Evaluation Report: Health Literacy Medication Project - Measurement and Evaluation

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What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others. - Pericles

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Acknowledgements

The Health Quality and Safety Commission, Workbase and Malatest International would like to thank the two pharmacies and their teams for opening up their pharmacies and taking part in the evaluation. Neither the demonstration project nor the evaluation would have happened without the commitment of the pharmacy owners to enhancing health literacy in their pharmacies for the ultimate benefit of improved health outcomes for consumers.

We would also like to thank the consumers who took the time to complete interviews and who consented to have their conversations with the pharmacist recorded. We appreciated everyone’s enthusiasm and willingness to assist with the evaluation.

The pharmacists who completed the online survey provided valuable information to inform a national roll-out of health literacy training.

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Executive Summary

Background

Health literacy is defined by the Health Quality and Safety Commission (HQSC) as:

> *"The degree to which individuals can obtain, process and understand health information and services they need to make appropriate health decisions"* (New Zealand Guidelines Group, 2011).[1]

In response to recommendations from research carried out by the New Zealand Guidelines Group[2] the Commission funded a health literacy demonstration project. The overall purpose of the project was to develop, trial, and evaluate a health literacy learning package aimed initially at staff in two community pharmacies. The focus was on pharmacists and the way they communicate with consumers.

The Education, Training and Resources

Workbase,[3] a not-for-profit organisation committed to improving the literacy, language and numeracy skills of people in New Zealand was selected as the training provider to complete a literature review[4] and to develop a health literacy education and training package and resources. A 'train-the trainer' approach was developed to train the two lead pharmacists to deliver the training and resources to their teams. The training package for the demonstration project included:

- A one day education session about health literacy for the lead pharmacist (the trainer);
- A package of resources developed based on a universal precautions approach, together with evidence and feedback from the lead pharmacists about what they considered would be useful for them in their pharmacies. The package included:
    - Trainer notes;
    - Resources to support the training – quizzes and notes;
    - A booklet and brochure outlining the three steps to health literacy;
        - Step 1 – Find out what people know
        - Step 2 – Build health literacy skills and knowledge
        - Step 3 – Check you were clear (and if not go back to Step 2)
    - A memo card about the three steps to health literacy;
- Follow-up telephone support to the lead pharmacists; and
- A follow-up on-site workshop with pharmacy staff.

Each of the two participating pharmacies differed in terms of their location, size and consumer base. The inclusion of two different pharmacies in the demonstration project provided an opportunity to learn from the experiences of the teams in each pharmacy to prepare a programme suitable for national roll-out.

The demonstration project ran for three months from mid-March until mid-June. Participating pharmacies continue to implement the training and work on health literacy.

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[1] New Zealand Guidelines Group for HQSA (2011).Health Literacy Environmental Scan. Available at: http://www.hqsc.govt.nz/assets/Consumer-Engagement/Publications/FINAL-NZGG-HQSC-Health-literacy-environmental-scan.pdf

[2] Ibid

[3] Workbase – Leading health literacy http://www.workbase.org.nz/

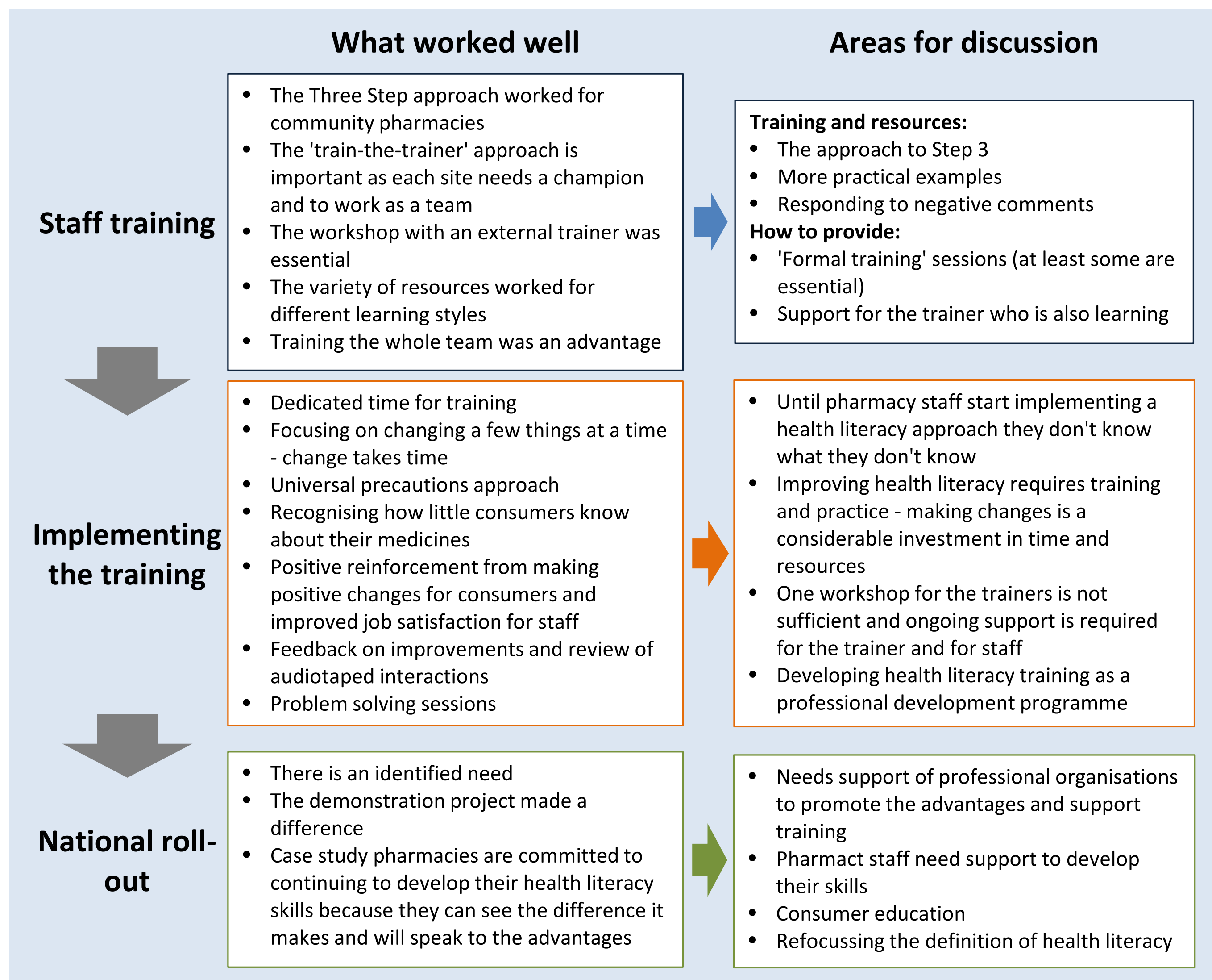
[4] Report for the development of health literacy education and training tools and resources for health providers, January 2013.

The Evaluation Methods

The evaluation consisted of case studies of the two participating pharmacies and focussed on the activities, outputs and short-term outcomes of the demonstration project. Data for the evaluation were collected through:

- Review of documents;
- Pre- and post-demonstration site visits and observation, interviews with the pharmacist trainers and their teams, surveys of pharmacy staff, assessment of audiotaped interactions between consumers and pharmacy staff, and interviews with consumers; and
- A national survey of pharmacists about health literacy.

Findings



Recommendations

Health literacy education and training should be extended to national roll-out as there is a demand and a need.

The health literacy demonstration project achieved the HQSC's objectives for pharmacy staff to:

- Acknowledge and understand how health literacy impacts medication safety; and
- Raise awareness of their own communication styles including the use of jargon, acronyms and technical terms when communicating with consumers.

The sector needs to discuss and develop strategies about how access to training can be provided nationally as pharmacy staff will need support to develop their skills.

The case studies demonstrated that even with pharmacists who identified health literacy as a topic for practice improvement, taking part in health literacy training produced surprises about how much more there was to learn. National roll-out will require pharmacy professional organisations to promote the advantages and provide support for health literacy training. It is difficult for pharmacies, particularly small ones, to put training into place on their own. One workshop for the trainers is not sufficient and on-going support is required for the trainer and for staff. Organisations will need to consider how to provide external training and how to support the trainers. Potential strategies for the sector could include:

- Changes in the approach to health literacy in professional education and training to provide consistent approaches through undergraduate training, internships and professional development packages;
- Linking health literacy to Long Term Conditions contracts and medicines reviews; and
- Incorporating health literacy training into professional development requirements.

A universal precautions approach to health literacy (working with all consumers to identify if they have health literacy needs) should be endorsed as an effective way of identifying and meeting the needs of consumers.

Asking every consumer relevant and open questions at the start of an interaction to establish what they know and need in relation to their health or medication provides a pharmacist with a useful starting point for building new knowledge with consumers. This approach can be used in every interaction with consumers and avoids making assumptions about which consumers are likely to have low health literacy or needing to test consumers for skill deficits.

Encourage pharmacists to use the model developed in the project of Three Steps to health literacy: Step 1 Find out what people know, Step 2 Build health literacy skills and knowledge, Step 3 Check you were clear.

A training approach and package has been developed that provides the foundation for health literacy training. The package provides easy to implement techniques, skills and ideas that can be put into practice in the clinical settings.

The training package could be strengthened by:

- Adding more practical examples into the training package;
- Making Step 3 more usable by providing more direction and examples. For example, introducing Step 3 so that staff get more confident in using teach back could include developing reusable closed questions to check important information and actions already discussed such as "how many tablets do you need to take each day?" or for rpn "when do you need to use this tablet?" or "what side-effects do you need to watch for?";
- Providing examples of how to respond to negative comments by consumers; and

- Providing more information about adult learning theory and how this has implications for consumer safety.

Consumer education about the responsibility pharmacy staff have to ask consumers questions to ensure medicine safety would help pharmacy staff.

The responsibility for providing good information about medicines sits with pharmacy staff as the health educators. However, in the demonstration project negative feedback from consumers impacted on staff confidence to make changes. Consumer education about the pharmacist's role, important things to know about medicines and to encourage consumers to ask questions if they need more information about their medicines may facilitate a health literacy approach. Developing any consumer education campaign to requires careful thought to ensure the key messages are appropriate.

Consider repositioning the definition of health literacy in a pharmacy setting

The definition of health literacy accepted for use in New Zealand is a historical definition that focusses on the skill levels of consumers to obtain, process and understand information.

Prior to national roll-out it will be useful to:

- Reposition health literacy in the pharmacy setting to focus on the responsibility of pharmacy staff to ensure consumer understanding of medication, involving both reducing unnecessary health literacy demands on consumers, and building and checking the knowledge consumers need to function in healthy and safe ways; and
- Reinforce the message that 'telling or giving information' to consumers does not guarantee 'ensuring consumer understanding'.

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Definitions and Abbreviations

Consumers	In the context of this report consumers are people using pharmacy services and may also be referred to in quotes as patients, clients or customers.
Health literacy	The degree to which individuals can obtain, process and understand health information and services they need to make appropriate health decisions.[5]
HQSC	Health Quality and Safety Commission.
LTC contracts	Long term conditions contracts http://www.centraltas.co.nz/LinkClick.aspx?fileticket=rlww-1d-h3c%3D&tabid=242&mid=874
Medicine safety	Medicine safety is ensuring the right people get the right medicine, the right dose at the right time and by the right route.
Patient safety	In the context of this project, patient safety is the improvements in patient safety that result from medication safety.
Whānau	A Māori language word for extended family.
Workbase	Workbase is a not-for-profit organisation committed to improving the literacy, language and numeracy skills of people in New Zealand.

[5] New Zealand Guidelines Group for HQSA (2011).Health Literacy Environmental Scan. Available at: http://www.hqsc.govt.nz/assets/Consumer-Engagement/Publications/FINAL-NZGG-HQSC-Health-literacy-environmental-scan.pdf

1. Background

1.1. Health Literacy in New Zealand

Health literacy is defined by the Health Quality and Safety Commission (HQSC) as:

> *"The degree to which individuals can obtain, process and understand health information and services they need to make appropriate health decisions".*[6]

Health literacy is an important issue in New Zealand. More than one-half (56%) of adult New Zealanders have poor health literacy skills.[7] The average health literacy score of both male and female New Zealanders falls below the level required to process and understand basic health information and services. Low health literacy should not be confused with low intelligence.[8]

While the statistics for health literacy levels in New Zealand as a whole present a worrying picture, they are even more concerning for some population groups. Elderly people, those with limited education, income or language proficiency are more likely to be less health literate. Four out of five Māori males and three out of four Māori females have poor health literacy, with Māori in rural locations or in the 16-24 year old or 50-65 year old age groups more likely to have poor health literacy.[9] Almost 90% of Pacific men and women aged 15 years and over have poor health literacy.[10] Some of these population groups, for example the elderly, are also more likely to have chronic health conditions and require a number of different medicines.

Poor health literacy is linked to poor health status and may also be a strong contributor to health inequalities. Research has found individuals with poor health literacy:[11]

- Are less likely to use prevention services (such as screening);
- Have less knowledge of their illness, treatment and medicine;
- Are less likely to manage their long term/chronic condition;
- Are more likely to be hospitalised due to a chronic condition;
- Are more likely to use emergency services; and
- Are more vulnerable to workplace injury because they do not understand safety precaution messages.

Medication errors are likely to be higher in patients with limited health literacy.[12] People who have a good understanding of the medicine they are asked to take, why they are taking it and when they should take it are more likely to take the medicine in the correct way, at the correct time and to complete the

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[6] New Zealand Guidelines Group for HQSA (2011).Health Literacy Environmental Scan. Available at: http://www.hqsc.govt.nz/assets/Consumer-Engagement/Publications/FINAL-NZGG-HQSC-Health-literacy-environmental-scan.pdf

[7] http://www.health.govt.nz/publication/korero-marama-health-literacy-and-maori-results-2006-adult-literacy-and-life-skills-survey

[8] Workbase.Understanding Health Literacy. Available at: http://www.bpac.org.nz/magazine/2012/august/docs/bpj_45_upfront_pages_4-7_pf.pdf

[9] New Zealand Guidelines Group for HQSA (2011).Health Literacy Environmental Scan. Available at: http://www.hqsc.govt.nz/assets/Consumer-Engagement/Publications/FINAL-NZGG-HQSC-Health-literacy-environmental-scan.pdf

[10] Ministry of Health (2012).Tupu Ola Moui – Pacific Health Chartbook 2012. Available at: http://www.health.govt.nz/system/files/documents/publications/tupu-ola-moui-pacific-health-chart-book_1.pdf

[11] http://www.health.govt.nz/publication/korero-marama-health-literacy-and-maori-results-2006-adult-literacy-and-life-skills-survey

[12] Agency for Healthcare Research and Quality Pharmacy Health Literacy Center. Accessed at: http://www.ahrq.gov/pharmhealthlit/

course of their prescription. Incomplete adherence to prescribed medicines can result in social and economic costs. Many people also take 'off the shelf', non-prescription medication and may not understand the risk of interaction between medicines.

In the United States:

> *"Fifty percent of people with chronic illnesses are not taking their medicines as prescribed" – Timothy Ulbrich at TEDxUniversity at Buffalo.*

A HQSC consumer representative summarised the problem in New Zealand as:

> *"People are going to get their medication but are not able to ask questions – they just take it. Sometimes they don't even ask or get told by the doctor… People don't know why they are taking their medicines. They mistake pain killers as treating the disease… Developing a health literacy programme in New Zealand is very important for a range of people."*

The response to health literacy in New Zealand has moved from placing the onus on the individual health care consumer to seek out, receive and interpret information to a more holistic view of how the health system can present information and interact with consumers to improve their health literacy. Improving health literacy encompasses improving the flow and readability of information, and building the health literacy skills and knowledge of health professionals, organisations and the health system.

Every interaction between an individual, their family/whānau and a health professional provides an opportunity to develop health literacy.[13]

1.2. The Demonstration Project

The overall purpose of HQSC's project is to develop, trial, and evaluate a health literacy learning package aimed initially at staff in two community pharmacies. The focus is on pharmacists and the way they communicate with consumers.

The high level objectives are to support pharmacists to:

- Acknowledge and understand how health literacy impacts on medication safety;
- Understand adult learning theory and its implications for patient safety;
- Raise awareness of their own communication styles including the use of jargon, acronyms and technical terms when communicating with consumers; and
- Provide easy to implement techniques, skills and ideas that can be put into practice in the clinical setting, especially with consumers who may have poor health literacy skills.

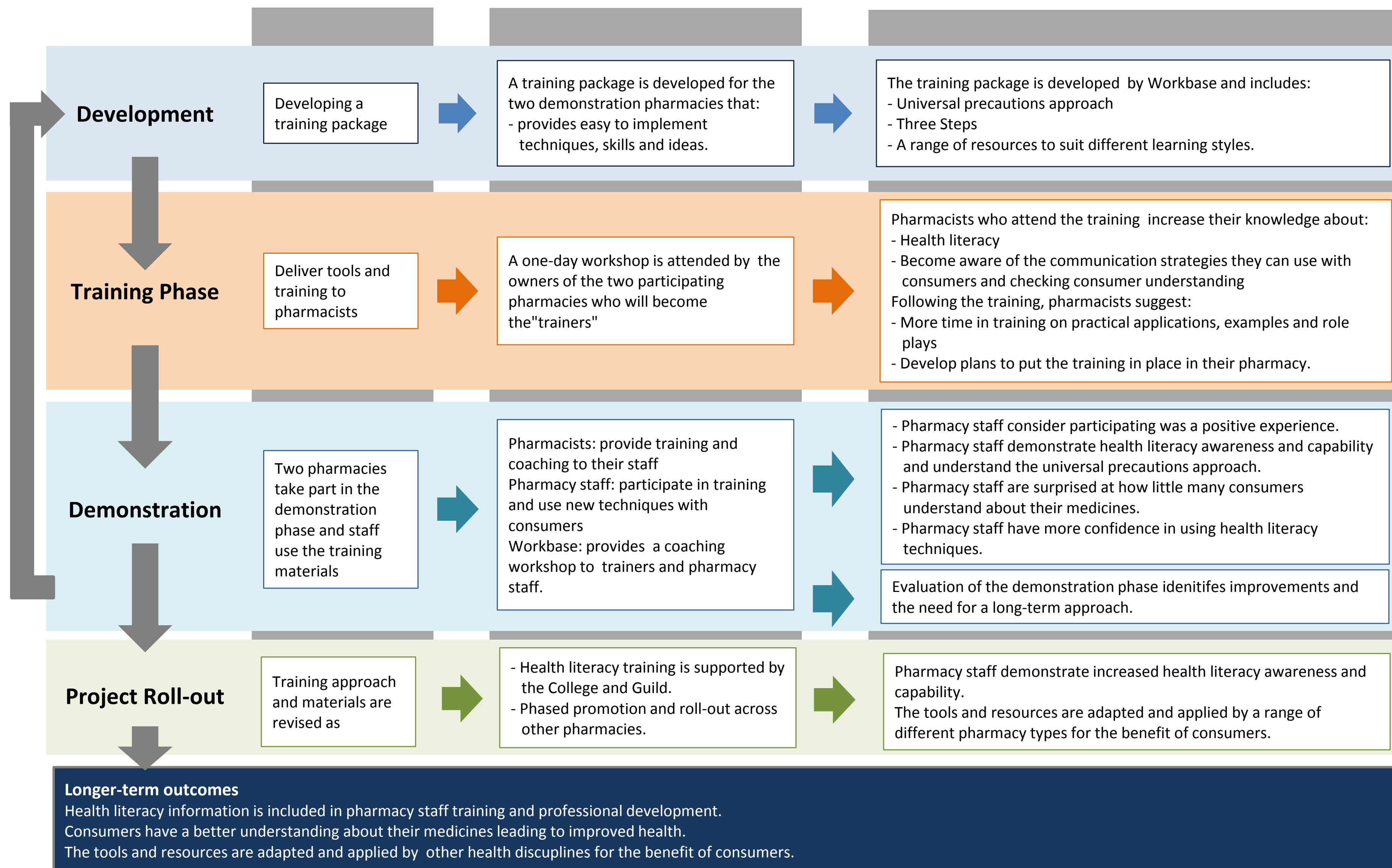
Information from this demonstration project will help inform how the tools can be adapted for wider roll-out in pharmacies and for use by other professionals within the health and disability sector.

The demonstration project included two community pharmacies and their teams. The pharmacies are different in terms of size, location, and consumer base. The evaluation approach reflects the focus of the demonstration project by describing the training, how pharmacists passed the training on to their teams and the extent to which pharmacy staff practices changed over the demonstration period.

The demonstration project activities and what the project set out to achieve are summarised in Figure 1-1. Based on evidence from the literature, the short-term outcomes of the improvements to health literacy will contribute in the longer-term to consumers having a better understanding about their medicines leading to improved health.

[13] Workbase.Understanding Health Literacy. Available at: http://www.bpac.org.nz/magazine/2012/august/docs/bpj_45_upfront_pages_4-7_pf.pdf

Figure 1-1: Demonstration project logic model



2. Evaluation Methods

The evaluation focussed on the activities, outputs and short-term outcomes of the demonstration project and did not attempt to record quantitative measures of any impacts on consumers' health. The evaluation consisted of case studies of the two participating pharmacies. Each of the two pharmacies differed in terms of their location, consumer group and size. The inclusion of two different pharmacies in the demonstration project provided an opportunity to learn from the experiences of the teams in each pharmacy to prepare a programme suitable for national roll-out.

2.1. Logic Model and Evaluation Framework

The logic model in Figure 1-1 was developed to illustrate how various aspects of the programme were expected to generate certain activities, outputs, short and longer-term outcomes. An evaluation framework, linked to the logic model, was developed to guide the evaluation and sets out the key questions, indicators and sources of evidence. A copy is appended (Appendix 1).

2.2. Evaluation Timeframe

The demonstration project ran for three months from mid-March to mid-June 2013. The timeframe for the demonstration project and the evaluation is shown in Table 2-1.

Table 2-1: Timeframe

Activity	Provisional Timeline
Training day	31 January
Demonstration period	18 March to late June
Initial data collection	Site A: 22, 25, 26 March Site B: 20-22 March
Post demonstration data collection	Site A: 1,2, 4 July Site B: 17-19 June
National Survey of Pharmacy Staff	A link to an online survey was sent out in the Pharmacy *Guild and Touch* on May 22 and May 28 and emailed to Pharmaceutical Society members and pharmacists working in secondary care on May 28

2.3. Evaluation Information Sources

Information for the evaluation was sourced from:

- **Document review** - Relevant documents reviewed as part of the evaluation included:
  - Project documentation;
  - Health literacy literature review and training package; and
  - Workshop attendance and evaluation information.
- **Site visits and observation** - Three days at the start and end of the demonstration period were spent in each pharmacy completing interviews and observing pharmacy activities. A modified AHRQ Pharmacy Assessment Tool,[14] adapted to the New Zealand context was used to record observations. Site visits and observations collected information about:

[14] http://www.ahrq.gov/research/findings/factsheets/tools/toolsria/index.html

- The pharmacist's approach to teaching/ coaching staff;
- Use of training materials;
- How pharmacy staff interact with consumers;
- Changes in pharmacies; and
- How busy the pharmacy is at the visits.

- **Interviews with pharmacy staff -** Interviews were completed with pharmacists pre-demonstration, monthly during the demonstration period and post-demonstration. Pharmacy staff were interviewed pre- and post-demonstration individually or in small groups. A semi-structured interview guide was developed for each specific group. The guides set out the topics to be covered but not necessarily the order of the topics, and also allowed for additional topics to be introduced by the interviewee. Copies of the interview guides are appended (Appendix 2). Interviews and focus groups were audiotaped and detailed notes taken. Analysis was thematic and informed by the evaluation questions and the topics in the interview guide.
- **Audiotaped interactions -** A sample of interactions between consumers and pharmacy staff was audiotaped. Interactions were assessed by the staff member recording the interaction as a self-assessment exercise and by an external assessor who had not visited the pharmacies and did not know any of the pharmacy staff. The recordings reflect only part of the interactions between pharmacy staff and consumers as any discussion that happened when the consumer handed the prescription to the pharmacy staff member was not captured. Efforts were made to include as many pharmacy staff as possible in making the recordings. Assessments collected information about:
  - The length of the interaction;
  - Use of technical terms, acronyms and drug naming;
  - Use of techniques from the training package such as examples of Steps 1, 2 and 3; and
  - Whether questions were asked by consumers and by pharmacists.

  The pre- and post-demonstration interactions were assessed by the same person. The assessment forms were completed as hard copy, therefore the assessor did not have access to the collated summary of pre-demonstration findings prior to carrying out the post-demonstration assessment.
- **Surveys of pharmacy staff –** Pre- and post-demonstration surveys of pharmacy staff explored:
  - Attitudes to health literacy;
  - Attitudes to tools/approaches/strategies to building health literacy with consumers; and
  - Changes in practice after taking part in the demonstration project.

  All pharmacy staff working in the pharmacy in the three on-site days pre- and post-demonstration were asked to complete the survey. All completed the pre-demonstration survey and all but one completed the post-demonstration survey. Pharmacy owners were not asked to complete the surveys because they had already received health literacy training at the time of the distribution of the pre-demonstration survey.

  The survey questionnaire was also distributed to pharmacists nationally as an on-line survey to identify the level of need for health literacy training and to provide baseline information about pharmacists' health literacy prior to national roll-out. Copies of the survey are appended (Appendix 2).
- **Consumer interviews -** On-site interviews were completed with consumers requiring prescription medication who visited the pharmacies on the three on-site days pre- and post-demonstration. Consumers were asked to take part if they entered the pharmacy and an

evaluator was available to talk to them. Interviews were based on a questionnaire that included a mix of open and closed questions. Consumers provided a good cross-section of different age and ethnic groups and with different health conditions. Consumers who did not speak English were excluded from the evaluation. Questions consumers were asked included:

- What they were told in the interaction with the pharmacist that day;
- How well they think they understand their medication and health condition;
- Any questions they might have about their medication and health condition; and
- Demographic information.

An overview of the data collection is provided in Table 2-2.

Table 2-2: Overview of Data Collection

Group	Data collection method	Timing	Numbers
Pharmacists	In-depth interviews: In-person and telephone	Pre-, early, mid-and post-demonstration	4 interviews with each pharmacist
Pharmacy observation	On-site observation	Pre- and post-demonstration	Site A: 3 days Site B: 3 days
Pharmacy staff interviews	Small group interviews. Individual interviews with those not available for the group interviews	Pre- and post-demonstration	Site A: 6 staff – 2 small group interviews and 2 individual interviews Site B: 13 staff – 3 small group interviews and up to 4 individual interviews
Pharmacy staff survey	Survey collecting quantitative measures	Pre- and post-demonstration	Site A: completed by 5 staff Site B: Completed by 13 staff pre- and 12 staff post-demonstration
Audio-taped interactions	Audio-taped conversations with consenting consumers	Pre- and post-demonstration	Site A: Pre 39 recordings from 5; Post 30 recordings from 6 Site B: Pre 44 recordings from 13; Post 27 recordings from 7
Consumers	Brief in-person interviews	Pre- and post-demonstration	Site A: Pre 90; Post 100 Site B: Pre 124; Post 101
National survey	On-line national survey of pharmacy staff	Mid-demonstration	The survey was completed by 376 pharmacy staff

2.4. Ethics and Consent

As the project was an evaluation of a quality improvement initiative, Health and Disability Ethics Committee approval was not sought. However, the evaluation adhered to ethical standards including fully informed consent for participants and confidentiality for participating pharmacy staff and consumers.

Participating pharmacies displayed signs on their door and counter letting consumers know that the pharmacy was taking part in a study and that they may be invited to take part.

After consumers handed their prescription to the pharmacist (or for telephone or faxed prescriptions while consumers were waiting) they were approached by a researcher who explained the study to them and asked if they were willing to take part by answering questions after they had been given their medicines and by allowing their interaction with the pharmacy staff member to be audiotaped.

Consumers who agreed to be audiotaped were given a card to hand to the pharmacy staff member. The use of a card added another layer of protection for consumers.

Participating pharmacy owners acknowledged that they and their pharmacies would be potentially identifiable in evaluation reports. Pharmacists were provided with case study reports about their pharmacies for review before wider circulation of the reports.

2.5. Strengths and Limitations of the Evaluation

The evaluation was strengthened by the enthusiastic participation of the pharmacy owners, their teams and consumers. The data collected provide an in-depth story of each pharmacy's approach to improving health literacy.

The evaluation was limited by:

- A delay of four to six weeks between the first training workshop and the training sessions in pharmacies. A number of factors contributed to the delay, including the desire to incorporate feedback about the resources from pharmacists after the training day before finalising the resources. Competing demands also delayed the start at one pharmacy.
- The three month time frame for the evaluation as this limited the extent to which pharmacies could fully implement the training. Nevertheless, there were sufficient changes seen during the three month demonstration period to make recommendations for a national roll-out.
- Lower proportions of Māori attended the two pharmacies participating in the demonstration sites on the onsite evaluation days than would be expected from the population of the localities they served. However, there were opportunities to obtain feedback from consumers from other ethnic groups.
- Many evaluation measures were qualitative and self-assessed which was both a strength and a limitation of the evaluation. Qualitative data and self-assessed changes in practice provided rich detail about the changes. The evaluation would have been strengthened if it had been possible to include objective measures to quantify the extent of the changes.

3. The Training and Resources

Workbase[15] is a not-for-profit organisation committed to improving the literacy, language and numeracy skills of people in New Zealand. Workbase were selected as the training provider and were commissioned by the HQSC to complete a review of the relevant literature[16] (Appendix 3) and to develop a health literacy training package and resources.

The principles underpinning the health literacy approach developed by Workbase were:

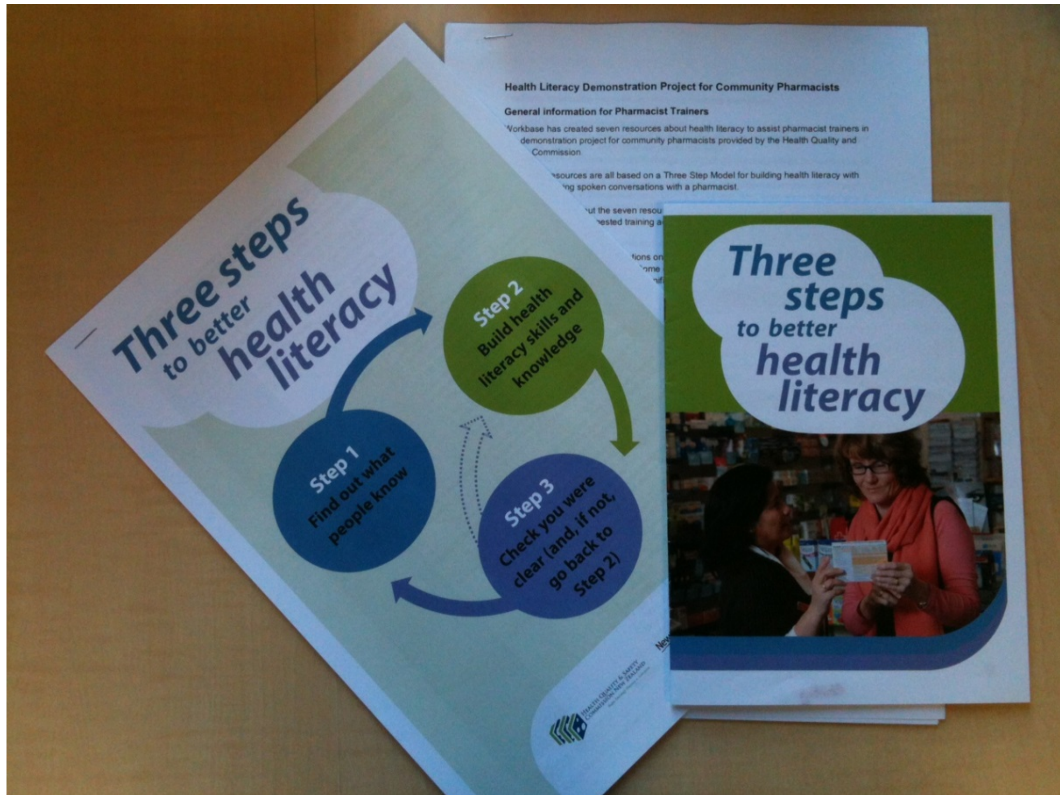
- A universal precautions approach is 'best practice' as opposed to targeted interventions focused on low literacy individuals identified through the use of assessment tools;
- Use of tools and strategies including:
    - Finding out what consumers already know;
    - Providing information in logical steps taking into account what consumers already know;
    - Checking understanding using teach-back;
    - Using reinforcement for critical information, or where consumers do not recall important information, or have changed their behaviours;
    - Where relevant, helping consumers to anticipate the next steps e.g. side effects or renewal of prescriptions;
    - Discussing written resources with consumers and highlighting the critical information they need to refer back to; and
    - When reviewing medicines with consumers, always using the actual medicines (rather than a list of medicines).

Workbase developed a training package for the demonstration project that included:

- A one day training session for the lead pharmacist (the trainer);
- A package of resources developed based on evidence and feedback from the lead pharmacists about what they considered would be useful for them in their pharmacies and included:
    - Trainer notes;
    - Resources to support the training – quizzes and notes;
    - A booklet and brochure outlining the three steps to health literacy (Figure 3-1);
        - Step 1 – Find out what people know
        - Step 2 – Build health literacy skills and knowledge
        - Step 3 – Check you were clear (and if not go back to Step 2)
    - A memo card about the three steps to health literacy;
- Follow-up telephone support to the lead pharmacists; and
- A follow-up on-site workshop with pharmacy staff.

[15] Workbase – Leading health literacy http://www.workbase.org.nz/
[16] Report for the development of health literacy education and training tools and resources for health providers, January 2013.

Figure 3-1: Examples of the Health Literacy Resources



3.1. Approach to Training

Initial thoughts for the project were to have a trainer visit each pharmacy to provide health literacy training to pharmacy staff. Subsequently the model was changed to a train-the-trainer approach where the community pharmacists received one day of training about health literacy, the health literacy tools and how to train and support their pharmacy staff to develop consumers' health literacy skills. This change in approach was taken to ensure there was buy-in from the pharmacy owner who could model the training and encourage their staff to apply the behaviours, skills and knowledge. The Commission did not want to put a stranger into the community pharmacies as this could have changed the pharmacy owner's commitment and the dynamics of the environment.

The community pharmacists planned health literacy training to fit with their usual approach to training their staff. On-going support was provided by Workbase as requested by the community pharmacists.

3.2. The One Day Training Workshop for the Trainers

The first step in the training was a one-day workshop attended by the pharmacy owners who would become the trainers for their pharmacies. The workshop was also attended by HQSC project staff and by the lead evaluator. The training workshop differed from that which might be subsequently rolled out as part of a national training programme, as it had a developmental focus and sought pharmacists' feedback on the training material and about resources they might find useful in training their teams.

The workshop was evaluated by Workbase through post-workshop feedback forms and through interviews with the pharmacists. Responses to the feedback forms were positive with most aspects of the workshop assessments scoring 4 or 5 on a 5-point scale where 5 was the most positive score possible. Detailed responses are appended (Appendix 4).

In interviews, the pharmacist trainers said the one day workshop was *"worthwhile"* and that a full day was *"definitely required".* The workshop provided both pharmacy trainers with a good overview of health literacy and added to their knowledge.

> *"I did come in with a lot of assumptions and generalisations… the workshop knocked that out of me" (Pharmacist - Trainer)*

While *"it was important to have all the background on health literacy"* provided in the workshop one trainer noted that it was also important to keep that part short to allow sufficient time to practice techniques such as role plays and to a have a chance to see teach back in action. Following the one day workshop both lead pharmacists felt the train-the-trainer approach would work in their pharmacies. However, they said they would have felt better prepared to put the training into place if there had been more practical information in the training.

> *"I think the process of training me as the trainer to introduce is fine, so you'd train me as a trainer so I can actually understand where it's coming from and then maybe the workshop, just like we had with [Workbase trainer]."(Pharmacist - Trainer)*

3.3. On-going Support

On-going support for health literacy training was available through the HQSC project team and medication safety specialists, and through Workbase. Four to six weeks after the start of the demonstration period, Workbase trainers provided small group workshop sessions to the teams at each pharmacy. Workbase were flexible in the way they provided these workshops and worked with the pharmacists to schedule times for small group sessions where needed. These workshops were seen as an essential part of the training.

> *"The [Workbase trainer] that came and did the training, she was really good. I really liked having her here. We had questions and she told us how to get around it and she had an answer to any question we had. She's probably one of the best tools I think, she was really good." (Pharmacy staff)*

4. Case Study A

Site A is a busy pharmacy open 8.30am to 6.00pm Monday to Friday and 9.00am to 12.30pm Saturday. It is located in a group of shops near a dentist and not far from an after-hours medical centre. The pharmacy is staffed by two full-time and four part-time staff plus the owner. All but one staff member are pharmacists.

The pharmacy is compact with a small dispensing area. It is light and airy having been recently re-decorated. There is a throughway for staff to engage with consumers in the pharmacy and not from behind a counter. The front part of the pharmacy has stands around the walls and in the middle, and chairs for people to sit on while they are waiting.

