particular risk of being left behind.

Our targeted content is currently limited for these audiences, it therefore provides an opportunity to do some additional work (with key community stakeholders) to understand areas of greatest need and information preferences.

Audit project recommendation

Consider the best way(s) to meet the information needs of communities at greatest risk of low health literacy including:

- ▷ Aboriginal and Torres Strait Islanders
- ▷ Culturally and Linguistically Diverse (CALD) communities
- ▷ Older people
- ▷ Low income, low SES and/ or low education levels

Health Literacy Indicators

The project team analysed all QUM grant funded consumer directed content on the NPS MedicineWise website against the 25 health literacy indicators developed from the CHF and NCS projects. A colour-coded map showing the variation in indicator coverage was provided to participants during the phase 3 workshops.

The table below explains the thresholds used to determine level of coverage for each indicator.

Domain	50% or more coverage	21 - 49% coverage	20% or less coverage
Individual health literacy	Asking questions when more information is needed (52%)	Discuss complimentary/ OTC medicines with doctor (31%) Search for information about health and medicines (49%)	Cost of medicines (15%)
Understanding of QUM		Interactions with other medicines (food/ drink) (29%) Medicines have benefits and risks (49%)	Medicines can be addictive (15%) Storage (6%) and disposal (5%) Taking out of date medicine (1%) Sharing medicines (5%)
Attitude towards HPs role	Ask doctor or a pharmacist questions (67%) Talk to doctor/ pharmacist before starting new medicine (59%) Deciding with your doctor which treatment is best (50%)	Look for information about health conditions, medicines or medical tests to prepare for the visit (31%)	One consistent doctor or pharmacist to talk to about their medicines (3%)
Reading medicine information	Side effects (58%)	Active ingredients in the medication (34%) What the medication is used for (27%) Pharmacist instructions/ directions for use (23%) Dosage of the medication (41%)	Read warning or allergy information (16%)

| Information sources | | Medicine information leaflet (24%) | |
| | | Telephone information service (33%) | |

Audit project recommendation

Focus on increasing content on health literacy indicators with less than 20% coverage:

▷ Cost of medicines

▷ Medicines can be addictive

▷ Safe storage

▷ Disposal of unwanted medicines

▷ Review of expiry dates

▷ Sharing of medicines

▷ Promotion of one consistent doctor or pharmacist to talk to about their medicines

▷ Reading warning or allergy information on a medicine

Diversity of Images

Our society is more diverse than ever:

▷ Nearly half of Australians are born overseas or one or both parents was born overseas (ABS 2016)

▷ There are currently 2.65 million unpaid carers in Australia (Carers Australia)

▷ Every night, more than 116,000 people in Australia experience homelessness (Mission Australia)

▷ More than 4 million people in Australia have disability (AIHW 2020)

▷ Nearly 30% of the population live outside major cities (AIHW 2019)

▷ Almost one household in four is a lone person household (ABS 2016)

▷ 2 million low-income households, with the average disposable income of $558 per week (ABS 2019)

Diversity is about what makes a person unique and includes identity, life experience and beliefs. While the imagery of our content wasn't specifically assessed, it was noted by consumers to be limited with respect to diversity. It was acknowledged that access to diverse imagery (through images libraries etc) remains limited. Workshop participants encouraged NPS MedicineWise to explore other ways to portray the diversity of people explaining that it is important to provide visual representation of a wider range of Australians, while avoiding using stereotypical images and promoting unconscious biases.

Audit project recommendation

Expand the diversity of images to represent Australian population including:

▷ Setting & geographic location   ▷ Ability/ disability   ▷ Age and life stage

▷ Gender   ▷ Cultural & ethnic background   ▷ Economic circumstances

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Patient Journey

A range of resources targeted at different life stages were identified, including:

▷ Medicines in pregnancy and during breastfeeding

▷ Information for parents

▷ Caring for a loved one

However, there are other key life events/ milestones or important moments in a 'patient journey' that may make it easier for consumers to find relevant information and learn health literacy skills, such as:

Life events/ milestones

▷ School

▷ Starting contraception

▷ Moving out of home

▷ Migrating to Australia

Patient journey

▷ disease prevention

▷ diagnosis

▷ starting a new treatment/ medicine

▷ troubleshooting

▷ maintenance

▷ relapse/ progression getting better/ ending treatment

▷ moving into residential care

▷ moving from paediatric to adult healthcare services

▷ being admitted or discharged from hospital

Audit project recommendation

Develop content related to key life events/ milestones or important moments in a patient journey.

IN-DEPTH HEALTH LITERACY ASSESSMENT RESULTS

A full analysis of the results from PEMAT and SHeLL editor can be found in Appendix C.

The table below provides the average, lower limit, upper limit and target for readability, actionability and understandability of NPS MedicineWise consumer content. Overall, our content does not meet readability standards.

	Reading grade	Complex language (%)	Passive voice	Actionability (%)	Understandability (%)
Average	11.6	19.5	12.7	73.9	85.5
Lower limit	7	7.6	0	40	46
Upper limit	15	31	81	100	100
Target	**8 or less**	**<15%**	**1 or less**	**>70%**	**>70%**

The results were analysed and compared against the following criteria:

▷ Unique page views (high v low v large difference between page views 2019-20 and 2020-21)

▷ Average time on page (high v low v medium)

▷ Year created/ updated (old v new v old but recently updated)

▷ Number of health literacy indicators (high v low)

▷ Format (card stack v factsheet v patient action plan, v video v other format)

There were no substantial differences in health literacy assessment results for all criteria, except for format.

The table below provides the average, lower limit and upper limit for readability, actionability and understandability of card stacks compared with resources of other formats.

Overall, card stacks performed more poorly than other formats for readability, actionability and understandability.

	Reading Grade		Complex Language (%)		Passive Voice		Actionability (%)		Understandability (%)	
	Card stack	Other format	Card stack	Other format	Card stack	Other format	Card stack	Other format	Card stack	Other format
Average	12.6	10.5	21.3	17.3	16.6	7.8	61.4	89	81.6	90
Lower limit	10	7	10.9	7.6	0	0	40	60	57	46
Upper limit	15	15	31	26.9	81	74	80	100	100	100

Readability

Full readability assessment for each resource can be found at

To make the grade reading score lower:

▷ Use shorter sentences: Aim for fewer than 20 words per sentence.

▷ Use shorter words: Pay close attention to words that contain more than 3 syllables.

▷ Use dot points: to break information down

Some complex language is inevitable in health information. To reduce language complexity:

▷ Avoid medical terms and acronyms where possible. When you do use medical terms, always define them first. Always spell out acronyms the first time they are used.

▷ Some words may not be medical terms but are uncommon in English. Where possible the editor will try to provide simpler alternatives.

