Health Literacy and Medication Safety

Environmental scan of tools, resources, systems, repositories, processes and personnel

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1.0 Executive summary

1.1 Purpose
The purpose of this environmental scan, carried out by the New Zealand Guidelines Group (NZGG), is to provide examples of important health literacy processes and initiatives underway in New Zealand which are associated with medication safety. This report details results of the scan and covers health literacy tools, resources, systems, repositories, processes, personnel and/or other methods currently used to improve consumers’ engagement with health and disability services associated with medication safety.

1.2 Background
The concept of health literacy is relatively new to New Zealand. A number of research projects are either underway or recently completed, but as yet there is little published data available, especially on effective interventions for improving health literacy, that are specific to New Zealand. This environmental scan represents an opportunity to collect early, qualitative data on developing approaches, and on those apparently few areas/initiatives where health literacy in medication safety is being more directly addressed.

1.3 Introduction
NZGG and the Health Quality and Safety Commission have adopted the following definition of health literacy and associated commentary:

The degree to which individuals can obtain, process and understand health information and services they need to make appropriate health decisions.

Health literacy represents a constellation of skills necessary for people to function effectively in the health care and disability support environment and act appropriately on health care information. These skills include the ability to interpret documents, read and write prose (print literacy), use quantitative information (numeracy) and speak and listen effectively (oral literacy).

1.4 Summary of findings
Attention to health literacy with respect to medication safety, beyond provision of written resources and dedicated websites, is rare. Below, examples of health literacy initiatives identified in the scan are presented under two headings – ‘broadly relevant activities’, and ‘purposive interventions’

Broadly relevant activities
In the context of health literacy as defined above, while the following activities are aimed at improving the knowledge of either health professionals or patients, they generally comprise only written materials, which employ only a
subset of the communication forms represented in the definition of health literacy.

- DHB yellow cards
- Bpac\textsuperscript{nz} Ltd
- University of Auckland, School of Pharmacy
- Māori Pharmacists Association
- Pharmacy Guild of New Zealand
- Health TV

**Purposive interventions**

For all that this exercise is a scan, not a stocktake, ‘purposive interventions’ in health literacy appear to be limited to seven initiatives.

- The project that Mauri Ora Associates is leading for the Ministry of Health (including a module on health literacy developed by Workbase) which is a cultural competency training tool that aims ‘to increase accessibility to cultural competence training and establish a base level of cultural competence and health literacy awareness amongst health care practitioners and other professional bodies throughout New Zealand’

- The efforts of Ngaruawahia pharmacists Mary and Steve Roberts in addressing poor health literacy among their predominantly lower socioeconomic community

- The use of DHB-funded Medication Utilisation Reviews (MURs), which utilise suitably trained pharmacists to provide identified ‘at risk’ patients with the knowledge, resources and tools that are fundamental to medicines use as a component of self-management of their condition

- The Workbase initiative, which involves the establishment of a dedicated website aimed at raising the awareness of health literacy, especially for health care providers and health care organisations

- The Auckland University/Workbase international research project aimed at strengthening health literacy among indigenous people living with cardiovascular disease

- The joint health education venture between PHARMAC, Mauri Ora Associates and the Māori Pharmacists Association to develop and provide a course designed for Community/Māori Health Workers to increase their awareness and understanding of the appropriate use, storage and disposal of medicines
The emerging shift in emphasis of the Heart Foundation from predominantly written materials to more interactive resources which focus on patient’s understanding of their heart condition and the medications required to manage it.

Among those few organisations and individuals who do make conscious address of health literacy, there is a deliberate emphasis on models of adult learning, drawing formally, or not, on precepts, principles and theories of learning theory and pedagogy. Often within this, there is an emphasis on starting with what people currently know and want to know, and on strongly interactive communication methods, sometimes including graphics and animation.

1.5 Conclusions and recommendations

This scan has identified that beyond the provision of written resources and dedicated websites, attention to health literacy with respect to medication safety is rare. Despite a thorough search, only half a dozen or so examples of purposive interventions in health literacy around medications safety were seen.

Much of the health sector appears largely unaware of the relevance of adult learning theory to health literacy (in either medications safety or more broadly). For all patient-mediated self-management (such as taking medications), an ability of health professionals routinely to create effective learning opportunities for patients in the course of meeting health needs appears underdeveloped.

NZGG recommends that the HQSC:

1. Note that understanding in the sector of how to improve health literacy appears limited, and that examples of purposive health literacy improvement work in medications safety are very few in number.

2. Note that most health practitioners appear largely unaware of adult learning theory or practice as a body of knowledge.

3. Note the significant advantage that techniques of learning theory apply across different topic areas and content types, and can reasonably be presumed to be replicable across topics, provided that health practitioners know how to apply them.

4. Note that although it is important to address health literacy at ‘systematic’ and ‘organisational’ levels, the most immediate task for the health sector is to upskill the health workforce in the application of learning theory to health service delivery.

5. Note the importance of Community Health Workers in lifting health literacy, especially among Māori and Pacific people.
6. Agree that in the context of medications safety, it is a priority to demonstrate to community pharmacy that health literacy improvement in medications safety is broader than simply providing written information and very brief verbal information.

7. Initiate a well-publicised demonstration project in community pharmacy based on health literacy improvement, perhaps developing the methods in use by Mary Roberts. The project should be evaluated and publicised. It should be targeted at community pharmacy and led by practicing community pharmacists.

8. Work with the members of the Health Forum (of which HQSC is a member) to initiate a national meeting or conference in health literacy improvement, with a focus on workforce skills. Potential aims of such a meeting could be to:

- share successful examples of health literacy intervention and identify areas for improvement
- acknowledge the highly complementary areas of expertise of health professionals and adult learning professionals
- provide a forum for debate on the training needs in adult learning theory of the health workforce
- identify opportunities for meeting those needs in the context of current New Zealand health workforce development strategies.

Note that there may be opportunities to collaborate with others in the sector who may be planning health literacy-themed events.

9. Request the HQSC’s Medications Safety Expert Advisory Group identify at least three classes of drugs where significant safety issues arise, for which health literacy improvement could substantially assist safer patient adherence.

10. Investigate options for HQSC-brokered access to a high-quality library of web-based videos on the pathophysiology of common conditions, and on the therapeutic action of common drugs, including those in the classes to be identified by the Medications Safety Expert Advisory Group (see recommendation 9 above). This could potentially be arranged via a licensing agreement with an international developer/publisher of such video resources which are scientifically accurate, of high production quality, easily viewed by common web browsers, and embeddable into one or more New Zealand-branded health-oriented web portals.

11. Investigate options for including in the new Community Pharmacy Services Agreement (currently under negotiation by DHBNZ) some formal requirements for health literacy improvement beyond the
dispensing of medicines and associated patient counselling. Such requirements would likely be broad initially, and could be developed to become more specific in future contract negotiation rounds.
2.0 Background: health literacy in New Zealand

2.1 Statistics

New Zealand’s health literacy statistics come from the Adult Literacy and Life Skills Survey (ALL) conducted in New Zealand in 2006, which tested the literacy, numeracy and problem-solving skills of a large sample of New Zealanders aged 16–65 years. The Ministry of Health’s report, Kōrero Mārama: Health Literacy and Māori published in February 2010, presented findings on health literacy by gender, location, age, level of education, labour force status and household income.¹

Kōrero Mārama (2010)² reported that:

- 56.2% of adult New Zealanders have poor health literacy skills, scoring below the minimum required to meet the demands of everyday life and work
- four out of five Māori males and three out of four Māori females have poor health literacy skills
- Māori who live in a rural location have on average the poorest health literacy skills, closely followed by Māori who live in an urban location
- Māori in the 50–65, 16–18 and 19–24 years of age groups have the poorest health literacy compared to the rest of the population. This is particularly concerning because over half of the Māori population (53%) was less than 25 years of age at the 2006 census. Also, older age groups have high levels of health need and are generally high users of health services
- Māori and non-Māori with a tertiary education are more likely to have good health literacy skills compared with those who have with lower levels of education. This is consistent with international evidence
- Māori across all labour force status types have poorer health literacy skills compared with non-Māori, but Māori who are unemployed or looking for work have the poorest health literacy skills of all groups
- Māori have poorer health literacy statistics across gender, age and location than non-Māori.

Accessed 25/7/2011

3.0 Data collection

The method for this environmental scan consisted of personal communications via telephone and email between NZGG analysts and key people and organisations in the health and disability sector known to have an interest or responsibility in ensuring the safe and effective use of medicines. The respondents were provided with a definition of health literacy (see section 1.3 above) and asked to identify any initiatives underway within their organisations, or at a regional or national level, which they felt addressed health literacy in the sphere of medications safety.

Note: This is an environmental scan of health literacy initiatives, not a stock take. While several initiatives have been replicated across the health and disability sector (eg, Medicines Utilisation Review), this scan limits the reporting of such initiatives to one example only of each initiative.
4.0 Broadly relevant activities

In the context of health literacy as defined earlier, while the following activities are aimed at improving the knowledge of either health professionals or patients, they generally comprise only written materials, which are only a subset of the communication forms represented in the definition of health literacy.

4.1 DHB Yellow cards

One way that several DHBs seek to address health literacy (related to medication safety) on discharge from hospital is with ‘Yellow Card’ or ‘SAM Card’ systems. These DHBs provide the cards on discharge to patients who are believed to be at risk due to apparently poor understanding of their medications, multiple medications, a documented history of poor medication compliance or the MDTs feel they are a necessary component of the rehabilitation process.

They present medicine information in the simplest possible format, clearly describing

- name of the medication (generic and common names)
- the time(s) of day it should be taken
- what it is for (in plain English)
- any special instructions including (i) what to look for regarding adverse reactions and (ii) what to do about them if they do occur.

The cards are prepared by hospital pharmacists, and where possible the pharmacists provide one-to-one patient counselling prior to discharge. To target DHB resources, the cards are provided mainly to patients being discharged to the community (as opposed to residential care) from rehabilitation wards. An example of a Yellow Card can be found in Appendix 4.

As part of their eMedicines Reconciliation programme, Counties Manukau DHB is currently proposing an eYellow Card which will be generated for all patients as part of the electronic discharge process.

4.2 Bpac\textsuperscript{nz} Ltd

Bpac\textsuperscript{nz} Ltd (Best Practice Advocacy Centre) is an independent organisation that promotes health care interventions that they claim meet patients’ needs, are evidence based, cost effective and suitable for the New Zealand context. Bpac\textsuperscript{nz} has five shareholders – ProCare Health, South Link Health, General Practice NZ, Pegasus Health and the University of Otago.