At the pre-demonstration visit, 92% of interviewed consumers described themselves as regulars and spoke highly of the pharmacy. Many were well known to the pharmacy owner. Opportunities to speak to staff were readily available and some interactions started from the time consumers walked in the door.

The pharmacy serves a multicultural community and pre-demonstration consumers described themselves as New Zealand European (48%), Indian (30%), Māori (6%) or from another ethnic group (16%). There are staff at the pharmacy who speak Mandarin, Cantonese and Hindi, and two to three interactions each day were in these languages.

Brochures and information for consumers were well displayed and consumers picked them up and used them. On display were signs at eye level for people sitting in the waiting chairs about 'what should I be aware of when taking this medicine', 'why is it important that I take the medicine', and 'when should I take it'.

4.1. Definitions of Success

The Site A pharmacy highlighted health literacy as an area where the team would like to work together to further develop their professional skills. The lead pharmacist identified her measures of success for the project as engaging in an evolving process to develop strategies to deal with common situations, and to:

> *"Improve patients' health outcomes. So it's not about us, but it's about how we can do things better to help them…and they've got to want to be helped." (Pharmacy Trainer)*

4.2. Pre-Training

At the start of the demonstration, staff described health literacy with phrases such as:

> *"Understanding the level of understanding people have when you are dealing with health issues", "making the patient understand the medical stuff in their language that they understand" and "it's all about knowing what medications they are taking, what it's treating and why they are taking it."*

Responses to the pre-demonstration survey indicated that staff agreed with the importance of the health professional's role in health literacy but some were confused about whether the largest ethnic group with low literacy was Pākeha adults. Most of the pharmacy staff indicated they would like more health literacy training across a number of topics.

4.3. Putting the Training into Place

The pharmacy owner took part in a one day workshop and then took the new knowledge and a set of resources developed by Workbase back to her team. The small size of Site A size means there is little

opportunity to provide formal workshops and training sessions for staff during work hours. Instead the lead pharmacist's approach was informal discussions, one-on-one sessions and coaching.

Initial interactions with the pharmacy staff emphasised a focus on understanding and using Step 1 and engagement with consumers at the pharmacy as part of an evolving and *"gradual change"* health literacy process.

> *"…the good thing is there's Three Steps and I think we need…you know, it took us a long time just to get to 'tell me what you know' and I can say now easily, tell me, but have I put it right into practice? … It's such a new concept, and it's a different way of approaching the adherence, so yeah, train, but all the training needs to be done around Three Steps." (Pharmacy Trainer)*

Shortly after introducing the Three Steps approach and putting into practice Step 1, the pharmacy team asked the Workbase trainer to come to the pharmacy for an evening workshop to staff. The workshop provided staff with practical examples of questions to ask at each of the Three Steps. The workshop was also an opportunity for staff to ask questions. The workshop was seen by the lead pharmacists and all staff as excellent:

> *"…I think one of the key things was that we had [Workbase trainer] out for that presentation…" (Pharmacy Trainer)*

In discussion, pharmacy staff gave examples of how they had changed their practice as a result of the techniques they learnt through the training.

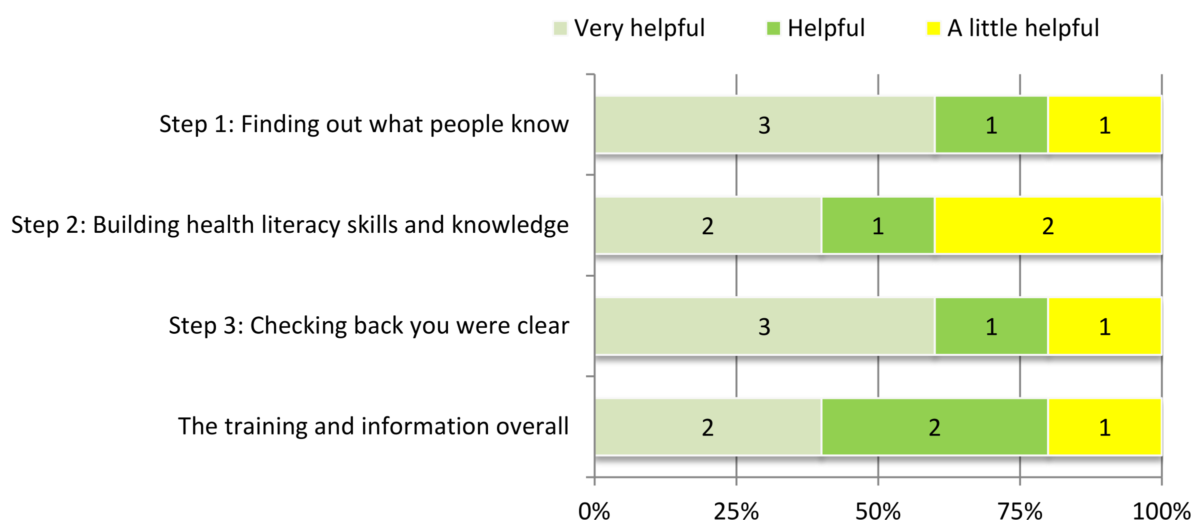
> *"Initially to bring that into practice was not easy, because the way we asked questions, some of the patients just went quiet, didn't understand you. But when we learned techniques, how to make the patient feel comfortable and open up, it kind of changed the way we used to ask questions, and we're more patient focused." (Pharmacy staff)*

Some staff also shared examples of their attempts to make changes and discussed these within the context of *"work in progress"* and a view to keep trying.

> *"Some of them, like I say, what has the doctor told you about this medication, whereas normally I'd tell them what I think they should know, now I'm saying what has the doctor told you about this medication? Some of them just stare blankly at me like 'what on earth are you asking me this for' and others will say, 'oh I know everything about this'. You think well I was asking an open question but it shut down, so now what do I do to make it open again?... It's challenging to change, but like I say, it's a work in progress." (Pharmacy staff)*

Staff reported finding the training overall to have been helpful (Figure 4-1). Some staff indicated that the train-the-trainer approach worked while others noted a preference to receive the training and resources directly through an external trainer or workshop with an external trainer. There was general agreement that there is a lot of value having an external person coming in to answer questions and to build on the training and practice already in place.

Figure 4-1: Helpfulness of health literacy training



The resources developed by Workbase for the demonstration project had been used to varying degrees by different staff members. Some staff had used the brochure about the Three Steps whereas others had read the booklet and indicated that *"In terms of the written material that's out there, I'm not sure I found that too useful."* In contrast, other staff noted *"…easy to read, friendly, good information."* Some staff also indicated a preference to include training resources such as role-play and on-line DVDs with real life interactions.

> *"I'd rather have like, what do you call it, like a little play, role play, I'd rather do that kind of thing, I'd find it easier." (Pharmacy staff)*

Several staff commented that it was good to have a range of resources that worked for different learning styles and different responses to a range of medical conditions consumers may have.

> *"I find I don't take things in as well reading, whereas listening to someone perhaps sinks in more a bit." (Pharmacy staff)*

As part of the evaluation, pharmacy staff were asked to record interactions with consenting consumers and to self-assess these using a form provided by the evaluation team. It was not clear how many staff listened to their recordings but those who did said they found it useful and considered reviewing the audiotapes to be a useful part of the training.

> *"I always asked closed ended questions and one thing I found from the audiotapes, I didn't realise how fast I speak. That was the first reaction I had." (Pharmacy staff)*

4.4. Changes for the Pharmacy Team

All staff in the pharmacy thought that participating in the health literacy training had been worthwhile for them personally and had improved their knowledge. Key changes included:

- Increased knowledge about health literacy:

> *"What was interesting was how poor it [health literacy] was and it didn't matter what socio-economic group you came from so that surprised me. My understanding has changed in that it's made me look at patients differently to assume that they don't*

really know anything until they start telling you that they do know something… even ones you assume know quite a lot you can't really assume." (Pharmacy staff)

- Changes in awareness of the health literacy of their consumers - The team are now aware that consumers do not necessarily understand what the pharmacy staff say:

  "I think it's about an awareness of a problem that probably none of us really realised existed. So in that context, that was the quantum leap…" (Pharmacy Trainer)

  "There's so many surprises that so many people don't know about their medication, even if they have been taking it regularly. Just because they're compliant doesn't mean they know about their medication." (Pharmacy staff)

- The Three Step approach has been introduced at the pharmacy and staff engagement and commitment to health literacy has increased. The biggest gains so far have been achieved through an initial focus on Step 1:

  I think that just being aware that health literacy is so poor makes you try harder, take the extra time that people may not understand or may not feel comfortable with what they're taking and just asking the question "what did the doctor tell you" has been really useful for me." (Pharmacy staff)

  "Some of the days where we've had a big focus on it, we had a Saturday morning, where we were just not quite as busy and we all really tried and you got that momentum going because we were all getting some good results." (Pharmacy Trainer)

- Use of the Three Step approach has resulted in increased self-awareness by pharmacy staff of how they talk with consumers:

  "I think the study was really good …it's a different way of dealing with customers now, before it was only telling, telling, telling, now it's kind of stopping and asking." (Pharmacy staff)

- Pharmacy staff taking responsibility for ensuring the consumer understands their medicine:

  "I'm quite excited to try and use it going forward so I've run around and made the decision in my head that I actually want to be a medicine manager and I want to help people take their meds properly and that's where I want to focus going forward." (Pharmacy Trainer)

- Increased pharmacy staff satisfaction and valuing of their role:

  "It's much more useful, satisfying as a professional and often they say 'thank you very much. It's been so useful'. Just very satisfying and hopefully [consumers] are a little bit more clued up to manage their medicines well for themselves." (Pharmacy staff)

Responses to the post-demonstration survey questions about what they had changed indicated that many of the pharmacy staff had made some changes across many aspects of their practice (Figure 4-2).

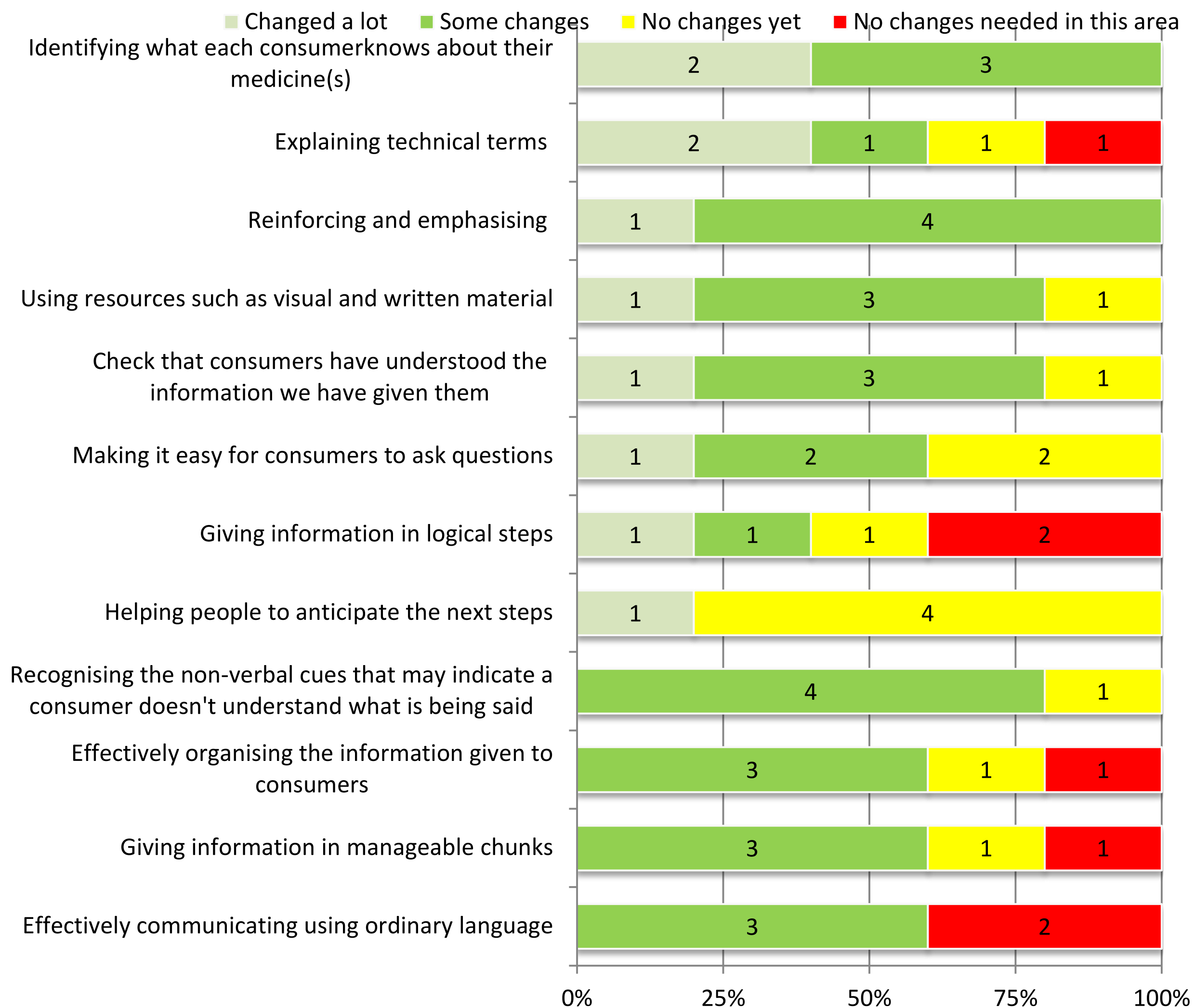


Figure 4-2: Changes made by pharmacy staff (self-assessed)

4.5. Changes for Consumers

Changes for consumers were recorded through the insights and changes reported by pharmacy staff and through the interviews with consumers. Information collected through interviews with consumers was similar across both pharmacies and is reported in Section 6.

The health literacy training was introduced with the aim of improving health outcomes for consumers by improving their understanding of their medicines and ensuring they were taking the medicines correctly. After using the techniques they had learnt as part of the health literacy training, pharmacy staff provided numerous examples where they discovered that a consumer had been taking their medicine incorrectly or needed help:

> *"…the dosage is to start two tablets straight away and then just one a day until finished. So I asked him, I asked the right questions, 'so what did the dentist tell you about your medication?' and 'what's the dosage?' And he said, 'oh yeah, one a day, maximum two a day'. I said, 'no, no, no, you take two straight away and then one a day', so he got the two daily but he thought it was maximum two a day and then he*

looked 'oops' you know, got it wrong…by asking the question correctly you found he actually didn't understand from the dentist correctly." (Pharmacy staff)

Pharmacy staff communication with consumers was assessed in terms of the recommended Three Step approach to health literacy.[17] It is important to note that the pre-demonstration findings reported in this section were taken **before** the staff had received training in the Three Step approach so it reflects the health literacy strategies pharmacy staff gained as part of their professional training and experiences.

Step 1: Checking consumer knowledge

Pre- and post-demonstration, many consumers at Site A were regulars. As the pharmacy was relatively small, pharmacy staff knew many of the regulars individually and used repeat visits over time to develop the consumers' knowledge about their health and medicines. Pre-demonstration, the strategies staff reported using to check consumer knowledge included:

- Trying to get feedback to see if they understand what we are saying. One staff member noted

  "I should say can you explain that back to me but what I do say is do you have any questions."

  "You look at the face and see what their reaction is – sometimes they look blank. Try another way and if they still look blank use examples."

- Building relationships with the repeat consumers so each pharmacist knows how much each consumer knows. Pharmacists explained how they build their relationships with consumers during our interviews with them:

  "Build rapport by asking how they are and in the conversation they tell you about other things and talk to them more about themselves rather than just focussing on the medicine."

- Checking the repeat consumers often:

  "When we give a repeat we do look at the history and when they last collected it (too early or too late) and ask 'is it working for you?'"

So although consumer knowledge was infrequently checked in the pre-demonstration audiotaped conversations, with 8% assessing what the person knew, pharmacy staff frequently relied on their understanding of consumers based on past visits. This was particularly the case with repeat prescriptions where pharmacy staff frequently assumed but did not test a degree of knowledge on the part of the consumer.

Post-demonstration, and after being introduced to the Three Steps approach by the lead pharmacist trainer, the team initially focussed on Step 1. They approached this by asking:

"What has your doctor told you?"

Pharmacy staff and the lead pharmacist felt this approach was working well.

"'Tell me' is probably the most useful with customers 'tell me what the doctor has told you about this medicine' and they're quite happy to share with you what the doctor said to them and that gives you a good basis to help fill in any gaps and they might need to know extra that the doctor's probably told them but they've forgotten, … so it's good from that point of view." (Pharmacy staff)

[17] As outlined in the training material developed by Workbase.

Checking prior knowledge was an area of change from the first assessments of audiotaped interactions. In post-demonstration audiotaped conversations the number of conversations where the consumer was asked about what they knew increased to 76% (Table 4-1). The change was also noticeable through on-site observations.

Table 4-1: Information provided by the pharmacy staff in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
Length of the interaction (seconds)	79 (11-482)	115 (28-334)
Number of technical terms used	72% No technical terms	100% No technical terms
Names of medicines*	70% Common names only 0% Technical names only 8% Both 23% No name	83% Common names only 0% Technical names only 0% Both 17% No name
The consumer was asked what they know	8%	76%
The consumer asked questions	31%	33%
Teach-back was used	9%	24%

* Technical names included both brand and generic names

Step 2: Building health literacy skills and knowledge

Step 2 is about pharmacy staff providing information to consumers about their medicines to build the consumers' health literacy skills and knowledge. Overall, review of audio-taped interactions demonstrated improvements in pharmacy staff approaches in most forms of positive engagement (for example, giving information in manageable chunks, using resources such as written or visual materials).

However, some staff indicated feeling challenged in using this Step, and highlighted a need to simplify the resources and key messages for Step 2.

> *"…when I'm doing 1, 2 and 3 Steps, when I come to 2, build health literacy skills and knowledge, I feel all kind of blank there. It's too big, it's not going to help me do my Steps properly, just something else that makes it a bit easier, it's too big. Maybe, divide it, you know how you have your 'tell me's' and things like that and make an acronym out of that in Step 2, you know things in there that can help people use, oh Step 2 involves that acronym, so you can picture it and use it." (Pharmacy staff)*

Step 3: Checking or Teach-back

Teach-back or checking back about what the consumer knew was heard in 9% of the pre-demonstration recorded interactions. The use of teach-back in the post-demonstration recorded interactions nearly tripled (24%) (Table 4-1). The assessed quality of the teach-back also increased.

In discussions, more staff said they were finding Step 3 difficult compared to the other Steps. Some found it difficult because it was a different approach; others felt uncomfortable checking on consumer knowledge.

> *"It is useful, but I found that Step 3 is not very easy to do and patients are short of time, they will have a patient tell you what you just told them. I mean, certainly it is a good Three Step process, but it's not easy to do it." (Pharmacy staff)*

"It's not really working [Step 3]". (Pharmacy staff)

4.6. What has Worked Well

Participating in the health literacy demonstration project has worked well. The pharmacy trainer and many of the staff commented about how much they had learnt about health literacy. The pharmacy team felt that the Three Step approach was a good process for pharmacies.

The Workbase workshop with staff was timely, after staff had had a chance to receive initial training and put that into practice. As anticipated by the lead pharmacist during the demonstration period, the 'train-the-trainer' approach worked best alongside a workshop provided by a Workbase trainer. Pharmacy staff and the pharmacy trainer emphasised the value of having the workshop with an external expert.

> *"The workshop [train-the-trainer] was me more understanding what health literacy was and that introduction period which is what we've gone through here. I can see the tools that are in the next step, but I don't quite know how to use them…so the videos and things like that I can see that they're going to work, but I don't…and probably because we haven't had a formalised training and I think that's going to be a key to the success, is that actually has got to be a proper workshop". (Pharmacy Trainer)*

Putting the training into practice provided the pharmacy team with some surprises about how little consumers actually knew about their medicines and that many of the assumptions they had made previously, especially about the regular consumers, were challenged.

> *"…sometimes you will be amazed, people who you think will know, they don't know, and who you think won't know, know a lot about it." (Pharmacy staff)*

> *"…she's been on this heart medication for so long I was quite surprised to find she's got no clue what it's for, like nothing. And then I start talking to her and she goes, I've always wanted to know what they're for…oh goodness, we deliver it to her all the time…so that was a bit of a shock. So I went and got a medication chart prepared for her with all the uses and stuff and gave her that and she walked out quite happy, but that was a complete shock…" (Pharmacy staff)*

4.7. Challenges

The pharmacy trainer noted that three months had not been long enough for them to make all the changes they wanted to make and emphasised that improving the team's health literacy skills was "*a work in progress"*. Making behavioural changes is difficult and staff need time to get used to a new approach.

> *"I find it quite hard to change…it makes me quite nervous…cause it's something new…while I'm finding it awkward, it's a work in progress and I'll get there eventually." (Pharmacy staff)*

Pharmacy staff talked about what they had found difficult:

- Staff initially thought that time would be a major challenge, particularly during busy periods and when people appear to be in a rush.

  "It's difficult when you're pressed for time to actually make that time. Because the old habits, it's easy to get back into that, to fall into that." (Pharmacy staff)

  "Time is a major factor, sometimes we are so busy we don't get time to get all those teach-back techniques and tell-me techniques so we just tell them what we have to." (Pharmacy staff)

However, some staff found that time was not as much of a barrier to health literacy as they had thought:

"Their body language is quite often saying 'I'm in a hurry'…you try and tell them but they're not engaging because their eyes are not making contact and they're jiggling… sometimes the jiggling is not always a sign that 'I want to go' it's just a habit, so sometimes I've found when you think this person really wants to get going but you ask them something just because you need to at least give them the opportunity, they'll suddenly have all the time in the world for you which has been interesting." (Pharmacy staff)

- Aspects of the Three Step approach remain challenging. Steps 2 and 3 remain an on-going area that the pharmacy team are working on, both in terms of consumer responses and detailed instruction.

"I like Step 1 and Step 3, find out what people know and then check if you're clear. That step [Step 2] probably needs to be broken down, it's a very big step and that's what we need to improve…" (Pharmacy staff)

"It's not comfortable [Step 3], but I have seen [lead pharmacist] do it really well…Step 1 is useful for every consultation, whereas [Step 3] is useful if they need new information." (Pharmacy staff)

- Another challenge for pharmacy staff is consumers who do not consider it is the pharmacist's role to ask them questions or consumers who do not want to discuss their medicines.

"The ones with the repeats and the long-terms, they're the hardest ones, like this man this morning was like, 'yeah, I've been on it for a long time', so you know 'no, no, nothing, yes I know.' I got nothing out of him and he left." (Pharmacy staff)

"I know one of the girls did get yelled at by one customer the other day when she tried to tell him about something and oh he just, but he's a bit difficult anyway. But I felt sorry for her, she was just trying…basically, 'I've been taking this for such a long time, you don't need to'." (Pharmacy staff)

4.8. Sustainability of Changes

The demonstration period ran for only three months. Three months was sufficient time to see some changes in what staff do but it will be important to continue to maintain momentum through on-going training and support.

"…it's not about a three month project, it's about changing the way we do things so as I say it's no Malcolm Gladwell, suddenly the whole world wants hush puppy shoes when they didn't the day before. It's going to be gradual change…The big challenge is, I don't know how we get this problem, identify it and fix it in five minutes…so it's not just going to be a blink, it's going to be a gradual road…" (Pharmacy Trainer)

The Site A lead pharmacist intends to continue to develop health literacy at the site through:

- Commitment to making health literacy work. The lead pharmacists and pharmacy staff felt they had a stronger foundation in health literacy and described their health literacy skills as "*work in progress"* that they would continue to work at improving.

"So I was pretty anti at the beginning, I was thinking you're going to teach me to suck eggs. I just tell everyone that we're not going to succeed and get any outcome for long

term condition consumers. We need to talk to our people in health literacy talk". (Pharmacy Trainer)

- A team approach to professional development

  "We are going to work as a team and as part of our professional development as well, we have to do a big project. Health literacy is going to be our topic…it doesn't end here." (Pharmacy staff)

  "…you've got to do a project, so our big three pointer, level three is all about health literacy. So the advantage of us doing it as a pilot site is it has to be a team, so none of these things will work if it's just one person trained." (Pharmacy Trainer)

- Building on the health literacy of consumers with long term chronic conditions.

  "…as a result of doing this pilot, I've got quite positive about doing the medicine management side better with the LTC, and what I've done is sent some letters out to our customers to say come in and sit down, in here, 20 minutes, and do a brown bag. It's not a full review, it's not looking for drug interactions. It's just trying to make sure we're on the right board, and I hope the skills and the concepts from this project will help us do that better. And without that, I think everyone's attempt to do LTCs is a stab in the dark…so in the old day's we said, 'you take this like this, this like that' so now it's going to be 'so tell me how you take the meds.'" (Pharmacy Trainer)

5. Case Study B

Site B is described on its website as a busy medical centre pharmacy providing a caring and professional pharmacy service. The pharmacy's mission statement is:

> *"To offer health advice, drug information, and awesome customer service in a pleasant and friendly environment and to provide an accurate, efficient and professional pharmacy service."*

The Site B pharmacy is a large seven day a week dispensing pharmacy staffed by 13 pharmacists and pharmacy technicians plus the owner. It is located in a group of shops nearby a doctor's office and provides urgent pharmacy services as well as dispensing for rest homes in the locality. The area in the front of the pharmacy is quite compact with about two-thirds of the total pharmacy floor space consisting of the dispensary area. The front of the pharmacy area consist of a waiting space, displays on the walls, a large dispensing counter with a payment area at one end, and a consultation room where staff can take consumers for private discussion.

Evaluators commented that staff were observed to be considerate and respectful of consumers. On the days they were in the pharmacy, the evaluators noticed several occasions where staff suggested ways to save consumers money. The pharmacy never turns away anyone who cannot pay and has in place a plan where people can put aside a little money each week to pay for their prescribed medicines.

Brochures and information are displayed outside by the door and inside the pharmacy. There are staff at the pharmacy who can speak Vietnamese and Russian. There is no information displayed in languages other than English but over both the pre- and post-demonstration periods no-one came in who was not proficient in English. Staff did say that they occasionally have people from cruise ships who do not speak English and there is a book of common phrases in different languages to use if required.

In the pre-demonstration site visit, 81% of interviewed consumers described themselves as regulars at the pharmacy. Over one-half (60%) were older than 45 years of age and many were collecting repeats. Most (90%) identified their ethnic group as New Zealand European, with 6% identifying as Māori and 4% another ethnic group. Post-demonstration, consumers who were interviewed included more who were unwell and collecting medicines for colds and flus and for sick children.

5.1. Definitions of Success

Pre-demonstration, the pharmacy owner said she would feel that taking part in the demonstration project had been a success if staff feel they are involved in something worthwhile, and if staff morale improves and is reflected in performance ratings. She hoped that resources developed for the project would make the process easy and that staff would take pride in using the tools and wanting to engage with consumers: the ultimate outcome being improvements in consumer health.

5.2. Pre-training

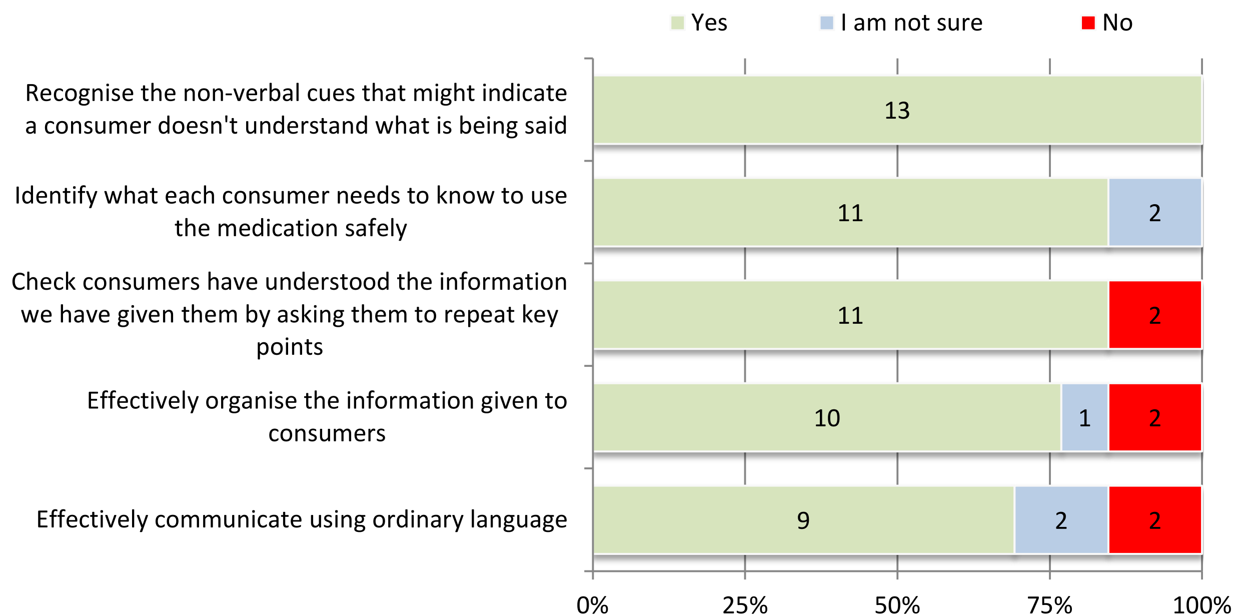
At the start of the demonstration, staff described health literacy with phrases such as:

> *"What people understand about their medicines", "whether they can understand the terms we use", "what their medicine is all about and why they need it."*

Pre-demonstration, staff agreed with the importance of the health professional's role in health literacy but a few were confused about whether the largest ethnic group with low literacy was Pākeha adults.[18] There was enthusiasm for health literacy training across a range of topics (Figure 5-1).

[18] The largest group with low health literacy is Pākeha adults

Figure 5-1: Health literacy topics staff would like training about (pre-demonstration)



In pre-demonstration discussion groups, staff talked about helping consumers with common problems they had encountered such as:

- How difficult labels were; and
- That people not used to pharmacies and taking medicine might not understand words and phrases commonly used in pharmacies such as 'take with food', 'take twice daily', 'prn', 'repeats'.

One staff member concluded that the difficulty for pharmacy staff in thinking about health literacy was:

> *"We are too used to [phrases and terms] and don't think about how other people hear it." (Pharmacy staff)*

5.3. Putting the Training into Place

Following the one-day workshop the lead pharmacist felt reasonably confident to start the training:

> *"I like to keep things simple so I am not going to complicate it. We will do small amounts often. I don't want to bog them down with it being too hard."(Pharmacy Trainer)*

Her intention was to lead by example:

> *"You just have to get out there and do it. I need to show them how you can do it."*

All staff in the pharmacy took part in the training. Training the technicians as well as the pharmacists was seen as an advantage as the whole team could then take a health literacy approach.

The first step in putting the training into place was small group training sessions during working hours provided by the lead pharmacist trainer with pharmacy staff. In the first session the team completed a health literacy quiz.[19] The surprise in the test for staff, that health literacy is not linked to education and that at certain points *"we could all have problems,"* provided a foundation for acceptance of the

[19] Provided by Workbase as part of the tools and resources for the demonstration.

universal precautions approach. The team then worked through the booklet about health literacy and approaches to putting it into practice. They talked about the Three Steps.

The trainer asked about Step 1 and they talked about what the team knew. They then went through Step 2 and talked about what they did, what they needed to tweak, and that they do not stop and pause and break the information into chunks.

> *"It was clear to me that we were doing a lot of Step 2, a lot of giving of information but not getting a lot back" (Pharmacy Trainer)*

They talked about how they could do Step 3 and the team asked about what they could do. Throughout the demonstration period, the lead pharmacist and the team discussed health literacy and talked about examples.

The Workbase trainer came to the pharmacy and ran a series of short sessions (of 30 to 40 minutes) during work time with staff divided into small groups of two or three people. The sessions provided staff with practical examples of questions to ask at each of the Three Steps. The lead pharmacist saw value in the team having the opportunity to start putting the Three Step approach into practice before an external trainer came in, so they could experience what worked well for them and what was challenging. The workshops also provided staff with an opportunity to ask questions. The workshop was seen by the lead pharmacist and all staff as excellent:

> *"She gave us really good quick fire things to use and background about how to read people. She and I had a good discussion. She reinforced the info I have provided – she made it sound simple and made us think it is not too hard. Really excellent to have her back up. If she wasn't there, I may have gone and got some other info."(Trainer)*

> *"The way she tied Step 1 to Step 3 was awesome – a light bulb just clicked. The more you find out what they [consumers] know, the less you have to check at the end. …She made it so it wasn't so difficult – so it was just a process."(Trainer)*

5.4. Staff Views about the Training

Staff reported the training overall to have had some value. Although at the time of the post-demonstration site visit some staff could not recall exactly what had happened in each of the training sessions, all were aware of the Three Step approach. Staff felt the Three Step approach to health literacy provided an effective framework for health literacy in pharmacies:

> *"The three stages definitely made sense to the way we counsel." (Pharmacy staff)*

> *"The Three Steps simplifies it down to three areas that you can remember easily – a logical process." (Pharmacy staff)*

Staff comments reflected their recognition of the usefulness of the universal precautions approach both for all consumers and for all their medicines:

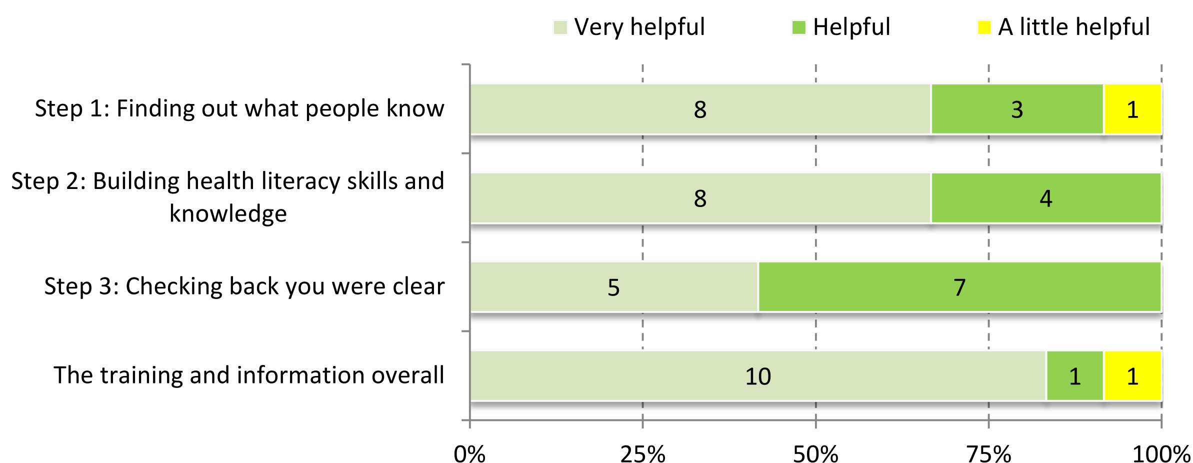
> *"We have used it – all of us up the front. We definitely think differently when we go to give out the meds. We all try to do it with everyone… even if you are very busy." (Pharmacy staff)*

> *"The person up the front used to tick if the medicine was new or not and then previously I just focussed on those with a tick – now I focus on all of them and explain. It [health literacy training] has made a point of looking at the whole script – not just the new medicines." (Pharmacy staff)*

In the post-demonstration staff survey, almost all staff found the training and information overall to be very helpful. None found it to be not helpful at all. Fewer staff found the training and information about

Step 3 to be very helpful as compared to the training and information provided about Steps 1 and 2 (Figure 5-2). Responses to the helpfulness of training about Step 3 may also be influenced by the fact that staff found Step 3 more difficult than Steps 1 and 2.

Figure 5-2: Helpfulness of health literacy training



Staff valued the opportunity for a workshop with the Workbase trainer although some staff felt the workshop was *"a bit rushed".* Staff thought the timing of the workshop was appropriate.

> *"Timing … was about right – probably wouldn't have understood what she was saying or been able to utilise it as much if she came earlier" (Pharmacy staff)*

There was general agreement that while the 'train-the-trainer' approach worked. There was a lot of value in having an external person coming in to answer questions and to build on the training and practice already in place.

5.5. Staff Views about the Resources

The resources developed by Workbase for the demonstration project were recalled and used to varying degrees by different staff members. Both the pharmacy trainer and pharmacy staff noted that it was the training that was important and not the resources.

> *"The resources alone are not enough." (Trainer)*

The trainer and several staff commented that it was good to have a range of resources that worked for different learning styles. Some staff had used the brochure about the Three Steps whereas others had read the booklet.

> *"I have not really looked at them since to be fair – it is more having it in the back of your head and being more aware. Not really a resource person." (Pharmacy staff)*

> *"I did get a big booklet, I didn't get a card. I like the Three Step approach, definitely. Read through the book and went back to it a few time. I find for me I take more in reading than listening to someone." (Pharmacy staff)*

Staff responses to the post-demonstration survey questions about the health literacy resources highlighted the value of the quiz, and the background information about health literacy. The resource that staff felt was least useful was the laminated reminder card of the Three Steps. In discussions, pharmacy staff noted that they had no trouble remembering the Three Steps. The challenge was in knowing the types of questions to ask at each step and suggested that it would be useful to develop a

reminder card that could go by the till with examples of questions. A general comment from staff about improving the resources was to make them *"more practical and applied"*.

The trainer noted the value of additional resources provided by Workbase about adult learning.