Text is easier to understand and act on when we use active voice. To change a sentence from passive voice to active voice, you need to:

▷ Identify who or what did the action (the agent). Sometimes this is not stated in the text. Add 'by the…' to help identify the agent

▷ Start the sentence with the agent. In the active voice the 'by the…' no longer works!

▷ Sometimes the whole sentence may need to change, not just the part that is passive.

Examples:

Passive voice	Agent (who/what did the action)	Active voice
The results will be given to you by the doctor	The doctor	The doctor will give you your results.
The test will be ordered.	Not stated. In this case, let's say it was the doctor	The doctor will order the test.
The medicine was being delivered to the patient	Not stated. In this case, let's say it was the doctor	The doctor was delivering the medicine to the patient
A prescription will be given to you by your doctor at the next appointment.	The doctor	Your doctor will give you a prescription at your next appointment.

Actionability

There are seven items related to actionability in the Patient Education Materials Assessment Tool (PEMAT)

▷ Item 20: The material clearly identifies at least one action the user can take.

▷ Item 21: The material addresses the user directly when describing actions.

▷ Item 22: The material breaks down any action into manageable, explicit steps.

▷ Item 23: The material provides a tangible tool whenever it could help the user take action.

▷ Item 24: The material provides simple instructions or examples of how to perform calculations.

▷ Item 25: The material explains how to use the charts, graphs, tables, or diagrams to take actions.

▷ Item 26: The material uses visual aids whenever they could make it easier to act on the instructions.

The table below outlines how each card stack performed against each of the criteria.

Agree	N/A	Disagree

	20	21	22	23	24	25	26
Complementary medicines explained	1	1	1	0	99	99	0
Understanding drug interactions	1	1	1	0	99	99	0
Buying medicines over the internet	1	1	1	1	99	99	0
Active ingredient prescribing: All you need to know	1	1	1	0	99	99	0
Understanding medical tests	1	1	1	0	99	99	0
Taking medicines in pregnancy	1	1	1	0	99	99	0
Medicines for pain relief: what are the options?	1	1	0	0	99	99	0
Treating my child's pain or fever – paracetamol or ibuprofen?	1	1	0	0	0	99	0
Antidepressants: 10 things you need to know	1	1	1	0	99	99	0
Antibiotics explained	1	1	1	0	99	99	0
COVID-19 and you	1	1	1	0	99	99	0
Managing hay fever	1	1	1	0	99	99	0
Making wise choices about medicines	1	1	1	0	99	99	0
Consumer Medicines information (CMI) explained	1	1	1	1	99	0	0
Finding good information about medicines	1	1	1	0	0	99	0
Keeping your medicine costs down	1	1	1	0	99	99	0
Imaging and children	1	1	1	0	99	99	0
Keeping a medicines list	1	1	1	0	99	99	1
Managing migraine	1	1	1	0	99	99	0
Anxiety disorders: what you need to know	1	1	1	0	99	99	1
Understanding blood pressure	1	1	1	0	99	99	1
What every parent should know about coughs, colds, earaches and sore throats	1	1	1	0	99	99	0
Vaccines and immunisation	1	1	1	0	99	99	1
Managing osteoporosis	1	1	0	0	99	99	0

Areas of success

▷ Item 20: Clearly identify at least one action the user can take e.g. Be active longer each time. If you are walking 3 days a week for 30 minutes, try walking for an additional 10 minutes or more each day.

▷ Item 21: Addresses the user directly when describing actions e.g. You can find common cold medicines at the pharmacy.

▷ Item 22: breaks down any action into manageable, explicit steps e.g. exercise regularly:

− Start by doing at least 10 minutes of physical activity at least 3 times a week. For example, you could walk the dog, take a walk at lunch, get off the bus one stop early and walk, or use the stairs instead of taking the elevator.

− Increase the number of minutes and the number of times you do your physical activity. Gradually work your way up to getting 2½ hours of exercise over the course of a week.

− While you are increasing the amount of time you spend exercising, start making some of your activities more demanding, such as aerobic dancing, bicycling, or jogging.

Areas for improvement

▷ Item 23: provide a tangible tool (e.g., menu planners, checklists) whenever it could help the user take action

▷ Item 24: Provide simple instructions or examples of how to perform calculations

▷ Item 25: Explain how to use the charts, graphs, tables, or diagrams to take actions

▷ Item 26: use visual aids whenever they could make it easier to act on the instructions e.g., picture showing how to use a metered dose inhaler
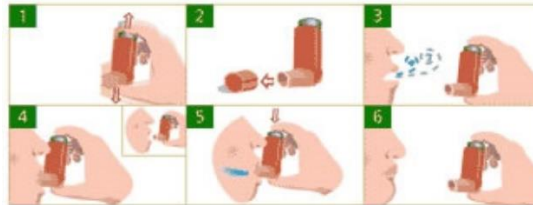
Understandability

Understandability is made up of the following areas:

▷ Content

▷ Word choice and style

▷ Terms

▷ Numbers

▷ Organisation

▷ Layout and design

▷ Key points

▷ Visual aids

The review highlighted the following improvements:

▷ Make the purpose of the completely evident by:

  – using a title or upfront text that clearly tells you at a glance what the material is about

  – not using a generic statement (e.g., this material will help you be informed about your condition)

▷ Focus on content that is relevant to its purpose, and no information distracts or detracts from the material's purpose. Only essential information is included; extra information is left out so as not to overwhelm the audience with too much or unnecessary content.

▷ Break or "chunk" information into short sections to prevent information overload and to make the content easier to understand. Similarly, longer lists need to be broken into smaller chunks as well.

▷ Provide a summary of the key points or review the key points at the end of the material, either in writing or orally. A checklist of key points (or steps) can also be considered a summary.

Visual aids

There are an additional 5 items related to visual aids in the Patient Education Materials Assessment Tool (PEMAT).

▷ Item 15: The material uses visual aids whenever they could make content more easily understood (e.g., illustration of healthy portion size)

▷ Item 16: The material's visual aids reinforce rather than distract from the content

▷ Item 17: The material's visual aids have clear titles or captions

▷ Item 18: The material uses illustrations and photographs that are clear and uncluttered

▷ Item 19: The material uses simple tables with short and clear row and column headings

The table below outlines how each card stack performed against each of the criteria.