Their major resource is Best Practice Journal, a 6-weekly publication distributed free to all general practitioners, practice nurses and community pharmacies. Specific issues have been devoted to Māori health, including a guide to understanding of Rongoā Māori treatments, and useful tips on how
to build trusting therapeutic relationships and engage Māori patients in their health issues.

While the bulk of bpac™ resources are provided for general practitioners, they do provide a number of patient resources including plain English brochures for practice staff to use when counselling patients. These cover a variety of topics – those relating to medication safety include:

- General information on medicine brand changes
- Patient information for those beginning warfarin therapy
- Patient information on back-pocket prescriptions.

### 4.3 University of Auckland, School of Pharmacy

This scan included an approach to the School of Pharmacy at the University of Auckland to provide information on programmes the school has put in place for their students that highlight and address the implications of poor health literacy on health outcomes, especially those relating to medication safety (see responses received below).

- Outlined course components of the B. Pharm degree that are likely relevant to considerations of health literacy (for example ‘Pharmacotherapy’ and ‘Pharmacy Practice’ courses which ‘concentrate on medicines use in patients’)
- Identified emphases in courses on pharmacist–patient communication and its role in both safety and adherence; students are said to learn to empathise with patients in order to help the students to understand what the patient needs to know, wants to know, might like to know. Some brief attention is said to be given to cultural differences in health beliefs and the influence this might have on health literacy
- Identified a current student research project into how widely the information panels on ‘general sales medicines’ are understood

### 4.4 Māori Pharmacists Association

Ngā Kaitiaki o Te Puno o Aotearoa - the Māori Pharmacists Association advises:

Health literacy is of huge concern and we are trying to educate pharmacists to be aware of this as part of a Cultural Competency Workshop we have developed. On an informal basis all of our members are well aware of ‘He Korero Marama’ and those of us working in predominantly Māori communities spend considerable time with whanau de-jargonising and ensuring understanding.
4.5 Pharmacy Guild of New Zealand

In response to an approach, the Pharmacy Guild identified its provision of printed matter for distribution by member pharmacists to patients as its main contribution to health literacy. The guild provided several examples of its resources such as ‘Heart Health’, ‘Warfarin Management’ and ‘Weight Management’ cards. These wallet-sized cards carry a key message about the topic in plain English, ‘Quick facts’, including ‘Do’ and ‘Do Not’ advice, and a table for recording measurements.

Other printed matter includes: a medication record card for pharmacists to complete (this is similar to the DHB Yellow Card); ‘How to Use’ pamphlets which carry a description of how particular medications should be used (eg, eye ointment) and a generic message on the back on how to use medicines safely; printed health messages on paper bags (which the Pharmacy Guild believes are very effective).

The Guild published a paper on health literacy in May 2006 titled *Literacy is a Health Issue* (see Appendix 5). Some important and broad-ranging principles are identified in that document, although NZGG has not identified any particular developments or programmes of work instigated by the Guild following release of the paper.

4.6 Health TV

Health TV [www.htv.co.nz](http://www.htv.co.nz) is a niche advertising company. The company provides closed circuit television broadcasts, containing health-related messages, in medical centre and hospital waiting rooms. Health TV’s directors believe that consumers are more receptive to health messages via TV than via posters, brochures etc.

Programming focuses on national health targets relating to smoking cessation, diabetes management, heart care, immunisation, and breast and cervical screening programmes. The service is funded through a variety of channels including individual medical centres, PHOs, Māori and Pacific health care providers and DHBs. PHARMAC has also funded education programmes on the network based on their ‘Generic Medicines’ and the ‘Wise Use of Antibiotics’ campaigns.

There are currently 125 sites spread across the major metropolitan centres as well as sites in Northland, Waikato and Bay of Plenty. The service uses digital technology that allows for individual programming for market segments. These segments are defined, for example, via the demographics of individual medical practices (which practices provide to Health TV).

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5.0 Purposive interventions

The scan identified a common theme across the following purposive interventions with regular reference to the ‘Ask Me 3’ campaign – a patient education programme developed by the National Patient Safety Foundation\(^4\) that is designed to promote communication between health care providers and patients in order to improve health outcomes. The programme encourages patients to understand the answers to three questions.

1. What is my main problem?
2. What do I need to do?
3. Why is it important for me to do this?

The campaign suggests patients should be encouraged to ask their providers these three simple but essential questions in every health care interaction. Likewise, providers should always encourage their patients to understand the answers to these three questions.

5.1 Mauri Ora Associates

Mauri Ora Associates has been in existence since 2000, and provides consultancy in Māori health and Māori education. Broadly it aims to improve the cultural competence of New Zealand health service providers. This scan has included some consideration of developments in cultural competency, since these are seen by NZGG as integral to the development of health literacy awareness especially in the Māori Community Health Worker (CHW) workforce.

The CHW workforce is an important tool for empowering patients, whānau and hapū to manage their health. The size of the national health literacy development task especially among Māori and Pacific people, the credibility of CHWs in the communities they serve, and the expanding size of the CHW workforce leads NZGG to consider that CHWs can be pivotal in lifting health literacy levels including in the sphere of medication safety. Part of the skill-building in this workforce involves improved cultural competency training.

Mauri Ora Associates provide a range of cultural competency and Māori health courses and training. More recently a foundation cultural competency course that includes a section on health literacy was developed. This development was in conjunction with Workbase (see section 5.5), a not-for-profit organisation which has been working in the field of health literacy since 2000.

\(^4\)http://www.npsf.org/askme3/Accessed 22/7/2011
5.2 Roberts Ngaruawahia Pharmacy

Mary Roberts and her husband Steve Roberts are pharmacists working from their community pharmacy in Ngaruawahia. They have developed a ‘Checklist for Assessing Health Literacy’ (see Appendix 1). In the course of a research project she conducted in 2006 to adapt the TOFHLA\(^5\) tool for use in her local, predominantly lower socioeconomic community, Mary came to consider that:

- the most commonly-used definition of health literacy focuses on literacy and numeracy skills, but limits the problem of literacy to the competence and capacity of individuals. This fails to acknowledge health system contributors such as attitudes, knowledge and skills of health practitioners, barriers around access and navigation, interpretation, presentation, administrative requirements, timeliness, and funding issues and constraints

- formal or informal judgments of health literacy are too often based on a normative, clinical approach. This positions poor health literacy as an individual deficit. There is a high risk of a person who is identified with poor health literacy being judged or stigmatised by that judgment, and a risk that an opportunity to improve their health literacy and therefore power over their health condition, is not identified.

Their ‘Checklist for Assessing Health Literacy’ seeks to identify patients with poor health literacy at risk of poor compliance or self-medication errors without labelling them. Instead, it makes the pharmacists more conscious of the areas in which they can work with these patients towards positive health outcomes. For example it includes items such as:

- recognising that a person’s health literacy level may be significantly worse than their general literacy

- using reflective questions to explore what knowledge or misconceptions patients may have around medicines or their health condition

- assessing patient’s medication histories and constantly monitoring for patterns of adherence, changes in drugs, dose or prescriber

- prioritising information about patient’s medication, and in most cases limiting it to the three most critical points necessary to ensure maximum health benefit.

Within their practice they have adopted the following WHO definition of health literacy\(^6\) as they feel it fits better with the patient-centred philosophy that they

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5\(^{TOFHLA - Test of Functional Health Literacy in Adults}\)
subscribe to and they believe it is more likely to provide positive outcomes for the patient:

Health literacy represents 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. Health literacy means more than being able to read pamphlets and successfully make appointments. By improving people’s access to health information and their capacity to use it effectively, health literacy is critical to empowerment.

Mary and Steve believe that successful work with patients is rooted in communication, and recognition of the patient’s prior knowledge and capabilities as the cornerstone on which to build. On the basis of their experience using their checklist, Mary and Steve have made a number of changes in the way they engage and interact with their patients. Important examples of these are:

- focusing on the fact that medicines adherence and/or use is often strongly based in terms of the patient’s beliefs and perceptions around medicines
- Recognising that patients with poor health literacy are often reluctant to engage with those whom they would assume to have good health literacy
- finding out what patients know and/or believe, and addressing any gaps or misinformation in a supportive and accepting manner that does not dismiss or diminish the patient or their ‘trusted source’. This source could be friends or family who themselves may not have access to good quality information or a good understanding of the patient’s medication or medical condition
- adopting a ‘teach back’ method, either on its own or in conjunction with other strategies such as utilising a variety of resources, predominantly visual but sometimes written.

Appendix 1 provides detail of the changes they have implemented in their practice over the past 5 years. It is worth noting that the work Mary and Steve have put in is voluntary. There is currently no support or formal requirement on community pharmacies to address health literacy as part of service delivery, and indeed the work in Ngaruawahia is the only example of its type identified in this scan.

5.3 Medicines Use Review

This review has appraised Medicines Use Review (MUR) as relevant to issues of health literacy in medications safety because it identifies the issues a patient may be experiencing with their medication on an individual basis.
and provides them with the knowledge, resources, and tools that are fundamental to medicines use as a component of self-management of their condition.

MUR is a service provided by pharmacists as specified in the DHBNZ National Framework for Pharmacist Services. The Pharmacy Council of New Zealand (PCNZ) outlines the principles, boundary determinants and competence standards of MUR (see Appendix 2) and the New Zealand College of Pharmacists provides a PCNZ accredited training course that enables and supports pharmacists to provide MUR services (see Appendix 3).

Included among the principles of MUR (as defined by the PCNZ) are:

1. MUR aims to help the patient find out more about the medicines they are taking, identify any problems they may be having with their medicines and improve the effectiveness of the medicines being taken. This includes complementary medicines and relevant lifestyle issues

2. MUR is a therapeutic relationship between the pharmacist and the patient. The pharmacist actively elicits the patient’s viewpoint/perspective. There is mutual agreement between the pharmacist and the patient in determining the recommendations. Any changes arising from the MUR are agreed with the patient

3. MUR requires formal documentation of the review process including problems identified, goals set, the action plan, recommendations made (to patient, GP or other health professionals), implementation of any changes and follow-up. The impact of any change should be evaluated and documented

4. MUR assists in identifying patients who require referral to other medicines management services due to either poor understanding of their current medicine regimens or more complex medicine regimens. Examples of these services include Medicines Oversight (a service which enables providers to visit older people in their homes at previously agreed times to observe and assist the taking of prescribed medicines), and Supported Transfer and Accelerated Rehabilitation Teams (a short-term service which enables the seamless discharge from hospitals back into the community).