> *"The resources are excellent – liked the A4 sheet and the bigger book. The information was put in a different way for different learning styles. The information was not too overbearing. [Staff] could use what suited them. They liked the A4 bullets. There may be too much about Step 2 in the brochure – perhaps lots of ideas on openers would be good. Feeding back on what works well."(Pharmacy Trainer)*

In the post-demonstration staff survey, seven of the twelve responding pharmacy staff said they would not like any further health literacy training. Four of the five staff who said they would like further training said they would like training on Step 3: *"Different techniques that we could use to implement the Three Steps more easily in everyday interactions."* The other staff member requested further training about: *"Getting customers to ask us more questions."* More help with Step 3 was also raised in discussions with staff.

> *"If we could have more help with that third step – I was silent and stumbling with how do I say it. I feel like I am fumbling around. Is he [consumer] going to growl at me – how is he looking?" (Pharmacy staff)*

As part of the evaluation, pharmacy staff were asked to record interactions with consumers and to self-assess these using a form provided by the evaluation team. Staff who listened to their recordings said reviewing the audiotapes was a useful part of the training. Some used their review of recordings as part of their continuing education programme.

> *"I listened to mine. I did find it useful and realised I didn't give gaps. It was professional development as well."(Pharmacy Trainer)*

> *"Listening to them was useful they were a real wake-up. It was like shoom, shoom, shoom – get out of here. There was a lot of ok and right from the person so they were pretending to take it all in at least." (Pharmacy staff)*

> *"If you hear yourself you realise you don't do that. I didn't explain it how I thought I explained it" (Pharmacy staff)*

5.6. Changes for the Pharmacy Team

Following the demonstration period, the lead pharmacist felt her pre-training measures of success for the project had been achieved:

- The Three Step approach is well integrated into practice at the pharmacy. The team are working together and have used the training as a professional development initiative.

  "As far as professional development goes it has been amazing and outcomes for customers – hard to measure but we have built some relationships there."(Pharmacy Trainer)

- The team are now aware that consumers do not necessarily understand what they say.

  "We were under the assumption that when we said it they had got it – they had understood. And now we know that they haven't. Or when you ask them what they have heard what you hear them say is completely different."(Pharmacy Trainer)

- The team can see the difference they can make for consumers by taking responsibility for ensuring the consumer understands their medicine

"It's those conversations when someone says – actually no-one has ever told me that before – you realise you have made a difference – you don't get that all day everyday but when it does I am glad I knew how to get that information across." (Pharmacy Trainer)

- Staff engagement and confidence have increased

  "I really think that they have felt they are making more of a difference."(Pharmacy Trainer)

All staff felt that overall taking part in the training had been worthwhile for them personally because it had:

- Increased their knowledge about health literacy:

  "Yes, it has been a good process. Yes, it has been interesting and interesting seeing what other people are doing. I definitely think it is a positive thing and has opened your eyes to a lot more things." (Pharmacy staff)

  "How I used to talk to customers and how I talk now – I have made a big change and I didn't think I would. I thought what I was saying to customers was great and they understood me. But now I've learnt that they … the way I word things now is a lot better." (Pharmacy staff)

- Increased their confidence:

  "I am definitely a lot more confident – that's one thing I have really found. I am a lot more confident in talking to customers in using open questions rather than closed ones when they can just answer me yes and no…and getting them to tell me a bit more about what they know. It is quite surprising how many people don't have a clue about what sort of medicine they are taking and why they are taking it. So just by using all these sorts of open questions now and knowing how to word them – it has been really good at getting customers to talk back to us." (Pharmacy staff)

- Increased their satisfaction and valuing of their role:

  "Makes you feel like you are here for a reason when you are helping someone." (Pharmacy staff)

- Changed their practice.

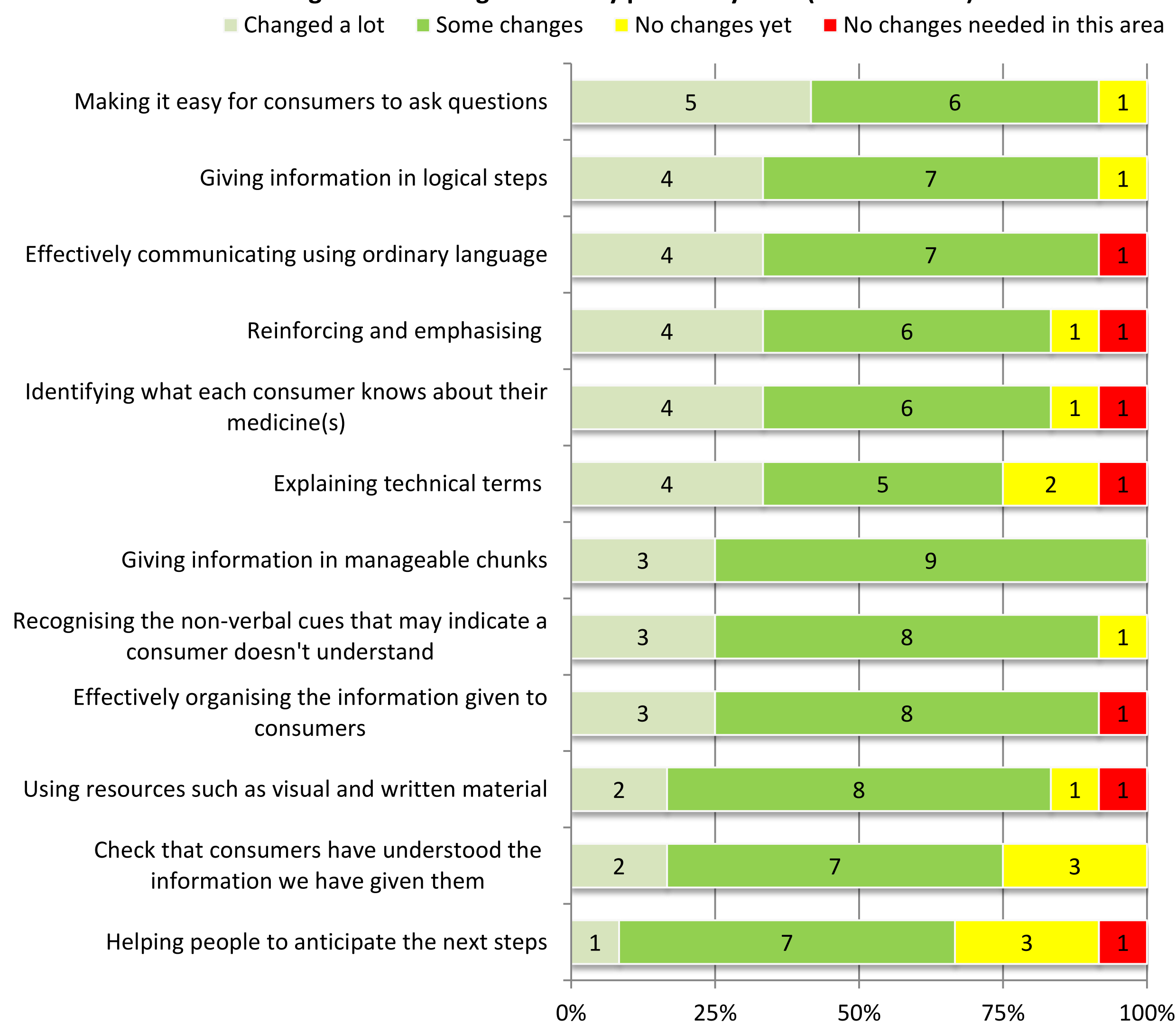
  "I have definitely changed my practice. Instead of rattling through for new meds I am especially aware that they may not have taken in what the doctor said. I now ask leading questions and if I am not sure they understand I give them printed material and invite them to ask questions." (Pharmacy staff)

  "I say to them what do you know about this, what have you been told about this medicine? … I expected that the customer knew everything already and they don't. It's all on the label – if you don't know just read that label. But some people can't read. I expected everyone to know all about their medicines and what to do with them and some people don't." (Pharmacy staff)

Staff also reported more use of the consultation room, including by some of the technicians who were not using it much prior to the training.

The changes that pharmacy staff discussed were also reflected in their responses to post-demonstration survey questions about what they had changed (Figure 5-3).

Figure 5-3: Changes made by pharmacy staff (self-assessed)



5.7. Changes for Consumers

Changes for consumers were recorded through the insights and changes reported by pharmacy staff and through interviews with consumers. Information collected through interviews with consumers was similar across both pharmacies and is reported in Section 6.

Using the techniques they had learnt as part of the health literacy training helped pharmacy staff to find consumers who had been taking their medicine incorrectly or needed help:

> *"I had an example the other day with … She thought it was 4 days on 4 days off – it would have been probably picked up anyway. She was supposed to use it for 4 days." (Pharmacy staff)*

Communication with consumers was considered in terms of the recommended Three Step approach to health literacy.[20] It is important to note that the pre-demonstration findings reported in this section

[20] As outlined in the training material developed by Workbase

were taken **before** the staff had received training in the Three Step approach and therefore reflect the health literacy strategies pharmacy staff gained as part of their professional training and experiences.

Step 1: Checking consumer knowledge

Pre-demonstration, the strategies staff reported using to check consumer knowledge included:

- Using a list in the front of the pharmacy as a reminder of what needed to be covered when a prescription was being taken;
- *"Just asking them"* if they are familiar with their medicine, whether the doctor explained it to them and what they would like to know; and
- Being vigilant about the frequency that they come for repeats as this can indicate whether the person is taking too much or too little of a medicine.

Consumer knowledge was infrequently checked in the pre-demonstration audiotaped conversations with staff assessing what the person knew in 13% of recorded interactions. This was particularly the case with repeat prescriptions where pharmacy staff frequently assumed (possibly correctly) but did not test a degree of knowledge on the part of the consumer. Many of these interactions were straight handovers, with minimal instruction which might cover dosage and how often to take the medicine. It is important to note however that the audiotapes only covered the handover part of the interaction and additional conversation took place when the prescription was handed to pharmacy staff.

After the first small group training sessions the team focussed on Step 1. They approached this by asking *"tell me what the doctor has told you",* a question suggested by Workbase. The Workbase trainer also explained how completing Step 1 and understanding what the person knew helped with Steps 2 and 3.

Pharmacy staff and the lead pharmacists felt this approach was working well.

> *"Step 1 has been revolutionary really – tell me what the doctor has told you….."(Trainer)*

> *"We have all got quite good at doing Step 1 – definitely a change. It opens up a can of worms and a conversation. Sometimes they haven't understood the doctor and then they do ask. Just comments like that." (Pharmacy staff)*

Checking prior knowledge was an area of change from the first assessments of audiotaped interactions. In post-demonstration audiotaped conversations the number of conversations where the consumer was asked about what they knew increased to 41% (Table 5-1). The change was also noticeable through on-site observations.

Table 5-1: Information provided by the pharmacy staff in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
Length of the interaction (seconds)	101 (8-506)	115 (36-286)
Number of technical terms used	95% No technical terms	96% No technical terms
Names of medicines	61% Common names only 0% Technical names only 7% Both 33% No name	81% Common names only 0% Technical names only 0% Both 19% No name
The consumer was asked what they know	13%	41%
The consumer asked questions	19%	31%
Teach-back was used	6%	43%

Step 2: Building health literacy skills and knowledge

Step 2 is about pharmacy staff providing information to consumers about their medicines to build the consumers' health literacy skills and knowledge. The trainer and pharmacy staff felt Step 2 was also going well with staff focussing more on tailoring information to the consumer's needs.

> *"They are starting to build the relationship with their regulars. For example by asking 'tell me about the system you use to remember your medicines?'" (Pharmacy Trainer)*

Other information such as confirming the person's name and who the medicine was for was exchanged when the prescription was handed over. As with the pre-demonstration assessments of interactions, pharmacy staff were more likely to assume that consumers collecting repeats knew everything. The fullest explanations came when prescriptions featured a change in dose. In some cases minimal discussions over repeats may be appropriate. In other cases, as staff explained, they found it difficult to provide detailed information to consumers collecting repeats because:

> *"When it is repeats, the people already know what they need to know." (Pharmacy staff)*

> *"I find it easier with new prescriptions rather than repeats. [New people] are a bit more open to it." (Pharmacy staff)*

Step 3: Checking or Teach-back

Teach-back or checking about what the consumer knew was heard in 6% of the pre-demonstration recorded interactions. Pre-demonstration, although not specifically checking back, staff talked about strategies they used to work out whether people had understood what they were saying. Others asked whether there was anything else they could help with or had elicited information from consumers during the interaction.

In post-demonstration interactions there were more examples of asking the person what they already knew, in giving information in logical steps, in manageable chunks and in using open-ended questions. Although open-ended questions were being used more effectively (Table 5-2) there were still instances of interactions being closed with "any questions?" Nearly one-half (43%) of post-demonstration interactions that were audio-assessed included some teach-back (Table 5-1).

In discussions, many staff said they were finding Step 3 more difficult than other steps. Some found it difficult because it was a different approach, others felt uncomfortable checking on consumer knowledge.

> *"Step 3 was difficult because we didn't want people to feel silly." (Pharmacy staff)*

Although Step 3 was more difficult, the team saw the value in doing it and had *"had some surprises".*

> *"Checking back – sometimes they miss things such as 'with food'. They often don't understand increasing or reducing doses. They hear the first bit and then stop listening. Now we are aware that people don't read labels we are more inclined to say – it is really important to read the label, especially when they are collecting something for someone else- 'do you think it will be clear to them what is written on the label?'" (Pharmacy Trainer)*

5.8. What has Worked Well

The pharmacy trainer and many of the staff commented about how much they had learnt about health literacy, and in some cases more than they had expected to learn.

The pharmacy team felt that the Three Step approach worked for pharmacies and that the universal precautions approach was important. The 'train-the-trainer' approach worked in this pharmacy and the dedicated time for training within working hours was valued by staff. The timing of the workshop provided by the Workbase trainer after staff had had a chance to receive initial training and put that into practice was successful. Pharmacy staff and the pharmacy trainer emphasised the value of having the workshop with an external expert.

Pre-demonstration staff said *"we ask them if they have had the meds before and if they have we do not push the issue"*. Putting the training into practice provided the pharmacy team with some surprises about how little consumers actually knew about their medicines. Many of the assumptions they had made previously, especially about the regular consumers, were incorrect.

> *"You do get some people who have no idea and they have been taking it for ages. That has been happening a few times." (Pharmacy staff)*

5.9. Challenges

In the pre-demonstration discussions, staff thought that time would be a big challenge. Staff noted that there are times of day when people are in a rush. The pharmacy owner changed the staffing roster to try and mitigate the time challenge during busy periods. Staff found that putting in place Step 1 and finding out how much the consumer already knew helped use time more effectively.

> *"Time has not been as big a problem as expected. Sometimes you are really, really busy and can only do the basics. We need to get good at getting it across in a suitable amount of time – or get them to come back and make a time." (Pharmacy staff)*

Step 3 remains an on-going challenge for the pharmacy team, both in terms of confidence and consumer responses.

> *"I still struggle with the 'tell me what I have just told you' questions. It depends on the person. Maybe it's our culture too of not questioning people too much. I quite like [Workbase trainer] approach– tell me what you are going to do when you get home. It is a tough one and that is where I struggle." (Pharmacy staff)*

> *"I didn't want to sound like a school teacher....I still have trouble with that [Step 3] now but I am getting better." (Pharmacy staff)*

Another challenge for pharmacy staff are those consumers who do not consider it is the pharmacist's role to ask them questions or those consumers who just do not want to know about their medicines.

> *"Some people say they would rather not know any more information. [They made a chart for someone and he said] 'I don't want it I'm not taking it.'" (Pharmacy staff)*

> *"Some people have been really taken aback by you asking. …. People are not used to in some pharmacies being asked stuff like that and they do not expect it." (Pharmacy staff)*

5.10. Sustainability of Changes

The Site B lead pharmacist intends to continue to develop health literacy at the site through:

- The monthly memo of what is happening

  "Putting a reminder in there, noticing what is going well, not slipping back into old habits."

- Building on the health literacy of consumers with long term chronic conditions through the Long Term Care Contract.

The lead pharmacist was adamant that *“we won’t be going back”.* Pharmacy staff also felt they had a strong foundation in health literacy and would continue to work at improving their health literacy skills.

6. Putting the Training into Practice – Consumers' Views

While the demonstration project was designed for pharmacy staff, raised awareness about health literacy ultimately benefits consumers through safe use of medicines. Despite the primary targets being pharmacy staff, the evaluation examined short-term changes from the consumer's perspective by:

- Asking consumers what they were told when they picked up their medicines;
- Asking consumers questions about their knowledge of their medicines; and
- Assessing audiotaped interactions.

It was intended that these different information sources would provide both qualitative and quantitative information from the consumer perspective in the pre- and post-demonstration periods. However, interpretation of the information from consumers was limited because pre-demonstration almost all consumers reported understanding their medicines.

6.1. Pre- and Post-Demonstration Changes

Pre-demonstration, consumers who were interviewed at both case study pharmacies were very positive about the pharmacies and spoke highly of the staff. Almost all said they understood their medicines very well, knew as much about them as they wanted to know and had asked the pharmacists any questions they wanted to. In response to being asked about what they were told by the pharmacists when they picked up their prescriptions, many consumers could not provide the generic or brand name of their medicines so it was not possible to check if they correctly understood how to take the medicine. Most consumers collecting repeats also explained that any information they were not given on that day had been explained to them previously.

The extent to which consumers are aware of the role of the pharmacist(s) and think they understand their medicines highlights some of the challenges to pharmacy staff in explaining information to people who feel they know it all already and are in a hurry and do not want to listen.

> *"…some people don't understand the role of the pharmacist, perhaps some information they need to know is that the pharmacist is there to help improve their health and they are a health professional. You need to be asking questions as well as promoting what a pharmacist is there for, people I don't think realise they can." (Pharmacy staff)*

In the post-demonstration interviews with pharmacy staff, staff provided many examples of how using the health literacy techniques they had been surprised at how little consumers actually knew and how many of their regulars collecting repeat prescriptions did not fully understand their medicines.

> *"…and when you ask them, especially for inhalers when they asked the lady how she uses it, she uses it completely wrongly and she's been on it for ages…and then we were surprised that she didn't know, so when you explain that she really appreciated it, because she thought she was doing the right thing." (Pharmacy staff)*

Assessment of audio-taped interactions demonstrated increased use of the Three Step approach and increased engagement with consumers. Pharmacy staff provided more opportunities for consumers to ask questions, and used strategies such as open ended questions to prompt consumers.

Post-demonstration responses from interviewed consumers showed no substantial changes from the pre-demonstration responses. Only one or two consumers at each pharmacy reported noticing any recent changes that related to health literacy, but many commented that the pharmacies were good before. For example:

> *"They generally explain medicine every time", "they're always professional and seem very knowledgeable" and "they are always good". (Consumer)*

We also asked pharmacy staff whether they had any feedback from consumers about changes in the pharmacy. Staff had mainly had positive feedback from consumers and provided examples:

> *"That man this morning was appreciative that we were trying to help him. He said that no-one has talked to him like this before." (Pharmacy staff)*

> *"No specific feedback from customers but lots of positive feedback and you can tell that people really appreciate it, going the extra mile. [The training] has been useful even for over the counter counselling and people have shown appreciation for going that extra mile rather than letting them pick a product off the shelf and selling it to them. I definitely feel that it is different from before." (Pharmacy staff)*

One consumer who did report noticing a change said she had noticed that staff asked more questions but that she did not like being asked questions by pharmacy staff:

> *"It is not the pharmacist's role to ask questions. The doctor should explain everything and people should read the leaflet." (Consumer)*

Staff also talked about negative feedback from a few consumers:

> *"We have had a few people who just don't want to listen to you. And they will bluntly say I know what I am doing and walk out. That sort of puts you down a bit for the next person you have to talk to. That was hard for me as well but I had to keep going and be positive." (Pharmacy staff)*

Negative comments knocked staff confidence and made it harder for them to put the training into practice. Including training about responding to negative comments might be a useful addition to the training package.

Staff suggested informing consumers about the role of the pharmacist and that it was all right for them to ask questions:

> *"Could we encourage patients to ask [us questions] as well." (Pharmacy staff)*

6.2. Consumers' Attitudes

Concern about consumer responses was reported by pharmacy staff at the demonstration sites as a challenge to improving their health literacy skills. Although evaluation data suggests that this is a minority of consumers, a negative response could result in staff losing confidence in their approach.

Many of the interviewed consumers were regulars at the demonstration site pharmacies. They thought that the advantages of being a regular were that pharmacy staff got to know them (48%), that various aspects of the interaction with the staff was good (31%) or for the location and convenience aspects such as parking (47%). Discounts or loyalty cards were also important to some (6%).[21]

In the post-demonstration interviews, consumers were asked about what they thought was important for them to know about their medicines and the best way for pharmacy staff to check how much they knew.

The most often mentioned topic that consumers thought was important to know was information about side effects and interactions. Also frequently mentioned were aspects of how to take medicines, how much and when to take them (Table 6-1).

---

[21] Based on 188 comments made by 144 respondents.

"Interactions – I don't collect them all at once so need to be told about possible interactions." (Consumer)

Table 6-1: What consumers think is important to know about their medicines

What consumers think are important to know about their medicines	Number of comments	Percentage of consumers
Side effects/interactions	77	39%
How to take the medicine	44	23%
How much to take	33	17%
When to take medicine	23	12%
What the medicine does	18	9%
How often to take the medicine	15	8%
How the medicine works/ that it works/ when it will work	11	6%
Others (doctors) role ensure consumer knows/ Don't need more info	10	5%
How long to take the medicine for	9	5%
What you are taking/ ingredients	8	4%
How to store the medicine	7	4%
Why the medicine has changed/ Why to take it/ what it is for	5	3%
Make sure doctor recommends it/ Doctor told me to take it	6	3%
Other – comments such as ingredients or comments about medicines in general	17	9%

283 comments made by 195 respondents

Responses to the question about the best way to find out what they know indicate that most consumers do find being asked acceptable. Many consumers thought the best way for pharmacy staff to check how much they know is to ask (Table 6-2).

Typical comments included:

"Asking is OK. They are trying to make you safe so they have to explain (in the shortest possible time) so you find out dosage etc." (Consumer)

"Go through everything – cover the basics – it's difficult to gauge what people know." (Consumer)

"Explain it to me when it's picked up for the first time." (Consumer)

Table 6-2: The best way for pharmacy staff to check how much consumers know

The best way for pharmacy staff to check how much you know	Number of comments	Percentage of consumers
Ask	72	38%
Explain	23	12%
Ask and explain/ repeat information	20	11%
Ask specific questions	15	8%
Provide information to take away	14	7%
Ask if first time/ explain if first time	12	6%
Check what the person needs to know	7	4%
Other's (doctor's) role to ensure consumer knows	5	3%
Discuss	4	2%
Other such as checking with the doctor or reading the prescription	21	11%

196 comments made by 189 respondents

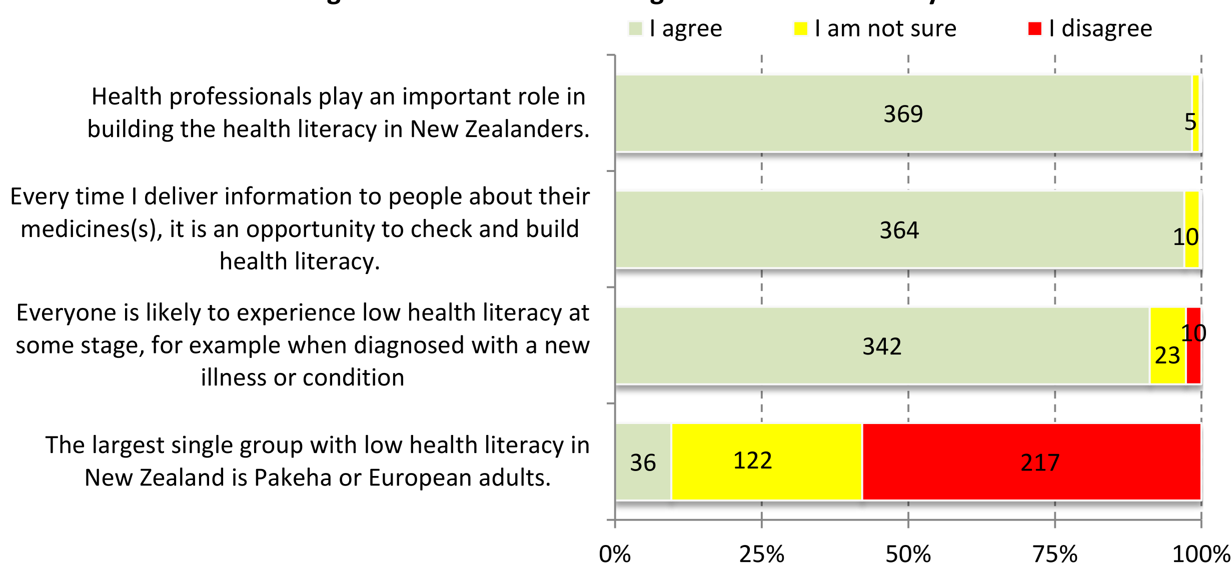
7. The Need for National Roll-out

The need for national roll-out was assessed through a national survey of pharmacy staff. The survey assessed knowledge about health literacy, current practice and attitudes towards health literacy training.

7.1. General Knowledge about Health Literacy

Almost all of the 376 pharmacy staff who responded to the survey agreed with the importance of the health professional role in building health literacy, the opportunities to check and build health literacy, especially when people were diagnosed with a new illness or condition. However, most survey respondents were not sure or disagreed that the largest single group with low health literacy is Pākeha or European adults[22] (Figure 7-1). This response highlights the importance of training about a universal precautions approach to health literacy and the inaccurate assumptions that are made about health literacy as it occurs within the population.

Figure 7-1: General knowledge about health literacy

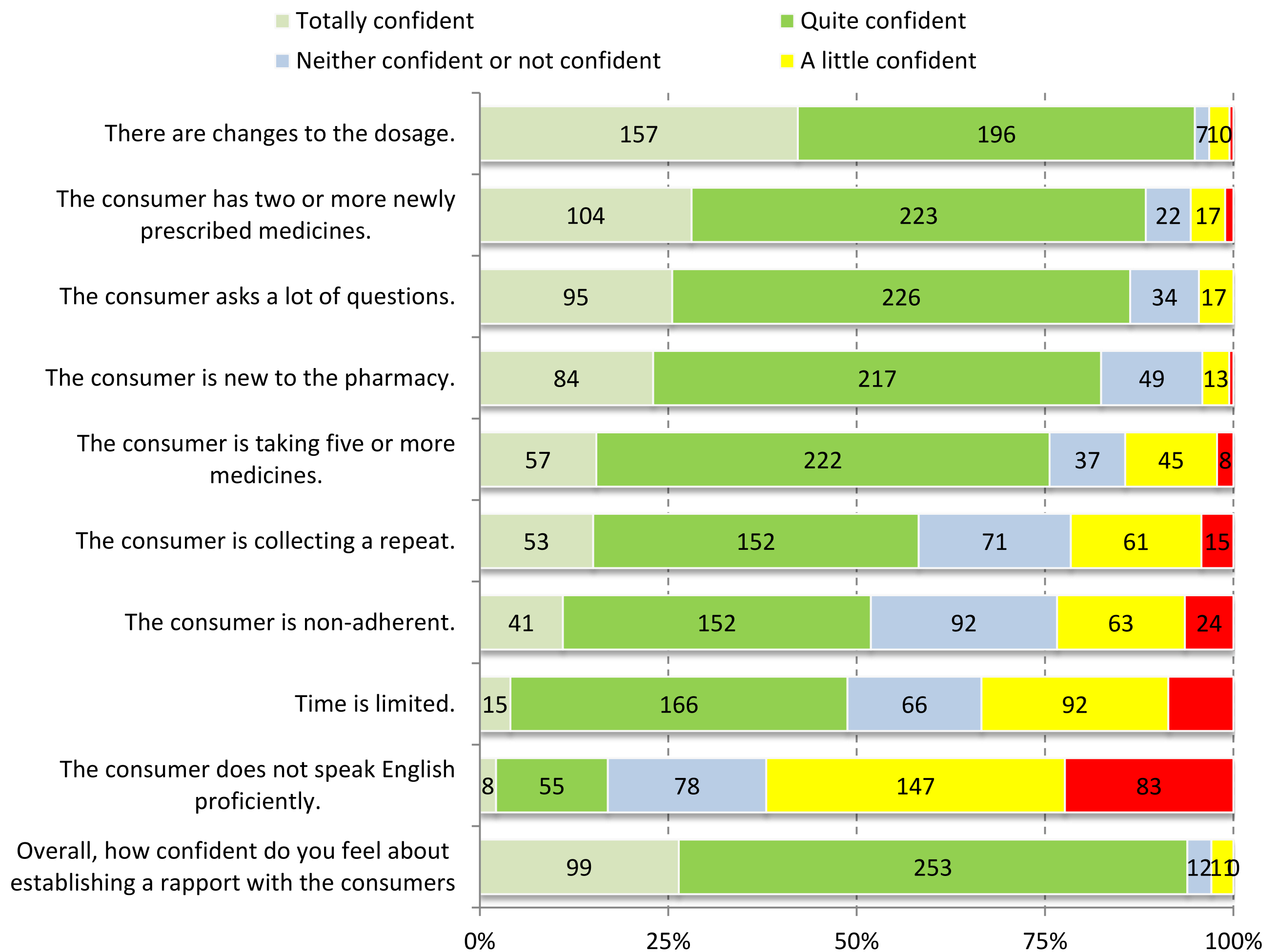


7.2. Confidence in Communication

The most common response from survey respondents to a series of questions about their confidence in different aspects of communication with consumers was that they felt quite confident. Pharmacy staff were least confident about communication with consumers who do not speak English proficiently, those who are non-adherent to their medication and when time is limited (Figure 7-2).

[22] The largest group with low health literacy is Pākeha adults.

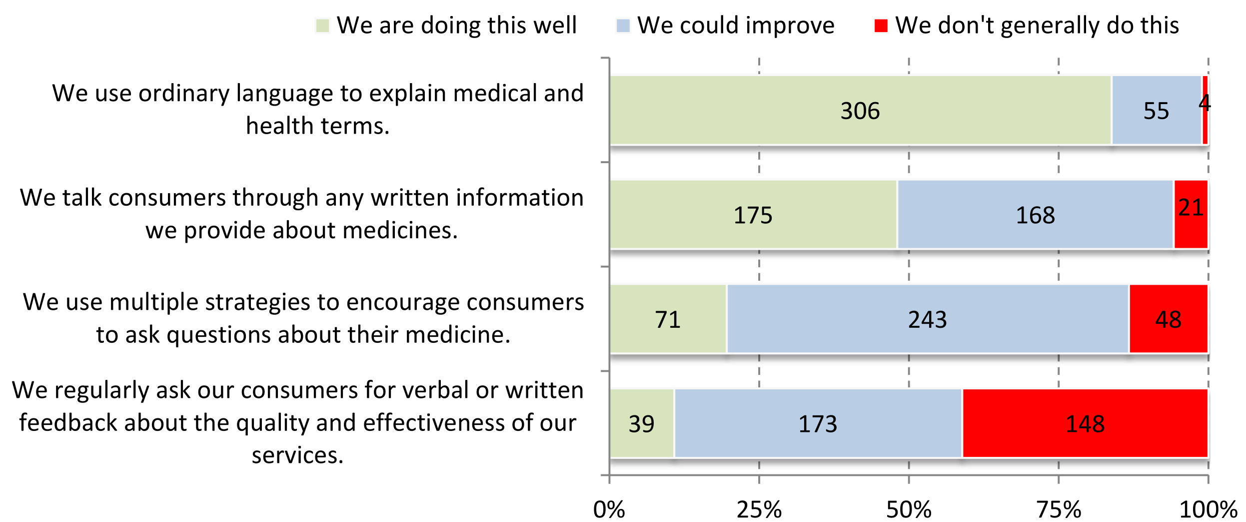
Figure 7-2: Confidence in aspects of communication with consumers



7.3. Health Literacy Strategies

Most survey respondents considered that they did well in using ordinary language to explain medical and health terms (Figure 7-3).

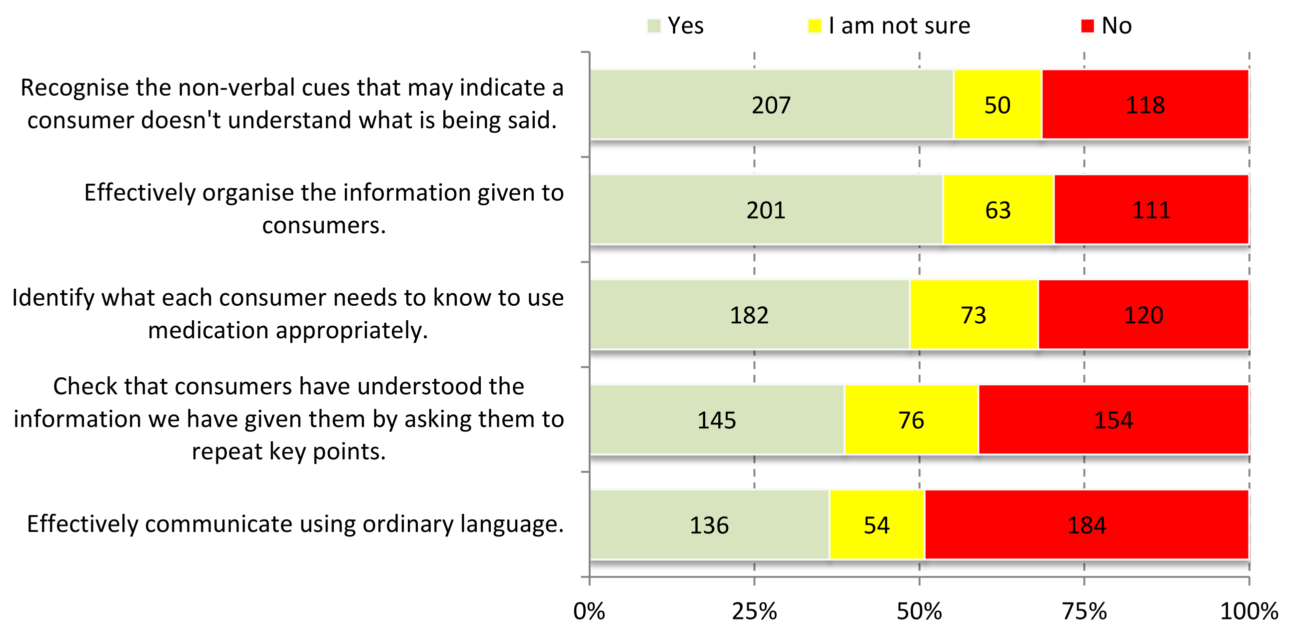
Figure 7-3 Health literacy strategies in pharmacies



7.4. Health Literacy Training

There are considerable numbers of community pharmacists who would like training in aspects of health literacy (Figure 7-4). Consistent with perceptions that they do well in using ordinary language to explain medical and health terms, effective communication using ordinary language was the topic where fewest survey respondents wanted more training.

Figure 7-4: I would like more health literacy training to ...



8. Discussion

8.1. Planning and Development

The health literacy demonstration project was planned as a case study approach with two community pharmacies. The participating pharmacies agreed to take part because each owner understood the importance of health literacy in improving health outcomes for their consumers and had identified potential benefits for staff such as increased skills, confidence and job satisfaction.

The training package developed by Workbase was grounded on evidence about 'best practices' identified through a review of the relevant literature. The initial training model was for a health literacy expert to visit pharmacies and to provide training. This model was subsequently changed to a 'train-the-trainer' model where a lead pharmacist was trained and would take that training back to their teams.

The training package recommended a universal precautions approach to health literacy and was based around Three Steps:

- Step 1 – Find out what people know;
- Step 2 – Build health literacy skills and knowledge; and
- Step 3 – Check you were clear (and if not go back to Step 2).

8.2. Training

The lead pharmacists took part in a one day workshop where they learnt about health literacy. Following the workshop they felt prepared to go back to their pharmacies and start training their teams. However, in retrospect both pharmacists felt that the initial workshop for the trainers should be more practical with more examples both of how to train and also about how to put the Three Step approach into practice.