Agree	N/A	Disagree

	15	16	17	18	19
Complementary medicines explained	0	99	99	1	99
Understanding drug interactions	0	99	99	1	1
Buying medicines over the internet	0	99	99	1	99
Active ingredient prescribing: All you need to know	0	99	99	1	99
Understanding medical tests	0	99	99	1	99
Taking medicines in pregnancy	0	99	99	1	99
Medicines for pain relief: what are the options?	0	99	99	1	99
Treating my child's pain or fever – paracetamol or ibuprofen?	0	99	99	1	99
Antidepressants: 10 things you need to know	0	99	99	1	99
Antibiotics explained	0	99	99	1	99
COVID-19 and you	0	99	99	1	99
Managing hay fever	0	99	99	1	99
Making wise choices about medicines	0	99	99	99	99
Consumer Medicines information (CMI) explained	1	1	1	1	99
Finding good information about medicines	1	1	1	0	99
Keeping your medicine costs down	0	99	99	99	99
Imaging and children	0	99	99	99	99
Keeping a medicines list	1	1	1	1	99
Managing migraine	0	99	99	99	99
Anxiety disorders: what you need to know	0	0	99	1	99
Understanding blood pressure	1	1	1	1	99
What every parent should know about coughs, colds, earaches and sore throats	1	99	99	1	99
Vaccines and immunisation	1	1	1	1	99
Managing osteoporosis	0	99	99	99	99

Areas of success

When we do include an image/ illustration/ tables it:

▷ usually reinforces rather than distracts from the content e.g., the following visual aid reinforces the content by illustrating levels of activity
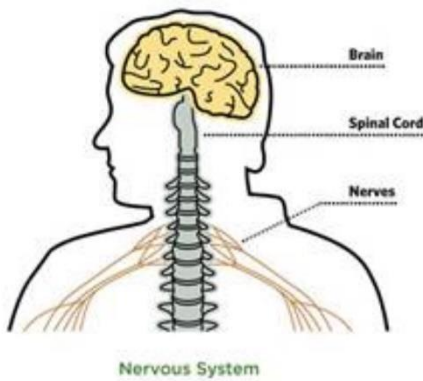
▷ has clear title and caption(s) e.g.,

Clean your baby's teeth with a clean, soft cloth or a baby toothbrush

▷ is clear and uncluttered e.g.,

▷ uses short and clear row and column headings

Nervous System

Areas for improvement

▷ Item 15: Use visual aids whenever they could make content more easily understood (e.g., illustration of healthy portion size)

Audit project recommendation

Prioritise adaptation of card stacks to improve actionability, visual aids and readability

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IMPLEMENTING RECOMMENDATIONS

Disseminating Findings and Recommendations

The gaps and opportunities identified in this project (i.e., audiences, health literacy indicators, diversity of images and patient journey) has broad implications for existing and future activities including:

▷ Topic Selection and development of resources within National Education Programs

▷ Good Medicines Better Health program

▷ Media and communications

Findings and recommendations will be disseminated through staff communication channels such as:

▷ Latest News

▷ Lunch n learn or other training sessions

▷ Team and project meetings

Prioritising Card Stacks for Adaptation

The table below outlines the card stacks which have been prioritised for adaptation, based on their performance according to readability, understandability and actionability.

Priority 1 card stacks will be updated between January and June 2022, as noted in *Schedule 7c: Digital Content workplan 2021-2022*.

Updating card stacks, identified as priority 2 and 3, will be included into future workplans (FY2022-23 and beyond).

	Actionability	Understandability	Reading grade	% complex language	Passive voice	Identified gap/ need
Priority 1 – to be updated January – June 2022						
Finding good information about medicines	Very low					Yes – HLL & CIAG
Active ingredient prescribing: All you need to know	Very low	Very low	Very high			Yes - NCS
Keeping your medicine costs down	Very low		Very high		Very high	Yes – NCS & GMBHAG
Treating my child's pain or fever – paracetamol or ibuprofen?	Lowest	Lowest	Highest	Very high		
Medicines for pain relief: what are the options?	Lowest	Lowest		Highest	Very high	
Antidepressants: 10 things you need to know	Very low	Very low	Very high			Yes – upcoming NPS program
Anxiety disorders					Very high	Yes – upcoming NPS program
Medicines in pregnancy	Very low					Common enquiry to Medicines Line
Priority 2						
Buying medicines over the internet						Internet shopping has exploded since COVID-19
COVID-19 and you	Very low					Topic identified in August workshop

Complementary medicines explained	Very low	Very low	Very high			
Antibiotics explained	Very low		Very high	Highest		
Understanding drug interactions	Very low		Very high			
Vaccines and immunisation				Highest	Highest	
Making wise choices about medicines	Very low					
Understanding medical tests	Very low					
Priority 3						
Managing migraine	Very low			Very high	Very high	Topic identified in August workshop
Managing osteoporosis	Lowest					Topic identified in August workshop
Managing hay fever	Very low			Highest		
What every parent should know about coughs, colds earaches and sore throats	Very low				Very high	
CMI explained					Very high	
Imaging and children	Very low				Very high	
Amitriptyline for nerve pain	Very low					

More detail of how each of the priority 1 card stacks can be adapted to better meet health literacy indicators and health literacy measures, can be found in Appendix D.

Processes for Developing Content

There are three processes in Promapp related to content development:

▷ Conduct internal product review

▷ Write product content

▷ Scope product

These processes will be reviewed and updated as required to include the use of SHeLL editor and PEMAT.

A product 'sign off sheet' is used prior to the launch of new content. Health literacy measures (readability, actionability and understandability) will be added as an essential requirement to the sign off processes for developing new consumer content and recommended for new health professional content.

Staff Training

Training on the use of SHeLL editor and PEMAT to a broad range of staff is essential.

Three levels of training and support will be provided:

- ▷ Initial training (January 2022):
  - In-depth health literacy training will be delivered to Consumer Engagement Champions
  - All staff lunch n learn to raise awareness of health literacy and provide an introduction to SHeLL editor and PEMAT
- ▷ Ongoing training through:
  - staff induction
  - public training events hosted by Sydney Health Literacy Lab
  - Consumer Engagement Lead support where required.

Access to the SHeLL Editor

The Health Literacy Lab anticipate the SHeLL editor will be available to NPS MedicineWise staff from end January 2022.

It is currently free of charge; however, it is expected that access will be require a fee in the future. It is not yet known the potential fee, although the cost will be integrated into relevant future workplans.