5.4 Waikato MUR Service

The Waikato DHB currently funds a MUR service, capped at 40 reviews per pharmacy per annum for each accredited pharmacy. The service is managed by the Waikato Community Pharmacy Group (WCPG) and is subject to certain eligibility criteria to ensure those most in need/at risk can access the service within the capped budget. The criteria are those living independently (eg, not in a residential care facility) who have cardiovascular disease, diabetes, respiratory disease or are on four or more regular medications.
WCPG report increasing numbers of referrals from the hospital Chronic Care Management (CCM) pharmacists who have a role in facilitating a safe transition for patients back into the community following discharge and regular monitoring by their community pharmacy to avoid unnecessary hospital readmission (these patients are commonly referred to by health professionals as ‘frequent flyers’). There are increasing numbers of referrals from PHO Disease State Management (DSM) nurses, Waikato DHB heart failure and cardiac rehabilitation Clinical Nurse Specialists (CNSs) and some GPs. Non-accredited pharmacists can also identify and refer patients they feel would benefit from the service e.g., those that only pick up medication intermittently, or ask unusual or inappropriate questions about their medications suggesting a poor level of health literacy.

The WCPG has employed a mobile MUR pharmacist to ensure better coverage of the Waikato region as there are currently only 15 pharmacies actively providing the service themselves, while others are unable to provide the service due to their sole practitioner status.

One of the key roles of the mobile MUR pharmacist is to ensure the service is properly targeting those with a poor understanding of their medications and adherence issues. The Mobile MUR pharmacist service has worked to achieve this by promoting the service to Māori health providers, to marae and kaumatua groups and also by facilitating medication education forums at these venues. These promotions encourage the community stakeholders to identify individuals who may benefit from help with their medications.

The 15 pharmacies providing the MUR service directly to their patients provide good coverage of the high needs areas of Ngaruawahia, Huntly, Thames, Tokoroa, Morrinsville, Matamata, Putaruru, Te Awamutu, Taumarunui and several in Hamilton. On average about 20–25 MURs are carried out per month across these pharmacies.

5.5 Workbase

Workbase is a not-for-profit organisation committed to improving the literacy, language and numeracy skills of New Zealanders. Their strategy is to work in partnership with organisations to build literacy, language and numeracy. They have developed a website, Health Literacy New Zealand7, which is dedicated to raising the awareness of health literacy, especially for health care providers and health care organisations. They have recently worked closely with Mauri Ora Associates on the development of a foundation cultural competency course that includes a section on health literacy (see Section 5.1)

Susan Reid, Consulting Services Manager for Workbase, is collaborating with Dr Sue Crengle of the University of Auckland in their study ‘Strengthening

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health literacy among Indigenous people living with cardiovascular disease, their families and health care providers\(^8\) (see section 5.6).

Ms Reid emphasises that learners – including patients using health services – require a ‘schema’, or framework within which to organise new information. At the same time, as a learner’s knowledge grows, so does that larger schema and this prepares the way for assimilation of new knowledge. Ms Reid also stresses the importance of repeating and reinforcing messages at every opportunity, and cites research that many learners require 40 exposures to a new term before it becomes fully familiar and understood.

At Workbase, interventions to improve health literacy are framed in terms of a four-level approach:

- intervention at consumer level
- intervention at the workforce skills level
- intervention at the organisational level among health service providers
- intervention at whole-system level.

Some concluding comment in these terms is provided in section 6.0 ‘Conclusions and recommendations’.

5.6 University of Auckland Research Project

In summary, this cohort study will research the application of Nutbeam’s conceptual model\(^9\) to improving the health literacy of Māori living with cardiovascular disease, with particular emphasis on health literacy as an asset which can be developed, not as a non-modifiable risk factor. The research project, which is split between 100 urban Māori (Te Hononga O Tamaki Me Hoturoa), and 100 rural Māori (Ngati Porou Hauora), will also investigate the demands imposed by health professionals, health services and health environments. Examples of these health literacy demands are:

- communication between patient/whānau and health professionals
- demands of documents/resources
- systems/service issues eg, signage etc.

The focus is on developing patient’s health literacy (skills and knowledge) in terms of their cardiovascular disease and the medications used in cardiovascular disease management.\(^10\)

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\(^9\) Nutbeam, D. The evolving concept of health literacy. Social Science & Medicine 67 (2008), 2072–2078

\(^10\) CVD was chosen as it is a major cause of mortality and morbidity, has well-described ethnic disparities, and the researchers considered self-management, especially knowledge about CVD risk factors and medications, as central to effective CVD management.
Pre-measures consist of a one hour intervention (in the context of usual care for CVD) delivered by a specially trained nurse using a modified ‘Ask Me 3’ tool. There is no formal measurement of health literacy (although a proxy health literacy measure is used), but specific measures for:

- CVD medication and target knowledge
- confidence in self-management
- engaging with health professionals.

Post-measures are carried out at three month intervals (to coincide with regular follow-up) and if necessary there is a repeat intervention or variation as required and re-measure.

Case studies will be used to capture:

- whether the implementation of the intervention has resulted in any changes in the health literacy demands of the environment
- the impacts of the intervention on health service resources and staff
- sustainability within the service
- transferability to other sites.

5.7 PHARMAC

‘He Rongoā Pai, He Oranga Whānau – Whānau staying well with medicines’, is a joint health education venture between PHARMAC, Mauri Ora Associates and the Māori Pharmacists Association. The facilitators represent some of New Zealand’s leading Māori professionals in Māori medicine, primary care, and pharmacology. A section on Rongoā Māori has also been included and is facilitated by kairongoā from within the communities.

The course is designed for Community/Māori Health Workers to increase their awareness and understanding of the appropriate use, storage and disposal of medicines. The main aim of the programme is to support these workers and whānau to safely and effectively use medication and rongoā and to recognise the positive and negative qualities of medicines. The programme has been delivered to approximately 400 CHWs nationwide, mostly working for Māori health providers and DHB health services.

5.8 Heart Foundation

The Heart Foundation advises that it is embracing a significant shift to better ground its patient communications more firmly in health literacy improvement. In contrast to a traditional emphasis on written material and instruction, the Foundation is developing an initiative called ‘Ask-Tell-Ask’. In brief summary, it is understood the initiative will recruit both consumers and primary care providers to participate in an interactive learning session where patients will
be encouraged to ask questions about their condition and their medications. NZGG has sighted some very summary material, but the planned campaign is proprietary to the Foundation and its materials are not publicly available.

6.0 Conclusions and recommendations

6.1 Conclusions
This scan has identified that beyond the provision of written resources and dedicated websites, attention to health literacy with respect to medication safety is rare. Despite a thorough search, only half a dozen or so examples of purposive interventions in health literacy around medications safety were seen.

Outside those examples, many respondents to this scan made little real distinction between intervening in health literacy and providing written materials. Even among those who did (for example the Auckland University School of Pharmacy, and the Māori Pharmacists Association), there appeared to be relatively little formal emphasis placed on health literacy.

Much of the health sector appears largely unaware of the relevance of adult learning theory to health literacy (in either medications safety or more broadly). For all patient-mediated self-management (such as taking medications), an ability of health professionals routinely to create effective learning opportunities for patients in the course of meeting health needs appears underdeveloped. This finding is not a criticism of New Zealand health practitioners; rather it is an indication that the problem is systemic throughout the health sector.

Among those organisations or individual health practitioners who have embraced concepts and practices of health literacy improvement in their clinical practice (such as the purposive examples given above), the results are reported to be positive and rewarding, though no robust evaluation data is available to date.

In terms of Workbase’s four level framework, this scan has identified some measures aimed at both consumers and health professionals, but we have seen only one example of efforts to make organisational address of health literacy (Roberts Pharmacy in Ngaruawahia), and no health sector ‘systemic’ address (although the commissioning of this report by HQSC represents the start of such thinking).

Finally, the results of this scan are presented here as they have been described by informants. Note that there remain debates of definition and method, sometimes between different stakeholders consulted in this report. Example issues are; the merits of various approaches, the fidelity of local projects to evidence around health literacy improvement and issues of language (ie, need to avoid ‘deficit’ modelling).
None of these debates detract from the constructive work which is occurring, but these will be important points for debate in defining any national programme of work around health literacy, in medications safety or more broadly.’

6.2 Recommendations

NZGG recommends that the HQSC:

1. Note that understanding in the sector of how to improve health literacy appears limited, and that examples of purposive health literacy improvement work in medications safety are very few in number

2. Note that most health practitioners appear largely unaware of adult learning theory or practice as a body of knowledge

3. Note the significant advantage that techniques of learning theory apply across different topic areas and content types, and can reasonably be presumed to be replicable across topics, provided that health practitioners know how to apply them

4. Note although it is important to address health literacy at ‘systematic’ and ‘organisational’ levels, the most immediate task for the health sector is to upskill the health workforce in the application of learning theory to health service delivery

5. Note the importance of Community Health Workers in lifting health literacy, especially among Māori and Pacific people

6. Agree that in the context of medications safety, it is a priority to demonstrate to community pharmacy that health literacy improvement in medications safety is broader than simply providing written information and very brief verbal information

7. Initiate a well-publicised demonstration project in community pharmacy based on health literacy improvement, perhaps developing the methods in use by Mary Roberts. The project should be evaluated and publicised. It should be targeted at community pharmacy and led by practicing community pharmacists

8. Work with the members of the Health Forum (of which HQSC is a member) to initiate a national meeting or conference in health literacy improvement, with a focus on workforce skills. Potential aims of such a meeting could be to:

- share successful examples of health literacy intervention, and identify areas for improvement

- acknowledge the highly complementary areas of expertise of health professionals and adult learning professionals
- provide a forum for debate on the training needs in adult learning theory of the health workforce

- identify opportunities for meeting those needs in the context of current New Zealand health workforce development strategies

Note that there may be opportunities to collaborate with others in the sector who may be planning health literacy-themed events.

9. Request the HQSC’s Medications Safety Expert Advisory Group identify at least three classes of drugs where significant safety issues arise, for which health literacy improvement could substantially assist safer patient adherence

10. Investigate options for HQSC-brokered access to a high quality library of web-based videos on the pathophysiology of common conditions, and on the therapeutic action of common drugs, including those in the classes to be identified by the Medications Safety Expert Advisory Group (see recommendation 9 above). This could potentially be arranged via a licensing agreement with an international developer/publisher of such video resources which are scientifically accurate, of high production quality, easily viewed by common web browsers, and embeddable into one or more New Zealand-branded health-oriented web portals

11. Investigate options for including in the new Community Pharmacy Services Agreement (currently under negotiation by DHBNZ) some formal requirements for health literacy improvement beyond the dispensing of medicines and associated patient counselling. Such requirements would likely be broad initially, and could be developed to become more specific in future contract negotiation rounds
Appendix 1: Roberts Ngaruawahia Pharmacy.