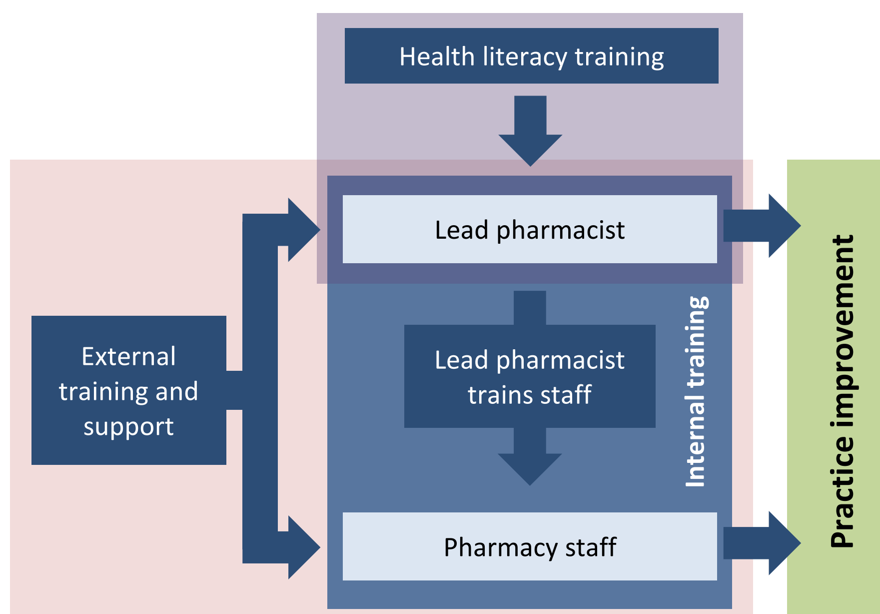
Overall:

- **The approach to health literacy was a new approach for pharmacy teams at the demonstration sites** - A key learning from this project is that the recommended approach to health literacy, as developed by Workbase and underpinned by a review of the literature, is a new approach for pharmacists and pharmacy technicians. Although communication and aspects of health literacy were taught in their education and training, all considered that the Three Steps method was a far better approach than what they had learned.
- **The 'train-the trainer' approach is important as each site needs a 'champion' and people working as a team** – Making changes to health literacy is a process that will progress slowly. Although different forms of initial training might work the behavioural change process for pharmacists takes time and requires on-going support. Having a champion within a pharmacy to lead and support the change process is critical to continued implementation.
- **The Three Step approach worked for these community pharmacies** – Pharmacists and their teams felt the Three Step framework was consistent with the way that pharmacists counselled consumers. However, pharmacy staff commonly struggled with Step 3. They reported feeling uncomfortable checking back on what consumers knew. The term 'teach-back' may not be the best term to use as several staff made comments about feeling like school teachers or feeling they were testing consumers. In the subsequent workshop sessions provided by Workbase, Step 3 was linked as a natural progression from Steps 1 and 2 and this made it easier for pharmacy staff.
- **A universal precautions approach is an effective way of identifying and meeting the needs of consumers** - Asking every consumer relevant and open questions at the start of an interaction,

to establish what they know and need in relation to their health or medication, provides a pharmacist with a useful starting point for building new knowledge with consumers. This approach can be used in every interaction with consumers and avoids making assumptions about which consumers are likely to have low health literacy or testing consumers for skill deficits.

- **A workshop(s) with an external trainer was essential to complement the 'train-the trainer' approach** – While a health literacy champion within a pharmacy can support the learning and development of health literacy skills in the pharmacy team, the champion is also learning and also needs support. In the demonstration project, the support from Workbase (in particular the workshop sessions), the support from the HQSC and the scheduled post-demonstration evaluation all contributed to keeping up the momentum of change in the pharmacies. Lead pharmacists said they felt well supported throughout the demonstration period. Figure 8-1 below summarises the different roles in achieving practice changes in health literacy.

Figure 8-1: Training and support roles in achieving practice improvement



- **A variety of resources worked for different learning styles** – The variety of resources suited the different learning styles of pharmacy team members. Some had not used the resources, whereas others read the resources through. However, there was a consensus that the resources were not as important as the training. Pharmacy teams suggested that resources could be strengthened with the inclusion of more practical information and examples of phrases and questions to use for each of the Three Steps.

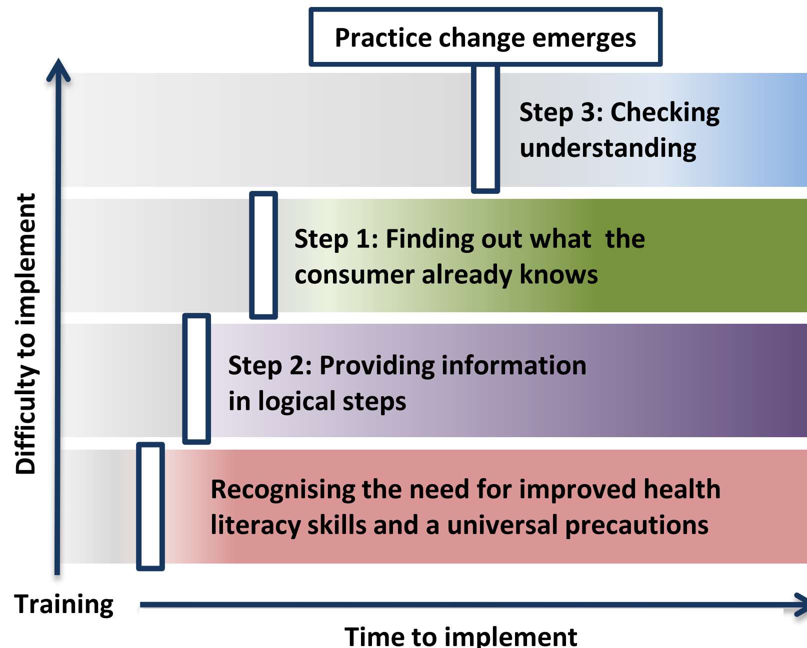
8.3. Putting the Training into Place

- **Training the whole team was an advantage** – In both case study sites, the pharmacy staff worked as a team. Training the whole team helps communication with consumers as the person who takes the prescription is not necessarily the person who hands over the medicines. Training the whole team also helps to facilitate change in the pharmacy as staff learnt from each other and some were better at different aspects of health literacy than others.
- **Dedicated time for training** –The Three Step approach to health literacy is a new approach and dedicated time for training, putting the training into practice and getting feedback was essential. Dedicated training time, preferably within working hours was preferred by pharmacy staff and is

likely to result in a faster change process. However, dedicated training time is difficult, especially for smaller pharmacies and may not be possible at all for one person pharmacies. Other options, such as a specialist trainer who could work with a pharmacy team may meet the needs of smaller pharmacies.

- **Change takes time** – As the approach to health literacy and communication with consumers is new for pharmacy staff and requires behavioural changes it takes time to accept and learn. Both demonstration site pharmacies focussed on changing a few things at a time and this seemed to be an effective approach. At the end of the demonstration period, three months after the start, both sites recognised that change was still a work in progress. Larger teams may be able to make changes faster as team members learning from each other builds momentum and keeps the team focussed on making changes.
- **The time staff take to make changes differs for different aspects of a health literacy approach** – At the start of the demonstration period, pharmacy staff felt reasonably confident in their ability to provide information in logical steps. However, after starting to put Step 1 into place staff recognised that consumers understood less than they had assumed and reassessed the way they explained medicines. From the experiences at the demonstration sites it appears that:
    - The important first stage is that staff recognise the impact of health literacy on consumers and understand the need to take a different approach to explaining medicines to consumers.
    - Staff realise that they need to make changes to the way they provide information to consumers and gradually make changes to the way they provide information as they gain increased understanding of health literacy techniques. Changing behaviours is difficult when they are busy. Making changes is easier with new consumers or regulars getting new medicines than with those collecting repeats.
    - Staff use health literacy techniques to find out what consumers already know and start putting Step 1 into place. Staff find using Step 1 is useful, provides them with new information about what consumers know and is not difficult to use.
    - Staff take longer to get used to Step 3 and the concept of checking-back on what consumers know. This stage was the most difficult one for staff at the demonstration sites.

Figure 8-2: Stages of change in pharmacy staff health literacy practices



- **Feedback and problem solving sessions are essential in putting the changes into place –** In the demonstration period, as pharmacy teams start to put the health literacy training into place some things work well and others are more difficult. Opportunities for staff to get advice about the things they find difficult was an essential part of the demonstration site training.
- **Positive reinforcement from making positive changes for consumers –** Positive feedback from consumers helped pharmacy staff to develop their confidence in using the Three Step approach.

8.4. Changes in Practice

All of the pharmacy staff at both of the demonstration sites said that overall they found taking part in the demonstration a positive experience. Changes in practice occurred because of:

- **Understanding of health literacy** - Pre-demonstration all of the explanations provided were framed in terms of what consumers understand or do not understand about their conditions and their medicines. Post-demonstration across both sites, pharmacy trainers and staff were all surprised by how little some consumers understood about their medicines and how much taking a health literacy approach improved their own communication with consumers.
- **Using the universal precautions approach** – Pre-demonstration there was some confusion amongst pharmacy staff about the population groups with the poorest health literacy skills. Following the training and using the universal precautions approach pharmacy staff recognised that anyone could have problems understanding their medicines.
- **Pharmacy staff methods for checking consumer understanding of medication safety have improved** – Assessment of audio-taped interactions with consumers, on-site observations and self-reported changes have provided evidence of changes in pharmacy staff behaviour that are consistent with the recommended Three Step approach to improving health literacy for consumers.

- **Increased pharmacy staff confidence, satisfaction and valuing of their role** – Pharmacy staff at both demonstration sites reported satisfaction in improving consumers' understanding of their medicines. Many also reported feeling more confident in talking to consumers.
- **Different approaches to repeats** – At the end of the demonstration period some pharmacy staff were still assuming that consumers collecting repeats on medicines did not need any information about their medicines. Other staff were checking consumer understanding for both new prescriptions, changes to medicines and repeats.

8.5. Consumers' Knowledge and Attitudes

Both pre- and post-demonstration, consumers said they were happy with the pharmacy staff. Many were regulars at the demonstration site pharmacies because they were satisfied with the service they received. At the pre-demonstration site visits, data from the consumer survey showed that most consumers thought they understood their medicines well, or as well as they wanted to. Consumers picking up repeat prescriptions frequently explained that they had been taking the medicine for years so did not need to have it explained to them. Very few consumers had questions that they had not asked the pharmacy staff member who gave them their medicines.

Most consumers were happy to be asked about their medicines by pharmacy staff as long as they were not in a hurry. However, some consumers did not consider pharmacists should be asking them questions about their medicines as that was the role of their doctor. Negative feedback from a few consumers had a disproportionate effect on pharmacy staff confidence in asking questions to find out what consumers know and checking back about their understanding.

8.6. Changes in Consumers' Experiences

Information from the observation and the assessment of pharmacy recordings shows that there have been changes in the way pharmacy staff interact with consumers. Assessing changes for consumers was difficult because interviewed consumers both pre- and post- demonstration were very happy with the pharmacies and the way staff explained their medicines to them. At the end of the demonstration:

- **Consumers continued to be generally positive** – Most consumers did not notice changes in the pharmacy and continued to be positive about the service they received.
- **Increased engagement and questioning** – Assessment of audiotaped interactions demonstrated increased consumer engagement and increases in the number of consumers asking questions.
- **Improved understanding** – Pharmacists increased explanations and identification of instances of misuse of medicines can be assumed to have resulted in increased understanding of their medicines by at least some consumers.

8.7. Challenges

Although, the measures of success that pharmacy owners talked about pre-demonstration had all been achieved or were in progress some challenges emerged such as:

- **Making changes is a work in progress** – Although changes had been made at both case study sites the changes were not yet embedded into practice and some aspects such as Step 3 or checking what the consumer understands remained difficult in both pharmacies.
- **Sustaining the changes** – Both pharmacy owners had thought about how to sustain the changes already made following the end of the demonstration period. Both had included health literacy as a professional development topic for staff. Linking health literacy to the new long-term care contracts and medicine reviews was also seen as a way to benefit consumers and continue to develop health literacy skills.

8.8. National Roll-out

The need for national roll-out was identified through:

- Interviews with consumer representatives who noted
  - Health literacy is about service improvement for consumers;
  - Consumers are reluctant to ask questions and there is a need to educate and encourage people to be open and talk about their conditions and medicines and to ask if they do not understand;
  - That it is important for pharmacists to consider issues for those with single medicines and those with multiple medicines and to target different age groups; and
  - There is a need to get more information into the community about medicines and the role of pharmacies and pharmacists with medicines.
- Interviews with pharmacy staff in the demonstration sites who believe that other pharmacies nationally could benefit from the training.
- Interviews with pharmacy academics and professional group representatives who recognised the need for enhanced health literacy training in academic study as well as for practicing pharmacists, made the following points:
  - Helping patients to understand their condition is a responsibility of all health care providers (including pharmacists);
  - Pharmacies have moved more into patient care orientated services as a result of the medicines use review service and LTC contracts. Health literacy provides a practical application of how they can work better with consumers;
  - Communication skills, including cultural competence, in health literacy are a big area for pharmacy at the moment with recognition of the importance of health literacy in helping patients to self-manage their illness;
  - Recognition that pharmacists are well placed to provide health literacy training and support for their teams but also noting that continual up skilling is important;
  - Students do not recognise the changes in their own health literacy over the duration of their studies and therefore don't understand how to moderate or translate technical language into clear English for consumers; and
  - Pharmacists are often busy so something that is easy to use and practical is key to their ability to use it. A suite of tools will be important as pharmacies come in many shape and sizes.
- A survey of 376 pharmacy staff identified that there are substantial numbers who would like training about aspects of health literacy.

8.9. Changes for National Roll-Out

The definition of health literacy accepted for use in New Zealand is an historical definition that focusses on the skill levels of consumers to obtain, process and understand information.

Prior to national roll-out it will be useful to:

- Reposition health literacy in the pharmacy setting to focus on the responsibility of pharmacy staff to ensure consumer understanding of medication, involving both reducing unnecessary health literacy demands on consumers, and building and checking the knowledge consumers need to function in healthy and safe ways; and

- Reinforce the message that 'telling or giving information' to consumers does not guarantee ‘ensuring consumer understanding'.

There are current definitions and comments for health literacy that could be used for the national roll-out that include both the skills of the consumer and the responsibility of the health professional to provide information and services.

The universal precautions and Three Step approach to health literacy form an effective framework for health literacy training for pharmacies. Some changes could be made to the training to strengthen it but overall the approach works for pharmacies.

A ‘train-the-trainer’ approach has the potential to work in larger pharmacies but there will need to be on-going support in place for the trainers and to provide workshop sessions for staff. Some support can be provided through videos and resources but an external workshop for trainers and subsequently for staff are minimum requirements. Audio-conferencing workshops could work for some. A training package developed for the trainers about how to pass the training onto their staff would facilitate the process. Content areas could include:

- Developing training plans and timelines;
- How to train staff and examples of what works well;
- How to help staff who are struggling with aspects; and
- Professional development packs.

An external trainer coming into the pharmacy will be essential for small pharmacies where the pharmacists cannot leave the practice for a day.

An intern at one of the case study pharmacies suggested that incorporating health literacy as a case study for the intern projects would provide valuable training.

Making changes to health literacy practices takes time and there is a tension between pharmacists’ need for something quick and the longer term approach required for implementing behavioural changes around health literacy. Linking health literacy training with the LTC contracts and with professional development provides a potential mechanism for encouraging pharmacists to take up the training.

The HQSC have developed the health literacy training package but implementing the package will need to be taken up by pharmacy professional organisations.

9. Recommendations

Recommendations

Health literacy education and training should be extended to national roll-out as there is a demand and a need.

The health literacy demonstration project achieved HQSC's objectives for pharmacy staff to:

- Acknowledge and understand how health literacy impacts on medication safety; and
- Raise awareness of their own communication styles including the use of jargon, acronyms and technical terms when communicating with consumers.

The sector needs to discuss and develop strategies about how access to training can be provided nationally as pharmacy staff will need support to develop their skills.

The case studies demonstrated that even with pharmacists who identified health literacy as a topic for practice improvement, taking part in health literacy training produced surprises about how much more there was to learn. National roll-out will require pharmacy professional organisations to promote the advantages and provide support for health literacy training. It is difficult for pharmacies, particularly small ones, to put training into place on their own. One workshop for the trainers is not sufficient and on-going support is required for the trainer and for staff. Organisations will need to consider how to provide external training and how to support the trainers. Potential strategies for the sector could include:

- Changes in the approach to health literacy in professional education and training to provide consistent approaches through undergraduate training, internships and professional development packages;
- Linking health literacy to Long Term Conditions contracts and medicines reviews; and
- Incorporating health literacy training into professional development requirements.

A universal precautions approach to health literacy (working with all consumers to identify if they have health literacy needs) should be endorsed as an effective way of identifying and meeting the needs of consumers.

Asking every consumer relevant and open questions at the start of an interaction, to establish what they know and need in relation to their health or medication, provides a pharmacist with a useful starting point for building new knowledge with consumers. This approach can be used in every interaction with consumers and avoids making assumptions about which consumers are likely to have low health literacy or testing consumers for skill deficits.

Encourage pharmacists to use the model developed in the project of Three Steps to health literacy: Step 1 Find out what people know, Step 2 Build health literacy skills and knowledge, Step 3 Check you were clear.

A training approach and package has been developed that provides the foundation for health literacy training. The package provides easy to implement techniques, skills and ideas that can be put into practice in the clinical settings.

The training package could be strengthened by:

- Adding more practical examples into the training package;
- Making Step 3 more user-friendly by providing more direction and examples. For example introducing Step 3 so that staff get more confident in using teach back could include developing reusable closed questions to check important information and actions already

discussed such as "how many tablets do you need to take each day?" or (for rpn) "when do you need to use this tablet?" or "what side-effects do you need to watch for?";

- Providing examples of how to respond to negative comments by consumers; and
- Providing more information about adult learning theory and how this has implications for consumer safety.

Consumer education about the responsibility pharmacy staff have to ask consumers questions to ensure medicine safety would help pharmacy staff.

The responsibility for providing good information about medicines sits with pharmacy staff as the health educators. However, in the demonstration project negative feedback from consumers impacted on staff confidence to make changes. Consumer education about the pharmacist's role, important things to know about medicines and to encourage consumers to ask questions if they need more information about their medicines may facilitate a health literacy approach. Careful thought needs to go into developing any consumer education campaign to ensure the key messages are appropriate.

Consider repositioning the definition of health literacy in a pharmacy setting.

The definition of health literacy accepted for use in New Zealand is an historical definition that focusses on the skill levels of consumers to obtain, process and understand information.

Prior to national roll-out it will be useful to:

- Reposition health literacy in the pharmacy setting to focus on the responsibility of pharmacy staff to ensure consumer understanding of medication, involving both reducing unnecessary health literacy demands on consumers, and building and checking the knowledge consumers need to function in healthy and safe ways; and
- Reinforce the message that 'telling or giving information' to consumers does not guarantee 'ensuring consumer understanding'.

Appendix One: Evaluation Framework

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consulting and advisory services

Evaluation questions	Indicators and/or measures	Sources of evidence
Planning and Development Phase		
Are the objectives and design of the project understood consistently by key stakeholders?	• Documentation of the project plan clearly sets out the project's objectives and design. • The training package development is consistent with the project's objectives and design. • Key stakeholders have a shared view of the project's objectives and design. • Key stakeholders have the same expectations about what the different phases of the project are likely to achieve.	• Project documentation. • Interviews with HQSC, Workbase, participating pharmacists, project advisory group. • Communications material such as newsletters and articles.
Has an effective training package been developed?	• The training package has been developed based on evidence from a literature review. • Pharmacists' have positive views on the effectiveness of the training package.	• Early and post-demonstration interviews indicate the training is being used. • Evaluation findings.
What are the components of the training package?	• Description and documentation of the training package.	• The literature review and training package provided by Workbase.
What do key stakeholders consider the success factors are?	• HQSC definitions of success. • Pharmacists' definitions of success factors in their pharmacies.	• HQSC documented objectives. • Interviews with pharmacists at the start of the project.
Training Phase		
Do invited pharmacists agree to take part in the demonstration project?	• Invited pharmacists participate in the workshop.	• Workshop attendance information.
Do participating pharmacists feel prepared to make changes in their pharmacies following the training workshop?	• Participating pharmacists consider the workshop increases their knowledge of health literacy. • Participating pharmacists consider the workshop increases their knowledge of the universal approach to health literacy. • Participating pharmacists consider the workshop has prepared them to train pharmacy staff in health literacy.	• Workbase training day evaluation forms. • Interviews with participating pharmacists.
Do HQSC workshop participants feel the training and support provided an adequate foundation for the demonstration project?	• HQSC participants consider the workshop increases their knowledge of health literacy. • HQSC participants consider the workshop provides pharmacists with training and resources to take back to their pharmacies. • Pharmacists consider follow-up support from HQSC and Workbase meets their needs.	• Workbase training day evaluation forms • Interviews with participating HQSC staff.

Evaluation questions	Indicators and/or measures	Sources of evidence
Do pharmacists think the resources for health professionals are: • **Easy to understand** • **Sufficient to guide practice** • **Sufficient to support training** • **Accurate (technically correct)** • **Sufficient to assist consumers to better understand their medicines** • **Culturally appropriate for use with consumers** • **Otherwise fit for purpose?**	• Pharmacists use the tools as provided.	• Interviews with pharmacists. • Assessment scales used during the interviews. • Pharmacists' perceptions of the tools collected at baseline, midpoint and end of the demonstration project.
Do pharmacists understand what is expected from them in the demonstration phase?	• Pharmacists, Workbase and HQSC have shared expectations of the objectives of the demonstration project.	• Interviews with Workbase, HQSC, pharmacists. • Terms of reference clearly outline expectations and responsibilities.
Demonstration Phase		
Is there a training plan in place for each pharmacy	• Training plans are in place.	• Document review. • Interviews with pharmacists.
Are pharmacists adequately supported through the demonstration phase?	• Pharmacists consider they have adequate support to make changes in their pharmacies.	• Interviews with pharmacists, Workbase, HQSC early and post demonstration. • On-site observation.
How are pharmacists helping other pharmacy staff improve their practice?	• Key pharmacy staff report training and/or mentorship.	• Interviews with pharmacists and group discussion with pharmacy staff. • Observations.
Resources (workbook and descriptions of health literacy tools)		
How useful was the workbook, and how could it be improved?	• Pharmacy staff assessment of the usefulness and usability of the workbook.	Post-demonstration: • Group discussions with pharmacy staff. • Survey of pharmacy staff.
Do pharmacy staff think the resources are: • **Easy to understand** • **Sufficient to guide practice** • **Sufficient to support training** • **Accurate (technically correct)** • **Sufficient to assist consumers to better understand their medicines** • **Culturally appropriate for use with consumers** • **Otherwise fit for purpose?**	Pharmacy staff assessment of the tools.	• Survey of pharmacy staff including assessment scales. • Group discussions with pharmacy staff about their perceptions of the tools at baseline, midpoint and end of the demonstration project.
How did pharmacists use the tools/strategies/approaches in providing training/ mentorship/ coaching to their staff about health literacy?	• Pharmacists used the tools/strategies/approaches as intended.	• Interviews with pharmacists (post demonstration). • Group discussions with pharmacy staff (post demonstration).
What tools are used by pharmacists? Which were most and least helpful,	• Pharmacy staff reported use of the tools.	Post-demonstration: • Group discussions with pharmacy

Evaluation questions	Indicators and/or measures	Sources of evidence
and why?	• Pharmacy staff assessment of the usefulness and usability of the different tools.	staff. • Survey of pharmacy staff. • Site visits and observation.
What other health literacy resources did pharmacists use?	• Pharmacy staff reported use of other health literacy resources. • Appropriateness of health literacy resources staff use.	Post-demonstration: • Group discussions with pharmacy staff. • Survey of pharmacy staff. • Site visits and observation.
Were other health literacy resources used complementary or did they overlap?	• The information covered by the different tools and resources.	• Analysis of the content of other resources used.
Changes in pharmacy staff awareness and understanding		
How has pharmacists' understanding of health literacy changed during the demonstration?	• Pharmacists and pharmacy staff self-rating early and post demonstration.	• Interviews with pharmacists. • Group discussions with pharmacy staff. • Survey of pharmacy staff using modified AHRQ validated tools to measure health literacy early and post-demonstration comparison. • Site-visits and observation/ audiotaped interviews.
Changes in policy and practice		
Have pharmacists' methods for checking consumer understanding of medication safety improved?	• Pharmacists identified potential policy changes which will help embed good health literacy practices in the future. • Identified practice changes.	• Survey of pharmacy staff early and post demonstration. • Group discussions with pharmacy staff early and post demonstration. • Interviews with consumers early and post demonstration. • Site visits and observation/ audiotaped interviews early and post demonstration eg observation of the number of "brown-bag" reviews. • Pharmacy staff self-assessments of audiotaped conversations early and post demonstration.
Have pharmacists and pharmacy staff found taking part in the demonstration a positive experience?	• Pharmacy staff self-assessment.	• Pharmacy staff-self assessment on a 5-point scale.
Changes in consumers' experience		
Has there been an increase in consumers' understanding of their medicines?	• Consumer self-assessment of the interaction with the pharmacy. • The proportion of consumers who understand what condition they are receiving medication for, what the medication will do, are able to name each of their medicines, the dose they take and how often they take the medicine and any other special considerations associated with the medicine.	• Interviews with consumers.

Evaluation questions	Indicators and/or measures	Sources of evidence
What feedback have pharmacy staff received from consumers?	• Pharmacy staff reports about feedback for example consumer experience of "brown-bag" reviews.	• Group discussions with pharmacy staff.
Challenges and successes		
Have measures of success been met?	• The extent to which the measures of success defined at the start of the project have been met.	• All information sources.
What was associated with success?	• Factors, attitudes, approaches that were associated with success (eg professional development points, pharmacy models, staff profiles etc).	• All information sources.
What barriers, issues or challenges have been identifies by pharmacy staff and consumers?	• Challenges identified by pharmacy staff. • Challenges identified by consumers.	• Group discussions with pharmacy staff. • Interviews with consumers.
What were the unexpected outcomes of the programme – both positive and negative?	• Outcomes reported by pharmacy staff. • Outcomes reported by consumers.	• Post demonstration group. discussions with pharmacy staff. • Post demonstration interviews with consumers. • Queries to HQSC.
How did the challenges and successes differ between the two types of pharmacies?	• Understanding differences between the two pharmacies facilitates development of training for different pharmacy "types".	• Review of what happened at each of the two pharmacies.
What changes need to be made prior to project roll-out?	• Project successes and challenges.	• All sources.
Project Roll-out		
Are processes in place to use findings from the evaluation to inform changes to the training resources, implementation of the training?	• Processes are in place to allow feedback to occur.	• HQSC interviews. • Document review.
Is baseline data collection in place to allow monitoring of changes over the roll-out	• Recommendations for baseline data collection are provided by the demonstration model evaluation.	• Baseline data is in place. Possibilities to be discussed with stakeholders.

Appendix Two: Questionnaires

Initial interviews with pharmacists

1. What do you hope to gain from the involvement of your pharmacy in the project?

2. What changes would you have to see for you to call the project a success?
    a. In the short term (demonstration project)?
    b. In the medium/long term (over the next year)?
    c. In outcomes for consumers?
    d. In changes in staff behaviour?
    e. In changes in pharmacy environment?
    f. In changes in staff knowledge of adult learning?

3. How do you currently provide training/education for your staff?

4. How do you plan to put the health literacy project in place in your pharmacy?
    a. How do you see yourself applying the training?
    b. Do you have processes in place to take advantage of the WorkBase resources? Eg staff training plans, review sessions, etc?
    c. What training/mentoring agreements do you have in place for your staff?

5. How relevant and/or informative was the training workshop for you?
    a. In terms of the content? Format? Etc?
    b. Do you feel the training increased your knowledge of health literacy?

6. How prepared and confident do you feel to use the Workbase resources?

7. What level of support do you feel would help you to carry out this project
    a. Do you want on site support from Workbase?

8. What level of engagement do you feel would be acceptable from the Commission?

9. Do you have any ideas about how you would measure/identify the changes you hope to see in your pharmacy?

10. We have some ideas about how to collect information that will help to measure the changes in your pharmacy as a result of the project that we would like to discuss with you
    a. Focussing the evaluation on those with long-term chronic conditions?
    b. On site interviews with consumers (how many per day/ casuals versus regulars)
    c. Audiotaped interviews
    d. Interviews/survey of staff (how many staff/ length of time in pharmacy/staff turn over)
    e. On site observation

11. What do you think will be any issues for you/ your staff/ your consumers in taking part in:
    a. The project
    b. The evaluation

12. When we are evaluating projects our usual approach is to assure participants of confidentiality. Given the publicity surrounding this project, while we can ensure confidentiality of pharmacy staff, it will be likely that the two pharmacies will be identifiable and therefore the pharmacists.

a. How would you like to see this managed?

13. Finally, I would like to discuss our next steps in working with you for the evaluation?
   a. Starting date
   b. Onsite dates
   c. Our team for your pharmacy
   d. Catching up with you on a regular basis

14. Information
   a. Number of staff
   b. Number of consumers with long-term chronic conditions
   c. Onsite survey times

Subsequent Interviews (early project interviews and catch up interviews) with pharmacists

1. How has the health literacy project been going?
   a. What have you put in place so far?
   b. What has worked well
   c. What challenges are you having

2. In retrospect, how appropriate was the training workshop for you?
   a. In terms of the content? Format? Etc?
   b. Do you feel the training increased your knowledge of health literacy?

3. Would you make any changes to the way the workshop was run?

4. How appropriate are the Workbase resources to you/your pharmacy/your staff in terms of:
   a. Content and comprehensiveness?
   b. Presentation?
   c. Overall usefulness?
   d. Probe: Easy to understand
      i. Sufficient to guide practice
      ii. Sufficient to support training
      iii. Accurate (technically correct)
      iv. Sufficient to assist with the identification of all relevant medication safety issues
      v. Having the potential to assist them in training pharmacy staff
      vi. Culturally appropriate for use with their consumers.

5. Do you foresee any barriers to using the tools effectively, or to the overall success of the programme?

6. What are you plans for the next month?

Interview Guide – post-demonstration Interview with lead pharmacists

1. What have you been doing with your team over the last month, since we last talked?

2. What do you think about different ways to support health literacy?
   - Step 1: Finding out what consumers already know
   - Step 2: Telling them what they need to know
   - Step 3: Checking understanding using teach-back

3. What do you think about the health literacy resources [add each resource they have used]?
   - Ease of use
   - Sufficient to guide practice
   - Sufficient to support training
   - Sufficient to help consumers to better understand their medicines
   - Culturally appropriate
   - Generally fit for purpose – assess on a scale of 1 (not useful) to 5 (very useful) for usefulness.

4. Would you make any changes to the resources?

5. Do you feel you had adequate support throughout the demonstration project? What additional support would have helped?

6. How have you found taking part in the demonstration project?
   - Has your knowledge about health literacy changed? How has your attitude to health literacy changed?
   - Are you doing anything different now?
   - Is the pharmacy as a whole doing anything differently?

7. What changes have you seen in your team?

Probe: changes in confidence, attitude to health literacy, other changes

8. What feedback has the pharmacy received from consumers?

9. Overall what has worked well and what has been difficult? Probe to explore issues raised such as privacy, how to work out how much consumers want to know and how to tailor messages

10. When we first talked before you started the project you said your measures of success were [add measures]. Have they been achieved?

11. How sustainable do you think the changes will be? What would be needed to maintain the changes?

12. Overall has taking part in the demonstration project been worthwhile for you personally?

13. What were any unexpected positive or negative outcomes of the project?

14. What would you change if you were starting again?

15. What advice would you give other pharmacists planning to focus on health literacy training for their team?

16. Is there anything else that you would like to talk about that has not been covered?

Thank you

Post-demonstration Discussion group guide – Pharmacy Staff

Estimated time available 30 minutes

Introduction

Hello, my name is {name}

Thank you for agreeing to be part of this discussion group. As you are aware your pharmacy is taking part in a demonstration project about health literacy. This discussion is part of the evaluation of the project and a follow up to the earlier discussion we had with you back in March.

We are meeting as a group to discuss what you think about health literacy and to hear your ideas about how you communicate with people who come into this pharmacy to have the scripts filled.

I would like to audiotape the conversation to assist us in analysing what you have said. It will not be heard by the pharmacist or by staff at the HQSC.

Are you all agreeable to being recorded?

Does anyone have any questions before we start?

Discussion Points

What do you understand by the term health literacy? Has your understanding changed over the last three months during the demonstration project?

What training have you had with [enter pharmacists name] about health literacy?

What do you think about different ways to support health literacy?

- Finding out what consumers already know
- Telling them what they need to know
- Checking understanding using teach-back

What do you think about the health literacy resources [add each resource they have used]?

a. Ease of use
b. Sufficient to guide practice
c. Sufficient to support training
d. Sufficient to help consumers to better understand their medicines
e. Culturally appropriate
f. Generally fit for purpose – assess on a scale of 1 (not useful) to 5 (very useful) for usefulness.

Would you make any changes to the resources?

How have you found taking part in the demonstration project?

Has your knowledge about health literacy changed?

Are you doing anything different now?

Is the pharmacy as a whole doing anything differently?

What feedback has the pharmacy received from consumers?

What has worked well?

What has been difficult? *Probe to explore issues raised such as privacy, how to work out how much consumers want to know and how to tailor messages*

Overall has it been worthwhile for you personally?

What were any unexpected positive or negative outcomes of the project?

What would you suggest changing for other pharmacies who decide to focus on health literacy? *Probe: would you change any aspects of the tools?*

Is there anything else that you would like to talk about that has not been covered?

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Kupu Taurangi Hauora o Aotearoa

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Health literacy in community pharmacy (Post-demonstration pharmacy staff survey)

Thank you again for completing the pre-demonstration project questionnaire.

We would now like to ask you to complete the post-demonstration questionnaire. The survey will take **less than ten minutes** to complete and is only being distributed to the teams at the two community pharmacies taking part in the demonstration project.

The information between the two surveys will be compared and will help in developing the health literacy training package for other pharmacies.

All information received will be confidential and held by Malatest International, which is conducting the survey on our behalf.

The survey asks about:

a. How you found the training
b. How you communicate with consumers
c. Your training in and understanding of health literacy
d. The health literacy environment of the pharmacy you work in

At the end of the survey, there is a space for comments.

If you have any questions, please contact Debbie McLeod at Debbie.McLeod@malatest-intl.com or 04 212 4566, or Linda Gilbert at the Health Quality and Safety Commission at Linda.Gilbert@hqsc.govt.nz

Regards

Dr Janice Wilson
Chief Executive

Thank you for helping us with the survey.

Your answers are confidential and you will not be identifiable in any reporting. We would appreciate you adding your name so we can track who has responded.

Your Name:

Health Literacy Training and Resources

This section asks about how you found the health literacy training provided in your pharmacy overall and for different aspects of your work.

Please check the ONE response that most accurately describes you.

How helpful did you find the health literacy training:	**Not at all helpful**	**A little helpful**	**Neither helpful nor not helpful**	**Helpful**	**Very helpful**	**N/A**
The training and information overall						
Training and information about **Step 1**: Finding out what people know						
Training and information about **Step 2**: Building health literacy skills and knowledge						
Training and information about **Step 3**: Checking back you were clear						
How helpful did you find the following health literacy resources:	**Not at all helpful**	**A little helpful**	**Neither helpful nor not helpful**	**Helpful**	**Very helpful**	**N/A**
The pamphlet on the three steps to better health literacy						
The laminated reminder card on the three steps						
The explanatory booklet on the three steps						
Quizzes about health literacy						
Background information about health literacy						

Communication

This section assesses how confident you feel about different aspects of communication with the consumers you provide with prescribed medication.

Please check the ONE response that most accurately describes you.

How confident are you that you can effectively educate consumers about medicines when:	**Not at all confident**	**A little confident**	**Neither confident nor not confident**	**Quite confident**	**Totally confident**	**N/A**
Time is limited.						
The consumer has many medications.						
The consumer has many new prescriptions.						
There are many changes in dosage.						
The consumer asks a lot of questions.						
The consumer is new to the pharmacy.						
The consumer is non-adherent.						
The consumer does not speak English proficiently.						

Please check the ONE response that most accurately describes you.	**Not at all confident**	**A little confident**	**Neither confident nor not confident**	**Quite confident**	**Totally confident**	**N/A**
Overall, how confident do you feel about establishing a rapport with consumers?						

Health literacy training

This section asks some general questions about any changes to your practice as a result of the health literacy training

Please check the ONE response that most accurately describes whether you have made changes that you think improve the health literacy of consumers	No changes needed in this area	No changes yet	Some changes	Changed a lot
Identifying what each consumer knows about their medicine(s)				
Giving information in logical steps				
Giving information in manageable chunks				
Explaining technical terms				
Using resources such as visual or written material				
Helping people to anticipate the next steps				
Reinforcing and emphasising				
Recognising the non-verbal cues that may indicate a consumer doesn't understand what is being said.				
Effectively organising the information given to consumers.				
Effectively communicating using ordinary language.				
Check that consumers have understood the information we have given them by asking them to repeat key points.				
Making it easy for consumers to ask questions				

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In your pharmacy
This section asks questions about how your pharmacy delivers its services.

Please check the ONE response that most accurately describes your pharmacy today, using the following rating scale:	We don't generally do this	We could improve	We are doing this well	N/A
We regularly ask our consumers for verbal or written feedback about the quality and effectiveness of our services.				
We use multiple strategies to encourage consumers to ask questions about their medication.				
We use ordinary language to explain medical and health terms.				
We talk consumers through any written information we provide about medication.				

Health literacy training	Yes	No
Are there any aspects of health literacy where you would like more training?		
If Yes: What would you like more training about?		

Personal Information

This section asks you for some descriptive information about yourself. Please tick the options that apply to you.	Pharmacist	Pharmacy technician	Other
Are you a:			

Do you have any comments you would like to add?

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Cover email.

Email subject line: Health literacy in community pharmacy

Introduction

The Health Quality and Safety Commission is carrying out a health literacy project with two community pharmacies. Health literacy is the degree to which individuals can obtain, process and understand health information and services they need to make appropriate health decisions.