APPENDIX A

The figure below is a screen shot of the spreadsheet mapping consumer content to the Health Literacy Indicators. View the spreadsheet at Mapping consumer content to HL indicators.xlsx

HEALTH LITERACY INDICATORS

APPENDIX B

The table below identifies resources selected for in-depth health literacy assessment with The Patient Education Materials Assessment Tool (PEMAT) and SHeLL editor. The assessment provided data on usability, understandability and readability,

General Quality use of Medicines

1.	Complementary medicines explained	Card stack	One of only a limited number of card stacks that focuses on non-prescription medicines (over the counter and complementary medicines)
2.	Making wise choices about medicines	Card stack	Large difference between unique page views 2019-2020 and 2020-2021
3.	Understanding drug interactions	Card stack	Bottom 5 on unique page views Created 2017 and updated in 2021
4.	Consumer Medicines information (CMI) explained	Card stack	Bottom 5 on unique page views in 2020-2021
5.	Buying medicines over the internet	Card stack	Internet shopping has exploded since COVID-19 and multiple lockdowns with public health restrictions
6.	Finding good information about medicines	Card stack	An area of need/ gap identified by Health Literacy Lab and members of the NPS MedicineWise Clinical Interventions Advisory Group
7.	Active ingredient prescribing: All you need to know	Card stack	Active ingredient is an area that scored low in the National Consumer Survey (2020). There have also been recent changes to active ingredient prescribing that directly impact consumers Resource translated into 10 languages Miscellaneous Pdf format and recently updated

General Quality use of Medicines

8.	Keeping your medicine costs down	Card stack	According to National Consumer Survey (2020), Aboriginal or Torres Strait Islander respondents were more likely to have to forgo buying medicines they need due to the cost compared with other consumer respondents
			Large changes in average time on page between 2019-2020 and 2020-2021
			Created 2017 (therefore quite old) but updated recently in March 2021
9.	Understanding medical tests	Card stack	Bottom 5 on unique page views for a card stack
10.	Imaging and children	Card stack	Bottom 5 on unique page views for a card stack in both 2019-2020 and 2020-2021
11.	Taking medicines in pregnancy	Card stack	Bottom 5 on unique page views for a card stack, despite common enquiry through Medicines Line
			Information relevant to different life stages
12.	Keeping a medicines list	Card stack	Topic of interest identified by workshop participants
			Medicines List is a flagship NPS MedicineWise product
13.	5 questions to ask your doctor or other health care provider	Fact sheet	Flagship Choosing Wisely consumer resource
			Resource translated into multiple languages. According to National Consumer Survey (2020), Culturally and Linguistically Diverse populations appear less confident asking a doctor or other health practitioner questions.
14.	Times really have changed	Social media	Choosing Wisely
15.	Medicines come with both risks and benefits	Social media	Links directly to a card stack that meets a large proportion of health literacy indicators
			Risks and benefits health literacy indicator (column O) is in the majority of resources produced by NPS MedicineWise
16.	Don't don't, double double, dose dose. Know your active ingredient	Social media	Links directly to a card stack that meets a large proportion of health literacy indicators
			Active ingredient is a core QUM principle and assessed low in National Consumer Survey (2020)

General Quality use of Medicines

17.	Medicines and heat	Social media	Limited/ minimal resources that meet Health Literacy indicator on storage (column K)
18.	Does your medicine cabinet spark joy?	Social media	Limited/ minimal resources that meet this Health Literacy indicator on storage and out of date medicines (columns O and M)
19.	What happens when two pills go on a blind date	Social media	Video is in a different style to others selected (humorous)
20.	Giving medicines to kids: Tips from a nurse	Video	Extremely high unique events – 58k views since published in 2019

Pain and pain medicines

21.	Medicines for pain relief: what are the options?	Card stack	Top 5 card stacks for unique page views
22.	Amitriptyline for nerve pain	Card stack	Highest unique page views Top 5 card stacks (27k)
23.	Managing migraine	Card stack	Topic of interest identified by workshop participants
24.	Treating my child's pain or fever – paracetamol or ibuprofen?	Card stack	Topic of interest identified by workshop participants
25.	Low back pain - do you need a scan?	Fact sheet	Language simpler than in other resources
26.	Managing pain and opioid medicines	Patient action plan	Choosing Wisely resource
			Meets a large proportion of health literacy indicators and an area of ongoing activity for NPS MedicineWise
			Aimed at different setting (hospital). Adapted by multiple external organisations
			Extensive stakeholder and consumer input into the design and development of the resource.
27.	Information about opioids and chronic non-cancer pain	Video	Recently developed
			Extensive stakeholder and consumer input into the design and development of the resource.
			Organisational priority to continue working in

Depression and anxiety

General Quality use of Medicines

28.	Anxiety disorders: what you need to know	Card stack	Large difference between unique page views 2019-2020 and 2020-2021
29.	Antidepressants: 10 things you need to know	Card stack	Large difference between unique page views 2019-2020 and 2020-2021
30.	About depression medicines - what you need to know about your antidepressant	Fact sheet	Resource aimed at Aboriginal and Torres Strait Islanders
31.	Treating anxiety disorders: what are the options?	Patient decision aid	Format/ type of resource Topic of interest to upcoming therapeutic program – Psychotropics in younger people

Heart Health

32.	Understanding blood pressure	Card stack	Top 5 card stacks for unique page views
33.	Heart Failure what you need to know	Fact sheet	Developed recently with extensive stakeholder and consumer input into the design and development
34.	Staying on track with your statin	Patient action plan	Created in 2017, this resource is in an older design and format
35.	Blood pressure: Managing high blood pressure	Video	Developed a long time ago – 2015. Low number of unique events

Antibiotic Resistance

36.	Antibiotics explained	Card stack	Top 5 card stacks for unique page views
37.	What every parent should know about coughs, colds, earaches and sore throats	Card stack	Bottom 5 on unique page views for a card stack in 2020-2021 and significant change in average time on page between 2019 – 2020 and 2020-2021 Content aimed at different life stages and carers/ parents

COVID-19 and vaccines

38.	Vaccines and immunisation	Card stack	Topic of interest identified by workshop participants

General Quality use of Medicines

39.	COVID-19 and you	Card stack	Topic of interest identified by workshop participants

Asthma and Chronic Obstructive Pulmonary Disease (COPD)

40.	An introduction to managing asthma and wheeze in children	Fact sheet	Language is simpler than in other resources

Dementia

41.	Medicines & Dementia: Tips for good medicines management	Fact sheet	Organisational priority to continue working in new settings e.g. age care and therefore this content it likely to have a long shelf life
42.	Medicines & Dementia	Booklet	Format/ type of resource Organisational priority to continue working in new settings e.g. age care and therefore this content it likely to have a long shelf life
43.	Dementia and changed behaviours: A plan for you and your carers	Diary	Format/ type of resource Organisational priority to continue working in new settings e.g. age care and therefore this content it likely to have a long shelf life

Bone Health

44.	Managing osteoporosis	Card stack	Few Health Literacy linked to this resource Topic of interest identified by workshop participants
45.	Bone Health Action plan	Patient action plan	Created in 2015, this is one of the oldest resources still in circulation. It is also designed in the old format as a 'Symptomatic Management Pad'

Other topics

46.	Managing Hay fever	Card stack	Large difference between unique page views 2019-2020 and 2020-2021 Signs and symptoms very similar to COVID-19

General Quality use of Medicines

47.	Discussing acute ankle and knee injuries	Patient action plan	Format/ type of resource
			No Health Literacy indicators mapped to this resource
48.	Lifestyle and metformin for type 2 diabetes	Patient decision aid	Format/ type of resource
49.	Medicinal cannabis: What would you like to know?	Miscellaneous Pdf	Format/ type of resource