The following summary of health literacy work in practice at two Ngaruawahia pharmacies was provided by Mary Roberts.\(^\text{11}\)

**What has integrating health literacy meant to our practice?**

As our knowledge and experience around health literacy has increased we have developed and introduced a number of changes in the approaches that we use when engaging and interacting with our patients/customers. The following list has been developed over the last 5 years; however, the degree to which we can implement it is hampered by the current lack of resourcing for both health literacy and community pharmacy.

1. Change in organisational culture to a ‘predominately oral interaction/intervention’ approach. This includes the strategies below.

   - Recognise and acknowledge that our role is not to improve the patient’s literacy. Health literacy goes way beyond reading and writing – it is about adapting practice to give patients knowledge and skills that allow them to self-manage, feel more at ease and able to make informed decisions within the healthcare environment, and particularly in (but not limited to) relationship to medicines

   - Identify those patients who have difficulty around health literacy through observation and a checklist

   - Central to all these strategies is developing a strong rapport and a relationship with all our patients (not just those that we know or suspect may have low health literacy). Without this relationship it is unlikely that health literacy issues can be ameliorated – this is often due to the burden of shame that exists for those with low health literacy, and the fact that those who have either low or borderline health literacy have many effective strategies for avoiding situations within the health environment where it may be unmasked. We have recognised and acknowledged that our participation within the Ngaruawahia and wider communities over the last 26 years means that we ‘have an edge’ – we have pre-existing relationships to build on, and we have a responsibility to our community to do our best. We operate a stewardship model – which is critical to the success of working within a health literacy paradigm, rather than a corporate model

   - Recognise that ‘access’ is a rate-limiting step in terms of health literacy. Who do they have to go through to get to us (the pharmacist)? What are staff attitudes like? What are our behaviours

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like? How do we acknowledge and engage those who we have identified as having low health literacy? These questions need to be addressed if the patient is to benefit

- Recognise that a person’s health literacy level may be significantly worse than their general literacy. They may be literate within a context of familiar terms, content and settings, but functionally illiterate when outside of these, such as in a healthcare setting

- Use reflective questions to explore what knowledge/misconceptions patients may have around medicines/their health conditions

- Assessing patient’s medication histories and constantly monitoring for patterns of adherence, changes or drug, dose, prescriber etc

- Prioritising information about patient’s medication – and in most cases limiting it to the 3 most critical points necessary to ensure maximum health benefit. (We have identified up to 22 points that may need to be covered)

- In the case of chronic medications/conditions we try to expand and add on to this information at each contact – check what they have retained – go over or elucidate on what they know and then add one more relevant point, thereby building patient knowledge and increasing their health literacy about both that product and usually their health condition.

- Use the strategy of ‘storytelling’ as a means to educate – have a range of ‘stories’ that we use to explain both medicines and patients health condition. This form of education places an emphasis on the use of simple ‘jargon-free’ language to convey messages. They encompass a range of medications and conditions – they vary according to the ‘audience’ and while all are used by the pharmacists, some are also used by our dispensary technicians when giving out medicines. Some examples would be around taking medications on an empty stomach, explaining how SSRI’s work, explaining atrial fibrillation – all in plain English with limited or no jargon and all giving reasons why

- Teach back method – used on its own or in conjunction with other strategies.


- Compliance/Adherence/Concordance. (Cramer 1991, Allan et al 1992) noted that:
  - compliance has been defined as ‘the extent to which a person’s behaviour (in terms of taking medications, following diets, or
executing lifestyle changes) coincides with medical advice’ ie, the patient is passive

- adherence recognises the autonomy of the patient and requires his or her agreement to the recommendations of the healthcare professional and is defined as: ‘the extent to which a patient’s behaviour corresponds to the treatment plan developed by the healthcare professional’ ie, the good patient

- concordance takes this a step further embodying a frank exchange of information, negotiation and a spirit of cooperation ie, the patient self-manages.

This coincides with Nutbeam’s proposed continuum of health literacy skills.

- Functional health literacy – sufficient basic skills in reading and writing to be able to navigate the health system.

- Communicative/interactive health literacy – more advanced cognitive and literacy skills, which together with social skills can be used to participate actively in everyday activities to extract information and derive meaning from different forms of communication and to apply new information to changing circumstances.

- Critical literacy – as above as well as applying and analysing information critically in order to exert greater control over life events and situations.

This provides useful discussion – particularly in setting goals in terms of managing health literacy within the community pharmacy environment. We aim to successfully initiate the prescribed treatment and support the patient throughout the treatment process. Since health literacy is likely to continue to decrease in older people, concordance and critical literacy may be a goal that is well beyond the capacities of many of our patients, and indeed not seen as a priority by some patients for themselves. Therefore some of the goals around health literacy could be seen as aspirational rather than as achievable. However any skills, knowledge, ease that we can support our patients in developing is of great benefit.

- Use of ‘Belief’s about Medicine’ – (Prof Rob Horne London University). Based on the perceptions and practicalities model of adherence – assessing whether patients are unintentionally non-adherent (traditional area of intervention in pharmacy) based on practical barriers, or intentional non-adherence – which is based on perceptual barriers. Permission was given to us by Prof Horne to use ‘Beliefs about medicines questionnaire’ and the ‘Necessity Concerns Framework’ in our practice
These approaches focus on the fact that medicines adherence and/or use is often strongly based in terms of the patient's beliefs and perceptions around the medicines. Those patients with low health literacy are often reluctant to engage with those who they would assume or are likely to have high levels of health literacy because of the risk of having their beliefs, perceptions, experiences negated and/or being stigmatised. As health care professionals our high levels of functional health literacy mean that we may not recognise these concerns and make assumptions about the level at which to ‘engage’ patients. Usually those to whom we are least drawn to engage are usually the people we most need to interact with.

People with low literacy are less likely to have access to ‘evidence-based’ sources of health information. Instead they are most likely to go to sources that they feel most comfortable with such as friends and family – who themselves may not have access to good quality information. The challenge is finding out what patients know/believe and addressing any gaps or misinformation in a supportive and accepting manner that does not dismiss or diminish the patient or their ‘trusted’ source. At times this is not for the faint hearted!

Unit dose packs – often seen as a panacea for many problems.

- Advantages
  - Organise medications and organise the day
  - Avoid the need to sort, work out dosage frequency
  - Build habit and certainty around medicines taking
  - Visual aid to medicines taking
  - More likely to make compliant

- Disadvantages
  - Doesn’t organise their life
  - May be counter intuitive
  - Can be disempowering, takes away choice
  - Need for FHL assessment and MUR to discover rationale around medicine beliefs, behaviours and the direction of FHL status
  - May need to educate how to use as in chart format
  - Doesn’t address health literacy problems and may mask them

Unit dose packs are often started because the patient is having difficulties self-managing their medication. Across time the issues that
have caused those difficulties are unlikely to disappear and although the pack may provide some resolution often for some years it is critical to remember that they are likely to reoccur. Most pharmacies don’t monitor for this – and certain valuable activities such as reminder services (we currently don’t provide this service) can act to mask situations where patients may be having difficulties. Our solution is to generate an Access Report monthly of blister patients – gives us information about when they are due – if early or late to pick up – it triggers a conversation

- Decisional Balance tools – invaluable in helping patients to self-assess and set goals, develops the relationship between pharmacist and patient and provides means of negotiating common goals and aspirations

- Motivational Interviewing/Health Behaviour change tools and strategies

2. Change in organisation environment – physical and cultural.

- Cultural literacy and health literacy are inextricably intertwined

- Recognised that one of the biggest barriers is around access. Although community pharmacies are 'public spaces' in the sense that anyone may come in, there are many other factors that act as barriers to access. We have completed and are working on a number of strategies to lessen these barriers

- Te Reo Māori – consulted with kaumatua over a period of 4 years to develop signage in Te Reo Māori. At present, project is complete in Ngaruawahia Pharmacy. Signs are in Te Reo with English translations. While the signs may be able to be used elsewhere the emphasis was on using Te Reo that is specific to our region

- Have living plants – reduce sterility and if they are healthy shows that we ‘take care’ of our environment

- In the refit of what is now Ngaruawahia Pharmacy both the design and the colour palette were reflective of nature and our community. The deep red represents the earth, the black the rock that the earth stands upon, the cream the clouds, the wood the forests (Hakarimata) the blue neon the river (Waikato) and the sky, and the new green which covers the outside of the dispensary is in the shape of a koru – representing the renewal of health. The philosophy behind this was to create a warm embracing space from which the wellspring of health would arise. As the physical space is traversed the patient travels from the ‘retail’ space into comfortable and expansive waiting area, a dedicated counselling area through to the dispensary
• Tainui gave permission for the commissioning of two works of art. The first was Kowhaiwhai patterns and Rongoa flowers that cover the counselling area to give privacy, and the design of a Pou – yet to be applied that will go across the top and down the sides of the front of the shop

• The premises were blessed by our kaumatua before it re-opened. (Cultural literacy is an important contributor to health literacy)

• Other changes that are occurring are less visible but also important – Currently I am undertaking the Te Ara Reo course – improve my Te Reo Maori. Encourage other staff members who may be willing to also consider doing this

• Our aim is to create a space that is reflective of Aotearoa/New Zealand. Up to this point in time there are very few pharmacies community or otherwise that reflect anything other than the traditional ‘British’ image of pharmacy. Since our population is 57% Maori hopefully these changes will be a start to make the space one in which they (as well as other New Zealanders) may feel more ‘at ease’

As I hope is evident Health Literacy both informs and is an integral part of the services that we provide.

As to developing guidelines, health literacy is not an area that is particularly amenable to guidelines and checklists, although they may provide broad outlines that encourage health professionals and provider organisations to start developing the field. Health Literacy is not predominately about reading and writing – as the domain of literacy is in the educational field. Instead it is predominantly about communication skills – most especially verbal and non-verbal, and the facilitation of services for patients. It requires a change in focus, for health professionals to develop new strategies around communication, to evaluate and be aware of our own behaviours and value sets, to be able to explain and educate in plain English/Te Reo/Mandarin etc., and to use feedback strategies that let us know how well we may have done that.