The demonstration project, which runs until the end of July, provides community pharmacists with training and resources to increase their understanding of health literacy. Subsequently the training resources will be available more widely.

We invite you to help us with this work by taking part in an online survey. It will take **less than ten minutes** to complete, and everyone who completes the survey will go into a draw to have a chance to win a $150 voucher for a meal for two at a restaurant of the winner's choice.

All information received will be confidential and held by Malatest International, which is conducting the survey on our behalf.

The survey asks about:

e. How you communicate with your consumers
f. Your training in and understanding of health literacy
g. The health literacy environment of the pharmacy you work in.

At the end of the survey, there is a space for comments and for you to let us know if you would like more information about health literacy training for pharmacy staff.

Please click [here] to start the survey [add link to www.healthliteracy.malatest.net]

If you have any questions, please contact Debbie McLeod at Debbie.McLeod@malatest-intl.com or 04 212 4566, or Linda Gilbert at the Health Quality and Safety Commission at Linda.Gilbert@hqsc.govt.nz

Regards

Dr Janice Wilson
Chief Executive

HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND
Kupu Taurangi Hauora o Aotearoa

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National **Survey of Pharmacists**

Thank you for helping us with the survey.

Your answers are confidential and you will not be identifiable in any reporting. You can find further information about our privacy policy here.

General questions about health literacy

This section asks general questions about health literacy. Please check the <u>ONE</u> response that most accurately describes whether you agree or disagree with the statements below:

	I disagree	I am not sure	I agree	N/A
Health professionals play an important role in building the health literacy of New Zealanders.				
Every time I deliver information to people about their medicine(s), it is an opportunity to check and build health literacy.				
Everyone is likely to experience low health literacy at some stage, for example when diagnosed with a new illness or condition.				
The largest single group with low health literacy in New Zealand is Pākeha or European adults.				

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Communication

This section assesses how confident you feel about different aspects of communication with the consumers you provide with dispensed medicine.

Please check the **ONE** response that most accurately describes you.

How confident are you that you can effectively educate consumers about medicines when:	**Not at all confident**	**A little confident**	**Neither confident nor not**	**Quite**	**Totally confident**	**N/A**
Time is limited.						
The consumer is collecting a repeat.						
The consumer is taking five or more medicines.						
The consumer has two or more newly prescribed medicines.						
There are changes to the dosage.						
The consumer asks a lot of questions.						
The consumer is new to the pharmacy.						
The consumer is non-adherent.						
The consumer does not speak English proficiently.						

	Not at all confident	**A little confident**	**Neither confident**	**Quite confident**	**Totally confident**	**N/A**
Overall, how confident do you feel about establishing a rapport with consumers?						

In your pharmacy

This section asks questions about how your pharmacy delivers its services.

Please check the **ONE** response that most accurately describes your pharmacy today, using the following rating scale:

	We don't generally do this	We could improve	We are doing this well	N/A
We regularly ask our consumers for verbal or written feedback about the quality and effectiveness of our services.				
We use multiple strategies to encourage consumers to ask questions about their medicine.				
We use ordinary language to explain medical and health terms.				
We talk consumers through any written information we provide about medicines.				

Health literacy training

This section asks some general questions about health literacy training.

Please check the ONE response that most accurately describes whether you agree or disagree with the statements below.

I would like more training on how to:	No	I am not sure	Yes	N/A
Identify what each consumer needs to know to use medication appropriately.				
Check that consumers have understood the information we have given them by asking them to repeat key points.				
Recognise the non-verbal cues that may indicate a consumer doesn't understand what is being said.				
Effectively organise the information given to consumers.				
Effectively communicate using ordinary language.				

Do you have any comments you would like to add?

D: Personal Information

This section asks you for some descriptive information about yourself. (All personal information will be kept confidential.)

Are you a:
Pharmacist____
Pharmacy technician ____
Other (please specify) ____

How many years have you worked as a pharmacist or pharmacy technician?

Less than 5
6 to 10
More than 10

How many years have you worked at your current pharmacy?

Locum
Less than 5
6 to 10
More than 10

Do you work:

Full-time
Part-time

Which ethnic group do you belong to:

NZ European
Māori
Samoan
Cook Island Māori
Tongan
Niuean
Chinese
Indian
Asian

Middle Eastern
South African
Other (please specify):

Are you:

Male
Female

Thank you for taking the time to complete the questions

Would you like to be sent information about the health literacy training available for pharmacists?
No
Yes. Please provide your email address ______________________

If you would like to be entered into the draw for a restaurant voucher for $150 please provide your email address ______________________

Please press “Submit” to end the survey

Exit to http://www.hqsc.govt.nz/our-programmes/medication-safety/

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Post-demonstration Questionnaire for Consumers

			No	Yes
Are you a regular at this pharmacy?				
How many medicines did you collect today?			Number:	
Is this medicine for you?				
Is this the first time you have had this medicine?				
If yes: How long have you had the condition the medicine is for?	< 3 mths	<1 year	1-2 years	3+ years

When you picked up your prescription did the pharmacist tell you….

	No	Yes	Told previous		No recall	Partial recall	Full recall	N/A
The name of the medicine				What is it called?				
What the medicine does				What does it do?				
How to take the medicine				How is that?				
How much to take each day				How much?				
How long to take the medicine for				How long?				
About any side effects				What side effects?				
Any harmful effects/ interactions to be aware of				What are these?				
Where to keep the medicine				Where?				
How to dispose of the medicine (post only)				How?				

		No	Yes
Would you like an opportunity to discuss your medicine further?			
Did you have any questions today that you didn't ask the pharmacist?			
If Yes - What were these?			
If Yes: What was the reason you didn't ask?			
	Not well	Average	Very well
How well do you think you understand the medicine you have been given today?			

What are the things you think are important for you to know about your medicine?
What is the best way for pharmacy staff to check how much you know about your medicine?
Do you have any general comments about how staff at this pharmacy explain your medicine to you?
If a regular: Have you noticed any changes since the last time you picked up a prescription?
If a regular: What are the advantages for you of being a regular at a pharmacy?

And finally a few questions about you – please tick to indicate the correct answer

What age group do you fall into	
Under 25	
25-45	
Over 45	
Which ethnic group do you belong to:	
NZ European	
Māori	
Samoan	
Cook Island Māori	
Tongan	
Niuean	
Chinese	
Indian	
Other:	
Are you:	
Male	
Female	

Appendix Three: Workbase Literature Review and Resources

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Workbase: Literature review of health literacy education, training tools and resources for health providers

Background

This literature review was prepared by Workbase for the Health Quality & Safety Commission. It provides guidance for the development of the training tools and resources that have been prepared for the Health Literacy Medication Safety demonstration project.

This project aims to provide key pharmacy staff with information and tools to increase their understanding of health literacy, adult learning theory and communication skills.

Health literacy and the role of health professionals

1. Introduction

As the sphere of health continues to grow and become more complex, the relationship between the health system, health professionals and the health consumer also continues to change and evolve. Health literacy is a concept that lies at the centre of this evolving relationship.

While health literacy is a relatively new field, particularly in New Zealand, definitions of health literacy have been informed by the Organisation for Economic Co-operation and Development (OECD) surveys of literacy amongst individuals and societies (Ministry of Education 2008). 'Health literacy' and 'literacy' are relative terms in that the health literacy (knowledge and skills) required in a given situation is determined by the health literacy demands created by the situation. These demands include immediate literacy skill demands, such as reading health materials or speaking with a health professional, and health knowledge demands, such as understanding how the body works or disease theory. These demands also include systemic factors and influences, such as the time a health professional has to spend with a patient, and how complex it is to access health services and support. Health literacy is also affected by the unfamiliarity of information and concepts, and the stress or anxiety experienced by patients and families in health situations.

Health literacy involves more than using literacy skills in a health context. Literacy and numeracy skills and knowledge, such as reading, writing, speaking, listening and numeracy, are central to health literacy. The term also encompasses skills and knowledge unique to health, such as a conceptual understanding of how the body works, knowing when and where to seek health advice, being able to evaluate the appropriateness of health advice, being able to interpret and describe health symptoms, as well as acting with confidence in a health setting (Institute of Medicine 2004; Zarcadoolas et al 2006; Rudd et al 2007).

There is a variety of definitions of health literacy that generally fall within two categories: health literacy as a set of individual capacities that allow a patient to successfully navigate a health care environment; or health literacy as an interaction between individual capacities of patients, families and health professionals and the health care environment in which they operate (Nutbeam 2008; Rudd et al 2007; Institute of Medicine 2004; Kickbusch et al 2005). How health literacy is defined affects the way in which improvements in health literacy are sought and how (or whether) health literacy is measured (Nutbeam 2008; Baker 2006).

1.1 Health literacy defined as an individual skill set

The United States' Department of Health and Human Services (2000, p11) defined health literacy as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions". The essence of this definition

lies with the ability of the individual to obtain, understand and use information (Baker 2006; Rudd et al 2007) and therefore positions health literacy as an individual issue.

A very similar definition is used in New Zealand. The Ministry of Health (2010, piii) defines health literacy as "the ability to obtain, process and understand basic health information and services in order to make informed and appropriate health decisions". This definition has also been adopted by the Health Quality & Safety Commission New Zealand.

On the face of it, both the above definitions view the individual patient as the critical factor in health literacy. The patient's skills and abilities determine health literacy. However, these definitions also imply that the individual is not in charge of the material that they receive and how the health system is organised. This is the responsibility of the health professional and the health system (Institute of Medicine, 2004).

1.2 Health literacy defined as an interactive practice

Although the previous definitions place responsibility for health literacy on the individual, the individual does not act alone in obtaining, processing and understanding health information. It is most likely that a health professional or health organisation will be involved in providing the information for the individual to process and, depending on the complexity and familiarity of the information and the way it is delivered to the individual, the health professional and health organisation may be very influential in determining whether the individual can obtain, process and understand the information.

More recently it has been argued that if health literacy is the ability to function in a health care environment, then health literacy must rely on aspects of both the individual and other parties involved in communication, as well as those designing health services. According to the Institute of Medicine (2004, p2) health literacy "emerges when the expectations, preferences and skills of individuals seeking health information and services meet the expectations, preferences and skills of those providing the information and services". This definition sees health literacy as a dynamic state that may depend on a variety of factors, including the medical problem being treated, the health care provider and the system providing the care (Baker 2006).

Where the health literacy required in managing a health condition is greater than the existing skills and knowledge of a patient or family, health professionals have a role in reducing any unnecessary health literacy demands. They also have a role in helping patients and families build their health literacy in order to manage their health effectively (Institute of Medicine 2004; Edwards et al 2012; Rudd et al 2007).

Edwards et al (2012, p151) emphasise the complex, social and changing nature of health literacy by defining it as a "multi-dimensional construct that develops over time, across different health contexts and through social interactions". The authors see health literacy as developing along a continuum towards greater knowledge, greater self-management and greater participation in decision making, with health literacy as both a process and an outcome. For example, developing health literacy skills and knowledge is an on-going process. However, developing the health literacy skills to manage a health condition at a particular point is an outcome.

Koh et al (2012) note that a chasm often separates what health professionals intend to convey in written and spoken communication and what patients actually understand. Further, while this mismatch has, in the past, been viewed as an issue of patient deficit caused by patients lacking health skills and knowledge (Koh et al 2012), it is now recognised that health literacy is a dynamic systems issue reflecting the complexity of health information being presented and the health care system being navigated (Rudd 2010; Parker and Ratzan 2010). Complex medical conditions, wide-ranging treatment options and service provision, as well as an array of communication channels, further impact on health literacy demands for patients and families.

Consequently, system-level changes are needed at both health professional and health organisation level if the issue of health literacy is to be addressed (Institute of Medicine 2004; Koh et al 2012).

1.3 Building health literacy

Building health literacy skills and knowledge includes understanding how to manage health risks and what is needed to improve health in the immediate and longer term. Reducing the unnecessary health literacy demands for managing a health issue may involve providing limited and prioritised information to patients and families, or focusing solely on 'to-do' tasks. At other times, it may require providing increased (but clearer) information to patients or providing more opportunities over time to build patient knowledge and skills. In order to build health literacy, people need to understand their health status, the health issue and how to follow treatment programmes. Ensuring that a patient adheres to a treatment programme may be a focus for many health professionals. The initial focus may be on treatment/task compliance, however to improve health literacy (the health skills and knowledge of the patient and family) a patient needs to understand their health condition and how to manage and prevent illness. How patients are able to respond to these demands depends on their skills and knowledge, and support available from health professionals (Reid and White 2012).

Therefore, building health literacy requires improved health knowledge along with the ability to put this knowledge into action, thus enabling individuals to gain greater self-control over their health and the health decisions they need to make (Edwards et al 2012).

Building health literacy draws on principles of adult education and learning. It requires health professionals to act as adult educators. In doing so, they draw on a patient's prior knowledge and experience in order to strengthen the patient's understanding of health. Starting with what the patient knows about their own condition opens the door to increased interaction, participation and critical thinking (Nutbeam 2008). Similarly, building health literacy requires more than the provision of clear information; it also involves purposefully building the skills and knowledge of individuals, their family and their communities (Reid and White 2012).

1.4 Assessment of health literacy

Health professionals are often concerned that patients may not understand the information or advice they give them. Nutbeam (2008, p2073) explains that, according to this view, "the effects of poor literacy can be mitigated by improving both the quality of health communications, and a greater sensitivity among health professionals of the potential impact of low literacy on individuals and in populations".

The approach to identifying whether patients had low health literacy has originally been to assess the vocabulary, reading or numeracy of patients.

In the United States, health literacy assessment tools, such as the Rapid Estimate of Adult Literacy in Medicine (REALM) or the Test of Functional Health Literacy in Adults (TOFHLA), are widely used to screen patients for low health literacy. The REALM tests word recognition and pronunciation, while the TOFHLA measures reading fluency through prose and document literacy. Other assessment tools include the Newest Vital Sign (Pfizer 2005) as well as modified versions of REALM and TOFHLA for different populations or different contexts such as oral health.

These assessment tools have been used in the United States not just in clinical situations but particularly in research situations where researchers want to identify 'low health literacy populations'. The assessment tools have also been used in research projects in other Western countries, including a small number of research studies in New Zealand, eg, Bakker et al 2011; Veerasamy 2010; Yates and Pena 2006.

The genesis of these assessment tools was the litigious nature of the United States' health system, where health organisations and health professionals sought to identify patients who might sue them for not being made fully aware of medical procedures or outcomes.

The validity of these tools has been heavily criticised by a number of health literacy experts. In relation to REALM and TOFHLA, Baker (2006, p880) states that "neither test is a comprehensive assessment of an individual's capacities", while others state that these assessment tools do not address the multiple domains of health literacy. By only measuring health literacy in terms of reading at the individual word level, the tools omit other critical skills, such as conceptual knowledge, listening, speaking and numeracy, all of which are needed to get a true picture of a patient's health literacy level (Zarcadoolas et al 2006; Institute of Medicine 2004).

Paasche-Orlow and Wolf (2007) claim that no assessment programme for limited health literacy has been proven to be effective and that there is considerable evidence that the potential for harm, in the form of shame and alienation, outweighs any potential benefits. Cornett (2009) also emphasises the potential for harm by highlighting that people with low literacy skills already feel stigmatised and would not welcome a tool that exposes their inability to read.

Importantly, Cornett (2009) argues that unless health care professionals are trained in communicating effectively with their patients, knowing a patient's literacy levels will not result in improved care.

Currently, individual patients' health literacy skills are not routinely assessed in clinical situations in New Zealand.

1.5 The concept of universal precautions

People with low health literacy are more likely to have on-going difficulties in making informed health decisions, but people with good health literacy skills can also find it difficult to understand health care information (Wolf et al 2007). Episodic instances of low health literacy may occur when a person is first diagnosed with an illness, receives unfamiliar text types, and is unwell or stressed. The Institute of Medicine (2004, p11) illustrates this point, stating, "even highly skilled individuals may find the systems too complicated to understand, especially when these individuals are made more vulnerable by poor health". This further undermines the validity of assessing individuals' health literacy using the tools (such as REALM, TOFHLA and Newest Vital Sign) referred to above.

Instead of assessing individual patients, many experts recommend that health professionals assume that all patients experience some degree of difficulty when in health environments and therefore apply the principle of universal precautions to health literacy (which is familiar to health professionals and organisations in the context of preventing blood-borne diseases) (Baker et al 2011; Paasche-Orlow and Wolf 2007; DeWalt et al 2010; Reid and White 2012). Taking a universal precautions approach to health literacy involves finding out what patients already know, sharing clear information with patients and helping patients build their understanding of how their body works, their health issues and associated treatment.

The United States Institute of Medicine (2004) states that health professionals have a key responsibility in lifting health literacy levels, suggesting that it is the health professionals' skills and expectations that drive health literacy levels. The central role of health professionals is reinforced by Edwards et al (2012), who state that it is the capacity of health professionals to empower or disempower patients and facilitate or limit health literacy. The universal precautions approach means that all patients and families benefit from the principles of good patient–provider communication.

The universal precautions approach to health literacy gained significant credibility with the publication in 2010 of the Universal Precautions Toolkit by the United States' Agency for Healthcare Research and Quality.

1.6 The role of the health workforce

The New Zealand Ministry of Health's (2010) research report *Kōrero Mārama* states that instead of viewing health literacy as an issue for the individual patient (where the onus is on the individual to lift their skills) the solution lies in a concerted effort from all sectors, including schools, government agencies and the health care system.

Health literacy is a relatively new concept in New Zealand and at present there is little published data on effective interventions for improving health literacy levels in New Zealand (New Zealand Guidelines Group 2011). In addition, much of the health sector appears to have a limited understanding of how to improve health literacy, and the principles and relevance of adult learning theory to health literacy (as noted by New Zealand Guidelines Group 2011, p7) and as such "opportunities to create effective learning opportunities for patients in the course of meeting health needs appears underdeveloped". One of the key recommendations of the New Zealand Guidelines Group report is that priority needs to be given to the up-skilling of the health workforce in understanding and applying principles of adult learning theory to the delivery of health services.

Since the New Zealand Guidelines Group report was published, a number of influential international reports have appeared which highlight that the role of the workforce in developing health literacy exists within a systemic or organisational frame, where a number of interconnected aspects are at play (Brach et al 2012; Koh et al 2012).

For example, the Institute of Medicine has published the 10 attributes of a 'health literate organisation', with workforce development being one of those attributes.

> "A health literate health organisation:
>
> 1. has leadership that makes health literacy integral to its mission, structure, and operations
> 2. integrates health literacy into planning, evaluation measures, patient safety, and quality improvement
> 3. prepares the workforce to be health literate and monitors progress
> 4. includes populations served in the design, implementation, and evaluation of health information and services
> 5. meets the needs of populations with a range of health literacy skills while avoiding stigmatisation
> 6. uses health literacy strategies in interpersonal communications and confirms understanding at all points of contact
> 7. provides easy access to health information and services and navigation assistance
> 8. designs and distributes print, audiovisual, and social media content that is easy to understand and act on
> 9. addresses health literacy in high-risk situations, including care transitions and communications about medicines
> 10. communicates clearly what health plans (in a NZ context: public funding) cover and what individuals will have to pay for services."
>
> (Brach et al 2012, p2).

These attributes require a workforce approach to building health literacy and will require further organisational resources and responses, which include a private area for conversations, improved recruitment and strategic induction, training and performance management processes.

In New Zealand, the Ministry of Health (2012c) has acknowledged a rationale for improving health literacy at a systemic level including the role of health organisations:

> "Improving health literacy in New Zealand is important, especially with our increased expectations for patient and whānau to take more responsibility for the management of their

health throughout the continuum of care. However, health literacy should not depend on the skills of the individual patient and whānau alone. It is an organisational value that should be considered core business, incorporated into all levels of service planning delivery and even the way health centres and hospitals are laid out." (p7)

2. Communication in health care contexts

Health professionals rely heavily on spoken and written communication. This section is an overview of the health care context and the strategies that health professionals can use to improve the quality of communication with their patients, leading to more effective patient–provider interactions, a better environment for the use of health literacy tools and, ultimately, improved health literacy.

2.1 Patient-centred communication

The patient–provider relationship is highly reciprocal, with both parties having an influence on each other and the medical exchange (Roter 2005). Patient empowerment is an important component of this exchange but little attention has been given to how health professionals can support the empowerment process. The communication strategies that health professionals use can either reinforce a communication-limiting cycle characterised by patient passivity, dependence and reticence, or facilitate more open, patient-centred communication characterised by full engagement and active collaboration in the medical exchange (Roter 2005).

A key aspect of patient-centred communication is tailored communication (Kripalani and Weiss 2006; Weiss 2007; Hironaka and Paasche-Orlow 2008; Sudore and Schillinger 2009). Tailoring communication starts by asking patients what they already know about the topic of discussion and linking new information to this existing knowledge. Connecting new information to existing patient knowledge gives meaning to the new information. It is an important part of the patient–provider exchange (Kripalani and Weiss 2006; Doak et al 1996). The challenge for health professionals is to find a connection that is both familiar and meaningful to the patient but that also expresses the point the health professional wants to get across (Doak et al 2006).

A number of health literacy experts claim that the patient-centred approach to the medical exchange helps uncover possible knowledge gaps and could save time if done correctly (Doak et al 1996; Weiss 2007; Sudore and Schillinger 2009).

Doak et al (1996) also highlight the importance of helping patients to anticipate the next steps in their particular health situation. Providing orientation on what to expect within their particular health context facilitates patient empowerment and makes the experience less traumatic and more manageable, especially for patients with low health literacy or for those from a different cultural background.

2.2 Spoken communication

The quality of spoken interaction between patients and health professionals is crucial to health literacy. Spoken language is our main form of communication, and patients with poor reading skills may better understand a spoken message. Spoken interactions are also context-rich and rely on more than words to communicate information and meaning, with tone, body language and gestures all playing an important part (Zarcadoolas et al 2006). On the other hand, Vandergrift (2006) argues that speech is ephemeral and once the interaction is over there is nothing left except the memory of what was said (which may be incomplete). Further, the listener does not have the option of reviewing the information presented and has little control over the rate of speech.

Zarcadoolas et al (2006, p90) acknowledge the fleeting nature of spoken interactions and for this reason recommend that spoken messages "contain facilitators such as brevity, narrative structure and repetition". There is a reliance on patients being able to accurately recall, interpret and apply spoken

information as they manage their health. However, it can be difficult to remember health information, with Kessels (2003) reporting that 40–80 percent of spoken medical information provided by health professionals is forgotten immediately.

Sudore and Schillinger (2009) assert that spoken communication must be clear and recommend that providers slow down their speech, avoid medical jargon and attempt to prioritise or limit their information to three points or fewer. Using plain language when talking to patients is a strategy recommended by a number of health literacy experts as it creates opportunities for dialogue between the patient and the provider, rather than limiting the encounter to a provider monologue (Rudd et al 2007; Weiss 2007; Sudore and Schillinger 2009).

These same experts agree that overwhelming the patient with too much information is a common provider communication error (Rudd et al 2007; Weiss 2007; Sudore and Schillinger 2009). Given that most patients only remember a few pieces of information from each medical encounter, it is important that professionals limit and structure the amount of information they give their patients. Addressing the patient's main concern which is often 'what do I need to do?' instead of 'what do I need to know?' helps tailor the message to the individual patient and keeps the exchange focused on the patient (Sudore and Schillinger 2009). Weiss (2007) emphasises the importance of not withholding important information but rather prioritising the information to the few most important points the patient needs to know during that particular encounter. The rationale behind this approach is that, "advice is remembered better, and patients are more likely to act on it, when advice is given in small pieces and is relevant to the patient's current needs or situation" (Weiss 2007, p32).

There will always be a tension for health professionals whose contact with a patient may not be on-going, which may mean that health professionals feel they need to pass on significant amounts of information to patients during a single interaction. In these cases, health professionals still need to take a patient-centred approach and consider how to provide information for the patient at the time of the interaction and how other sources of information can be provided where the patient can obtain further information at a later time.

This will also be a concern where patients have complex or multiple conditions and health professionals need to ensure an on-going relationship with patients.

2.3 Written communication

Principles of good communication are important in written texts. According to Weiss (2007, p35), "the readability of consent forms and patient education handouts has received more attention than perhaps any other health literacy issue". Weiss adds that a multitude of studies show that there is often a mismatch between patients' reading skills and the reading skills needed to comprehend the written information provided (Weiss, 2007).

A common strategy to improve the effectiveness of written patient information is to take a plain language (or plain English) approach. This approach means that information is presented in such a way that the reader can find it quickly and can understand it the first time they read it (Ministry of Health 2012a). There are a number of plain language checklists available (Weiss 2007; DeWalt et al 2010). A detailed plain language checklist relevant to the New Zealand context is included in *Rauemi Atawhai: A guide to developing health education resources in New Zealand* (Ministry of Health 2012a).

In addition, a New Zealand checklist for plain language alternatives for medical words can be found in the publication *Unravelling Medical Jargon* (Write Limited 2012).

The Ministry of Health (2012a, p6) states that taking a plain language approach is not in itself sufficient when developing health education resources. It asserts that, "developing people's health literacy skills

means resources also have to include activities that build on existing knowledge by introducing new concepts, vocabulary and information".

A plain language approach also involves assessing the readability of written information using readability tools such as Fleisch Kincaid and SMOG (Simple Measure of Gobbledygook). Readability tools focus on two aspects of the text – sentence length and number of multisyllabic words. The longer the sentences and the more multisyllabic words used, the higher the readability score, which mean the text is more difficult to read. The plain language approach posits that shortening sentences and replacing multisyllabic words with shorter words will make the text easier to read and understand.

In the United States in particular, readability scores are linked to school grade levels (children's reading levels) and a view that all health materials should be written at a grade 5 level (10-year-old). However, in the health care context, there are many multisyllabic words that patients and families need to understand, eg, diabetes, insulin and eczema, and it is not possible to simplify these words. Instead these words need to appear in the text and be explained. This will often result in a higher readability score but the text will be easier for a reader to understand because of the explanations provided (Ministry of Health 2012a).

Weiss (2007) states that whatever written materials are used, the effectiveness of the materials will always be augmented if the provider uses additional strategies to build understanding of the materials instead of simply handing them over to the patient to read later. For example, strategies such as highlighting, underlining, circling or numbering key information will make the materials more meaningful to the patient.

In New Zealand, a review of publicly available gout medication resources found that many resources are filled with useful factual information but the presentation of this is often too densely worded, too long or written using health vocabulary that is not always well explained. The review also found that health professionals need to discuss resource content with patients and their families to ensure they understand important messages about gout (Ministry of Health 2012b).

Using design tools to support better understanding of information is especially important when presenting numeric or risk information. Sudore and Schillinger (2009) make six recommendations for improving communication of numeric or risk information. These are:

1. using multiple formats to present information
2. using a consistent denominator to help comparisons and avoid confusion
3. presenting risk in terms of a timeframe that is meaningful to the patient, ie, a 10-year period instead of a lifetime
4. giving absolute risks instead of relative risks
5. presenting risk as a frequency instead of a percentage
6. avoiding using only positive or negative framing and instead use both, eg, "5 in 100 are expected to get the outcome, meaning that 95 out of 100 will not get the outcome" (p4).

In New Zealand, as in other countries, health education resources are often designed with the initial part of the resource providing an explanation about a health condition, with action or instruction messages, such as what to do, provided at the end of the resource. This can mean that patients are overwhelmed by the amount of information provided and stop reading before they reach the part of the resource that tells them what they need to do and why.

Health education resources need to meet two primary objectives: ensuring that resources and messages are understandable to the audience and that resources help the audience develop the health literacy skills they need to understand and manage a particular health issue (Ministry of Health 2012a). A key component of developing a good health education resource is conducting a comprehensive needs

analysis. A thorough understanding of the purpose of the resource is crucial, and comes from researching the need for a resource, defining the audience and spending time with the audience to clarify the audience's needs and preferences prior to developing any draft resources. In practice, the first engagement with an audience often takes place during a focus group where the audience is asked to give feedback on draft resources. This makes it less likely that a resource reflects the priorities, needs and language of the audience.

Conducting a health literacy review is also highlighted as an important part of developing effective health education resources. This is done by identifying the literacy demands of the health issue and the literacy skills of the main audience. If done well, a developer will be able to decide how the resource can bridge the gap between the skills people have and the skills they need (Ministry of Health 2012a).

The challenges of developing the health literacy skills of patients go beyond the principles of plain language and good design. Other factors, such as cognitive load and learning theories, should be taken into account when designing educational interventions targeted to this group.

2.4 Using both spoken and written communication

Sudore and Schillinger (2009) highlight studies which show that providing both written and spoken information increases patient knowledge and satisfaction when compared with spoken information alone. Doak et al (1996), Weiss (2007) and Sudore and Schillinger (2009) also assert that visuals and pictures enhance patient understanding but emphasise that visuals and pictures are not substitutes for written or spoken communication and work best when combined with written or spoken explanations. Katz et al (2006) found that patients' understanding of medicine labels and patient information sheets was significantly enhanced when written information was combined with pictures, in comparison to text-only information.

2.5 Cultural competence and health literacy

Internationally, Zarcodoolas et al (2006) describe cultural literacy as a component of health literacy and define cultural literacy as the ability to understand and use culture and social identity to interpret and act on information.

Kickbusch et al (2005) state that culture (including the culture of the health system) affects attitudes, perceptions and behaviours at both the patient and provider end, or for those receiving and delivering health services. Culture shapes language, perceptions, beliefs and behaviours, including those related to health and, in particular, health information, messages, treatment, decisions and actions. The Health Literacy Universal Precautions Toolkit (DeWalt et al 2010) lists religion, culture and employment as central components in understanding why patients make the health choices they do. Learning about patients' ethnic backgrounds, cultural beliefs and religions, and the ability to apply this knowledge to shape the health encounter, shows cultural competence and enhances patient-centred care (DeWalt et al 2010).

Given that cross-cultural interactions in the New Zealand health sector are common, health providers need to be competent in communicating with patients whose cultures are different from their own (Medical Council of New Zealand 2006). Cultural competence is important for patient outcomes as the more a provider understands about a patient and takes into account when explaining treatments, the more relevant, meaningful and acceptable the treatment will be to the patient.

The New Zealand Medical Council outlines a number of standards that health providers need to demonstrate in order to be able to work effectively with patients from different cultures. These standards focus on Māori patients but the principles contained are relevant for other cross-cultural interactions as well. These standards were also designed for general practitioners to apply, but can be applied to other primary health care providers, including pharmacists.

Māori cultural competence standards include the following attitudes, awareness, skills and knowledge:

1. "A willingness to develop a rapport with Māori patients. The most effective way to understand the communities you serve is by establishing relationships with local Māori, including Māori health professionals in your area.
2. A preparedness to ask patients about their preferences and a willingness to follow their lead.
3. An awareness that Māori tradition strongly prefers face-to-face communication and an understanding that Māori place a greater emphasis on the spoken word.
4. An awareness that body language can be different between Māori and non-Māori. For example, direct eye contact can be seen as a sign of disrespect in Māori culture.
5. The ability to ask patients about their ethnic background. Asking the question not only demonstrates respect for the patient's culture and heritage, but also affords an opportunity to discuss the patient's cultural preferences.
6. The ability to involve whānau during consultations.
7. The ability to make sure that patients adequately understand their condition and treatment plan, and not simply rely on printed instructions."

(Medical Council of New Zealand 2006, p3).

In the New Zealand context, Mauri Ora Associates Limited provides a range of cultural competency courses and training, including an online foundation cultural competency course that includes a module on health literacy.

3. Tools health professionals can use to build health literacy

This section is an overview of evidence-based health literacy education and training tools and resources for health professionals. Due to the lack of examples of health literacy initiatives from New Zealand, this section draws on tools and resources mostly developed and used in the United States. These tools are drawn from a toolkit and a collection of health literacy interventions, as well as references in professional development materials (DeWalt et al 2010; Sheridan et al 2011; Berkman et al 2011; Kripalani and Jacobson 2007; Shoemaker et al 2011).

Several systematic reviews of health literacy interventions have been undertaken in the United States (Sheridan et al 2011; Berkman et al 2011). Sheridan et al (2011, p49) identified that there were "several discrete design features that improved participant comprehension in one or a few studies (e.g. presenting essential information by itself or first, presenting information so that the higher number is better, presenting numerical information in tables rather than text, adding icon arrays to numerical information, adding video to verbal narrative)".

In addition, the authors identified "the design features that facilitate intervention success. For instance, common features of interventions that changed distal outcomes (e.g., disease biomarkers and hospitalizations) included their high intensity, theory basis, pilot testing, emphasis on skill building, and delivery by a health professional, for example, a pharmacist or a diabetes educator" (Sheridan et al 2011, p50).

Berkman et al 2011 (p5) identified that, "effective interventions to mitigate the effects of low health literacy may work by increasing knowledge and self-efficacy or by changing behaviour".

3.1 Finding out what patients already know

Patients come to each health encounter with existing knowledge which needs to be taken into account during the encounter. This knowledge is represented or organised in long-term memory as sets of information or schema (Anderson 2004). When patients receive new information (whether verbally, through reading or a combination of both) they relate this new information to what they already know

or have experienced. This is how new knowledge is created. There are two types of sets or schema – content and textual (Singhal 1998). Content schemas are about knowledge of the world including personal, day-to-day knowledge as well as specialised knowledge. Textual schemas are about how texts (both spoken and written) are organised in terms of structure, vocabulary and tone. Both schemas are important. Patients' schemas are activated when they receive new information. However, if that information does not relate to their existing content or textual schemas, then the information will not be added to existing schema and could be rejected. For example, if a health professional starts talking about the need to take medicines and the patient already believes (knows) they can manage their condition through lifestyle factors, the patient will need to be provided with information about risks and benefits of medicines if the patient is to modify their schema and add the new information. In a similar way, if patients are used to receiving information in a particular format, and that format is changed to another less familiar format, their textual schema may not help them get information from the new format.

Health professionals need to find out their patient's schema at the beginning of each health encounter so a health professional can find a way of adding new information to existing schema. This is as straightforward as asking, "What do you know about ...?"

In the same way, health professionals also need to match their language to the patient's language and then extend the patient's language with the introduction of essential technical vocabulary and explanations.

Finding out what patients already know is part of the universal precautions approach because it assumes that all adults have some prior knowledge or experience to build on. It also gives health professionals useful information about where to start the health dialogue.

3.2 Checking understanding or teach-back

Doak et al (1996) state that a health professional's ability to get meaningful feedback from patients is crucial to effective communication. The use of open-ended questions and the teach-back method to confirm patient understanding empowers patients to be more actively involved in the encounter which will give the health professional better information about how the patient is currently managing their condition. Teach-back is also known as 'teach-to-goal' or 'closing the loop' (Sudore and Schillinger 2009; Weiss 2007; DeWalt et al 2010).

Checking and confirming patient understanding is one of the most important aspects of good communication. However, many providers fail to do this (Sudore and Schillinger 2009). Many providers make the mistake of simply asking, 'Do you have any questions?' or 'Does that make sense?' as a way of seeking confirmation. Asking closed questions such as these has been shown to be an ineffective way to gauge patient understanding, as patients are most likely to answer in the positive, even when they don't understand (Weiss 2007). Instead, asking, 'What questions do you have?' facilitates patient empowerment by conveying to them that it is normal to have questions. As a result, the patient is more involved in the medical encounter (Sudore and Schillinger 2009).

Following any discussion generated by patient questions, checking patient understanding can be achieved using the teach-back method. Sudore and Schillinger (2009, p3) define the teach-back method as a "technique in which the clinician asks the patient to restate or demonstrate the knowledge or technique just taught". When done well, the teach-back method is an effective tool in confirming that the provider has given a clear explanation in a way that is understandable to the patient (DeWalt et al 2010). Schillinger et al (2003) recommend that providers de-stigmatise the encounter by placing the onus of clear communication on themselves. Health professionals can take responsibility for the encounter by framing their enquiry appropriately. For example, "I've just said a lot of things. To make

sure I've covered everything and explained things clearly, can you describe for me what you need to do?"

Weiss (2007) states that if patients cannot explain or demonstrate what they should do, health professionals must assume that they did not provide the patient with adequate explanation. In these cases, new efforts are required to ensure patient understanding. Studies have established that, when used effectively, the teach-back method does not result in longer medical encounters, but does improve patient understanding and outcomes (Schillinger et al 2003; Weiss 2007).

Teach-back is the most widely referred to health literacy intervention. However, it needs to be introduced slowly and those using it need to practise to become confident with this technique (DeWalt et al 2010).

3.3 Medicine reviews

Reviewing medicine is an opportunity for health professionals to discuss the medicines a patient is taking and helps health professionals identify and answer patient questions, confirm what medicine a patient is taking, identify and/or avoid medicine errors and assist a patient to take their medicine correctly (DeWalt et al 2010).

Medicine reviews, also known as brown bag reviews, are a patient-centred practice that encourages patients to routinely bring in all their medicines and supplements to every medical appointment. Bringing in the actual medicines, rather than asking patients to provide a list of medicines, places a lower health literacy demand on the patient who may have poor writing skills or be unsure about what to include on a list. A medicine review provides an opportunity to review how the patient interprets medicine labels and instructions and to check understanding about side effects and interactions.