APPENDIX C

The table below provides the scores from PEMAT and SHeLL editor for understandability, actionability and readability. Scores have been colour coded according to the following key:

	Understandability	Actionability	Reading Grade	% complex language	Passive voice
Good	>70%	>70%	≤8	0-14.9%	1
OK			9-10	15-24.9%	2-4
Poor	<70%	<70%	≥11	≥25%	≥5

Name of Resource	Type of resource	PEMAT tool (%)										SHeLL editor		
		Overall understandability	Content	Word choice & style	Terms	Numbers	Organisation	Layout & design	Key points	Visual aids	Overall actionability	Reading Grade	% complex language	Passive voice
General Quality use of Medicines														
Complementary medicines explained	Card stack	69	50	100	100	100	50	100		50	60	14	27	11
Making wise choices about medicines	Card stack	92	100	100	100	100	100	100		0	60	12	13.7	10
Understanding drug interactions	Card stack	73	100	100	100	50	50	100		67	60	14	19.4	14
Consumer Medicines information (CMI) explained	Card stack	94	100	100	100	100	75	100		100	67	13	22.3	23
Buying medicines over the internet	Card stack	86	100	100	100	100	75	100		50	80	13	19.6	8
Finding good information about medicines	Card stack	81	50	100	100	100	75	100		75	50	13	18.4	15
Active ingredient prescribing: All you need to know	Card stack	69	50	100	100	100	50	100		50	60	14	17.7	19
Keeping your medicine costs down	Card stack	85	100	100	100	100	75	100		0	60	14	16.9	27
Understanding medical tests	Card stack	85	100	100	100	100	75	100		50	60	11	17.1	2
Imaging and children	Card stack	85	100	100	100	100	75	100		0	60	13	19.7	23
Taking medicines in pregnancy	Card stack	92	100	100	100	100	100	100		50	60	13	15.8	11
Keeping a medicines list	Card stack	93	100	50	100	100	100	100		100	80	11	10.9	1
5 questions to ask your doctor or other health care provider	Fact sheet	85	100	100	100	100	75	100		0	80	12	24.2	4
Times really have changed	Social media	100	100	100	100		100		100		100	8	8.1	0
Risks and benefits	Social media	100	100	100	100		100		100	100	100	8	13.8	0

Name of Resource	Type of resource	PEMAT tool (%)										SHeLL editor		
		Overall understandability	Content	Word choice & style	Terms	Numbers	Organisation	Layout & design	Key points	Visual aids	Overall actionability	Reading Grade	% complex language	Passive voice
Don't don't, double double, dose dose. Know your active ingredient	Social media	100	100	100	100		100		100	100	67	8	18.4	0
Medicines and heat	Social media	100	100	100	100		100		100	100	100	9	7.8	2
Does your bathroom cabinet spark joy?	Social media	100	100	100	100		100		100	100	100	10	26	0
What happens when two pills go on a blind date	Social media	86	0	100	100		100		100	100	100	7	12.7	1
Giving medicines to kids: Tips from a nurse	Video	91	100	100	100		75		100	100	100	9	9.4	1
Pain and pain medicines														
Medicines for pain relief: what are the options?	Card stack	57	50	50	100	50	50	100		50	40	12	30.3	26
Amitriptyline for nerve pain	Card stack	85	100	100	100	100	75	100		0	60	11	19.9	8
Managing migraine	Card stack	83	100	100	100	100	75	100		0	60	13	28.7	22
Treating my child's pain or fever – paracetamol or ibuprofen?	Card stack	57	50	100	100	0	50	100		50	40	15	28.8	15
Managing pain and opioid medicines	Patient action plan	94	100	100	100	100	75	100		100	100	11	20.3	4
Low back pain - do you need a scan?	Fact sheet	94	100	100	100	100	75	100		100	100	9	13.2	3
Information about opioids and chronic non-cancer pain	Video	100	100	100	100		100	100	100	100	75	13	20.8	7
Depression and anxiety														
Anxiety disorders: what you need to know	Card stack	80	100	100	100	100	75	100		33	80	13	24	24
Antidepressants: 10 things you need to know	Card stack	69	50	100	100	100	75	0		50	60	14	17.4	3
About depression medicines - what you need to know about your antidepressant	Fact sheet	94	100	100	100	100	75	100		100	100	10	11.9	0
Treating anxiety disorders: what are the options?	Patient decision aid	94	100	100	100	100	75	100		100	100	12	21.2	6
Heart Health														
Understanding blood pressure	Card stack	100	100	100	100	100	100	100		100	80	11	14.3	6
Heart Failure what you need to know	Fact sheet	94	100	100	100	100	75	100		100	100	10	7.6	6
Staying on track with your statin	Patient Action Plan	92	100	100	100	100	100	100		0	80	11	18.8	2

Name of Resource	Type of resource	PEMAT tool (%)										SHeLL editor		
		Overall understandability	Content	Word choice & style	Terms	Numbers	Organisation	Layout & design	Key points	Visual aids	Overall actionability	Reading Grade	% complex language	Passive voice
Blood pressure: Managing high blood pressure	Video	100	100	100	100		100		100	100	100	11	14	0
Antibiotic Resistance														
Antibiotics explained	Card stack	77	50	100	100	100	75	100		50	60	14	30.7	12
What every parent should know about coughs, colds, earaches and sore throats	Card stack	100	100	100	100	100	100	100		100	60	10	20.4	28
COVID-19 and vaccines														
COVID-19 and you	Card stack	77	0	100	100	100	75	100		50	60	11	14.3	0
Vaccines and immunisation	Card stack	94	100	100	100	100	75	100		100	80	12	31	81
Asthma and Chronic Obstructive Pulmonary Disease (COPD)														
An introduction to managing asthma and wheeze in children	Fact sheet	81	100	100	0	100	50	100		100	83	10	19.2	11
Dementia														
Medicines & Dementia: Tips for good medicines management	Fact sheet	75	100	100	100	100	50	100		0	60	13	16.7	3
Medicines & Dementia	Booklet	92	100	100	100	100	100	100		50	83	13	25.8	52
Dementia and changed behaviours: A plan for you and your carers	Diary	94	100	100	100	100	75	100		100	100	10	13.5	1
Bone Health														
Managing osteoporosis	Card stack	85	100	100	100	100	75	100		0	40	13	23.3	8
Bone Health Action Plan	Patient action plan	79	50	100	100	100	75	100		50	83	11	26.9	3
Other topics														
Managing hay fever	Card stack	71	50	100	100	100	50	100		50	60	12	30.9	17
Discussing acute ankle and knee injuries	Patient action plan	83	100	100	100	100	75	100		0	80	10	20.8	1
Lifestyle and metformin for type 2 diabetes	Patient decision aid	92	100	100	100	100	100	100		50	83	11	18.7	6
Medicinal cannabis: What would you like to know?	Miscellaneous Pdf	46	50	0	0	100	50	100		0	60	15	24.6	74

ADAPTING PRIORTIY 1 CARD STACKS

A workshop held on 19 November 2021, brought together a group of 12 consumer representatives, Health Literacy Lab and 6 NPS MedicineWise Staff to focus on ways to improve priority 1 card stacks, in relation to:

▷ actionability

▷ visual aids

▷ meeting health literacy indicators with less than 20% coverage

▷ readability.