It is not about patient deficit, or improving the patient’s ability to read and write – it is about enhancing and improving patient skills, making them feel at ease and able to navigate the health system. It is about removing the ‘white coat’ both metaphorically and literally in order to recognise and support the patient to manage and/or improve their health. It is also important to note the role of existing and potential support networks. It is our experience that partners, friends, caregivers or whānau/family can help patients navigate through the health literacy paradigm. This becomes particularly important when those support networks cease through a partner’s illness, or a person’s relocation or dislocation from their established community. When this happens the role of the provider and awareness of a person’s health literacy become more important.
Appendix Two:
Pharmacy Council of New Zealand:
Medicines Use Review
Medicines Use Review (MUR)

Principles
Boundary Determinants
Competence Standards
Principles of Medicines Use Review

1 Medicines Use Review is undertaken in a structured and systematic manner by an accredited Medicines Use Review pharmacist. The pharmacist is accountable and responsible for the delivery of the Medicines Use Review service to the patient.

2 Medicines Use Review aims to help the patient find out more about the medicines they are taking; identify any problems they may be having with their medicines and improve the effectiveness of the medicines being taken. This includes complementary medicines and relevant lifestyle issues.

3 Medicines Use Review is undertaken within the context of the national and local healthcare strategies and requires collaboration and teamwork with the local community healthcare team.

4 Medicines Use Review is a therapeutic relationship between the pharmacist and the patient. The pharmacist actively elicits the patient’s viewpoint/perspective. There is mutual agreement between the pharmacist and the patient in determining the recommendations. Any changes arising from the Medicines Use Review are agreed with the patient.

5 Medicines Use Review requires formal documentation of the review process including problems identified, goals set, the action plan, recommendations made (to patient, GP or other health professionals) implementation of any changes and follow-up. The impact of any change should be evaluated and documented.

6 Medicines Use Review assists in identifying patients who require referral to other Medicines Management Services or to other health professionals.
<table>
<thead>
<tr>
<th>Boundary Determinants</th>
<th>Name of Service</th>
<th>Medicines Use Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of MM Service</td>
<td>Level B</td>
<td></td>
</tr>
<tr>
<td>Definition of Service</td>
<td>Medicines Use Review is a structured, systematic, documented and consultation-based service undertaken by an accredited pharmacist. Medicines Use Review aims to improve the patient’s understanding of their medicines-related health outcomes by identifying access, adherence, and day to day management issues a patient has with their medicines and setting goals with the patient to resolve these issues.</td>
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**Patient Interview**

Structured/Formal

The pharmacist meets with the patient to:

1. Help the patient find out more about the medicines they are taking
2. Identify any problems the patient may be having with their medicines
3. Improve the effectiveness of the medicines being taken

**Documentation Process**

Formal documentation

Documentation of the process taken to conduct a Medicines Use Review is mandatory. This could be through a nationally developed template which includes patient details, prescribed and non-prescribed medicines details (including complementary meds), allergies, results of the screening questions, action taken and any correspondence with the healthcare team of the patient. The reason for having formal documentation is to ensure transparency of the process and to ensure all relevant information can be communicated and picked up by other members of the patient’s healthcare team including pharmacists.

**Reactive or Proactive Service**

Proactive

The medicines use review as a service is a partnership between the patient and the pharmacist and therefore a 2 way process. The service will proactively identify any problems the patient has which are associated with medicines use. It is based on patient needs and therefore requires proactive identification of the patient/group in need.

**How instigated**

Referral (self/health practitioner)

For the medicines use review service patients may be able to self refer, or be referred to pharmacists via other health practitioners or the local DHB/PHO.

**Service Users**

For individuals or groups

The service can be for targeted individuals or others i.e. those at risk of medicine-related problems e.g. taking four or more medicines every day, where non-adherence is suspected, specific patient groups e.g. older people, physical problems like arthritis or patients where there is opportunity to improve care e.g. new formulation which may be easier for patient to take, new compliance aids available.

**Access to individual patient information**

Limited access to patient medical information from healthcare team

This service may take place with/without full access to the patient’s medical information from the healthcare team. It must however have full access to the patient’s medicines record (PMR). The patient must be present whenever possible as dictated by best practice, unless, due to disability or geographical isolation within New Zealand as well as the inability to visit a pharmacy regularly. This is impractical. In this case the pharmacist must document the reason that a face-to-face interview did not take place and conduct the same detailed consultation with the patient by telephone or electronic means as they would have had the patient been present. Medicines Use Review will also be helpful in identifying anomalies and help identify patients who require referral to other Medicines Management Services or to another Healthcare professional.

**Support Provider (to pharmacist)**

Peer Support required

Peer support would require pharmacists providing Medicines Use Review services to maintain a formal network with other pharmacists providing similar services in order to learn from each other’s experiences e.g. PSNZ (Inc) Branch Meetings, E-mail discussion groups etc. Peer support will also be required from the local healthcare team.

**Collaboration**

Collaboration with healthcare team

Collaboration is required with the patient’s healthcare team in order to recommend/ implement any changes, e.g. patient is not taking some medicines, patient may require to be referred to other medicines management services, patient needs to be referred back to the GP, patient needs support to take/use medicines.

**Accreditation/Competence**

Some services may require provider accreditation

An Accredited Medicines Use Review pharmacist can provide this service in any practice location. The pharmacist:

- Must be registered in the pharmacist scope of practice and hold a current APC without conditions
- Must be participating in recertification and be meeting the Medicines Use Review recertification requirements as set by the Council i.e. undertake CPD to accumulate a minimum of 2 Outcome Credits in Competence Standard 2 (Contribute to the Quality Use of Medicines) per year.
- Must demonstrate competence in all current Competence Standards for the Pharmacy Profession except not necessarily Competence standard 6 (dispense medicines) and 7 (prepare pharmaceutical products)
- Must be assessed as competent in the Medicines Use Review competencies as defined by the Pharmacy Council of NZ through an accredited provider organisation.
<table>
<thead>
<tr>
<th>MUR 1</th>
<th>UNDERSTAND MEDICINES USE REVIEW in the context of MEDICINES MANAGEMENT SERVICES</th>
</tr>
</thead>
</table>
| **1.1** Differentiate between the levels of Medicines Management Services | **1.1.1** Describes the Pharmacy Council of NZ competence framework for medicines management services  
**1.1.2** Describes the boundary determinants of levels of medicines management services in the Council framework |
| **1.2** Describe the principles, aims and scope of the Medicines Use Review Service | **1.2.1** Describes the principles of Medicines Use Review  
**1.2.2** Describes the limitations of the Medicines Use Review Service  
**1.2.3** Demonstrates the application of the boundary determinants of Medicines Use Review  
**1.2.4** Takes responsibility for patient care  
**1.2.5** Assesses and interprets information gained and applies its relevance to the individual patient |
| **1.3** Describe the place of Medicines Use Review in the wider context of national and local healthcare goals | **1.3.1** Understands the goals of the relevant national health care strategies e.g. Primary Health Strategy, Maori Health Strategy  
**1.3.2** Identifies local area support and facilitation to assist with meeting local healthcare needs  
**1.3.3** Identifies the roles and responsibilities of members of the local community healthcare team  
**1.3.4** Informs and advises patients of the members of the local community healthcare team |
MUR 2  ESTABLISH AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS

2.1 Understand the principles of privacy and consent
2.1.1 Describes the principles of gathering patient consent
2.1.2 Ensures privacy of patient is maintained

2.2 Build a relationship with the patient
2.2.1 Acknowledges patient partnership and involvement of family/whanau/caregiver
2.2.2 Takes into account patient's individual circumstances and preferences including cultural and health beliefs
2.2.3 Maintains an effective relationship with the patient and family/whanau/caregiver

2.3 Build a relationship with the healthcare team
2.3.1 Explains partnership with and involvement of healthcare team
2.3.2 Takes into account individual healthcare team members circumstances and preferences including cultural and health beliefs
2.3.3 Maintains an effective working relationship with the healthcare team

2.4 Communicate effectively with the patient
2.4.1 Understands and applies the concept of the concordance/adherence model
2.4.2 Agrees and sets goals with the patient
2.4.3 Communicates accurate and relevant information to the patient in a timely manner
2.4.4 Describes the principles of consultation skills including the structure of the consultation process
2.4.5 Describes the principles in motivating and facilitating behavioural change
2.4.6 Monitors and follows up on patients appropriately

2.5 Communicate effectively with the healthcare team
2.5.1 Identifies appropriate communication skills needed to work collaboratively with the healthcare team
2.5.2 Communicates accurate and relevant information with the healthcare team in a timely manner
2.5.3 Acts on feedback received by the healthcare team in a timely manner
2.5.4 Refers or consults appropriately with other health professionals
MUR 3 DOCUMENT THE SERVICE

3.1 Develop effective recording systems
3.1.1 Documents the process including prioritisation of recommendations, goal setting, planning and writing of report or action plan, implementation of action plan and follow up.
3.1.2 Ensures records are relevant and up to date
3.1.3 Contributes to other health professionals records where appropriate

3.2 Maintain patient records
3.2.1 Records patient information and updates patient records in the MUR setting
3.2.2 Maintains privacy and security of patient information
3.2.3 Records goals set and recommendations

MUR 4 MAINTAIN ONGOING QUALITY

4.1 Undertake professional development
4.1.1 Uses the continuing professional development (CPD) cycle to evaluate and identify learning needs
4.1.2 Recognises limitations and works within them
4.1.3 Achieves a minimum of 2 (two) Outcome Credits each year in Competence Standard 2

4.2 Maintain peer support
4.2.1 Maintains a formal network with other pharmacists providing similar services to share and learn from each other’s experiences

4.3 Implement a quality improvement procedure
4.3.1 Describes the principles of Quality Improvement Procedures
4.3.2 Uses standardised documentation e.g. questionnaires/surveys to evaluate the service
Appendix Three: Medicines Use Review Training Information Sheet
MUR is a new service for pharmacists as specified in the DHBNZ National Framework for Pharmacist Services

The Medicines Use Review (MUR) Training Course provided by the New Zealand College of Pharmacists (NZCP) will enable and support pharmacists to provide MUR services. The NZCP MUR training course is being accredited by the Pharmacy Council.

Pharmacists providing these services must comply with the Pharmacy Council Competence Standards for MUR, which require the pharmacist to complete an accredited training course. All pharmacists wishing to complete the NZCP course will be required to complete the pre-course study, attend the workshop and pass the course assessment.

The Pharmacy Council MUR Competence Standards are: [details overleaf]

  MUR 1 Understand Medicines Use Review in the context of Medicines Management Services
  MUR 2 Establish and maintain effective working relationships
  MUR 3 Document the Service
  MUR 4 Maintain Ongoing Quality

The NZCP MUR training course consists of a one day face to face workshop, with a pre-workshop distance study pack and post course assessment, including one MUR review.

Course content covers compliance / adherence, context, privacy, culture, peer support, CPD, quality, communication, process and documentation.

Presenters are experts in the fields of MUR, communication and pharmacy practice.