3.4 Asking questions

The importance of asking questions has already been referred to in relation to checking, understanding and teach-back. Health professionals are trained to use closed diagnostic questions (requiring 'yes' or 'no' answers or very specific short answers) and shifting to using open-ended questions diverges from that training. As with teach-back, health professionals need time to practise using open-ended questions, such as, "Most people have lots of questions, what questions do you have?" instead of, "Do you have any questions?" or "Do you understand?"

3.5 Providing information in logical steps

Patients are more likely to understand, remember and act on health information if it is presented in a logical sequence, such as problem, action, rationale. However, in the same way as plain language, information is not sufficient on its own to build health literacy. Information needs to be accompanied by appropriate support in order for patients to understand and use that information (The Health Foundation 2011).

3.6 Helping patients anticipate the next steps

Explaining to a patient the next steps they will be taking in relation to a health issue enables that person to better navigate the system, answer questions, anticipate what might be asked of them and understand how long it could take to get test results and the importance of follow-up appointments or procedures (Doak et al 1996). Anticipating the next steps draws on adult learning principles that an adult is intrinsically motivated to learn independently where the learning is directly related to that adult's day-to-day life.

3.7 Using written materials effectively

Written materials have already been discussed in Section 2 of this review. If written materials are going to be used to reinforce new information then health professionals need to link the written material to the spoken information given by highlighting, marking or otherwise indicating the relevant information.

3.8 Reinforcement

Reinforcing new or important information relates to the issue of working memory and cognitive load (Kessels 2003; Ngoh 2009; Baker et al 2011). Patients may need to be reminded of critical information on a number of occasions before it is part of their working memory. The need for reinforcement can be identified by checking understanding (using teach-back), as well as asking patients what they know about their condition or treatment. Reinforcement should also be used if, as a result of checking for understanding (using teach-back), it becomes apparent that the patient does not recall all the information given. In this situation, the piece of information that is missing should be reinforced by the health professional.

Reinforcement can be used to refer to a critical step or piece of information, as well as acknowledge that patients have developed new knowledge and behaviours.

3.9 Action plans

An action plan outlines the steps that a patient needs to take to achieve their health goal. It is created by the patient and provider. In helping patients integrate these steps into their daily lives, action plans allow patients to be actively involved in their own care and have been shown to be effective in bringing about desired behaviour change (DeWalt et al 2010). Patient motivation is a crucial component of an effective action plan. The patient must be motivated to change their behaviour and the central goal must be determined by the patient. If the goal is not important to the patient then the desired behaviour change will be difficult to achieve. Goals need to be small, specific and realistic for the patient, and the timeframe for re-evaluation should be short. Follow-up by the health professional is important to show a genuine interest in helping the patient achieve their goal (DeWalt et al 2010).

3.10 Pill cards

Research shows that 20–50 percent of patients do not take prescription medicine as directed (Kripalani et al 2007; Ngoh 2009; Viswanathan et al 2012). Patients with limited health literacy are less likely to know how to take their medicines and more likely to experience difficulty in following complex medicine regimens. Improving patient understanding around medicines and how to take them can reduce the number of medicine errors and increase a patient's ability to care for their illness. This is especially true in the case of chronic illness (Kripalani et al 2007; DeWalt et al 2010; Viswanathan et al 2012). Ngoh (2009) states that poor medication adherence is not simply a patient problem; health professionals including pharmacists are also involved. Although no single intervention has been shown to improve the medication adherence of all patients, research shows that several factors are key to improving patient medication adherence, including clear and effective communication from health professionals (including pharmacists) and the presence and nurturing of trust in the relationship between health professionals (including pharmacists) and patients (Ngoh, 2009).

Kripalani et al (2007) claim that self-efficacy is an important consideration when seeking to enhance patients' medicine understanding and adherence, and can be built through the simplification of certain behavioural steps while providing an opportunity to rehearse these steps. Their research suggests that an illustrated medicine card (pill card) created at the point of care (where the health professional is either prescribing or dispensing the medicine) is considered valuable by patients, especially by those with marginal literacy skills. Pill cards use pictures and short, simple phrases to show each medicine, its purpose, the correct dose and when to take it (DeWalt et al 2010). Pill cards are not appropriate for medicines that are to be taken 'as needed', as they do not require daily adherence (Jacobson et al

2008). The feasibility of pill cards as a tool to enhance patients' medicine understanding and adherence is reinforced by Blake et al (2010), who found that use of an illustrated medicine schedule was beneficial in a pharmacy setting. The study also highlighted the importance of providers being well trained in clear communication and adequate resources being available to ensure the successful implementation of the intervention. In the New Zealand context, some district health boards provide patients, on discharge, with 'yellow' cards listing their medicines and directions for taking the medicines. Some community pharmacists use these cards as well.

The 'yellow' card is likely to be an unfamiliar text for patients, and the descriptions of the purpose of each medicine and directions for taking the medicine are often complex. Examples of this complexity include phrases such as, "take regularly if pain persists", "maintain adequate fluid intake", "do not use for prolonged periods" and "abdominal discomfort may occur" (K Brackley, New Zealand Hospital Pharmacists' Association, personal communication, 28 August 2012). These 'yellow' cards differ from pill cards in that there are no actual images of the pills, or any use of icons, in relation to when the pills are to be taken

Conclusion

This review has provided an overview of evidence-based health literacy education, training tools and resources for health professionals available in New Zealand and overseas. As already mentioned health literacy is a relatively new concept in New Zealand and there is limited understanding in the health sector of how to improve health literacy levels (New Zealand Guidelines Group 2011). The infancy of health literacy in New Zealand is reflected in that the majority of initiatives outlined in this review originate from the United States, the major exceptions being the cultural competency training tool developed by Mauri Ora Associates Limited, and *Rauemi Atawhai: A guide to developing health education resources in New Zealand* (Ministry of Health 2012a).

Since the New Zealand Guidelines Group report was published in 2011, a number of other publications from the United States (e.g. Brach et al 2012; Koh et al 2012) have emphasised the systemic aspects of health literacy with the role of the health workforce being only one of a number of aspects that need to be addressed for the building of health literacy skills.

The health professional plays an important role in reducing the health literacy demands of health care encounters. Reid and White (2012) have identified a number of strategies and tools that can be used in this regard:

> "Health literacy demands can be reduced by:
>
> - making it easier for patients to navigate health services, systems and processes
> - encouraging health conversations and helping people to identify and ask questions
> - finding out what people know as the starting point of any health conversation
> - tailoring the conversation to take into account what they already know
> - making the amount of information or instructions passed on manageable for the patient and their whānau
> - checking that you have been clear when talking to a patient by asking them to 'teach-back'
> - encouraging whānau involvement in health conversations
> - going through written information with patients and whānau rather than handing it out to be read later
> - making medicine and treatment information clearer
> - following up and monitoring prescribed medicines and instructions
> - re-designing health education resources, letters and forms so they are clear to the audience." (pp2–3)

Health professionals will need time to learn about and then practise using the strategies and tools outlined in this review. Health professionals will also need to learn not only how to rephrase what they say, but also to adjust tone and body language for the strategies and tools to be effective.

10. Appendix 1 – MeSH terms

MeSH terms

- Health education
- Consumer health information
- Health literacy
- Patient medication knowledge

Keywords

- Health literacy
- Health literacy NZ
- Health literacy universal precautions
- Health literacy universal precautions evaluation
- Health literacy pharmacy
- Health literacy medication safety
- Health literacy medication safety NZ
- Health literacy medication review NZ
- Health literacy assessment
- Health literacy screening
- REALM
- TOHFLA
- Health literacy screening
- Health literacy screening validation
- Health literacy screening critique
- Health literacy asset model
- Health literacy risk model
- Health literacy education
- Health professional patient communication
- Health provider communication strategies
- Health literacy system approach
- Health literacy training
- Health literacy education
- Patient centred communication
- Health literacy tailored communication
- Health literacy provider communication
- Health literacy provider patient interaction
- Health literacy oral communication
- Health literacy written communication
- Health literacy schema theory
- Health literacy plain language
- Health literacy teach-back
- Health literacy culture
- Health literacy cultural competence (NZ)
- Health literacy tools
- Health literacy checking understanding
- Health literacy clear communication
- Health literacy interventions
- Patient provider relationship
- Patient trust rapport

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Appendix Four: Detailed Findings

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Workshop Evaluation Findings

5: Strong Agree	**4:** Agree	**3:** Neutral	**2:** Disagree	**1:** Strongly Disagree

Content	☺ **5**	**4**	**3**	**2**	☹ **1**
The material was well organised.	4	1			
The content met my expectations.	4		1		
The material will be useful in my training.	3	1	1		
Overall I benefited from this workshop.	3	2			
Presenters	☺ **5**	**4**	**3**	**2**	☹ **1**
The presenter was well-prepared.	4	1			
The presenter delivered material clearly and coherently.	5				
The presenter moved at an appropriate pace.	5				
The course content was relevant to my trainer role.	4		1		
The presenter was attentive to the needs of the audience.	4	1			
I learnt information about	☺ **5**	**4**	**3**	**2**	☹ **1**
Health literacy.	2	2	1		
Adult education and adult literacy.	3	2			
Health literacy tools.	2	2	1		

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Site A Post-Demonstration Summary

1. Purpose

The experiences of the pharmacy at Site A in taking part in the health literacy demonstration are described in this report. These experiences will be included as a case study in the report on the health literacy demonstration that will be released by the Health Quality and Safety Commission. The case studies will help other pharmacies learn from the site's experiences implementing the health literacy professional development.

This standalone report also provides feedback to the case study pharmacy staff on their participation and the resulting changes in their pharmacy.

2. Pharmacy Profile

Site A is a busy pharmacy located in a multicultural community in a group of shops near to a dentist and not far from an after hour medical centre. The pharmacy is airy and newly decorated. This pharmacy aims to provide the best care possible to nearby residents and others who travel long distances to the pharmacy.

In their time at the pharmacy evaluators were impressed with the operation of the pharmacy, particularly the friendly and engaging attitude of the staff. We noted the following:

- **Staffing and Hours:**
  - The pharmacy is open 8.30am to 6.00pm Monday to Friday and 9.00 to 12.30pm Saturday.
  - The pharmacy is staffed by two full time and four part time staff, predominantly pharmacists plus the owner.
  - The pharmacy is compact with a small dispensing area. There is a throughway for staff to engage with consumers in the pharmacy and not from behind a counter. The front part of the pharmacy has stands around the walls and in the middle and three chairs for people to sit on while they are waiting.
- **Activity:**
  - The pharmacy alternated between being quite quiet and very busy.
  - The average waiting time when quiet was approximately five minutes, and during busy periods, between 10 and 15 minutes.
- **Pharmacy Operation:**
  - There are a large number of regulars and they are well known to the pharmacy owner. Interactions start from the time the person walks in the door.
  - Opportunities to speak to staff were readily available.
- **Information for Consumers:**
  - Brochures and information for consumers were well displayed and consumers picked them up and used them.
  - On display were large signs for people to look at while they are waiting. The signs were at eye level for people sitting in the waiting chairs. Key messages were *"what should I be aware of when taking this medicine"*, *"why is it important that I take the medicine"*, *"when should I take it"*.

- No signs or information in languages other than English were observed. There are staff at the pharmacy who speak Mandarin, Cantonese and Hindi.

2.1. The Demonstration Pilot

The demonstration pilot is being evaluated to gain knowledge about the tools as applied in the pharmacies and to inform the wider roll-out of these tools and resources developed as part of the demonstration project. The case study pharmacies agreed to open up their pharmacies to the evaluation team to collect information before and after the demonstration pilot and following the pilot.

Pre- and post-demonstration information was collected from the following sources:

Table 1: Information Sources

Information source	Pre-demonstration	Post-demonstration
Site Visits	20-27 March 2013	1,2 and 4 July 2013
Interviews throughout the demonstration period	Pharmacy owner	Pharmacy owner
Pre-and post-demonstration interviews	Small group or individual interviews with the team	Small group or individual interviews with the team
Pre-and post-demonstration survey	Pharmacy team	Pharmacy team
Questionnaires	Completed with 90 consumers	Completed with 100 consumers
Audiotapes of interactions with consumers at the time the medicine was given to them	39 interactions (from 4 staff and the pharmacy owner)	30 interactions (from 5 staff and the pharmacy owner)

The post-demonstration period was in the winter and there was an increase in people coming to the pharmacy following a doctor's visit for colds, flu or with sick children.

3. Health Literacy General Knowledge (pre-demonstration)

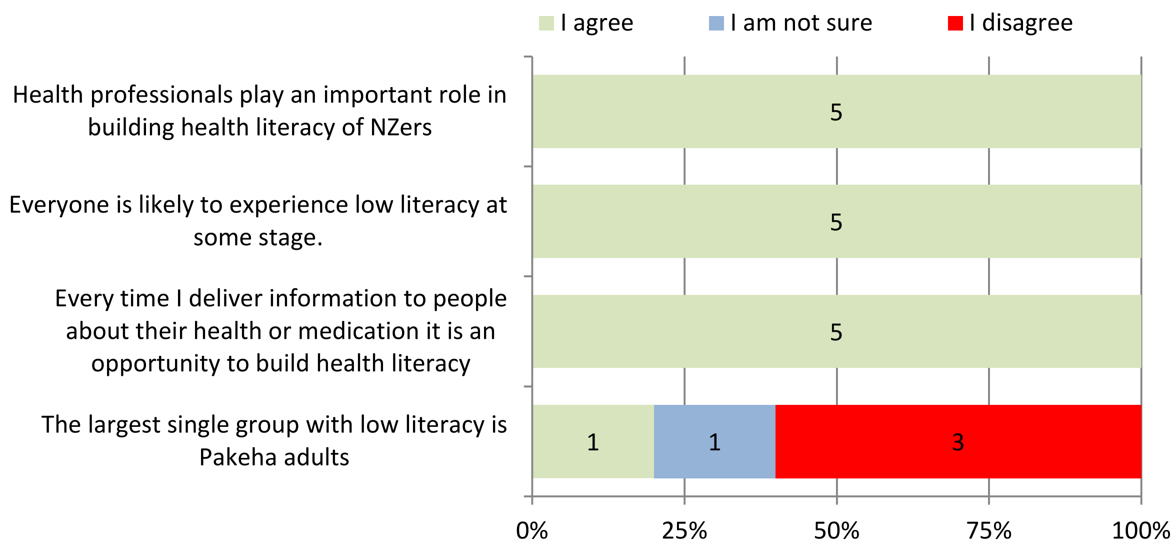
At the start of the demonstration, staff described health literacy with phrases such as:

> *"Understanding the level of understanding people have when you are dealing with health issues."*
>
> *"Making the patient understand the medical stuff in their language that they understand."*
>
> *"It's all about knowing what medications they are taking, what it's treating and why they are taking it."*

All of the explanations provided were framed in terms of what consumers understand or do not understand about their conditions and their medicines.

In the pre-demonstration pharmacy questionnaire, staff were asked about the extent they agreed with some general questions about health literacy (Figure 1). Responses indicated agreement with the importance of the health professional's role in health literacy and some confusion about whether the largest ethnic group with low literacy was Pākeha adults.

Figure 1: General knowledge about health literacy (pre-demonstration)



In discussion groups, staff talked about common problems they had encountered such as:

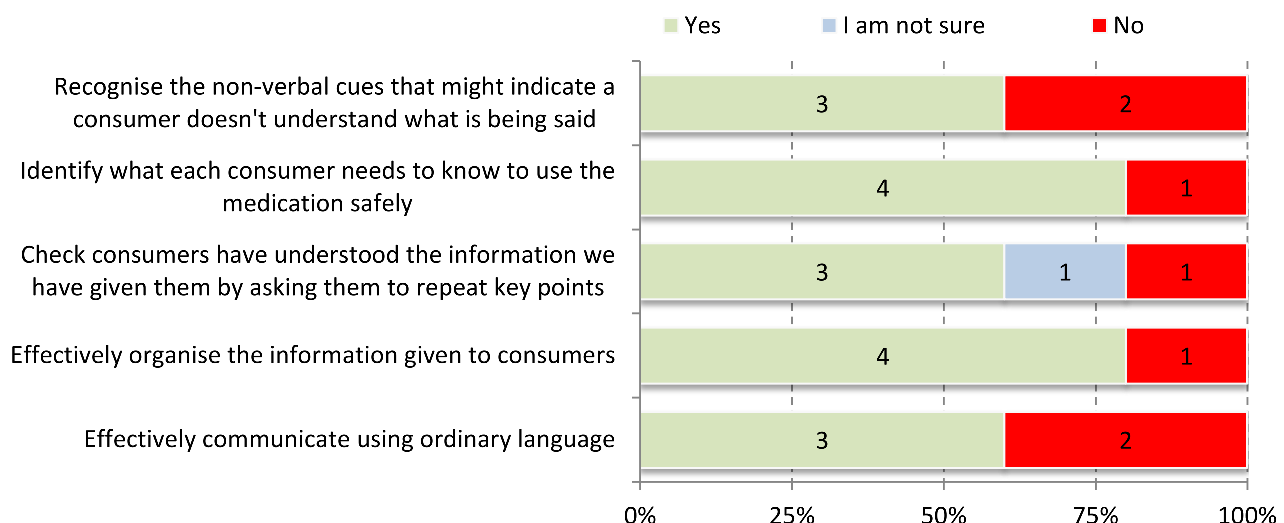
> *"We don't realise how often we use jargon".*
>
> *"I find it hard to initiate with some people but there are a lot I have seen before and know".*
>
> *"It takes time with some people. Sometimes you can try as hard as you can but people are not open to it so you give written info but you are relying on them reading English."*
>
> *"You worry that some people think you have dumbed it down for them"*

One staff member summed it up by saying *"I'm probably doing it myself too",* referring to the use of jargon when talking to consumers.

3.1. Staff Pre-Demonstration Attitudes to Health Literacy Training

In the pre-demonstration survey pharmacy staff indicated they would like more health literacy training across a number of topics (Figure 2).

Figure 2: Health literacy topics staff would like training about (pre-demonstration)



4. Health Literacy Training

The pharmacy owner and the pharmacy team decided to work on health literacy as a priority area for professional development.

4.1. The Training Package

The health literacy tools and resources were developed for the demonstration project by Workbase[23] based on a review of current evidence.[24] The approach outlined by Workbase was:

- A universal precautions approach as best practice as opposed to targeted interventions focused on low literacy individuals;
- Use of tools and strategies based around a Three Step approach:
  - Step 1: Finding out what consumers already know;
  - Step 2: Providing information in logical steps taking into account what consumers already know;
  - Step 3: Checking understanding using teach-back.

Training for the health literacy demonstration pilot was based on a 'train-the-trainer' approach, where one person receives training and takes that training back to other members of the team. For Site A, the pharmacy owner was the 'trainer' and attended a one-day workshop about health literacy developed and provided by Workbase.[25] The training package included:

- A one day training session for the lead pharmacist (the trainer);
- A package of resources developed based on evidence and feedback from the lead pharmacists about what they considered would be useful for them in their pharmacies;
- Follow-up telephone support to the lead pharmacists; and
- A follow-up on-site small group training meeting with pharmacy staff.

Feedback from the pharmacist trainer on the one-day workshop was that:

> *"I think the process of training me as the trainer to introduce is fine, so you'd train me as a trainer so I can actually understand where it's coming from and then maybe the workshop, just like we had [Workbase trainer]." (Pharmacy Trainer)*

4.2. Putting the Training into Place

The first step in putting the training into place was an informal introduction to the Three Steps for staff, by the lead pharmacist trainer, through one-on-one or small team discussions during work hours. Site A is a small and often busy pharmacy with little opportunity to provide formal workshops and training sessions for all staff during work hours.

> *"You got to do the Three Steps but for us, so teach the Three Steps but actually start teaching it, so what do you know about health literacy? And how are you going to change it and how are you going to check? So probably if you were going to run a workshop and I think the Three Steps are good." (Trainer)*

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[23] Workbase – Leading health literacy http://www.workbase.org.nz/

[24] Report for the development of health literacy education and training tool and resources for health providers, January 2013.

[25] Workbase (www.workbase.org.nz) the training provider, were commissioned by the HQSC to complete a review of the relevant literature and to develop a training package.

Initial interactions with the pharmacy staff emphasised, as part of an evolving and *"gradual change"* health literacy process, a focus on understanding step one and implementing this into their practice and engagement with consumers at the pharmacy.

> *"…the good thing is there's Three Steps and I think we need…you know, it took us a long time just to get to 'tell me what you know' and I can say now easily, tell me, but have I put it right into practice? Probably not, but every so often I think, no 'tell me, tell me what you know, what did the doctor tell you?'...Because it's such a new concept, and it's a different way of approaching the adherence, so yeah, train, but all the training needs to be done around Three Steps." (Pharmacy Trainer)*

Shortly after introducing the Three Steps approach and putting into practice Step 1, the lead pharmacist asked if it was possible for staff to have a session with the Workbase trainer.

The Workbase trainer came to the pharmacy and provided an evening group workshop to staff including practical examples of questions to ask at each of the Three Steps. The workshops also gave staff an opportunity to ask the Workbase trainer questions. The workshop was seen by the lead pharmacist and all staff as excellent:

> *"I think the process of training me as a trainer to introduce it is fine, so you'd train me as a trainer so I actually understand where it's coming from and then maybe the workshop, just like we had [Workbase trainer]. So you put the resources in, you start thinking about it but then have a workshop to trial, what have you found…I think one of the key things was that we had [Workbase trainer] out for that presentation…" (Pharmacy Trainer)*

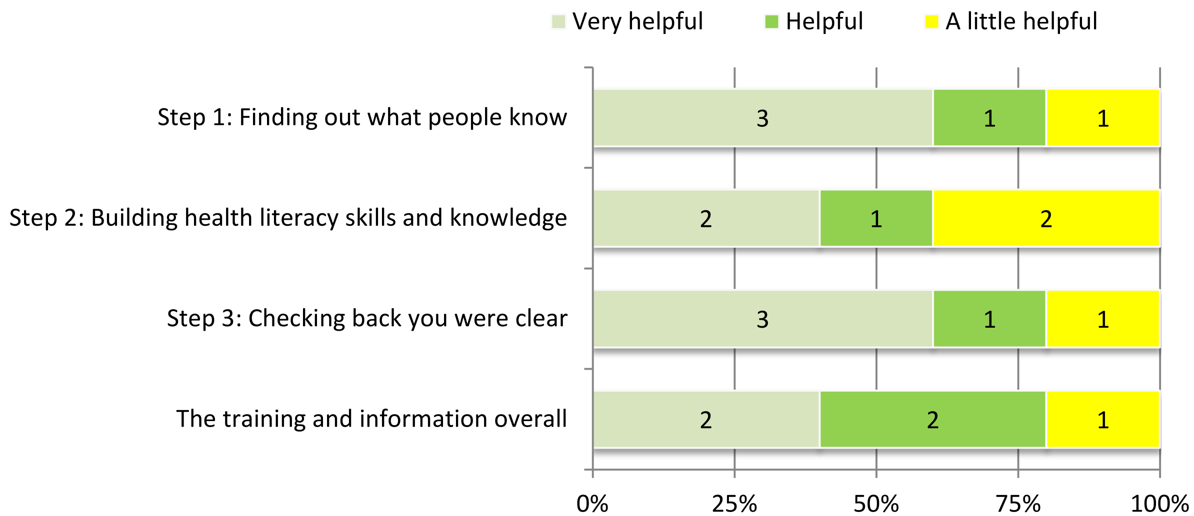
> *"The [Workbase trainer] that came and did the training, she was really good. I really like having her here. We had questions and she told us how to get around it and she had an answer to any question we had. She's probably one of the best tools I think, she was really good." (Pharmacy staff)*

4.3. Staff Views about the Training

Staff reported finding the training overall to have been helpful. Although at the time of the post-demonstration site visit some staff couldn't recall exactly what had happened during the training period, all were aware of the Three Step approach.

Staff views about the value of the training were explored in the post-demonstration staff survey. Most staff found the training and information overall to be helpful, no-one found it to be not helpful at all. Fewer staff found the training and information about Step 2 to be very helpful as compared to the training and information provided about Steps 1 and 3 (Figure 3).

Figure 3: Helpfulness of health literacy training



Staff valued the opportunity for a workshop with the Workbase trainer. Some staff indicated that the 'train-the-trainer' approach worked while others noted a preference to receive the training and resources directly. There was general agreement that there is a lot of value having an external person coming in to answer questions and to build on the training and practice already in place.

Training the pharmacy assistant as well as the pharmacists was seen as an advantage in integrating health literacy practices into the pharmacy.

4.4. Staff Views about the Resources

The resources developed by Workbase for the demonstration project were recalled and used to varying degrees by different staff members. Both the trainer and pharmacy staff valued both the training and resources.

> *"…so it makes you motivated to want to increase the health literacy of the people you speak to and well laid out. And [Workbase trainer], when she came she went over that as well, so it was good to reinforce that." (Pharmacy staff)*
>
> *"I think the workshop is really good, keep the workshop. Pamphlets, they are good as well." (Pharmacy staff)*

Several staff commented that it was good to have a range of resources that worked for different learning styles and different responses to a range of medical conditions consumers may have.

> *"I find I don't take things in as well reading, whereas listening to someone perhaps sinks in more a bit." (Pharmacy staff)*
>
> *"Is it role playing, is it videos or is it actually just written down…so if we've got a patient on [medication] you know…if I was sitting down and doing my review…I'm trying to think about, what resources might I need? So before I sit down and do my review, I know what the meds are, so what resources do I need to make the best out of that one-on-one I'm going to have with the person." (Pharmacy Trainer)*

Some staff had used the brochure about the three steps whereas others had read the booklet and indicated that *"In terms of the written material that's out there, I'm not sure I found that too useful."* In

contrast, other staff noted *"…easy to read, friendly, good information."* Some staff also indicated a preference to include training resources such role-play and on-line DVDs with real life interactions.

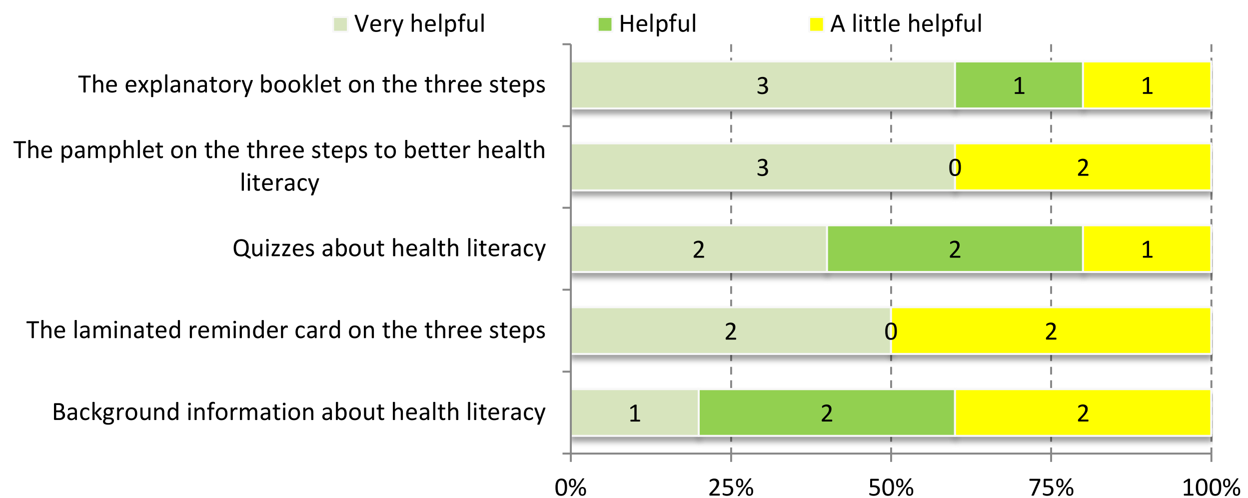
> *"I'd rather have like, what do you call it, like a little play, role play, I'd rather do that kind of thing, I'd find it easier." (Pharmacy staff)*

> *"Yeah that would be useful, if people watch the video that is. It can't be lengthy ones but that would definitely teach people." (Pharmacy staff)*

Staff responses to the post-demonstration survey questions about the health literacy resources highlighted the value of the explanatory booklet and the pamphlet on the Three Steps (Figure 4). The resource that staff felt was least useful was the background information on health literacy. In discussions, pharmacy staff suggested that it would be useful to develop one A4 sized tool with key protocols and questions for each of the Three Steps. As one staff member noted:

> *"Being a pharmacist, I know I've never gone and looked at everything."*

Figure 4: Helpfulness of Health Literacy Resources



As part of the evaluation, pharmacy staff were asked to record interactions with consenting consumers and to self-assess these using a form provided by the evaluation team. It was not clear how many staff listened to their recordings but those who did said they found it useful and considered reviewing the audiotapes to be a useful part of the training.

> *"I always asked closed ended questions and one thing I found from the audiotapes, I didn't realise how fast I speak. That was the first reaction I had." (Pharmacy staff)*

5. Putting the Training into Practice – Changes in the Pharmacy

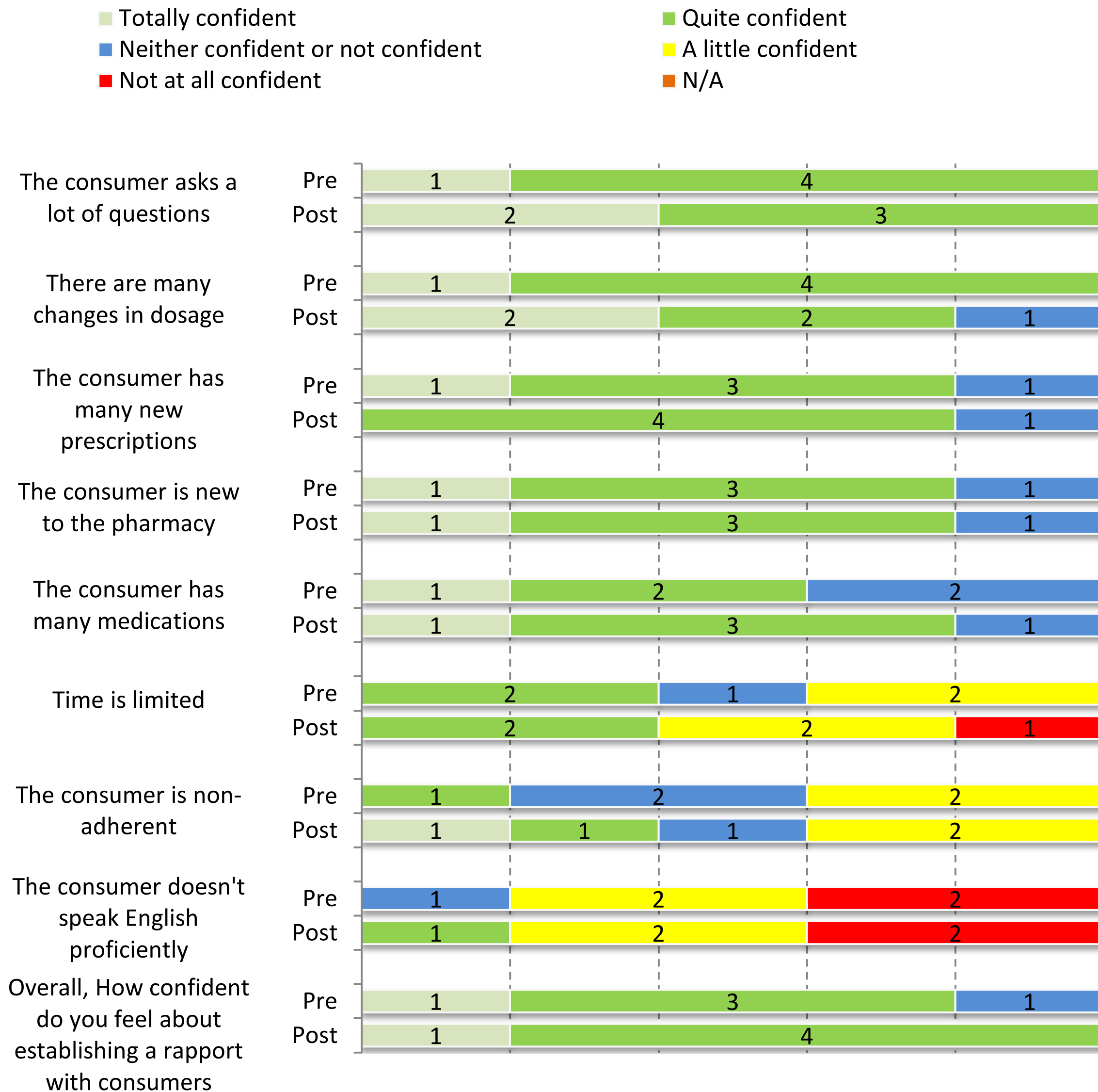
Overall, all staff in the pharmacy thought that participating in the health literacy training had been worthwhile for them personally and had improved their knowledge.

> *"What was interesting was how poor it [health literacy] was and it didn't matter what socio-economic group you came from so that surprised me. My understanding has changed in that it's made me look at patients differently to assume that they don't really know anything until they start telling you that they do know something…even ones you assume know quite a lot you can't really assume." (Pharmacy staff)*

5.1. Increased Staff Confidence

There were some changes in confidence observed in staff self-assessment of their confidence in different aspects of communication with consumers pre-and post-demonstration (Figure 5).

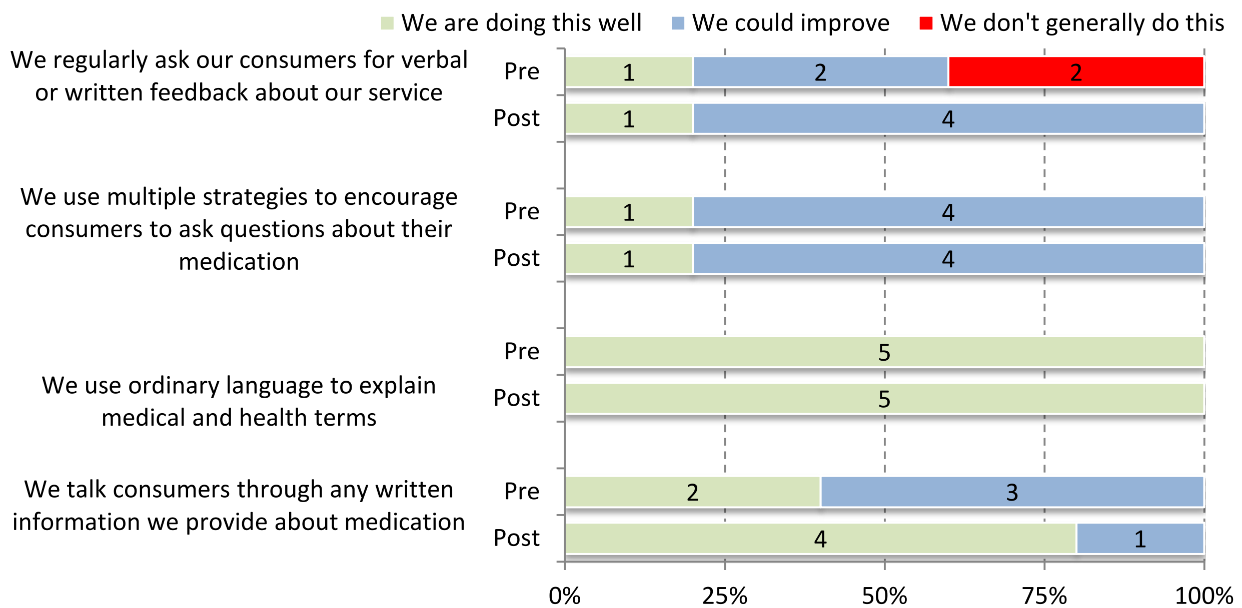
Figure 5: Staff confidence with aspects of communication with consumers



5.2. Self-reported Changes in Practice

Staff thought the main change in the pharmacy between the pre- and post-demonstration surveys had been that they were better at talking consumers through any written material (Figure 6).

Figure 6: Changes in the Pharmacy



In discussion, pharmacy staff gave examples of how they had changed their practice as a result of the training.