The information below is the output of small group work.

Taking medicines in pregnancy

Tangible tools

▷ What to start thinking about differently during pregnancy

▷ Mother making a list of medicines they take: regularly/ as needed – confirm these with the HPs, can I continue to take these? (include complementary medicines) – [prompts of what to include e.g., OTC, complementary meds]

▷ List of common symptoms during pregnancy (e.g., nausea/ back ache) = what medicines can I take? List according to stage of pregnancy. Alternatives to medicine. (include planning for pregnancy)

▷ Complementary medicines – immunisations (e.g., whooping cough) and other supplements needed (e.g., folic acid)

▷ Table of common medicines - what's ok/ not… what doesn't mix e.g., vit D

▷ Checklist of stop (e.g., alcohol), question (e.g., meds), continue (e.g., folic acid)

▷ Labelling – what does x, y, z mean?

Visual aids

▷ Example of warning label of 'not for use in pregnancy'

▷ Ingredients list – what to avoid

▷ Illustration to support explanation of how medicine causes harm e.g., transport across placenta, damage placenta

▷ Look at images done for Aboriginal communities re: alcohol in pregnancy

▷ Illustration of food portions before and after pregnancy – dispel myth 'eating for two'.

Health Literacy indicators

▷ Cost of medicine – everything during pregnancy is more expensive e.g., nutritional supplements, antiemetics… alternatives e.g., ginger, plain crackers etc.

▷ Some medicines can be addictive – link to current information on other topics e.g., pain/ sleep

▷ How to store medicine – find a new place to keep medicines – will need new/ different meds for baby.

▷ Easy to understand re: risk of harm with meds and unborn child

▷ If you have other children… Storage out of reach of children. Separate out nutritional supplements so don't confuse them with sweets.

▷ How to dispose of medicines safely – you might take something during the pregnancy and now don't need it – dispose of it safely. Need to dispose of meds that previously taking but not now during pregnancy.

▷ Taking out of date medicine – general information. Where is the expiry date (illustration)?

- ▷ Taking medicine prescribed for someone else – Don't be tempted to take meds from others e.g. meds for nausea, back pain, sleep.
- ▷ One consistent doctor or pharmacist to talk to - What was relevant for grandparents etc may not be relevant today (technology/ knowledge changes). People will give you lots of advice…. Well-meaning advice should be taken with a grain of salt
- ▷ Read the warning or allergy information – warning re: pregnancy and breastfeeding – how to find it

Readability

Word	Example	Plain English alternative
Benefit/s	Taking medicines in pregnancy card stack 'The use of any medicine during pregnancy requires careful consideration of both risks and **benefits** by the health professional caring for you.' (problem with the sentence… rewrite whole sentence)	What works and doesn't work Both good and bad Pluses and minuses Pros and cons The good and the bad Carefully think about the pros and cons of… Some medicine can help you but might hurt your baby. To know what will work best… talk to your doctor. Careful discuss about what will work bets for you without hurting your baby
Harm	Taking medicines in pregnancy card stack 'How do medicines cause **harm** during pregnancy? Medicines that cause **harm** during pregnancy do so in various ways.'	Cause (make) problems/ hurt your baby Sometimes a medicine that is good for you, can hurt your baby Sometimes a medicine can hurt the growth (and development) of your baby Some medicines that help you can hurt your baby. If you are not sure, speak to your doctor. Can be bad for your baby (look at alcohol info for wording)

Other words not yet discussed

Manage	Taking medicines in pregnancy card stack 'At other times, it may be essential to continue using a medicine, such as when the medicine helps to **manage** a long-term condition like asthma, diabetes, depression, or seizure.'
Risk	Taking medicines in pregnancy card stack 'The use of any medicine during pregnancy requires careful consideration of both **risks** and benefits by the health professional caring for you.'
Side effect/s	Taking medicines in pregnancy card stack 'Others may have **side effects** like drowsiness that affect the baby around the time of birth.'
Symptom/s	Taking medicines in pregnancy card stack 'Ssometimes it's possible to relieve **symptoms** without medicines.'
Treatment	Taking medicines in pregnancy card stack 'If you have a chronic medical condition and need medicine to **treat** it, it is important to have your condition assessed while you are planning for, or during your pregnancy. Your doctor is the best person to assess your medical treatment.'
Effectiveness	Taking medicines in pregnancy card stack 'Many complementary medicines have not undergone the same level of research as **prescription** and over-the-counter medicines, so often less is known about their **effectiveness**, possible **side effects** and **interactions** both overall and during pregnancy.'

Treating my child's pain or fever - paracetamol or ibuprofen?

Tangible tools

▷ Audit of your medicine cupboard, versus what you need. First aid kit checklist.

▷ Dose calculator/ chart (mg for weight kg)

▷ Medicines log – when last gave x,y,z, when next dose due

▷ Measuring tools – do's don't's e.g., teaspoon v syringe

▷ Decision tree/ quiz – which medicine should I give? Do I need to see the doctor?

Visual aids

▷ Illustration/ instructions re: how to give medicine to children (e.g.

▷ Example calculations

▷ How to take a baby's temperature

▷ How to fill syringes (how you read the dose)

▷ Summary table highlighting difference between paracetamol and ibuprofen

Health Literacy indicators

▷ Cost of medicine – alternatives to medicine, when do you really need to use medicine (and alternatives are not going to work). Generic medicine. Talk to doctor if can't afford the medicine. Red flags for immediate medical attention e.g., rash

▷ How to store medicine – where is a suitable storage location e.g., fridge, cupboard. Very relevant to medicines that look like sweets. Have these medicines available before you need them (not at 3am when baby screaming)

▷ Taking out of date medicine – where is the expiry date (illustration)? Linked with storage – look before you give the medicine. Audit medicine cabinet regularly and check expiry dates in that process.

▷ Taking medicine prescribed for someone else – discourage sharing med – may have something for another family/ child. 2 different strengths… friend might use a different strength and risk of overdose. **Share knowledge, not medicine.**

▷ Read the warning or allergy information - Long term effects of meds

Readability

Word	Example	Plain English alternative
Instruction/s	Treating my child's pain or fever card stack 'Always refer to the **instructions** on the label or packaging and ask your health professional to confirm the correct dosage if you are unsure.'	Directions Read the medicines label Advice Read the label to work out the right dose
Active ingredient	Treating my child's pain or fever card stack 'Paracetamol is the **active ingredient** in a number of OTC products for children, including drops, suspensions, tablets and suppositories.'	