Assessment

  1. Pre-course Distance Study Pack on Compliance / Adherence (Part A) must be completed prior to attending the workshop.
  2. Assessments A, B and C must be passed (70%) prior to the first review.
  3. Final assessment includes the documentation of the first review (Part D).

A strong part of the Pharmacy Council’s approach to MUR is in the formation of peer support groups, which are seen as a necessary mechanism for the profession to achieve a sustainable and high quality service. The College aims to facilitate this development as an encouraging network that will benefit those pharmacists taking up the MUR initiative.
Pharmacy Council MUR Competence Standards

MUR 1 UNDERSTAND MEDICINES USE REVIEW in the context of MEDICINES MANAGEMENT SERVICES

1.1 Differentiate between the levels of Medicines Management Services
1.1.1 Describes the Pharmacy Council of NZ competence framework for medicines management services
1.1.2 Describes the boundary determinants of levels of medicines management services in the Council framework

1.2 Describe the principles, aims and scope of the Medicines Use Review Service
1.2.1 Describes the principles of Medicines Use Review
1.2.2 Describes the limitations of the Medicines Use Review Service
1.2.3 Demonstrates the application of the boundary determinants of Medicines Use Review
1.2.4 Takes responsibility for patient care
1.2.5 Assesses and interprets information gained and applies its relevance to the individual patient

1.3 Describe the place of Medicines Use Review in the wider context of national and local healthcare goals
1.3.1 Understands the goals of the relevant national health care strategies e.g. Primary Health Strategy, Maori Health Strategy
1.3.2 Identifies local area support and facilitation to assist with meeting local healthcare needs
1.3.3 Identifies the roles and responsibilities of members of the local community healthcare team
1.3.4 Informs and advises patients of the members of the local community healthcare team

MUR 2 ESTABLISH AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS

2.1 Understand the principles of privacy and consent
2.1.1 Describes the principles of gathering patient consent
2.1.2 Ensures privacy of patient is maintained

2.2 Build a relationship with the patient
2.2.1 Acknowledges patient partnership and involvement of family/whanau/caregiver
2.2.2 Takes into account patient’s individual circumstances and preferences including cultural and health beliefs
2.2.3 Maintains an effective relationship with the patient and family/whanau/caregiver

2.3 Build a relationship with the healthcare team
2.3.1 Explains partnership with and involvement of healthcare team
2.3.2 Takes into account individual healthcare team members circumstances and preferences including cultural and health beliefs
2.3.3 Maintains an effective working relationship with the healthcare team

2.4 Communicate effectively with the patient
2.4.1 Understands and applies the concept of the concordance/adherence model
2.4.2 Agrees and sets goals with the patient
2.4.3 Communicates accurate and relevant information to the patient in a timely manner
2.4.4 Describes the principles of consultation skills including the structure of the consultation process
2.4.5 Describes the principles in motivating and facilitating behavioural change
2.4.6 Monitors and follows up on patients appropriately

2.5 Communicate effectively with the healthcare team
2.5.1 Identifies appropriate communication skills needed to work collaboratively with the healthcare team
2.5.2 Communicates accurate and relevant information with the healthcare team in a timely manner
2.5.3 Acts on feedback received by the healthcare team in a timely manner
2.5.4 Refers or consults appropriately with other health professionals

MUR 3 DOCUMENT THE SERVICE

3.1 Develop effective recording systems
3.1.1 Documents the process including prioritisation of recommendations, goal setting, planning and writing of report or action plan, implementation of action plan and follow up.
3.1.2 Ensures records are relevant and up to date
3.1.3 Contributes to other health professionals records where appropriate

3.2 Maintain patient records
3.2.1 Records patient information and updates patient records in the MUR setting
3.2.2 Maintains privacy and security of patient information
3.2.3 Records goals set and recommendations

MUR 4 MAINTAIN ONGOING QUALITY

4.1 Undertake professional development
4.1.1 Uses the continuing professional development (CPD) cycle to evaluate and identify learning needs
4.1.2 Recognises limitations and works within them
4.1.3 Achieves a minimum of 2 (two) Outcome Credits each year in Competence Standard 2

4.2 Maintain peer support
4.2.1 Maintains a formal network with other pharmacists providing similar services to share and learn from each other’s experiences

4.3 Implement a quality improvement procedure
4.3.1 Describes the principles of Quality Improvement Procedures
4.3.2 Uses standardised documentation e.g. questionnaires/surveys to evaluate the service
Details of the Programme:

1. Pre-course distance pack:

   Topic is Compliance and Adherence
   Presenters: Diane Harries and Elizabeth Johnstone, pharmacists
   50 page booklet of reading (cover shown next page below left)
   1/2 hour of audio-recording with handout
   Short quiz of 40 questions (Part A)
   Estimated time to complete 2 hours
   Reading, listening and quiz must be completed prior to workshop

   **Key issues in booklet:** the difference between compliance, concordance and adherence with medication regimens; the factors affecting adherence to medication regimens in terms of the five dimensions: socio-economic, health system, therapy, condition and patient; unintentional and intentional non-adherence to therapy; ways to recognise non-adherence; strategies and communication skills that may assist patients to learn about their medicines or illnesses, and thereby overcome non-adherence.

   **Key issues in recording:** patient issues including priorities, perspectives, empowerment, competence, stereotyping; markers for non-adherence; process for analysis.

2. Face-to-face one-day workshop

   Planned for 9am until 5pm on Sunday; Local venue; Lunch provided
   Six hours face-to-face interactive teaching session
   Short quiz of 40 questions (Part B)
   Short written answer questions (Part C)
   Must be completed before undertaking first review in practice

   **Content:**
   - Context, privacy, culture, peer support, quality issues:
     (90 minutes) (Bob Buckham and Elizabeth Johnstone, NZCP/PSNZ)
   - Communication skills module appropriate to MUR with practice of the skills taught to gain experience in a simulated fashion and for formative assessment.
     (180 minutes) (Dr Richard Fox, Dr Susan Hawken, Dr Renske van den Brink or Dr Fiona Moir of Connect Communications)
   - Process of MUR using case studies to demonstrate application of theory to practice. Completion of appropriate documentation.
     (90 minutes) (Ann Privett or Marie Bennett, MUR pharmacists)

   **Key Issues:**
   - Context relates to: Pharmacy Council Competence Framework for Medicine Management Services; tasks, limitations, responsibilities and boundaries for MUR; Government Strategy documents; local area healthcare organisations.
   - Code of Health and Disability Services Consumers’ Rights and the Health Information Privacy Code relevant to MUR.
   - Cultural awareness and diversity: looking for assumptions and concepts that impact on cultural and health beliefs.
• Quality issues in terms of Continuing Professional Development requirements for pharmacists undertaking MUR services, including recognition of professional limitations; quality improvement plans and evaluation of the service provided; the what, why, where and how of peer support networks.

• Communication: the importance of the therapeutic relationship between the pharmacist and the patient, with the pharmacist actively eliciting the patient’s viewpoint and perspective; mutual agreement between the pharmacist and the patient in determining the recommendations and creating the action plan.

• Developing an effective working relationship with the healthcare team; attitudes; referrals and feedback; appropriate styles.

• Process and documentation of the MUR consultation with the patient; record keeping; using practice-based cases with experienced MUR pharmacists.

3. Accreditation

(a) Short quizzes Parts A and B (above) must be passed at 70% or over
(b) Short answer questions (Part C) must be completed and passed.
(c) Then pharmacist completes one real MUR review in their practice
(d) Documents from practice (Part D) submitted for final accreditation
(e) Resubmission of incomplete answers if required
(f) Certificate of accreditation issued (see example below right)
(g) NZCP will notify Pharmacy Council when the pharmacist becomes accredited
Time Schedule

- Enrolment must be received two weeks prior to the workshop date, in order to complete the pre-course work, submit the quiz and pass at 70%, prior to the workshop.
- Assessments for Parts B and C must be submitted within two weeks of the workshop.
- Pharmacist carries out first review and completes Part D of assessment within eight weeks of the workshop.
- Pharmacist notified of accreditation between ten and twelve weeks from workshop.

Costs and Refund Policies: Details are on the reverse side of the enrolment form.

Recognition of Prior Learning:

Exemptions

- If the pharmacist has already participated in the audioconference “Supporting Your Patients’ Compliance” in June 2006 or studied using the audiopack, and passed the quiz, they will be exempt from the pre-course study pack.
- If the pharmacist has already been carrying out MUR type reviews, one of these may be used for the documentation required in Part D assessment.

Portfolio

- If a pharmacist is seeking recognition of prior learning for MUR, an assessment tool is available from the NZCP to assist with this pathway to accreditation. This competence tool is for self-assessment against MUR 1-4 (given above) and involves the submission of a portfolio of evidence that demonstrates competence in every one of the MUR standards and activities. The cost of assessment via this pathway will be $1,050 plus gst with a minimum processing time of three months.
- It is mandatory for pharmacists to be active members of peer support groups and these will be established at the NZCP training sessions. If a pharmacist intends to claim recognition of prior learning, this requirement needs to be in place and described in the evidence submitted.
Appendix Four:
Medication Card: Counties Manukau DHB
**Mr Time HOME**  
CPG2936  
DoB: 22/06/1975 Male

**Medication Card**  
Prepared by Aaron Jackson (Pharmacist) on discharge from Counties Manukau DHB on Thursday, 15.4.2010

**IMPORTANT! - Keep this card and take it whenever you go to your GP, Pharmacist or the Hospital**

You have been prescribed the following medications. This information is to help you to use them safely. This information was accurate at the time of printing.