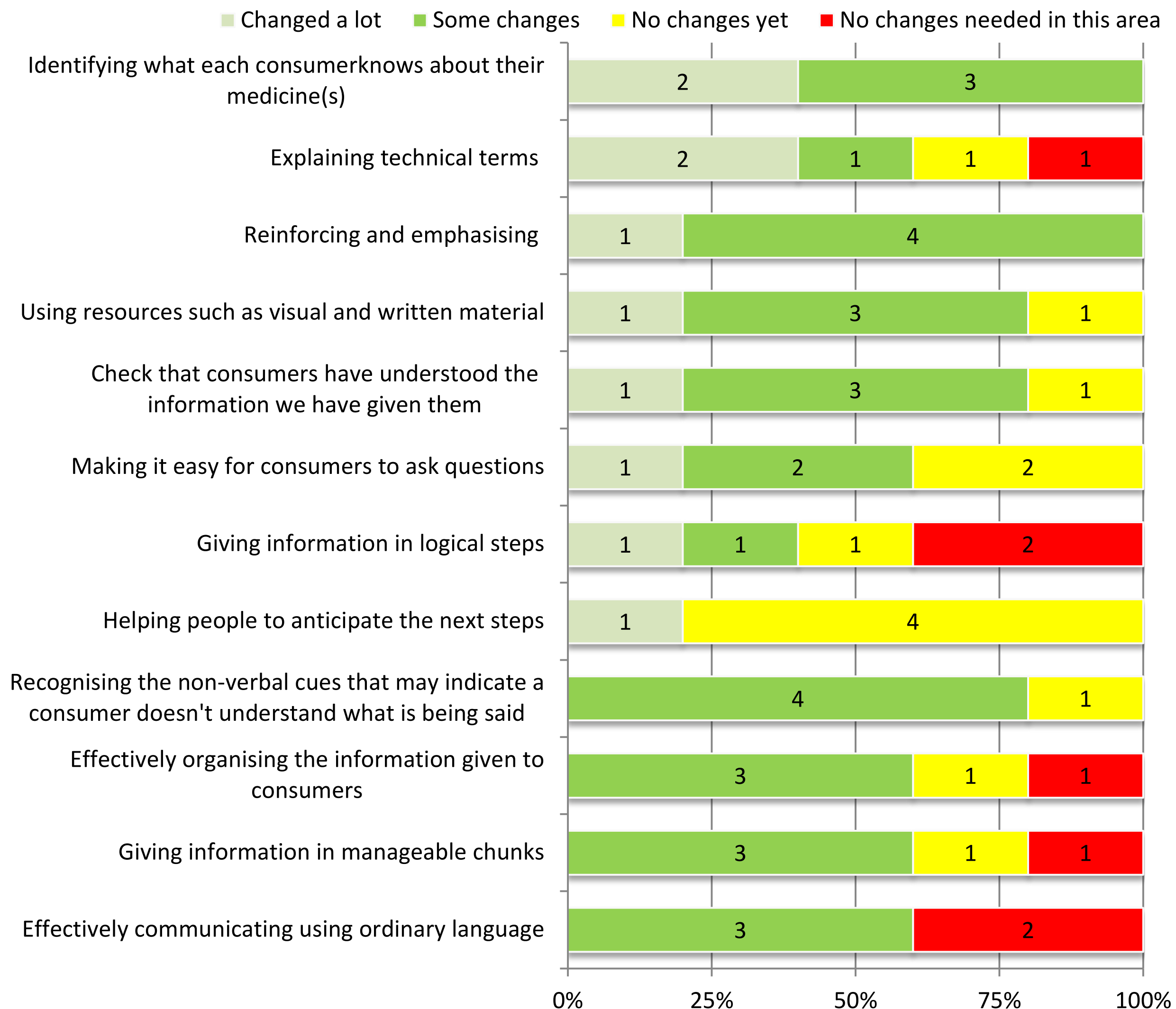
> *"Initially to bring that into practice was not easy, because the way we asked questions, some of the patients just went quiet, didn't understand you. But when we learned techniques, how to make the patient feel comfortable and open up, it kind of changed the way we used to ask questions, and we're more patient focused." (Pharmacy staff)*

Some staff also shared examples of their attempts to make changes and discussed these within the context of *"work in progress"* and a view to keep trying.

> *"Some of them, like I say, what has the doctor told you about this medication, whereas normally I'd tell them what I think they should know, now I'm saying what has the doctor told you about this medication? Some of them just stare blankly at me like 'what on earth are you asking me this for' and others will say, 'oh I know everything about this'. You think well I was asking an open question but it shut down, so now what do I do to make it open again? ... It's challenging to change, but like I say, it's a work in progress." (Pharmacy staff)*

Responses to the post-demonstration survey questions about what they had changed indicated that many of the pharmacy staff had made some changes (Figure 7).

Figure 7: Changes made by pharmacy staff (self-assessed)



6. Putting the Training into Practice – Staff Communication with Consumers

Communication with consumers was considered in terms of the recommended Three Step approach to health literacy.[26] It is important to note that the pre-demonstration findings reported in this section were taken **before** the staff had had training in the Three Step approach and therefore reflect the health literacy strategies pharmacy staff are equipped with through their professional training and experiences.

A sample of audio-recorded interactions with consumers was assessed by an external assessor who had not visited the pharmacies. The pre- and post-demonstration interactions were assessed by the same person. The assessment forms were completed as hard copy, therefore the assessor did not have access to the collated summary of pre-demonstration findings prior to carrying out the post-demonstration assessment. The recordings reflect only a part of the interactions between pharmacy staff and consumers as any discussion that happened when the consumer handed the prescription to the pharmacy staff member was not captured.

[26] As outlined in the training material developed by Workbase.

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6.1. Step 1: Checking consumer knowledge

Pre- and post-demonstration, a large proportion of consumers at Site A were regulars and were well known to the pharmacy staff. As the pharmacy was relatively small pharmacy staff knew many of the regulars individually and used repeat visits over time to develop the consumer's knowledge about their health and medicines. Pre-demonstration, the strategies staff reported using to check consumer knowledge included:

- Try and get feedback to see if they understand what we are saying:

  "I will explain the medication". One staff member noted *"I should say can you explain that back to me but what I do say is do you have any questions".*

  "You look at the face and see what their reaction is – sometimes they look blank. Try another way and if they still look blank use examples."

- Building relationships with the repeat consumers so each pharmacist knows how much each consumer knows. Pharmacists explained how they build their relationships with consumers during our interviews with them:

  "We tend to know our customers quite well. We are used to a natural approach to it"

  "Half the time we know if they have come out of hospital or something so we can ask how they are going."

  "Ask how they are, how they are going with their medicine and about their life style. Build a relationship, having the history."

  "Build rapport by asking how they are and in the conversation they tell you about other things and talk to them more about themselves rather than just focussing on the medicine."

- Checking the repeat consumers often:

  "When we give a repeat we do look at the history and when they last collected it (too early or too late) and ask 'is it working for you?'"

Although consumer knowledge was infrequently checked in the audiotaped conversations, with 8% assessing what the person knew, pharmacy staff frequently relied on their understanding of consumers based on past visits. This was particularly the case with repeat prescriptions where pharmacy staff frequently assumed but did not test a degree of knowledge on the part of the consumer.

It was not possible to assess from the recording whether assumptions about the level of consumer knowledge were accurate. The audiotapes also covered only the handover part of the interaction and additional conversation took place when the prescription was handed to pharmacy staff.

Post-demonstration, and after being introduced to the Three Steps approach by the lead pharmacist trainer, the team initially focussed on Step 1. They approached this by asking *"what has your doctor told you?"*

Pharmacy staff and the lead pharmacist felt this approach was working well.

> *"'Tell me' is probably the most useful with customers 'tell me what the doctor has told you about this medicine' and they're quite happy to share with you what the doctor said to them and that gives you a good basis to help fill in any gaps. And they might need to know extra that the doctor's probably told them but they've forgotten, because I think it's something like you only retain 30 percent of information you were told so it's good from that point of view." (Pharmacy staff)*

Checking prior knowledge was an area of change from the first assessments of audiotaped interactions. In review of post-demonstration audiotaped conversations the number of conversations where the

consumer was asked about what they knew increased to 76% (Table 2). The change was also noticeable through onsite observations.

Table 2: Information provided by the pharmacy staff in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
Length of the interaction (seconds)	79 (11-482)	115 (28-334)
Number of technical terms used	72% No technical terms	100% No technical terms
Names of medicines	70% Common names only 0% Technical names only 8% Both 23% No name	83% Common names only 0% Technical names only 0% Both 17% No name
The consumer was asked what they know	8%	76%
The consumer asked questions	31%	33%
Teach-back was used	9%	24%

6.2. Step 2: Building health literacy skills and knowledge

Step 2 is about pharmacy staff providing information to consumers about their medicines to build the consumers' health literacy skills and knowledge. Staff indicated feeling challenged in using this this step, and highlighted a need to simplify the resources and key messages for Step 2.

> *"…when I'm doing 1, 2 and 3 Steps, when I come to 2, build health literacy skills and knowledge, I feel all kind of blank there. It's too big, it's not going to help me do my Steps properly, just something else that makes it a bit easier, it's too big. Maybe, divide it, you know how you have your 'tell mes' and things like that and make an acronym out of that in Step 2, you know things in there that can help people use, oh Step Two involves that acronym, so you can picture it and use it." (Pharmacy staff)*

6.3. Step 3: Checking or Teach-back

Teach-back or checking back about what the consumer knew was heard in 9% of the pre-demonstration recorded interactions. The use of teach-back in the post-demonstration recorded interactions nearly tripled (24%) (Table 2).

6.4. Overall

The level of engagement with consumers, assessed through audiotaped interactions increased between the pre- and post-demonstration interactions (Table 3).

The most notable increase was in staff who were assessed as doing well at 'asking the person what they already know' (8% and 80% respectively) although improvements in pharmacy staff approaches were evident in most forms of positive engagement (for example, giving information in manageable chunks, using resources such as written or visual materials etc).

There was also an increase in 'asking closed questions', a small reduction in 'emphasising key points' and no change in 'opportunities allowed for the consumer to ask questions'. These identify areas of engagement that pharmacy staff may choose to focus on in the future.

Table 3: Overall changes in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
	Average, quite or very well	Average, quite or very well
Speed pharmacists talked	82%	100%
Asking the person what they already know	8%	80%
Giving information in logical steps	65%	90%
Helping people anticipate the next steps	3%	17%
Giving Information in manageable chunks	59%	93%
Using resources such as written or visual material	0%	30%
Reviewing the medicines the person is on	6%	17%
Asking closed questions	50%	87%
Asking open questions	13%	33%
Emphasising key points	24%	23%
Teach-back	5%	14%
Opportunities allowed for the consumer to ask questions	26%	26%
Providing practical advice	35%	50%
Quality of interaction from a health literacy perspective	8%	69%
Consumer's engagement	13%	77%

In discussions, more staff said they were finding Step 3 more difficult than other steps. Some found it difficult because it was a different approach, others felt uncomfortable checking on consumer knowledge.

> *"It's not comfortable [Step 3], but I have seen [lead pharmacist] do it really well…Step 1 is useful for every consultation, whereas [Step 3] is useful if they need new information." (Pharmacy staff)*

7. Putting the Training into Practice – Consumers

A number of data collection methods were put in place to evaluate any changes from the consumer perspective. These included:

- Asking consumers what they were told when they picked up their medicines;
- Asking consumers questions about their knowledge of their medicines; and
- Assessing audiotaped interactions.

These different information sources provided both qualitative and quantitative information from the consumer perspective in the pre- and post-demonstration periods. Interpretation of the information from consumers was limited by different profiles of consumers in the pre-demonstration (summer) and

post-demonstration (winter) site visits, and by the relatively short time between the pre- and post-demonstration visits.

7.1. Consumer Profile

The profiles of the consumers who agreed to be interviewed for the pre- and post-demonstration site visits are compared in Table 4 below. The increased prevalence of winter colds and flus during the post-site visit resulted in a higher proportion of 25-45 year olds and those collecting medicines for themselves, and possibly contributing to the slightly different gender profiles.

Table 4: Profiles of Interviewed Consumers

	Pre-demonstration (n=124)	Post-demonstration pilot period (n=100)
Gender	70% females 30% males	58% female 42% male
Ethnicity	48% European 6% Māori 30% Indian 16% Other ethnic groups	48% NZ European 5% Māori 35% Indian 11% Other ethnic groups
Age group	15% under 25 years 38% 25-45 years 47% 45+	8% under 25 years 45% 25-45 years 47% 45+
Consumer profile	92% regulars 67% were collecting medicines for themselves 16% were collecting medicines for the first time 33% picked up one medicine, 28% two medicines, 15% three medicines and 19% four or more[27]	89% regulars 72% were collecting medicines for themselves 18% were collecting medicines for the first time 31% picked up one medicine, 35% two medicines, 19% three medicines and 15% four or more[28]

1. Profile information was collected from consumer questionnaires and recordings
2. Post-demonstration this information was collected during interviews with consumers

7.2. Consumers' Recall

In the pre- and post- demonstration site visits, consumers were asked what they recalled being told in their conversations with the pharmacist (Table 5). The proportion of consumers who recalled the name of their medication reduced in the pre- and post-demonstration visits. However, there was a consistently high proportion of consumers who recalled being told what their medication does. There were also higher proportions of consumers post-demonstration who remembered being told about how long to take their medicine, the side effects and harmful effects of the medication and how to store it.

[27] It was not possible to tell how many medicines were collected from 10% of recordings.
[28] It was not possible to tell how many medicines were collected from 10% of recordings.

Table 5: Information consumers recalled being told about their medicine that day

Type of Information Was the consumer told…	Pre-demonstration	Post-demonstration	Post-demonstration (includes told previously)
The name of the medication	66%	56%	92%
What the medication does	63%	63%	98%
How to take the medication	66%	63%	96%
How much of the medicine to take	63%	61%	95%
How long to take the medicine	51%	58%	92%
The side effects of the medication	14%	38%	74%
The harmful effects of the medication	13%	34%	72%
How to store the medication	25%	44%	83%

Post-demonstration, whether consumers were told this information previously was also recorded

7.3. Consumers' Overall Knowledge

The health literacy training was focused on ensuring that consumers understand their medicine and how to take it. In the pre-demonstration interviews, 85% of consumers said they understood their medicines very well and this increased to 93% in the post-demonstration surveys (Table 6).

Table 6: Consumers' perceptions of their overall knowledge

Overall knowledge	Pre-demonstration	Post-demonstration
Understanding of medicine	85% very well 13% average 1% not well	93% very well 6% average 1% not well
Anything the consumer would like to discuss further	Not asked	98% No 2% Yes
Any questions not asked	97% no questions	100% no questions

In the pre-demonstration survey, many consumers commented that the pharmacy staff were *"great"* and *"approachable"* as well as explaining everything very well. These comments were consistent with those made in the post-demonstration survey.

In both the pre- and post-demonstration surveys approximately one-third of consumers in the recorded interactions asked questions. In both phases, when we interviewed consumers almost all said they did not have any questions. In the post-demonstration phase some of the reasons why people did not feel the need to ask the pharmacy staff questions were because:

- The doctor had told them what to do; and
- They were asked if it was a repeat.

The extent to which consumers are aware of the role of the pharmacist(s) and think they understand their medicines highlights some of the challenges to pharmacy staff in explaining information to people who feel they know it all already and are in a hurry and do not want to listen.

> *"…some people don't understand the role of the pharmacist, perhaps some information they need to know is that the pharmacist is there to help improve their health and they*

are a health professional. You need to be asking questions as well as promoting what a pharmacist is there for. People I don't think realise they can." (Pharmacy staff)

7.4. Feedback from Consumers

In the consumer survey no consumers said they had noted changes in the pharmacy that related to health literacy, but many commented that in general the pharmacy was good before. For example, consumers said:

"They generally explain medicine every time"

"They're always professional and seem very knowledgeable"

"They are always good".

We also asked pharmacy staff whether they had any feedback from consumers about changes in the pharmacy. Staff had mainly had positive feedback from consumers and provided examples:

"I think people more are happy that you're finding information out for them, because you're talking more you're finding out what their needs are, so we might go and look things up for them and they're happy to wait around while you do it or you know, appreciative of what you do for them." (Pharmacy staff)

"…some people say 'oh you have explained it really well about my medicines', I say thank you, a few of the patients yeah, they appreciate it. (Pharmacy staff)

"…and when you ask them, especially for inhalers when they asked the lady how she uses it, she uses it completely wrongly and she's been on it for ages…and then we were surprised that she didn't know, so when you explain that she really appreciated it, because she thought she was doing the right thing." (Pharmacy staff)

8. Overview

The Site A pharmacy highlighted health literacy as an area where the team would like to work together to further develop their professional skills. The pharmacy is one of two pharmacies that agreed to take part in the Health Quality and Safety Commission's demonstration pilot project on health literacy.

The pharmacy owner took part in a one-day workshop and then took the new knowledge and a set of resources developed by Workbase back to her team. Training for the team consisted of informal one-on-one coaching and feedback provided by the pharmacist trainer, coaching tips such as signs in the pharmacy, agreement on some pharmacy wide health literacy initiatives and a workshop provided by the Workbase trainer.

Changes in the pharmacy were evaluated before and after the demonstration period.

8.1. Pharmacist Trainer

During the demonstration period, the lead pharmacist identified measures of success for the project as engaging in an evolving process to develop strategies to deal with common situations, and to:

"Improve patients' health outcomes. So it's not about us, but it's about how we can do things better to help them…and they've got to want to be helped." (Pharmacy Trainer)

Following the demonstration period, several measures of success were identified:

- Changes in awareness: The team are now aware that consumers do not necessarily understand what they say. The Three Step approach has been introduced at the pharmacy; although the biggest gains so far have been achieved in an initial focus on Step 1.

  "I think it's about an awareness of a problem that probably none of us really realised existed. So in that context, that was the quantum leap, actually being aware of the problem and the assumption of people perhaps knowing more than. They don't and certainly we picked up quite a lot of people that we're finding out that they didn't know anywhere near as much." (Pharmacy Trainer)

- Changes for consumers

  "I think it's less, 'take one three times a day with food thank you very much'. We still do it but I think every so often, if the door's open a little bit with the patients I think we get in a bit better than we used to, whereas the door was never really open." (Pharmacy Trainer)

- Professional development: The team are working together and are using the training as a professional development initiative.

  "…you've got to do a project, so our big three pointer, level three is all about health literacy. So the advantage of us doing it as a pilot site is it has to be a team, so none of these things will work if it's just one person trained." (Pharmacy Trainer)

- Taking responsibility for ensuring the consumer understands their medicine

  "I'm quite excited to try and use it going forward so I've run around and made the decision in my head that I actually want to be a medicine manager and I want to help people take their meds properly and that's where I want to focus going forward." (Pharmacy Trainer)

- Staff engagement and commitment to the three step approach has increased

  "Some of the days where we've had a big focus on it, we had a Saturday morning, where we were just not quite as busy and we all really tried and you got that momentum going because we were all getting same good results." (Pharmacy Trainer)

8.2. Staff

Overall, staff felt that overall taking part in the training had been worthwhile for them personally because it had:

- Increased their knowledge about health literacy:

  "I think that just being aware that health literacy is so poor makes you try harder, take the extra time that people may not understand or may not feel comfortable with what they're taking and just asking the question 'what did the doctor tell you' has been really useful for me." (Pharmacy staff)

  "There's so many surprises that so many people don't know about their medication, even if they have been taking it regularly. Just because they're compliant doesn't mean they know about their medication." (Pharmacy staff)

- Increased self-awareness of their engagement with consumers:

  "I think the study was really good, changed the way…it's a different way of dealing with customers now, before it was only telling, telling, telling, now it's kind of stopping and asking." (Pharmacy staff)

"I find it quite hard to change…it makes me quite nervous…cause it's something new…while I'm finding it awkward, it's a work in progress and I'll get there eventually." (Pharmacy staff)

- Increased satisfaction and valuing of their role:

"It's much more useful, satisfying as a professional and often they say 'thank you very much, it's been so useful'. Just very satisfying and hopefully they're a little bit more clued up to manage their medicines well for themselves." (Pharmacy staff)

"It's been very useful, because you do feel like you have a much better rapport with people and the information you are giving is more useful and they're taking it on board rather than just reading it all out and there's all your information and they go away with it. So interacting, engaging them more I suppose." (Pharmacy staff)

8.3. Consumers

Changes for consumers were assessed in terms of the information that was provided to them by the pharmacists and whether their medicines were explained in a way that helped them to understand them. Information from the observation and the assessment of pharmacy recordings suggests that there have been significant changes in the way pharmacy staff interact with consumers. Pharmacy staff were also able to provide examples where using the techniques they had learnt as part of the health literacy training they discovered that a consumer had been taking their medicine incorrectly or needed help:

"…the dosage is to start two tablets straight away and then just one a day until finished. So I asked him, I asked the right questions, 'so what did the dentist tell you about your medication?' and 'what's the dosage?' And he said, 'oh yeah, one a day, maximum two a day'. I said, 'no, no, no, you take two straight away and then one a day', so he got the two daily but he thought it was maximum two a day and then he looked 'oops' you know, got it wrong…by asking the question correctly you found he actually didn't understand from the dentist correctly." (Pharmacy staff)

8.4. What has Worked Well

Participating in the training worked well. The pharmacy trainer and many of the staff commented about how much they had learnt about health literacy but also noted that three months had not been long enough for them to make all the changes they wanted to make.

The pharmacy team felt that the Three Step approach provided an effective framework for health literacy in pharmacies. As anticipated by the lead pharmacist during the demonstration period, the 'train-the-trainer' approach worked best alongside a workshop provided by a Workbase trainer.

"The workshop [train-the-trainer] was me more understanding what health literacy was and that introduction period which is what we've gone through here. I can see the tools that are in the next step, but I don't quite know how to use them…so the videos and things like that I can see that they're going to work, but I don't…and probably because we haven't had a formalised training and I think that's going to be a key to the success, is that actually has got to be a proper workshop". (Pharmacy Trainer)

The Workbase workshop with staff occurred after they had had a chance to receive initial training and put that into practice. Pharmacy staff and the pharmacy trainer emphasised the value and the timing of the workshop with an external expert.

Putting the training into practice provided the pharmacy team with some surprises about how little consumers actually knew about their medicines.

"…sometimes you will be amazed, people who you think will know, they don't know, and who you think won't know, know a lot about it." (Pharmacy staff)

"…she's been on this heart medication for so long I was quite surprised to find she's got no clue what it's for, like nothing. And then I start talking to her and she goes, I've always wanted to know what they're for…oh goodness, we deliver it to her all the time…so that was a bit of a shock. So I went and got a medication chart prepared for her with all the uses and stuff and gave her that and she walked out quite happy, but that was a complete shock…" (Pharmacy staff)

8.5. Challenges

Staff thought that time was a major challenge, particularly during busy periods and when people appear to be in are a rush.

"It's difficult when you're pressed for time to actually make that time. Because the old habits, it's easy to get back into that, to fall into that." (Pharmacy staff)

"Time is a major factor, sometimes we are so busy we don't get time to get all those teach-back techniques and tell-me techniques so we just tell them what we have to." (Pharmacy staff)

"Their body language is quite often saying 'I'm in a hurry'…you try and tell them but they're not engaging because they're eyes are not making contact and they're jiggling… sometimes the jiggling is not always a sign that 'I want to go' it's just a habit, so sometimes I've found when you think this person really wants to get going but you ask them something just because you need to at least give them the opportunity, they'll suddenly have all the time in the world for you which has been interesting." (Pharmacy staff)

Steps 2 and 3 remain an on-going area that the pharmacy team are working on, both in terms of consumer responses and detailed instruction.

"I like Step 1 and Step 3, find out what people know and then check if you're clear. That step [Step 2] probably needs to be broken down, it's a very big step and that's what we need to improve…" (Pharmacy staff)

"It is useful, but I found that Step 3 is not very easy to do and patients are short of time, they will have a patient tell you what you just told them. I mean, certainly it is a good Three Step process, but it's not easy to do it." (Pharmacy staff)

"It's not really working [Step 3]". (Pharmacy staff)

Another major challenge for pharmacy staff are those consumers who do not consider it is the pharmacist's role to ask them questions or repeat and long-term chronic condition consumers who do not want to discuss their medicines.

"The ones with the repeats and the long-terms, they're the hardest ones, like this man this morning was like, 'yeah, I've been on it for a long time', so you know 'no, no, nothing, yes I know.' I got nothing out of him and he left." (Pharmacy staff)

"I know one of the girls did get yelled at by one customer the other day when she tried to tell him about something and oh he just, but he's a bit difficult anyway. But I felt sorry for her, she was just trying…basically, 'I've been taking this for such a long time, you don't need to'" (Pharmacy staff)

8.6. Sustainability of Changes

The demonstration period ran for only three months. Three months was sufficient time to see some changes in what staff do but it will be important to continue to maintain momentum through on-going training and support.

> *"…it's not about a three month project, it's about changing the way we do things so as I say it's no Malcolm Gladwell, suddenly the whole world wants hush puppy shoes when they didn't the day before. It's going to be gradual change…The big challenge is, I don't know how we get this problem, identify it and fix it in five minutes…so it's not just going to be a blink, it's going to be a gradual road…" (Pharmacy Trainer)*

The Site A lead pharmacist intended to continue to develop health literacy at the site through:

- A team approach to professional development; and
- Building on the health literacy of consumers with long term chronic conditions.

> *"…as a result of doing this pilot, I've got quite positive about doing the medicine management side better with the LTC, and what I've done is sent some letters out to our customers to say come in and sit down, in here, 20 minutes, and do a brown bag. It's not a full review, it's not looking for drug interactions. It's just trying to make sure we're on the right board, and I hope the skills and the concepts from this project will help us do that better. And without that, I think everyone's attempt to do LTC's is a stab in the dark…so in the old day's we said, 'you take this like this, this like that' so now it's going to be 'so tell me how you take the meds'" (Pharmacy Trainer)*

The lead pharmacist was adamant that health literacy works:

> *"So I was pretty anti at the beginning, I was thinking you're going to teach me to suck eggs. I just tell everyone that we're not going to succeed and get any outcome for LTC. We need to talk to our people in health literacy talk".(Pharmacy Trainer)*

Pharmacy staff also felt they had a stronger foundation in health literacy and described their health literacy skills as "*work in progress*" that they would continue to work at improving. One staff member noted:

> *"We are going to work as a team and as part of our professional development as well, we have to do a big project. Health literacy is going to be our topic…it doesn't end here." (Pharmacy staff)*

Site B Post-Demonstration Summary

1. Purpose

The experiences of the pharmacy at Site B in taking part in the health literacy demonstration are described in this report. These experiences will be included as a case study in the report on the health literacy demonstration that will be released by the Health Quality and Safety Commission. The case studies will help other pharmacies learn from the site's experiences implementing the health literacy professional development.

This standalone report also provides feedback to the case study pharmacy staff on their participation and the resulting changes in their pharmacy.

2. Pharmacy Profile

Site B is described on its website as a busy medical centre pharmacy providing a caring and professional pharmacy service. The pharmacy is located in a group of shops near a doctor's office. The pharmacy's mission statement is:

> *"To offer health advice, drug information, and awesome customer service in a pleasant and friendly environment and to provide an accurate, efficient and professional pharmacy service."*

In their time at the pharmacy, evaluators were impressed with the operation of the pharmacy, particularly its efficiency and the friendly attitude of the staff. We noted the following:

- **Staffing and hours:**
  - The pharmacy is a seven day pharmacy and for five days it is open from 8:30am to 8pm.
  - It is staffed by 13 pharmacists and pharmacy technicians plus the owner.
  - It has a large dispensary and the area in front of the counter is quite compact.
- **Activity:**
  - In the peak periods before work, after school and after work, the pharmacy is very busy with activity quietening down later in the evenings. The Monday of the post-demonstration data collection was especially busy and one staff member had called in sick.
  - The pharmacy is very efficient and waiting times were kept to a minimum.
  - The pharmacy dispenses medicines for rest homes in the area and has a sachet packing machine.
- **Pharmacy operation:**
  - While in the pharmacy we received lots of positive feedback from consumers about the pharmacy and the staff.
  - Staff are considerate and respectful of consumers.
  - We observed several occasions where staff were looking at ways to save consumers money. The pharmacy never turns away anyone who cannot pay and has in place a plan where people can put aside a little money each week to pay for their prescribed medicines.
- **Information for consumers:**
  - Brochures and information are displayed outside by the door and inside the pharmacy.

- There is no information displayed in languages other than English but over both the pre- and post-demonstration periods no-one came in who was not proficient in English. Staff did say that they occasionally have people from cruise ships who do not speak English.
- There are staff at the pharmacy who can speak Vietnamese and Russian. For other languages and when those staff members are not there, there is a book of common phrases in different languages to use if required.

2.1. The Demonstration Pilot

The Site B pharmacy highlighted health literacy as an area where the team would like to work together to further develop their professional skills. Pre- and post-demonstration information was collected from the following sources:

Table 1: Information Sources

Information source	Pre-demonstration	Post-demonstration
Site Visits	20-22 March 2013	17-19 June 2013
Interviews throughout the demonstration period	Pharmacy owner	Pharmacy owner
Pre-and post-demonstration interviews	Small group or individual interviews with the team	Small group or individual interviews with the team
Pre-and post-demonstration survey	Pharmacy team (13/13 completions)	Pharmacy team (12/13 completions)
Questionnaires	Completed with 124 consumers	Completed with 101 consumers
Audiotapes of interactions with consumers at the time the medicine was given to them	44 interactions (from 13 staff)	27 interactions (from 7 staff)

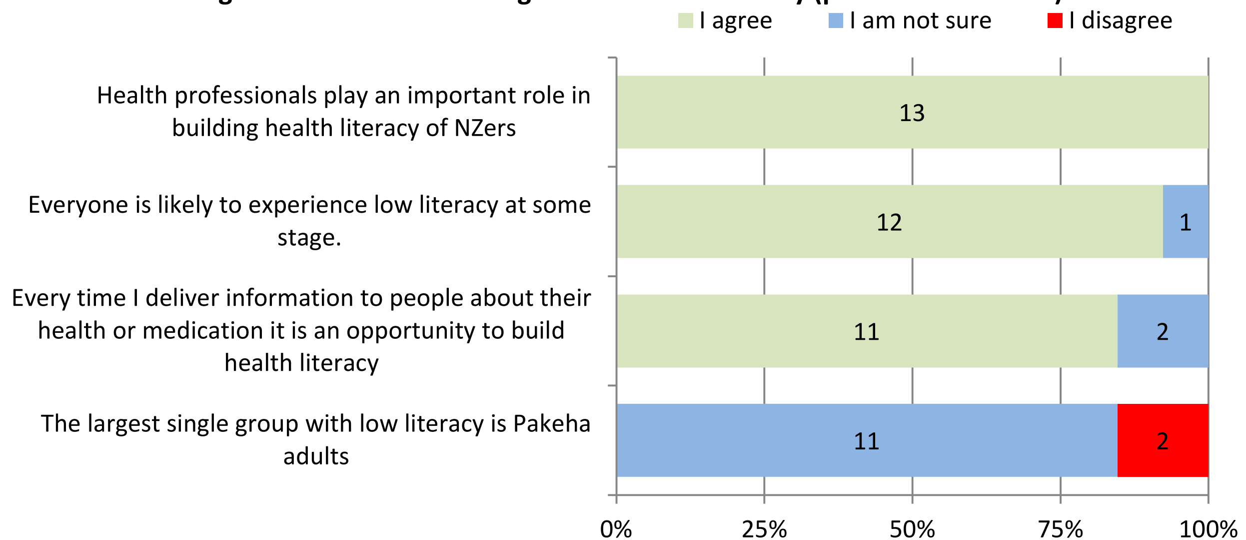
The post-demonstration period was in the winter and there was a notable increase in people coming to the pharmacy following a doctor’s visit for colds, flu or with sick children. More people declined to take part in the post-demonstration interviews because they were unwell or had to take children home.

3. Health Literacy General Knowledge (pre-demonstration)

At the start of the demonstration, staff described health literacy with phrases such as *“what people understand about their medicines”, “whether they can understand the terms we use”, “what their medicine is all about and why they need it.”* The explanations provided were generally framed in terms of what consumers understand or do not understand about their conditions and their medicines.

In the pre-demonstration pharmacy questionnaire, staff were asked about the extent they agreed with some general questions about health literacy (Figure 1). Responses indicated agreement with the importance of the health professional’s role in health literacy and some confusion about whether the largest ethnic group with low literacy was Pākeha adults.

Figure 1: General knowledge about health literacy (pre-demonstration)



In discussion groups, staff talked about helping consumers with common problems they had encountered such as:

- How difficult labels were; and
- That people not used to pharmacies and taking medicine might not understand words and phrases commonly used in pharmacies such as "take with food", take twice daily", "prn", "repeats".

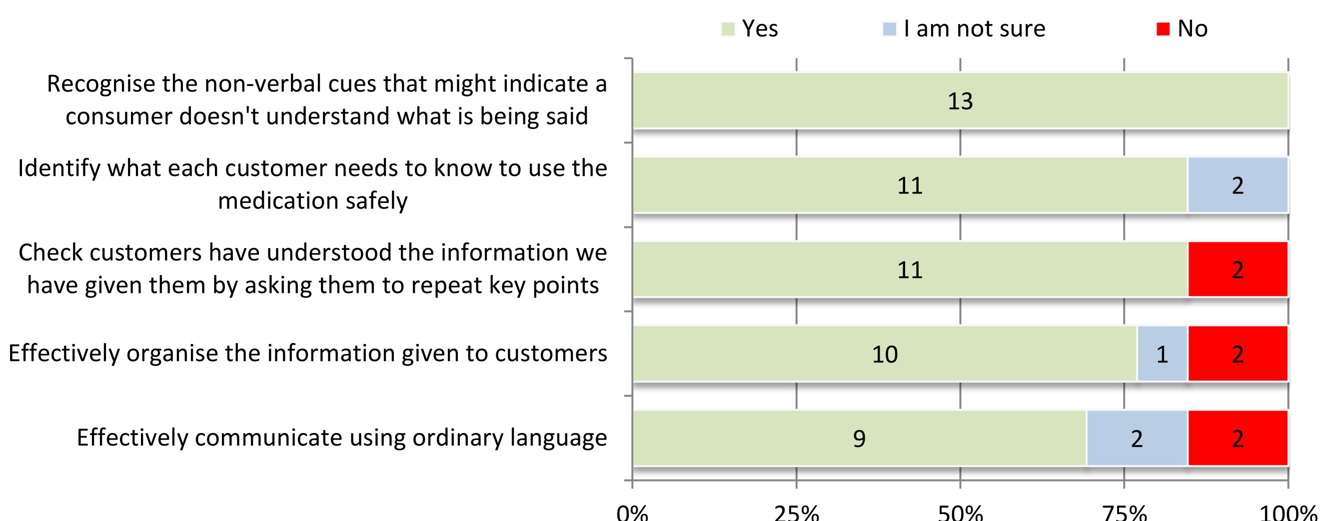
One staff member concluded that the difficulty for pharmacy staff in thinking about health literacy was:

"We are too used to [phrases and terms] and don't think about how other people hear it."

3.1. Staff Pre-Demonstration Attitudes to Health Literacy Training

In the pre-demonstration survey pharmacy staff indicated they would like more health literacy training across a number of topics (Figure 2). In discussions, staff were enthusiastic and looking forward to the training: *"it makes you conscious about what you are doing and what you are saying".*

Figure 2: Health literacy topics staff would like training about (pre-demonstration)



4. Health Literacy Training

The pharmacy owner and the pharmacy team decided to work on health literacy as a priority area for professional development. The pharmacy owner took part in a one-day workshop and then took the new knowledge and a set of resources developed by Workbase back to her team. Training for the team consisted of small group sessions provided by the pharmacist trainer, a workshop provided by the Workbase trainer and informal one-on-one training and feedback.

4.1. The Training Package

The health literacy tools and resources were developed for the demonstration project by Workbase[29] based on a review of current evidence.[30] The approach outlined by Workbase was:

- A universal precautions approach as best practice as opposed to targeted interventions focused on low literacy individuals;
- Use of tools and strategies based around a Three Step approach:
    - Step 1: Finding out what consumers already know;
    - Step 2: Providing information in logical steps taking into account what consumers already know;
    - Step 3: Checking understanding using teach-back.

Training for the health literacy demonstration pilot was based on a 'train-the-trainer' approach, where one person receives training and takes that training back to other members of the team. For Site B, the pharmacy owner was the 'trainer' and attended a one-day workshop about health literacy developed and provided by Workbase.[31] The training package included:

- A one-day training session for the lead pharmacist (the trainer);
- A package of resources developed based on evidence and feedback from the lead pharmacists about what they considered would be useful for them in their pharmacies;
- Follow-up telephone support to the lead pharmacists; and
- A follow-up on-site small group training meeting with pharmacy staff.

Feedback from the pharmacist trainer on the one-day workshop was that it was *"worthwhile"* and that a full day was *"definitely required".*

> *"I did come in with a lot of assumptions and generalisations….the workshop knocked that out of me" (Pharmacy Trainer)*

While *"it was important to have all the background on health literacy"* provided in the workshop it was also important to keep that part short and to allow sufficient time to practice techniques such as role plays and to a have a chance to see teach-back in action.

Following the one-day workshop the lead pharmacist felt reasonably confident to start the training:

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[29] Workbase – Leading health literacy http://www.workbase.org.nz/

[30] Report for the development of health literacy education and training tool and resources for health providers, January 2013.

[31] Workbase (www.workbase.org.nz) the training provider, were commissioned by the HQSC to complete a review of the relevant literature and to develop a training package.

> *"I like to keep things simple so I am not going to complicate it. We will do small amounts often. I don't want to bog them down with it being too hard."(Trainer)*

4.2. Putting the Training into Place

The first step in putting the training into place was small group sessions during working hours provided by the lead pharmacist trainer with pharmacy staff. In the first session the team completed a health literacy quiz.[32] The surprise in the test for staff, that health literacy is not linked to education and that at certain points *"we could all have problems,"* provided a foundation for acceptance of a universal precautions approach. The team then worked through the booklet about health literacy and approaches to putting it into practice. They talked about the Three Steps.

The trainer asked about Step 1 and they talked about what the team knew and where they got the knowledge from. They then went through Step 2 and talked about what they did and what they needed to tweak and the fact that they don't stop and pause and break the information into chunks.