Active Ingredient Prescribing: all you need to know

Tangible tools

▷ Provide short set of questions for person to use with prescriber or pharmacist to help them talk about active ingredients in a medicine and understand terms such as substitution, generic, biosimilar.

▷ Provide a list of explanations to common questions that a prescriber or pharmacists might ask a patient about active ingredients or generics – e.g., would you like the generic version? Explain what this means and that it is Ok for a person to give their preference.

Visual aids

▷ Example of a medicine script and label showing where different information is located.

▷ Use a non-medicine image example to explain active ingredient

Health Literacy indicators

▷ Cost of medicine (cost can be a disincentive, some people don't understand how and what medicines are subsidised) and having one consistent doctor or pharmacists (need to feel confident and comfortable to ask questions and have conversations) were the most important indicators to build into the content.

Readability

Word	Example	Plain English alternative
Benefit/s	Active Ingredient Prescribing: all you need to know card stack 'So for most medicines, the **benefits** and side effects will be the same for the original and generic versions of that active ingredient'	Health improvements Improvements to your health What helps your health and what can reduce your health There are helpful and not helpful effects
Prescribe/ prescribed/ prescriber	Active Ingredient Prescribing: all you need to know card stack 'There are also some situations where your doctor may **prescribe** a specific brand of medicine because they believe it is the one that best meets your clinical needs.'	Write a medicine script Write a script General feeling that prescribe was understood
Prescription	Active Ingredient Prescribing: all you need to know card stack 'Some **prescription** medicines have more than one active ingredient, and these will all be listed on the **prescription** (except as explained below).'	Script Medicines that need a doctor's script
Side effect/s	Active Ingredient Prescribing: all you need to know card stack 'So for most medicines, the **benefits** and **side effects** will be the same for the original and generic versions of that active ingredient.'	When you feel like your health has not improved after taking a medicine
Active ingredient	**Active Ingredient** Prescribing: all you need to know card stack '**Active ingredients** are what make a medicine work.' 'All medicines should have their **active ingredients** listed on the packaging or container they come in.**'**	This is a good explanation that should be used across all cards

Anxiety disorders: what you need to know

Tangible tools

▷ Sheet to print out medicines – doses, potential interactions, side effects to watch out for (people are usually in an anxious state at the doctors and will retain very little information)

▷ Tool to measure anxiety over period of time especially if medication or therapy is started

▷ Include space to identify possible triggers and suggestions on how to manage them.

Visual aids

▷ Icons to represent QUM messages around safety, side effects, storage, translator services etc

▷ Liked the images on card 2 but felt they could be better aligned with the information to help explain descriptions

Health Literacy indicators

▷ How to store medicine, how to dispose of medicine safely (include information about Return Unwanted medicines project), taking medicines prescribed for someone else, having one consistent doctor or pharmacist to talk to (building trust is very important for people with mental health conditions)

Additional general comments

layer information to give basic what is where to go for help first, then add levels of complexity to support readers with progressively higher health and general literacy.

reorder opening anxiety disorder card to explain what is anxiety, when is anxiety not normal part of daily function and move the explanations of anxiety types to another card lower in the deck – example of more detailed information that not everyone will want to know.

Can there be a glossary of key terms at the start or along the side of the page to help with health literacy

Readability

Word	Example	Plain English alternative
Manage	Anxiety disorders what you need to know card stack 'Psychological treatments can help you **manage** your anxiety disorder by changing the way you think.'	Take part Help you cope Help you deal with
Effective	Anxiety disorders what you need to know card stack There are many **effective** treatments for anxiety, and the sooner you get help, the more likely you are to get better	Helpful

Other word not yet discussed:

Symptom/s	Anxiety disorders what you need to know card stack 'Anxiety disorders don't always happen suddenly – the **symptoms** are not always obvious and can appear slowly over time.'
Treatment	Anxiety disorders what you need to know card stack Antidepressant medicines are effective **treatments** for anxiety disorders as well as depression

Finding good information about medicines

Tangible tools

▷ Participants in the workshop group found Medicine Finder very useful, and see as it was part of NPS MedicineWise, argued that this resource should be front and centre/prioritised. Graphics could show how to use Medicine Finder, and then show next steps / other resources if that website did not have the information they sought. Also suggested linking directly to the search function (e.g., through an iframe)

▷ Part 6 'assessing the quality' could be improved by including a checklist or illustration, traffic lights etc

▷ Participants also suggested that GPs could use the links in this card stack to help them learn to use simple language with patients (i.e., in addition to direct patient/consumer benefits)

Visual aids

▷ For active ingredient – show a pill bottle with label and highlight where the active ingredient is.

▷ Tutorial video for active ingredient rather than lengthy text

▷ Use graphic when recommending NPS MedicineWise app, to build brand awareness and make it more recognisable

▷ Could incorporate traffic lights to show level of caution; metaphors + humour

▷ Broader comments about NPS MedicineWise using icons throughout the cardstacks to communicate certainty/uncertainty of the evidence

Health literacy indicators

▷ One consistent doctor/pharmacist could be good for finding good information about medicines -- add under helpful resources

▷ Change 'don't rely on Dr Google' that's just how people find information

Readability

Word	Example	Plain English alternative
Benefit/s	Finding good information about medicines card stack 'Information about the **benefits** and side effects of medicines can come from many sources, including the internet, the media, and family and friends.'	'plus,' use icons to support understanding
Prescribe/prescribed/ prescriber	Finding good information about medicines card stack 'If you or a loved one become ill, are **prescribed** a medicine or are referred for a medical test, it is natural to want to know more about the condition or treatment.'	Given; advised to take;
Prescription	Finding good information about medicines card stack 'Consumer medicine information is designed to inform consumers about **prescription** and pharmacist-only medicines.'	Define what prescription means – use a graphic of the prescription pad; can have as a glossary item (very simple) Important for new immigrants
Risk	Finding good information about medicines card stack 'Always check the **active ingredient** when you leave hospital with medicines, to reduce the risk of accidental overdose or interactions with your other medicines.'	Danger, chance (but this feels less negative),
Interaction	Finding good information about medicines card stack 'Always check the **active ingredient** when you leave hospital with medicines, to reduce the **risk** of accidental overdose or **interactions** with your other medicines.'	Different drugs can work against each other Unwanted action/impact Can make drugs work more/less strongly; try to describe the effects of the interaction; maybe some kind of graphic; sometimes this is good (e.g., iron with vit c)

Other words not yet discussed:

Side effect/s	[Finding good information about medicines](#) card stack 'Information about the **benefits** and **side effects** of medicines can come from many sources, including the internet, the media, and family and friends.'
Treat	[Finding good information about medicines](#) card stack 'Don't use it to try and diagnose, **treat**, cure or prevent illness yourself.'
Treatment	[Finding good information about medicines](#) card stack 'The best information also acknowledges that all **treatments** have both positives and negatives, and that the outcome of **treatments** cannot be guaranteed.'
Active ingredient	[Finding good information about medicines](#) card stack 'Always check the **active ingredient** when you leave hospital with medicines, to reduce the **risk** of accidental overdose or **interactions** with your other medicines.'