<table>
<thead>
<tr>
<th>#</th>
<th>Medication name</th>
<th>Other name(s)</th>
<th>How many and when to take</th>
<th>Recent changes</th>
<th>What is it for?</th>
<th>Special instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Morphine sulfate 30mg Sustained Release Capsules (m-Eslon)</td>
<td></td>
<td>1 cap Breakfast 1 cap</td>
<td>Change</td>
<td>To treat Severe Pain.</td>
<td>Swallow whole, do not crush or chew tablets</td>
</tr>
<tr>
<td>2</td>
<td>Enalapril maleate 10mg Tablets (m-Enalapril)</td>
<td></td>
<td>1 tab Breakfast 1 tab</td>
<td>New</td>
<td>Reduces blood pressure</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Lactulose 10g/15ml Oral Solution (Laevolac)</td>
<td>Duplalac</td>
<td>20 ml Breakfast 20 ml</td>
<td>New</td>
<td>To prevent / treat constipation</td>
<td>Ensure adequate fluid intake. Effect occurs after about 3 days of regular use</td>
</tr>
<tr>
<td>4</td>
<td>Docusate sodium &amp; Sennosides A and B Tablets (Laxsol Tablets)</td>
<td></td>
<td>Take TWO tablets at night when required for constipation</td>
<td>New</td>
<td>To prevent / treat constipation</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Calcium carbonate 1.25g Tablets (Calci-Tab 500)</td>
<td></td>
<td>2 tabs</td>
<td>New</td>
<td>Calcium Supplement to strengthen bones</td>
<td>Do not take within 2 hours of other medication</td>
</tr>
<tr>
<td>6</td>
<td>Aspirin 100mg Enteric coated Tablets (Ethics Enteric Coated Aspirin)</td>
<td>Cartia</td>
<td>1 tab</td>
<td>No Change</td>
<td>Thins the blood &amp; prevents clots</td>
<td>Swallow whole and take with food and a glass of water</td>
</tr>
<tr>
<td>7</td>
<td>Fluticasone propionate 250mcg/1dose Inhaler (Flixotide Inhaler CFC Free)</td>
<td></td>
<td>2 puffs 2 puffs</td>
<td>No Change</td>
<td>Helps prevent breathlessness (PREVENTER)</td>
<td>Rinse mouth with water after use. Use regularly for best results</td>
</tr>
<tr>
<td>8</td>
<td>Alendronate sodium &amp; Cholecalciferol Tablets</td>
<td></td>
<td>Take ONE tablet ONCE weekly on</td>
<td>No Change</td>
<td>To strengthen bones</td>
<td>Take with a large glass of water and remain upright for 30 minutes after taking</td>
</tr>
</tbody>
</table>
### Medications I am to take ONLY WHEN REQUIRED

<table>
<thead>
<tr>
<th>#</th>
<th>Medication Name</th>
<th>Dosage</th>
<th>How to Take</th>
<th>Side Effects</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Paracetamol 500mg Tablets (Pharmcare Paracetamol)</td>
<td>Panadol Tablets</td>
<td>Take TWO tablets FOUR times daily when required for pain</td>
<td>No Change</td>
<td>Pain relief. Maximum EIGHT tablets in 24 hours. Take regularly for best effect.</td>
</tr>
</tbody>
</table>

### Allergies, Adverse Reactions and Drug Intolerances

<table>
<thead>
<tr>
<th>#</th>
<th>Drug/Substance</th>
<th>Past Reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Penicillin</td>
<td>Anaphylaxis, breathing difficulty, rash</td>
</tr>
<tr>
<td>2</td>
<td>Diclofenac</td>
<td>Nausea, Renal impairment</td>
</tr>
</tbody>
</table>

### Medications I buy myself

<table>
<thead>
<tr>
<th>#</th>
<th>Medication Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fish oil, 2 tablets daily</td>
</tr>
<tr>
<td>2</td>
<td>St Johns Wort daily</td>
</tr>
</tbody>
</table>
## Medications I was taking before I came into hospital that have been STOPPED

Please return these medications to your Pharmacy for disposal as you are no longer required to take them.

<table>
<thead>
<tr>
<th>#</th>
<th>Medication name</th>
<th>Other name(s)</th>
<th>Stopped</th>
<th>Reason/Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bendrofluazide 2.5mg Tablets (Neo-Naclex)</td>
<td></td>
<td></td>
<td>Kidney impairment</td>
</tr>
<tr>
<td>2</td>
<td>Captopril 25mg Tablets (Apo-Captopril)</td>
<td></td>
<td></td>
<td>Changed to enalapril on admission due to rash</td>
</tr>
<tr>
<td>3</td>
<td>Diclofenac sodium 75mg Sustained Release Tablets (Diclax SR Tablets)</td>
<td>Voltaren</td>
<td></td>
<td>Poor kidney function</td>
</tr>
</tbody>
</table>

---

### My Contact Details:

**Address:**

57 Hill Road
Buckland’s Beach 2012

**Ph**

**Recent Hospital Discharge Information:**

- Admission date: 5.4.2010
- Discharge date: 15.4.2010
- Discharge Ward: W023-ATR
- Discharge Clinician: Dr John Smith,

**My Usual Pharmacy:**

Botany Downs, Life Pharmacy, Shop 17, Town Centre Drive, 272-7700

**My Usual GP:**

Dr Fell Good, Botany Clinic Ph (09) 276 0044

**For Consultant**

Dr Geoff Green
Appendix Five: Literacy is a Health Issue
Literacy is a Health Issue

Large font electronic copies are available on request from Rosemary Knight - r.knight@pgnz.org.nz

PHARMACY GUILD OF NEW ZEALAND (INC)
Literacy is a major determinant of health. Over one million adults in NZ lack ‘functional literacy’. They are below the minimum level of literacy competence required to meet the demands of everyday life.

Health literacy is a relatively new concept. It links levels of literacy with the ability to interpret and act on health information and is now an area of study in its own right.1

Early definitions focused on the capacity to read and comprehend medical information but research has identified advanced skills required to interpret health information. These include social skills, the ability to set and realise personal goals, critical analysis of options, making informed choices, problem solving, numeracy, and coping effectively with change.2

The first International Adult Literacy Survey (IALS), a joint project of OECD and North American agencies from 1994 to 1998, profiled adult literacy skills in 22 countries including NZ. It rated literacy from level one to level five:

• Level 1 - may have difficulty reading
• Level 2 - can read, but only when the material is simple, clearly laid out, in a familiar context and the tasks involved are not too complex
• Level 3 - the minimum desired level to meet the demands of life in most countries
• Level 4/5 - higher literacy skills requiring the ability to integrate information and solve complex problems

Figures denoting limited health literacy in this article refer to levels one and two combined as people functioning at these levels cannot fully access their health systems. Despite inevitable sampling differences, the IALS results highlight the challenge that faces more or less 50% of adults in each country profiled and also the health providers who care for them. Australian and New Zealand results mirror USA, Canada, UK and Ireland.
Canada 50% of adults have difficulty interpreting everyday reading materials.

USA 90 million adults, almost 50% of the adult population, do not have the literacy to fully benefit from the health system. The cost to the US of poor health literacy is $73 billion.

Ireland 45% of the population functions at level one or two 25% of the adult population could not fully understand the instructions on a popular headache tablet package.4

Australia Almost half of Australian adults are expected to struggle with the information processing demands of everyday life.5

New Zealand Over one million adults are below the minimum level of literacy competence required to meet the demands of everyday life. 20% of these people have very poor literacy skills (level one).6 NZ Adults performed poorly in document and quantitative literacy tests.7

The adult literacy survey is being repeated in NZ in 2006 and will be known as the Adult Literacy and Life Skills Survey (ALL). It remains a joint project of the OECD and North American agencies but locally it is the responsibility of the Ministry of Education. It will collect statistics on prose, document and quantitative literacy, and also test problem solving ability. The data will be internationally comparable and will update our knowledge of the functional literacy of the NZ population i.e. how well people use information to function in daily life.

What is the impact of poor health literacy?

Direct Effects

The direct effects of poor literacy are seen in the pharmacy every day. People with limited literacy are less likely to use screening and prevention services, have less knowledge of their illness and medicines, are less able to self manage their long term condition and are more likely to be hospitalised.8 They are also more vulnerable to workplace injury, where safety depends on the ability to read and apply information on signs and in manuals.9

A NZ survey led by Pauline Norris in 2001 looked at consumer understanding of nine terms commonly used by health providers including ‘hypertension’, ‘antibiotic’ and ‘decongestant’. A Maori, Pakeha and Tokelauan pharmacy student each asked people from their own ethnic group to define the selected terms. Only three words, ‘orally’, ‘allergic’ and ‘inflammation’ were understood by more than 50% of the 244 respondents. ‘Decongestant’ was the least understood word, correctly defined by only 5.3% of respondents. Understanding varied with ethnicity, level of education and gender, being highest in Pakeha, those with tertiary education and females. Of significance to community pharmacy, however, is the finding that comprehension of these common words was very low overall. The study highlights the importance of using simple, clear language when talking to patients, as any misinterpretation of medical terms commonly used by health providers carries a high risk of harm.10
Another NZ study informs health providers about the risk of harm associated with poor knowledge of medical terms. The report begins with an international literature review, outlining the direct and indirect effects of low health literacy. It discusses non-adherence to medication regimens, increased health costs due to failed treatments and mismanaged conditions and the risks associated with not checking patient comprehension of a diagnosis or medication or treatment plan.

This study surveyed people about the source of their medicines information and examined the readability of each. They compared TV medical dramas, media news, magazines, advice from pharmacists, medical specialists, alternative practitioners and GPs, Medsafe fact sheets and Ministry of Health brochures, pharmaceutical product inserts, advertising, relatives and friends and the Internet. Only the TV dramas, “Casualty” and “ER” met the criteria of the readability formula for the average reader, i.e. Grade Level 8, equivalent to 12-13 year old education level. Ministry of Health and Medsafe consumer information in leaflets and on their websites measured well at 9.8. Least accessible to consumers were medicines and product information supplied by pharmaceutical companies and the brochures and advertising of the complementary and alternative medicines sector.

This rating does not mean that TV dramas are a preferred information source. Rather, it is a comment on the accessibility of information. Respondents rated the advice of a doctor and pharmacist as very important, but of particular interest to community pharmacy is the finding that 88% rated consistency of advice between doctors and pharmacists as very important. Limited knowledge of health and medical language was also found during a Medicines Use Review Service, initiated by a Wellington community pharmacy group and recently evaluated by the Guild. The service identified non-adherence to medicines regimens in 76% of the enrolled patients. Many of the adherence issues could be attributed to low health literacy.

Health problems arising directly from literacy difficulties can be severe enough to require hospitalisation. The NLHP and other Canadian health groups have identified some examples:

- Incorrect use of medicines
- Failure to comply with medical directions
- Errors in administration of infant formula
- Unhealthy lifestyles invalidating drug therapy
- Misunderstanding of the goals and expectations of therapy
- Safety risks in the workplace, the community and at home, e.g. in the handling of chemicals and machinery

Other daily difficulties for people with limited health literacy are less of a safety risk, but nevertheless affect their quality of life and use public health resources. This list gives an indication of the burden of expectation placed on patients:
• Calculating the correct amount of medicine for a child
• Following instructions for a diabetes regime
• Determining the amount of fat or sodium from a food label
• Retrieving basic information from a medicine label
• Understanding concepts like take on an empty stomach, orally, apply sparingly, instil
• Recognising or understanding the symptoms of hypoglycaemia
• Fully understanding a procedure
• Understanding an (informed) consent form for medical treatment
• Interacting with health care providers
• Having the confidence to take part in decision-making about themselves
• Navigating through a complicated health system
• Finding a dentist or other health provider
• Seeking appropriate and timely medical attention

Indirect effects

The major impacts on personal and national health occur indirectly. Accepted determinants of health such as living and working conditions, personal health practices and coping skills, physical environment and use of health services are all affected by literacy. Literacy is linked to employability, social status and poverty and is therefore both a determinant and an outcome of other social conditions. Without it people struggle to rise out of dependency.