> *"It was clear to me that we were doing a lot of Step 2, a lot of giving of information but not getting a lot back" (Pharmacy Trainer)*

They talked about how they could do Step 3 and the team asked about what they could do.

Throughout the training the lead pharmacist and the team discussed health literacy and talked about examples.

At the outset, the lead pharmacist had planned for an external trainer from Workbase to come in and provide a workshop with staff. The lead pharmacist saw value in the team having the opportunity to start putting the Three Step approach into practice before an external trainer came in, so they could experience what worked well for them and what was challenging.

The Workbase trainer came to the pharmacy and provided small group workshops to staff giving them practical examples of questions to ask at each of the Three Steps. The workshops also gave staff an opportunity to ask questions. The workshop was seen by the lead pharmacists and all staff as excellent:

> *"She gave us really good quick fire things to use and background about how to read people. She and I had a good discussion. She reinforced the info I have provided – she made it sound simple and made us think it is not too hard. Really excellent to have her back up. If she wasn't there I may have gone and got some other info."(Pharmacy Trainer)*

> *"The way she tied Step 1 to Step 3 was awesome – a light bulb just clicked. The more you find out what they [consumers] know the less you have to check at the end. …She made it so it wasn't so difficult – so it was just a process." (Pharmacy Trainer)*

4.3. Staff Views about the Training

Staff reported the training overall to have had some value. Although at the time of the post-demonstration site visit some staff couldn't recall exactly what had happened in each of the training sessions, all were aware of the Three Step approach.

Staff felt the Three Step approach to health literacy provided an effective framework for health literacy in pharmacies:

> *"The three stages definitely made sense to the way we counsel" (Pharmacy staff)*

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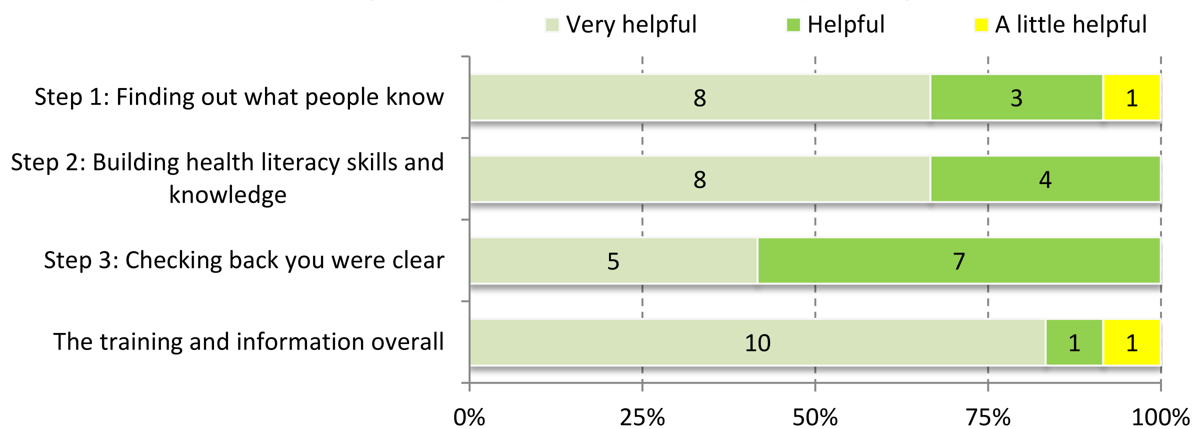
[32] Provided by Workbase as part of the tools and resources for the demonstration.

"The Three Steps simplifies it down to three areas that you can remember easily – a logical process." (Pharmacy staff)

Staff views about the value of the training were explored in the post-demonstration staff survey. Almost all staff found the training and information overall to be very helpful, no-one found it to be not helpful at all. Fewer staff found the training and information about Step 3 to be very helpful as compared to the training and information provided about Steps 1 and 2 (Figure 3). Responses to the helpfulness of training about Step 3 may also be influenced by the fact that staff found Step 3 more difficult than Steps 1 and 2.

Figure 3: Helpfulness of health literacy training



Staff valued the opportunity for a workshop with the Workbase trainer and thought the timing of the workshop was appropriate:

"Timing … was about right – probably wouldn't have understood what she was saying or been able to utilise it as much if she came earlier" (Pharmacy staff)

Some staff felt the workshop with the Workbase trainer was *"a bit rushed"*. There was general agreement that while the 'train-the-trainer' approach worked, there was a lot of value in having an external person coming in to answer questions and to build on the training and practice already in place.

Training the technicians as well as the pharmacists was seen as an advantage as the whole team could then integrate health literacy into their practice as a team strategy.

4.4. Staff Views about the Resources

The resources developed by Workbase for the demonstration project were recalled and used to varying degrees by different staff members. Both the trainer and pharmacy staff noted that it was the training that was important and not the resources.

"The resources alone are not enough." (Pharmacy Trainer)

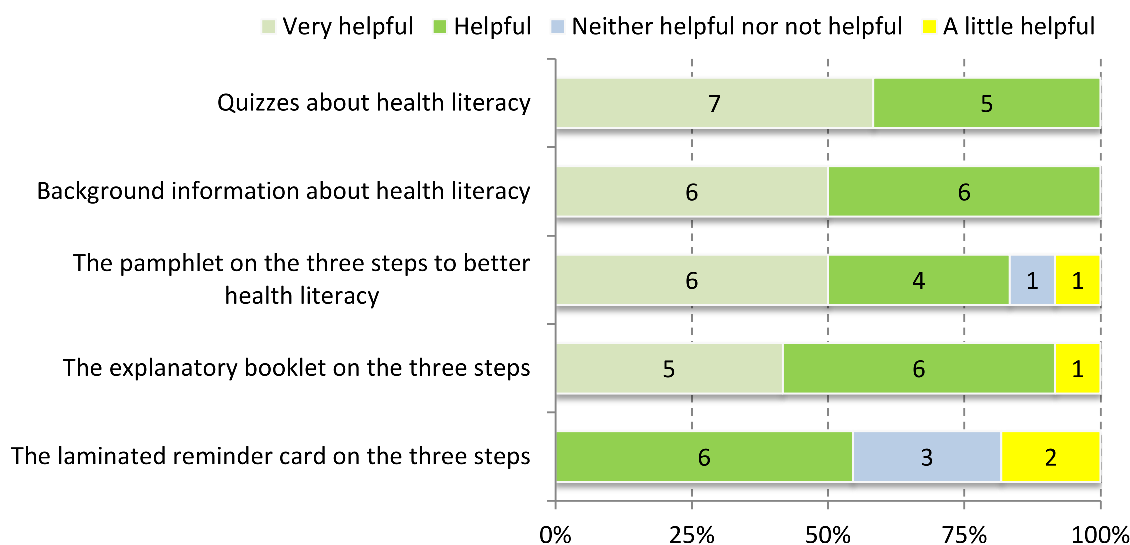
The trainer and several staff commented that it was good to have a range of resources that worked for different learning styles. Some staff had used the brochure about the Three Steps whereas others had read the booklet.

"I have not really looked at them since to be fair – it is more having it in the back of your head and being more aware. Not really a resource person." (Pharmacy staff)

"I did get a big booklet, I didn't get a card. I like the Three Step approach, definitely. Read through the book and went back to it a few time. I find for me I take more in reading than listening to someone." (Pharmacy staff)

Staff’s responses to the post-demonstration survey questions about the health literacy resources highlighted the value of the quizzes about health literacy, and the background information about health literacy (Figure 4). The resource that staff felt was least useful was the laminated reminder card of the Three Steps. In discussions, pharmacy staff noted that they had no trouble remembering the Three Steps. The challenge was in knowing the types of questions to ask at each step and suggested that it would be useful to develop a reminder card that could go by the till with examples of questions. A general comment from staff about improving the resources was to make them *“more practical and applied”.*

Figure 4: Helpfulness of health literacy resources



The trainer noted the value of additional resources provided by Workbase about adult learning.

> *“The resources are excellent – liked the A4 sheet and the bigger book. The information was put in a different way for different learning styles. The information was not too overbearing. [Staff] could use what suited them. They liked the A4 bullets. There may be too much about step 2 in the brochure – perhaps lots of ideas on openers would be good. Feeding back on what works well.”(Trainer)*

In the post-demonstration staff survey, seven pharmacy staff said they would not like any further health literacy training. Four of the five staff who said they would like further training said they would like training on Step 3: *“Different techniques that we could use to implement the Three Steps more easily in everyday interactions.”* The other staff member requested further training about: *“Getting customers to ask us more questions.”* More help with Step 3 was also raised in discussions with staff.

> *“If we could have more help with that third step – I was silent and stumbling with how do I say it. I feel like I am fumbling around. Is he [consumer] going to growl at me – how is he looking.” (Pharmacy staff)*

As part of the evaluation, pharmacy staff were asked to record interactions with consumers and to self-assess these using a form provided by the evaluation team. It was not clear how many staff listened to their recordings but those who did said they found it useful and considered reviewing the audiotapes to be a useful part of the training. Some used their review of recordings as part of their continuing education programme.

"Listening to them was useful they were a real wake-up. It was like shoom, shoom , shoom – get out of here. There was a lot of ok and right from the person so they were pretending to take it all in at least." (Pharmacy staff)

"If you hear yourself you realise you don't do that. I didn't explain it how I thought I explained it" (Pharmacy staff)

5. Putting the Training into Practice – Changes in the Pharmacy

The lead pharmacist's intention was to lead by example:

"You just have to get out there and do it. I need to show them how you can do it."

Overall, all staff in the pharmacy thought that participating in the health literacy training had been worthwhile for them personally and had improved their knowledge.

"Initially people go health literacy – oh we know about doing that. It is not until you start doing this and hear yourself back – it makes you think a bit more and wonder if it is you explaining poorly or them not wanting to know" (Pharmacy staff)

5.1. Increased Staff Confidence

The lead pharmacist felt there had been increases in staff confidence. Increased confidence was observed in staff self-assessment of their confidence in different aspects of communication with consumers between pre-demonstration Phase 1 survey and post-demonstration Phase 2 (Figure 5).

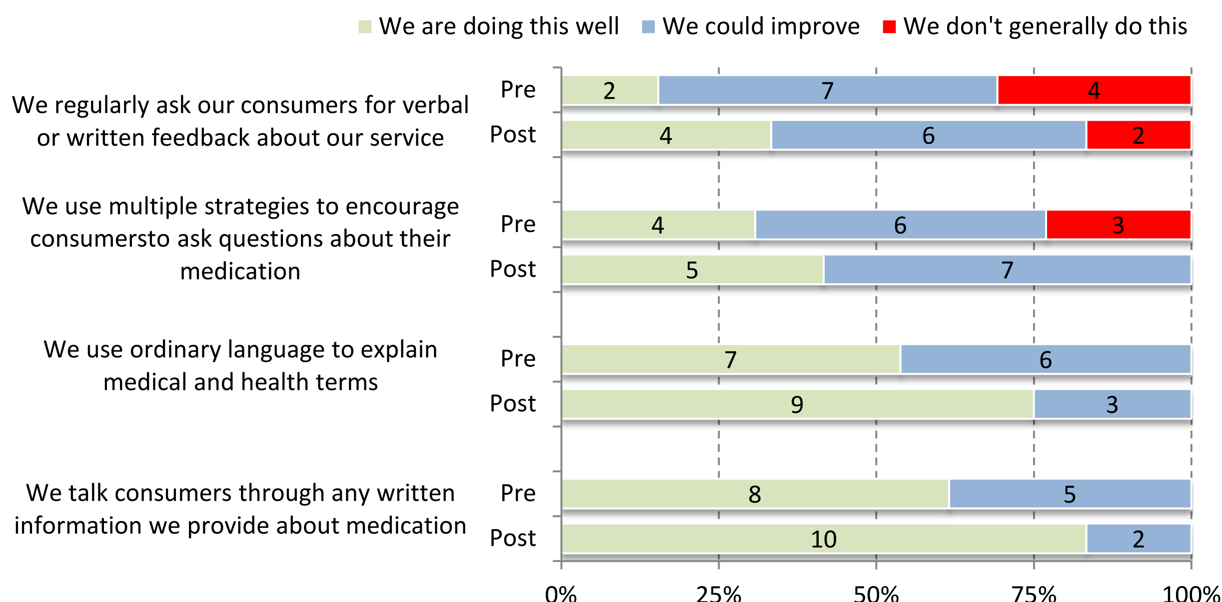
"I am definitely a lot more confident – that's one thing I have really found. I am a lot more confident in talking to customers in using open questions rather than closed ones when they can just answer me yes and no….and getting them to tell me a bit more about what they know. It is quite surprising how many people don't have a clue about what sort of medicine they are taking and why they are taking it. So just by using all these sorts of open questions now and knowing how to word them – it has been really good at getting customers to talk back to us." (Pharmacy staff)

Figure 5: Staff confidence with aspects of communication with consumers

5.2. Self-Reported Changes in Practice

Staff also thought there had been changes in the pharmacy as a whole between the pre- and post-demonstration surveys (Figure 6).

Figure 6: Changes in the pharmacy



In discussion pharmacy staff gave many examples of how they had changed their practice as a result of the training.

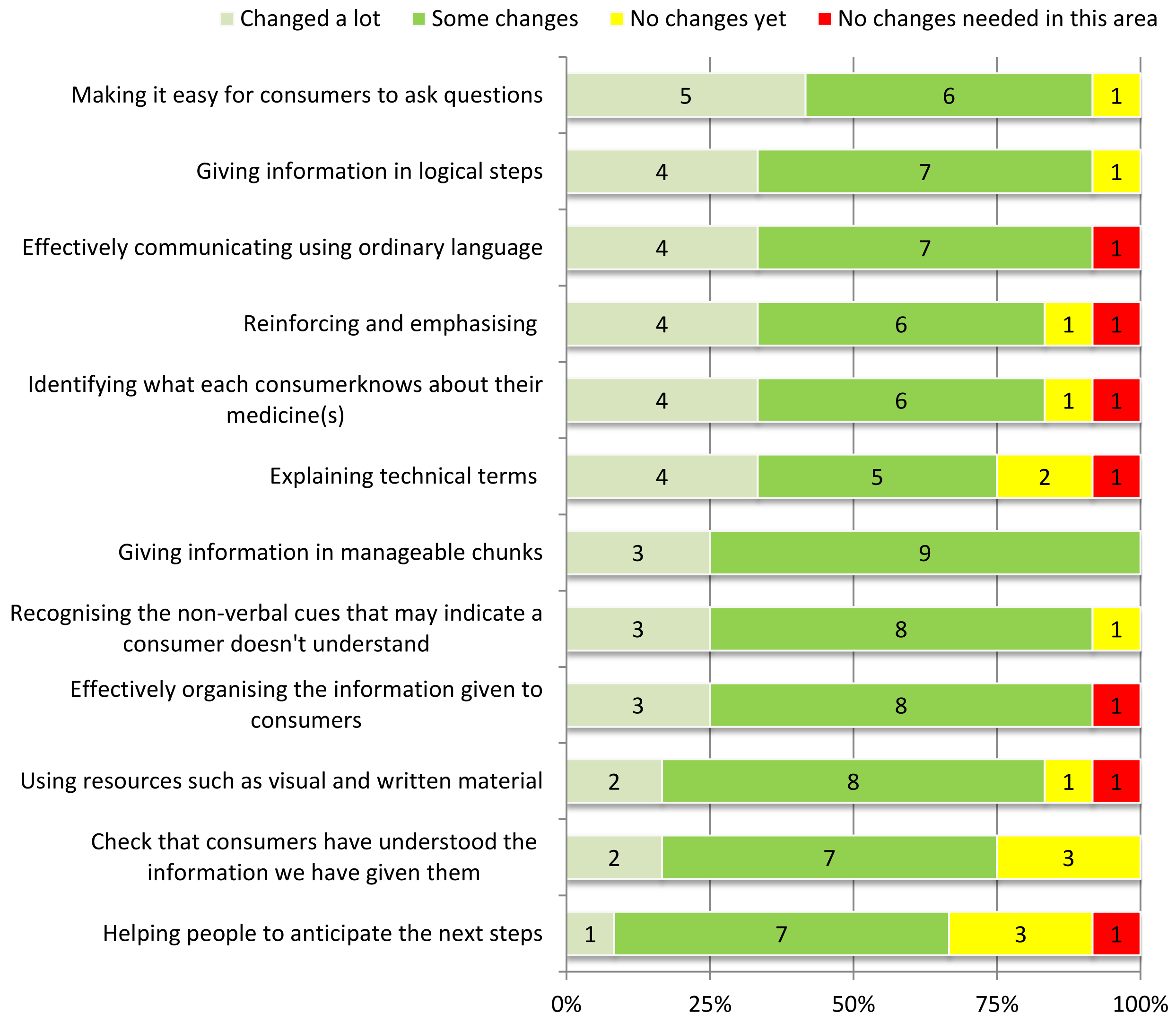
> *"I have definitely changed my practice. Instead of rattling through for new meds I am especially aware that they may not have taken in what the doctor said. I now ask leading questions and if I am not sure they understand I give them printed material and invite them to ask questions." (Pharmacy staff)*

> *"I say to them what do you know about this, what have you been told about this medicine? .... I expected that the customer knew everything already and they don't. It's all on the label – if you don't know just read that label. But some people can't read. I expected everyone to know all about their medicines and what to do with them and some people don't." (Pharmacy staff)*

Staff also reported more use of the consultation room, including by some of the technicians who were not using it much prior to the training.

The changes that pharmacy staff discussed were also reflected in their responses to post-demonstration survey questions about what they had changed (Figure 7).

Figure 7: Changes made by pharmacy staff (self-assessed)



Staff were finding that the health literacy approach was not taking as long as they had thought it might. The pharmacist owner had also made some staffing changes to rosters to put more staff up the front during the busy periods to reduce time pressures for staff.

5.3. Universal Precautions Approach

Staff comments reflected their recognition of the usefulness of the universal precautions approach both for all consumers and for all their medicines:

> *"We have used it – all of us up the front. We definitely think differently when we go to give out the meds. We all try to do it with everyone… even if you are very busy." (Pharmacy staff)*

> *"The person up the front used to tick if the medicine was new or not and then previously I just focussed on those with a tick – now I focus on all of them and explain. It [health literacy training] has made a point of looking at the whole script – not just the new medicines." (Pharmacy staff)*

6. Putting the Training into Practice – Staff Communication with Consumers

Communication with consumers was considered in terms of the recommended Three Step approach to health literacy.[33] It is important to note that the pre-demonstration findings reported in this section were taken **before** the staff had had training in the Three Step approach and therefore reflect the health literacy strategies pharmacy staff are equipped with through their professional training and experiences.

A sample of audio-recorded interactions with consumers was assessed by an external assessor who had not visited the pharmacies. The pre- and post-demonstration interactions were assessed by the same person. The assessment forms were completed as hard copy, therefore the assessor did not have access to the collated summary of pre-demonstration findings prior to carrying out the post-demonstration assessment. The recordings reflect only a part of the interactions between pharmacy staff and consumers as any discussion that happened when the consumer handed the prescription to the pharmacy staff member was not captured.

6.1. Step 1: Checking consumer knowledge

Pre-demonstration, the strategies staff reported using to check consumer knowledge included:

- Using a list in the front of the pharmacy to help remind staff of what needed to be covered when a prescription was being taken;
- *"Just asking them"* if they are familiar with their medicine, whether the doctor explained it to them and what they would like to know; and
- Being vigilant about the frequency that they come for repeats as this can indicate whether the person is taking too much or too little of a medicine.

Consumer knowledge was infrequently checked in the pre-demonstration audiotaped conversations with staff assessing what the person knew in 13% of recorded interactions. This was particularly the case with repeat prescriptions where pharmacy staff frequently assumed (possibly correctly) but did not test a degree of knowledge on the part of the consumer. Many of these interactions were straight handovers, with minimal instruction which might cover dosage and how often to take the medicine.

After the first small group training sessions the team focussed on Step 1. They approached this by asking *"tell me what the doctor has told you",* a question suggested by Workbase. The Workbase trainer also explained how completing Step 1 and understanding what the person knew helped with Steps 2 and 3.

Pharmacy staff and the lead pharmacist felt this approach was working well.

> *"Step 1 has been revolutionary really – tell me what the doctor has told you….."(Pharmacy Trainer)*
>
> *"We have all got quite good at doing Step 1 – definitely a change. It opens up a can of worms and a conversation. Sometimes they haven't understood the doctor and then they do ask. Just comments like that." (Pharmacy staff)*

Checking prior knowledge was an area of change from the first assessments of audiotaped interactions. In review of post-demonstration audiotaped conversations the number of conversations where the consumer was asked about what they knew increased to 41% (Table 2). The change was also noticeable through onsite observations. The reviewer of the audiotaped transactions noted that while several pharmacists opened the conversation with the consumer by asking what the doctor had explained about the medicine, if the response from the consumer covered the dosage only, the pharmacists did not always go on to provide fuller information.

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[33] As outlined in the training material developed by Workbase

Table 2: Information provided by the pharmacy staff in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
Length of the interaction (seconds)	101 (8-506)	115 (36-286)
Number of technical terms used	95% No technical terms	96% No technical terms
Names of medicines	61% Common names only 0% Technical names only 7% Both 33% No name	81% Common names only 0% Technical names only 0% Both 19% No name
The consumer was asked what they know	13%	41%
The consumer asked questions	19%	31%
Teach-back was used	6%	43%

6.2. Step 2: Building health literacy skills and knowledge

Step 2 is about pharmacy staff providing information to consumers about their medicines to build the consumers' health literacy skills and knowledge. The trainer and pharmacy staff felt Step 2 was also going well with staff focussing more on tailoring information to the consumer's needs.

> *"They are starting to build the relationship with their regulars. For example by asking "tell me about the system you use to remember your medicines?" (Pharmacy Trainer)*

Other information such as confirming the person's name and who the medicine was for was exchanged when the prescription was handed over. As with the pre-demonstration assessments of interactions, pharmacy staff were more likely to assume that consumers collecting repeats knew everything. Some of these were still straight handovers. The fullest explanations came when prescriptions featured a change in dose. In some cases the minimal discussions over repeats may be appropriate. In other cases, as staff explained, they found it difficult to provide detailed information to consumers collecting repeats because:

> *"When it is repeats the people already know what they need to know".(Pharmacy staff)*

> *"I find it easier with new prescriptions rather than repeats. [New people] are a bit more open to it." (Pharmacy staff)*

6.3. Step 3: Checking or Teach-back

Teach-back or checking about what the consumer knew was heard in 6% of the pre-demonstration recorded interactions. Pre-demonstration, although not specifically checking back, staff talked about strategies they used to work out whether people had understood what they were saying. Others asked whether there was anything else they could help with or had elicited information from consumers during the interaction. For example:

- Going by the person's body language or look to see if they "got it": *"You get a vibe from people"*. Several mentioned that you could see it *"in the eyes".*
- If a consumer didn't seem to understand then staff would try explaining things a different way and/or asking another staff member to explain to them as often another person could connect where they had not – *"a different way and a different rapport can help".*

Nearly one-half (43%) of post-demonstration interactions that were audio-assessed included some teach-back (Table 2). Although open-ended questions were being used more effectively (Table 3) there were still instances of interactions being closed with “any questions?” Table 3 provides a summary of ratings of a small sample of all the interactions that happen in the pharmacy. The main interest in the table is the change in approach from pre- to post-demonstration and not the actual percentage values.

Table 3: Overall changes in recorded interactions

Information from recorded interactions	Pre-demonstration	Post-demonstration
	Average, quite or very well	Average, quite or very well
Speed pharmacists talked	73%	100%
Asking the person what they already know	9%	35%
Giving information in logical steps	47%	85%
Helping people anticipate the next steps	2%	27%
Giving Information in manageable chunks	48%	88%
Using resources such as written or visual material	41%	21%
Reviewing the medicines the person is on	5%	21%
Asking closed questions	36%	20%
Asking open questions	0%	20%
Emphasising key points	16%	48%
Teach-back	7%	16%
Opportunities allowed for the consumer to ask questions	14%	38%
Providing practical advice	35%	70%
Quality of interaction from a health literacy perspective	11%	55%
Consumer’s engagement	11%	41%

In discussions, many staff said they were finding Step 3 more difficult. Some found it difficult because it was a different approach, others felt uncomfortable checking on consumer knowledge. The term “teach-back” may not be the best term to use as several staff made comments about feeling like school teachers or feeling they were testing consumers.

> *“Step 3 is a challenge as we need to stop talking and start listening” (Trainer)*
>
> *“Step 3 was difficult because we didn’t want people to feel silly.” (Pharmacy staff)*

Although Step 3 was more difficult, the team saw the value in doing it and had *“had some surprises”.*

> *“Checking back – sometimes they miss things such as ‘with food’. They often don’t understand increasing or reducing doses. They hear the first bit and then stop listening. Now we are aware that people don’t read labels we are more inclined to say – it is really important to read the label, especially when they are collecting something for*

someone else- 'do you think it will be clear to them what is written on the label?'" (Trainer)

7. Putting the Training into Practice – Consumers

A number of data collection methods were put in place to evaluate any changes from the consumer perspective. These included:

- Asking consumers what they were told when they picked up their medicines;
- Asking consumers questions about their knowledge of their medicines; and
- Assessing audiotaped interactions.

These different information sources provided both qualitative and quantitative information from the consumer perspective. Interpretation of the information from consumers was limited by different profiles of consumers in the pre-demonstration (summer) and post-demonstration (winter) site visits, and by the relatively short time between the pre- and post-demonstration visits.

7.1. Consumer Profile

The profiles of the consumers who agreed to be interviewed for the pre- and post-demonstration site visits are compared in Table 4. The increased prevalence of winter colds and flus during the post-site visit resulted in a higher proportion of younger consumers, a lower proportion of regular consumers and those collecting medicines for themselves, and possibly contributed to the slightly different gender and ethnic profiles.

Table 4: Profiles of Interviewed Consumers

	Pre-demonstration (n=124)	Post-demonstration pilot period (n=100)
Gender	57% females 43% males	53% female 47% male
Ethnicity	90% European 6% Māori 0% Indian 4% Other ethnic groups	79% NZ European 13% Māori 4% Indian 4% Other ethnic groups
Age group	10% under 25 years 30% 25-45 years 60% 45+	26% under 25 years 28% 25-45 years 46% 45+
Consumer profile	81% regulars 82% were collecting medicines for themselves 28% were collecting medicines for the first time 35% picked up one medicine, 35% two medicines, 13% three medicines and 9% four or more[34]	74% regulars 70% were collecting medicines for themselves 39% were collecting medicines for the first time 43% picked up one medicine, 29% two medicines, 15% three medicines and 13% four or more[35]

3. Profile information was collected from consumer questionnaires and recordings
4. Post-demonstration this information was collected during interviews with consumers

[34] It was not possible to tell how many medicines were collected from 10% of recordings
[35] It was not possible to tell how many medicines were collected from 10% of recordings

7.2. Consumers' Recall

In the pre- and post- demonstration site visits, consumers were asked what they recalled being told in their conversations with the pharmacists (Table 5). The proportion of consumers who recalled being told the name of their medicine was similar in the pre-and post-demonstration visits. There was a tendency for more consumers to remember being told about what their medicine does, how to take their medicine and how much to take. The difference may reflect different consumer profiles.

Table 5: Information consumers recalled being told about their medicine that day

Type of Information Was the consumer told…	Pre-demonstration	Post-demonstration	Post-demonstration (includes told previously)
The name of the medication	59%	57%	88%
What the medication does	48%	54%	90%
How to take the medication	64%	70%	97%
How much of the medicine to take	62%	71%	98%
How long to take the medicine	49%	66%	96%
The side effects of the medication	33%	31%	63%
The harmful effects of the medication	28%	32%	64%
How to store the medication	17%	16%	40%

Post-demonstration, whether consumers were told this information previously was also recorded

7.3. Consumers' Overall Knowledge

The health literacy training was more focused on ensuring that consumers understood their medicine and how to take it. It was difficult to measure empirical changes in consumer understanding as in the pre-demonstration interviews 81% of consumers said they understood their medicines very well. In the post-demonstration surveys the proportion who said they understood their medicine very well had decreased as had the proportion who did not understand their medicine (Table 6). Examples provided by pharmacy staff in the post-demonstration discussions indicated that although consumers thought they understood their medicines they may be taking them incorrectly.

Table 6: Consumers' perceptions of their overall knowledge

Overall knowledge	Pre-demonstration	Post-demonstration
Understanding of medicine	81% very well 18% average 1% not well	72% very well 26% average 2% not well
Anything the consumer would like to discuss further	Not recorded	97% No 3% Yes
Any questions not asked	96% no questions	95% no questions

In the pre-demonstration survey, many consumers commented that the pharmacy staff were *"great"* and *"approachable"* as well as explaining everything very well. These comments were consistent with those made in the post-demonstration survey. People who said they did not understand their medicine well said it was because they:

- Did not fully understand their condition;
- Understood the basics but not the details such as side effects or how the medicine works;
- Could not remember so much information;
- Had everything well explained when the medicine was initially prescribed but have since forgotten details; and
- Knew as much as they wanted to know.

Consumers in the pre-demonstration recorded interactions infrequently asked questions (19%). In the post-demonstration interaction 31% of consumers asked questions. In both phases, when we interviewed consumers almost all said they did not have any questions they had not asked. In the post-demonstration phase those who did have questions they did not ask explained that they would ask their doctor.

The level of engagement of consumers, assessed through audiotaped interactions, also increased between the pre- and post-demonstration interactions.

The extent to which consumers think they understand their medicines highlights one of the challenges to pharmacy staff in explaining information to people who feel they know it all already and are in a hurry and do not want to listen.

> *"Could we encourage patients to ask [us questions] as well" (Pharmacy staff)*

7.4. Feedback from Consumers

In the consumer survey few (three) consumers said they had noted changes in the pharmacy that related to health literacy, and commented that staff explained things better. Many commented that the pharmacy was very good before.

We also asked pharmacy staff whether they had any feedback from consumers about changes in the pharmacy. Staff had mainly had positive feedback from consumers and provided examples:

> *"Sometimes they tell you that you are really good at explaining it." (Pharmacy staff)*

> *"That man this morning was appreciative that we were trying to help him. He said that no-one has talked to him like this before." (Pharmacy staff)*

> *"No specific feedback from customers but lots of positive feedback and you can tell that people really appreciate it, going the extra mile. [The training] has been useful even for over the counter counselling and people have shown appreciation for going that extra mile rather than letting them pick a product off the shelf and selling it to them. I definitely feel that it is different from before." (Pharmacy staff)*

Staff had received negative feedback from a few consumers. One person interviewed said she had noticed that staff now seem to ask more questions but that she didn't like being asked questions by pharmacy staff:

> *"It is not the pharmacist's role to ask questions. The doctor should explain everything and people should read the leaflet." (Consumer)*

> *"We have had a few people who just don't want to listen to you. And they will bluntly say 'I know what I am doing and walk out'. That sort of puts you down a bit for the next person you have to talk to. That was hard for me as well but I had to keep going and be positive." (Pharmacy staff)*

Negative comments knocked staff confidence and made it harder for them to put the training into practice. Including training about responding to negative comments might be a useful addition to the training package.

8. Overview

Changes in the pharmacy were evaluated before and after the demonstration period.

8.1. Pharmacist Trainer

Following the demonstration period, the lead pharmacist felt her pre-training measures of success for the project had been achieved:

- Changes in practice: The team are now aware that consumers do not necessarily understand what they say. The Three Step approach is well integrated into practice at the pharmacy

  "We were under the assumption that when we said it they had got it – they had understood. And now we know that they haven't. Or when you ask them what they have heard what you hear them say is completely different."(Pharmacy Trainer)

- Changes for consumers

  "It's those conversations when someone says – actually no-one has ever told me that before – you realise you have made a difference – you don't get that all day everyday but when it does I am glad I knew how to get that information across." (Pharmacy Trainer)

- Professional development: The team are working together and have used the training as a professional development initiative

  "As far as professional development goes it has been amazing and outcomes for customers – hard to measure but we have built some relationships there."(Pharmacy Trainer)

- Taking responsibility for ensuring the consumer understands their medicine

  "I had one this morning when we asked what the doctor had told them and he said 'nothing'. There are huge gaps we can fill. It's going to be quite exciting." (Pharmacy Trainer)

- Staff engagement and confidence have increased

  "I really think that they have felt they are making more of a difference."(Pharmacy Trainer)

8.2. Staff

Overall, all staff felt that taking part in the training had been worthwhile for them personally because it had:

- Increased their knowledge about health literacy:

  "Yes I think so. It is a completely different concept. Good to highlight it for us especially as we are a pharmacy that prides itself on counselling." (Pharmacy staff)

  "Yes, it has been a good process. Yes, it has been interesting and interesting seeing what other people are doing. I definitely think it is a positive thing and has opened your eyes to a lot more things." (Pharmacy staff)

"How I used to talk to customers and how I talk now – I have made a big change and I didn't think I would. I thought what I was saying to customers was great and they understood me. But now I've learnt that they … the way I word things now is a lot better." (Pharmacy staff)

- Increased confidence:

"It has been really good to make me think about what I am doing. I am growing in confidence and this has helped me to grow….definitely." (Pharmacy staff)

- Increased satisfaction and valuing of their role:

"You always get a good feeling when you feel like you have helped someone." (Pharmacy staff)

"Makes you feel like you are here for a reason when you are helping someone." (Pharmacy staff)

8.3. Consumers

Changes for consumers were assessed in terms of the information that was provided to them by the pharmacists and whether their medicines were explained in a way that helped them to understand them. Information from the observation and the assessment of pharmacy recordings suggests that there have been significant changes in the way pharmacy staff interact with consumers. Pharmacy staff were also able to provide examples where using the techniques they had learnt as part of the health literacy training they discovered that a consumer had been taking their medicine incorrectly or needed help:

"I had an example the other day with …. She thought it was 4 days on 4 days off – it would have been probably picked up anyway. She was supposed to use it for 4 days." (Pharmacy staff)

"People are more likely to ask questions now – 1 or 2 out of 10 will ask questions ... It's about leaving that space and opportunity." (Pharmacy Trainer)

8.4. What has Worked Well

Participating in the training was beneficial for staff. The pharmacy trainer and many of the staff commented about how much they had learnt about health literacy, and in some cases more than they had expected to learn.

The pharmacy team felt that the Three Step process suited pharmacies and that the universal precautions approach was important. The 'train-the-trainer' approach worked in this pharmacy and the dedicated time for training within working hours was valued by staff. The timing of the workshop provided by the Workbase trainer after staff had had a chance to receive initial training and put that into practice was successful. Pharmacy staff and the pharmacy trainer emphasised the value of having the workshop with an external expert.

Pre-demonstration staff said *"we ask them if they have had the meds before and if they have we do not push the issue"*. Putting the training into practice provided the pharmacy team with some surprises about how little consumers actually knew about their medicines. Many of the assumptions they had made previously, especially about the regular consumers, were incorrect.

"You do get some people who have no idea and they have been taking it for ages. That has been happening a few times." (Pharmacy staff)

"I didn't know how little people knew." (Pharmacy staff)

8.5. Challenges

In the pre-demonstration discussions, staff thought that time would be a big challenge. Staff noted that there are times of day when people are in a rush. The evaluators observation was that staff were very considerate and wanted to minimise waiting times for consumers but maybe on occasion consumers would be prepared to spend a little more time discussing their medicine. The pharmacy owner changed the staffing roster to try and mitigate the time challenge during busy periods. Staff found that putting in place Step 1 and finding out how much a consumer already knew helped use time more effectively.

> *"Time has not been as big a problem as expected. Sometimes you are really, really busy and can only do the basics. We need to get good at getting it across in a suitable amount of time – or get them to come back and make a time." (Pharmacy staff)*

Step 3 remains an on-going challenge for the pharmacy team, both in terms of confidence and consumer responses.

> *"I still struggle with the 'tell me what I have just told you' questions. It depends on the person. Maybe it's our culture too of not questioning people too much. I quite like [Workbase trainer] approach– tell me what you are going to do when you get home. It is a tough one and that is where I struggle." (Pharmacy staff)*

> *"I didn't want to sound like a school teacher....I still have trouble with that [Step 3] now but I am getting better." (Pharmacy staff)*

Another major challenge for pharmacy staff are those consumers who do not consider it is the pharmacist's role to ask them questions or those consumers who just do not want to know about their medicines.

> *"Some of them really want to know and some just don't care." (Pharmacy staff)*

> *"Some people say they would rather not know any more information. [They made a chart for someone and he said] 'I don't want it I'm not taking it'." (Pharmacy staff)*

> *"Afterhours people just want to get their medicine and get out of there." (Pharmacy staff)*

> *"Some people that have been really taken aback by you asking. …. People are not used to in some pharmacies being asked stuff like that and they do not expect it." (Pharmacy staff)*

8.6. Sustainability of Changes

The demonstration period ran for three months. Three months was sufficient time to see some changes in what staff do but it will be important to continue to maintain momentum through on-going training and support. The Site B lead pharmacist intends to continue to develop health literacy at the site through:

- The monthly memo of what is happening – *"putting a reminder in there, noticing what is going well, not slipping back into old habits."*
- Building on the health literacy of consumers with long term chronic conditions through the Long Term Care Contract.

The lead pharmacist was adamant that *"we won't be going back".*

Pharmacy staff also felt they had a strong foundation in health literacy and would continue to work at improving their health literacy skills.