Medicines for pain relief: what are the options?

Tangible tools

▷ See comments on visual aid below – this will also operate as a tangible tool for making decisions about pain relief medicines

▷ Title needs to make it clear that this is about short-term pain relief, and direct people to other appropriate card stacks if need be

Visual aids

▷ Table/chart with each of the categories of drugs with material alongside – see the information in one hit

▷ Could use a flow chart e.g., what kind of pain have you got? E.g., headache, period pain? Idea of a 'quiz' floated but felt it was important to be able to see all the options in one go and know WHY they were not recommended a particular one.

▷ Separate out short term, medium term and long term

▷ Pain scale

▷ Mocked up version of paracetamol boxes to show what they look like.

Health literacy indicators

▷ Active ingredient health literacy indicator

▷ Complementary medicine

▷ Didn't think cost indicator was well suited to this one

▷ Taking out of date medicine for options for pain relief, sitting in the back cupboard, could even link to safe disposal as well.

▷ As a mum of 2 kids, only have panadol and nurofen - laxative, get diarrhea from the sugar – link clearly to card stack about pain relief for children.

▷ Link off to storing and how to dispose about how to find medicine information

Readability

Word	Example	Plain English alternative
Instruction	[Medicines for pain relief – what are my options?](#) card stack 'Always follow the dose information on the packaging, unless you are given specific **instructions** by your healthcare provider.'	Information about how to use; steps; steps to follow; following medicines wisely? icon with steps

Keeping your medicines costs down

Tangible tools

Start with schematics that split out action into:

1. Have HMR – i.e., make sure you are only taking the meds you need

2. Understand costs and questions you can ask to better understand this

3. Understand options

Tools:

▷ Canadian tool – 5 Qs to ask about your medicines? Or adaptation thereof.

▷ Have a valid Medicare card

▷ Have a valid concession card

▷ Use of webster packs

▷ Registered for closing the gap

▷ Proper storage to avoid waste

Visual aids

▷ Visually separate out personal vs govt info for ease of navigation and to reduce complexity. i.e. what is in control of person in one section and what is govt policy in another.

▷ Overall feedback on this card stack was that it was very long, dense and no clear call to action for the consumer. Visual aids could reference:

▷ Know your costs – talk to your Dr

▷ Have up to date Medicare card

▷ Put detail on PBS etc as pop ups on the side.

Health Literacy indicators

1. Costs of medicines

2. Taking out of date meds

3. How to store medicines

4. One consistent Dr

5. Other people's medicines

▷ Feedback was that this card stack should focus more on the information as it relates to the consumer journey i.e., start with taking the right medicines (e.g., HMR), then know your costs and options. This then links to the concepts below.

▷ avoid waste – i.e., How to store medicines

▷ One consistent Dr – avoids unnecessary duplication

▷ Don't cut corners – i.e., don't take other people's medicines.

Readability

Word	Example	Plain English alternative
Benefit/s	Keeping your medicines costs down card stack 'They decide if the new medicine has a better or equal health **benefit** compared to an existing one.'	They decide if new medicine is equal or better for you

Antidepressants: 10 things you need to know

Tangible tools

▷ Tools to support better conversations with HP re what are Antidepressants, do I need one, can I do something else first – e.g., CW 5 Qs or equivalent.

Visual aids

▷ Visual that taking an A-D is a journey through

▷ Starting, adherence, monitoring and stopping with guidance.

Health Literacy indicators

1. Costs of medicines

2. One consistent Dr

3. Read the warnings

4. Meds are addictive

▷ Discussed need for advice to be framed in context of starting meds, trying to be consistent in taking them (adherence), monitoring and stopping with guidance.

▷ Starting meds –opportunity to embed HL indicators for one consistent Dr (theme throughout) and reading the warnings (i.e., know the risks), knowing the costs.

Readability

Word	Example	Plain English alternative
Manage	Antidepressants: 10 things you should know card stack 'If the side effects of your antidepressant medicine are hard to **manage**, talk to your doctor about trying a lower dose or switching to a different antidepressant.'	Talk to your Dr if you have any concerns about your medicine and its effects on you.
Risk	Antidepressants: 10 things you should know card stack 'Keep taking your antidepressant after you start to feel better for as long as your doctor advises (usually 6 to 12 months) – this will reduce the **risk** of your depression coming back when you stop treatment.'	Keep taking your antidepressant after you start to feel better for as long as your doctor advises (usually 6 to 12 months). This will reduce the **chance** of your depression coming back.
Side effect/s	Antidepressants: 10 things you should know card stack 'All antidepressants have some **side effects**, but different people respond quite differently to the same antidepressant. Some **side effects** might go away after a few weeks (e.g., insomnia, nausea, dizziness), while others may not (e.g., sexual problem.'	All antidepressants have some **side effects.**, Different people respond differently to the same antidepressant. Some **side effects** like, insomnia, nausea, and dizziness may go away after a few weeks. Others may not e.g., sexual problems.
Symptom/s	Antidepressants: 10 things you should know card stack 'Stopping them suddenly can cause **symptoms** such as dizziness, nausea or feeling jittery.'	Stopping them suddenly can cause dizziness, nausea or feeling jittery.
Treat	Antidepressants: 10 things you should know card stack 'Antidepressants are medicines used to **treat** depression.'	Antidepressants are medicines used to **help with** depression.
Treatment	Antidepressants: 10 things you should know card stack 'Keep taking your antidepressant after you start to feel better for as long as your doctor advises (usually 6 to 12 months) – this will reduce the risk of your depression coming back when you stop **treatment**.'	Keep taking your antidepressant after you start to feel better for as long as your doctor advises (usually 6 to 12 months). This will reduce the chance of your depression coming back.
Effective	Antidepressants: 10 things you should know card stack 'For mild depression, it's better to try psychological therapies first, because they are more **effective** than antidepressants in this situation.'	Talk to a health professional you trust. There may be other choices for you.
Interaction	Antidepressants: 10 things you should know card stack 'Use our Medicine Finder to get the consumer medical information for different kinds of antidepressant medicines and find out more about potential medicine **interactions**.'	Use our Medicine Finder to get more information about antidepressant medicines and how they might be affected by other things you take.