Research continues into causes of low literacy. At the individual level, language and cultural differences, visual, hearing and cognitive impairment are clearly markers of health and literacy. An influential study, A Prescription to End Confusion by the United States Institute of Medicine (IOM) offers a top down theory that health literacy goes beyond the capacity of the individual and “arises from a convergence of health care and education systems, social and cultural factors.” It gives the responsibility for addressing this to health providers, suggesting that health literacy depends on their skills, preferences and expectations.

The IOM also suggests that there will be no reduction of disparities in health without a simultaneous improvement in literacy. In NZ, the right to health literacy is provided by Right Five of the Code of Health and Disability Services Consumers’ Rights, Regulation 1996 which entitles every consumer “to effective communication in a form, language and manner that enables the consumer to understand the information provided”. Since reducing disparities in health is a major aim of every District Health Board in NZ, addressing poor health literacy becomes the responsibility of all health providers.

As we ask people to take responsibility for their adherence to long term goals and self-care in a complex system, planners of primary health care services will continue to battle the direct negative patient effects and indirect social effects of limited health literacy. Health literacy is “the currency needed to negotiate the system” to ensure good outcomes in the future.
How can we identify poor health literacy?

Limited health literacy is ‘a silent epidemic’ and ‘an underappreciated challenge’, characterised by the lack of understanding of many health practitioners and policy makers, and the shame and powerlessness that patients feel. A sense of shame reduces patients’ ability to express their concerns in a highly literate health care environment.21

One of the teaching points of the American Medical Association’s Health Literacy Training-of-Trainers Program is that ‘you can’t tell by looking’ who lacks functional literacy.22 People become adept at hiding their difficulties but some behaviour may indicate a need to be sensitive to the literacy level of a patient. Hostile, embarrassed or inappropriate behaviour may not indicate a non-compliant or difficult patient, but someone who has lost their capacity for health action.

A person who routinely misses appointments, has problems understanding how to access appropriate services, ignores or misunderstands advice and instructions, fails to fully engage with the health provider, asks a lot of questions or none at all or frequently returns to the pharmacy for health-related services, may lack literacy skills.

How someone reacts to written material or the need to write information down may be an indicator of low literacy. A person who arrives with incomplete forms, who avoids filling out a form in public or asks for 2 or 3 forms, never jots down instructions or refers to written information they’re given, makes excuses about forgetting their glasses or says they’ll read it at home, may be relying on family members to read and write for them.23

What are the barriers to addressing low literacy?

Barriers to addressing low literacy on a daily basis are easily identified. Time is a constraint for all health environments. However patients who don’t understand or follow instructions need repeat or extra healthcare and in the end cost more of a health provider’s time, more of the public purse and have unsatisfactory outcomes. Other barriers cited are lack of private space in patient care areas, cultural resistance to lifestyle changes and health promotion, and the sheer volume of information health providers receive each week.

Research in the future intends to identify the actual awareness of health providers and examine their practices in literacy and health. We can then look forward to a guide to best practice, effective literacy and health policies.24

What can be done about poor health literacy?

Health providers cannot change the literacy levels of their community. “They can however work to improve their own communication skills, the procedures used for communicating and interacting with people, and the forms and materials they write”.25 Many health practitioners already model good communication. When this is combined with increased literacy awareness, both the health literacy and the health of patients improve.
Rudd & Zobel identified five contexts in which primary health care practitioners can make a significant contribution to the development of a patient’s cognitive skills. The following list gives examples of materials and tasks within those contexts which practitioners can assist their patients with to ensure understanding beyond the reading.

<table>
<thead>
<tr>
<th>Health promotion</th>
<th>find important information in a health booklet or product label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health protection</td>
<td>understand a health and safety notice, cleaning product label</td>
</tr>
<tr>
<td>Disease prevention</td>
<td>set health goals and engage in early detection</td>
</tr>
<tr>
<td>Health care and maintenance</td>
<td>make and keep an appointment, follow a medicine regimen,</td>
</tr>
<tr>
<td></td>
<td>give a health history, form a partnership with a doctor</td>
</tr>
<tr>
<td>System navigation</td>
<td>access needed services, understand forms and get benefits</td>
</tr>
</tbody>
</table>

This does not mean “dumbing down” information or taking extra time. The key is to support one form of information or instruction with another e.g. reinforce written material with visual or spoken explanations at the same time. A brief discussion of a message in a booklet or drawing a diagram of a process or the use of a visual aid is sufficient. Providing a shame free environment is also important. You might say, for example, “A lot of people have trouble reading and remembering these kinds of materials/instructions. Is this ever difficult for you?”

What can health practitioners do to support literacy in their own practices?

- Rely on face to face opportunities to give advice if possible
- Learn the “Teach-back” method to check for understanding (see box at end)
- Read written material with patients or support with verbal explanations
- Support explanations with pictorial material or a visual aid
- Use plain language in patient interactions, forms and brochures (see box at end)
- Be careful not to blame people with limited literacy for their lifestyle and health practices. Assist them to make informed choices

At the community or management level:

- Raise awareness about the links between literacy and health
- Make written materials easier to use. Consider font, design, layout, pictures
- Be familiar with and refer patients to community literacy and health programmes
- Give consistent health and medicines messages
- Include health literacy awareness in professional training
- Challenge policies that alienate people with limited literacy
- Work with community organisations to promote plain language
Summary
The concept of health literacy and the research it has generated are relatively new to many in the health profession. While we await recommendations for best practice we can continue to raise health literacy awareness in the community, to develop communication techniques that aim not only to inform people but also assess their understanding, and to encourage the planning of socio-economic strategies that take adult health literacy into account.28

Teach-back method to check understanding
The “Teach-back” method is a strategy to check that patients understand what you’ve said. In addition it is a tool to improve recall and compliance. It also helps establish partnership and rapport with patients who feel overwhelmed by the system.

The Agency for Healthcare Research and Quality (AHRQ) rates asking that patients “recall and restate what they have been told” as one of the 11 top patient safety practices based on the strength of scientific evidence.29

How it works: Avoid challenging patients’ knowledge.
If you say “Do you understand?” patients will say “yes”.
If you say “Do you have any questions?” patients will say “no”.

Ask people to explain their illness / health in their own words.

Put the emphasis on your teaching, which eases patient anxiety. e.g.
“I want to make sure I explained things well. Can you tell me what we’ve decided to do?” or “Tell me how you’re going to do this when you get home.”

or “We talked about a few salty foods to avoid to control your blood pressure. Tell me two foods you’re willing to give up to help your blood pressure.”

Twelve tips for clearer medical English30

1. Think of the patient always
2. Use short sentences
3. Avoid jargon, but do use words patients need to know. Explain them simply
4. Avoid writing words in capital letters as these are much harder to read. With lower case the words make different shapes, which make them easier to recognise
5. Don’t underline or use italics
6. Use bullet points for complex information
7. Use everyday words
8. Be very careful with writing numbers. Always use words for single digit numbers
9. Be personal. Say “your foot”, not “the foot”
10. Use active verbs. This keeps sentences short, direct and more personal e.g. Write or say Take one tablet (active, shorter, more personal) instead of One tablet to be taken (passive, longer, impersonal)
11. Reveal hidden verbs. e.g. after completion of the course = after you finish the course
12. Use a readable typeface, preferably a serif typeface e.g. Times New Roman which is easier to read than a sans serif typeface
**Literacy toolbox**

- [http://www.plainenglishcampaign.com](http://www.plainenglishcampaign.com) has an A-Z guide for medical terms.

- [http://www.usp.org.audiences/consumers/pictograms/form.html](http://www.usp.org.audiences/consumers/pictograms/form.html) has downloadable pictograms for use with speakers of other languages or patients with low literacy. However, a study by K Ryan, S De Silva, G Becket & R Vaillancourt on Pre-testing of Pictograms with Non-English Speaking Peoples found that cultural differences affect how people interpret pictograms. This work is summarised in Pharmacy Education 2004; Sept-Dec Vol 4, no 3-4.

- [http://www.nzliteracyportal.org.nz/Health+Literacy/](http://www.nzliteracyportal.org.nz/Health+Literacy/) This site has little Australian and NZ data yet, but has good links to international health literacy research.

**Readability assessment**

MS Word for Windows has a readability assessment (Flesch-Kincaid Scale) to test the reading level of written materials. Tools > Spelling and Grammar > Options > select Show readability statistics. Type in a sample paragraph from a document, check spelling and grammar in the normal way and the next box will give you the reading level, albeit using American grade levels. Try to write to grade 8 or less if written material is for general community use.

- [www.AskMe3.com](http://www.AskMe3.com) is the website of a coalition of US national organisations, including the American Medical Association, dedicated to clear communication. It provides a patient education tool designed to improve communication between health providers and patients. The three questions patients should ask their doctor, nurse or pharmacist are:
  - What is my problem?
  - What do I need to do?
  - Why is it important for me to do this?

These questions could guide the information given to patients, e.g:
  - Your problem is...
  - You need to...
  - Because...

- [www.chcs.org/publications3960/publications_show.htm?doc_id=291711](http://www.chcs.org/publications3960/publications_show.htm?doc_id=291711) is the website of the (American) Centre for Health Care Strategies, Inc. It has 9 downloadable fact sheets about Health Literacy.
References

1. Office of the Minister of Education. More than words, The NZ Adult Literacy Strategy. 2001:27
5. Australian Council for Adult Literacy Inc. Surveys and beyond: The case for adult literacy. accessed 30.11.05
7. Ibid. p.27
9. Rootman R & Ronson B. Literacy and health research in Canada. Where have we been and where should we go? Canadian Journal of Public Health. 2005; 96 (2):67
12. Ibid. p.16
16. Rootman R & Ronson B. Literacy and health research in Canada. Where have we been and where should we go? Canadian Journal of Public Health. 2005; 96 (2):67
22 Vergara K. Raising health literacy sensitivity throughout the healthcare system and the community. Department of Medicine & Public Health. American Medical Association. 2005; slide 10 accessed 2.5.2006


25 Rudd R. A Maturing Partnership. Focus on Basics, World Education NCSALL 2002:5(C)


30 Grassby P. Health Illiteracy – The hidden handicap. IPU Review 2001; Nov:424

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