

THE COLLEGE OF  
FAMILY PHYSICIANS  
OF CANADA



LE COLLÈGE DES  
MÉDECINS DE FAMILLE  
DU CANADA



BEST ADVICE

# Health Literacy in the Patient's Medical Home

MAY 2016

*The College of Family Physicians of Canada gratefully acknowledges the assistance of  
Dr Cathy MacLean and the CFPC's Patient Education Committee in the preparation and drafting of this guide.*

©The College of Family Physicians of Canada 2016  
*All rights reserved.*

## INTRODUCTION

Health literacy\* is a person's ability to access, understand, evaluate, and communicate information about their own health. In Canada, about 60% of the general population and 88% of seniors struggle with health literacy challenges.<sup>1</sup> The ability to make sense of relevant health information is crucial to patients making informed health care decisions, and as such health literacy is a key component of the Patient's Medical Home (PMH).<sup>2</sup>

The first pillar of the PMH is the concept of patient-centredness.<sup>3</sup> Without the ability to understand information about health, patients cannot fully take part in their own care. If they do not understand information, their care is not truly patient-centred. Without systems in place to confront health literacy issues, a practice will have a difficult time reaching the goals of a PMH.

As family physicians, we may not be able to tell who has low health literacy based on an initial assessment or subjective judgment. It is difficult to accurately assess what patients understand. Patients may appear to have high comprehension skills when in fact they are simply hiding their limitations.

A number of factors can lead to a poor understanding of health information. Education, language, access to resources, and age can affect a person's health literacy skills. People who are vulnerable, who have low financial or social status, or do not have a high school diploma are most likely to struggle.<sup>4</sup> However, anyone can have problems, regardless of education level or social status. Often, medical information presented to patients is not easy to grasp.

### Consider this story from Dr Paul Sawchuk, a Winnipeg family physician:

*"I have a patient in hospital who has rheumatoid arthritis. She was offered hydroxychloroquine and cholecalciferol. She refused them because she didn't recognize that they were actually different formulations of the Plaquenil and the vitamin D she had been prescribed before. This patient has a master's degree. It was a reminder to me about how complex our system is and how difficult it is even for very literate patients to make informed decisions even on a hospital ward staffed with nurses and pharmacists. It made me wonder why the only patient refusing her meds was the most educated one who expected to know what she was taking and why she was taking them. It makes me wonder what we would find if we surveyed the other patients about their knowledge of the pills they were given this morning."<sup>5</sup>*

\*Appendix A contains definitions for the terms used in this guide.

Health literacy is not the same as general literacy. Language barriers exist in a country as diverse as Canada. Sharing the same language does not guarantee understanding. New translation technology might help when the languages are different, but will not help with health literacy problems. Individuals who struggle with health literacy may have trouble with:

- Understanding basic health information available in the doctor's office, pharmacies, and through media
- Realizing health consequences that result from daily choices
- Grasping the details of their condition, or how to manage it
- Keeping appointments; this can limit access to preventive measures, such as disease screening, diagnostic testing, and management options<sup>6</sup>
- Worsening chronic conditions because effective management may be more of a challenge; poorly managed chronic conditions are associated with frequent hospitalizations and use of emergency services<sup>7</sup>

The objective of this guide is to assist family physicians help their patients overcome health literacy challenges.

Family physicians are leaders in patient-centred care. They are the best ones to recognize problems their patients have with health literacy. Family physicians can promote greater attention to health literacy on many levels. The implications of poor literacy—health and otherwise—to society are vast. Tackling the wide range of literacy issues in society, although important, is beyond the scope of this guide. The specific objectives include:

- Improve physician communication with patients and focus on skills that affect health literacy
- Increase the use of health literacy assessment tools
- Use health literacy models to bridge the gap between health information and a patient's understanding and willingness to change behaviour
- Help physicians access, recommend, and provide resources that match patients' literacy needs

Making simple changes to the way family physicians organize their practices and interact with patients can help them care for patients with health literacy challenges. This includes enhancing physician and staff communication (verbal and written), using visual aids and other resources appropriately, and applying helpful patient education strategies.<sup>†</sup>

---

<sup>†</sup>Throughout this guide, **communication** refers to both verbal and written unless specified otherwise; **physician** refers to family physician, unless specified otherwise.

## HEALTH LITERACY IMPLEMENTATION STRATEGIES

The College of Family Physicians of Canada (CFPC) broadly refers to three levels of care in guides: care in the practice, care in the community, and care in society. These are also referred to as micro, meso, and macro levels of care. These are terms the CFPC has adopted, using its social accountability lens. This guide focuses on issues in the practice. We acknowledge that many literacy challenges that affect patient health are based in the social determinants of health—that is, at the community and societal levels. The [Canadian Task Force on Preventive Health Care](#) makes use of many of the tools and decision aids referred to in this guide or in the resource list in Appendix C in the development and production of their own material.

### In the practice

Effective communication is important when delivering health information. The PMH principle of patient-centred care cannot be supported if patients do not understand what they are told or shown. *The Health Literacy Universal Precautions Toolkit* from the Agency for Healthcare Research and Quality (AHRQ) is a comprehensive resource aimed at the practice level and is available online (see Appendix C for more information). Many patients do not want to admit they have difficulty reading or understanding information. Shame and stigma are commonly associated with low literacy levels. The best approach is to recognize how important the relationship with the patient is, and create a non-judgmental environment. While the tools outlined in this guide are useful with patients who are at a low health literacy level, they can apply to all patients.

Enhancing communication with patients is perhaps the most important recommendation in this guide. Using plain language is always a good practice to follow, but it is crucial for patients with low health literacy levels. This applies to all forms of communication. The Nova Scotia Department of Health and Wellness's guide on health literacy and cultural competence also provides examples of how doctors can identify opportunities for improvement in these areas (see **Figure 1**).

Every practice should use plain language in interactions with patients every day. The terminology and language that health professionals use is often technical and laden with jargon. While health professionals may be comfortable using jargon, patients find it confusing.

**Figure 1.** The Nova Scotia Department of Health and Wellness's 2010 resource on health literacy.



Source: Nova Scotia Department of Health and Wellness.

Practices focused on health literacy can eliminate jargon by using plain language guides or charts. Also think about non-medical terminology that can be simplified with plain language options. The options presented in **Tables 1 and 2** can help you replace jargon with plain language.<sup>8</sup>

**Table 1. Plain language options for medical terms**

Medical Term	Plain Language Option
Contraception	Birth control
Vomit	Throw up
Analgesic	Pain pill (eg, Tylenol)
Cardiac	Heart
Pharyngitis	Sore throat
Bacteria/virus	Germs
Myocardial infarction	Heart attack
Otitis media	Ear infection
Cellulitis	Skin infection
Hypertension	High blood pressure
Negative (test result)	Good outcome/no disease
Benign (tumour)	Not cancer
Fracture	Broken bone
Inhaler	Puffer

Source: Nova Scotia Department of Health and Wellness.

**Table 2. Plain language options for non-medical terms**

Non-Medical Language	Plain Language Option
Orally	By mouth
Modify	Change
Ambulate	Walk
Optimal	Best way/choice
Additional	More
Adequate	Enough
Advise	Tell
Ailment	Sickness
Beverage	Drink

Source: Nova Scotia Department of Health and Wellness.

### Use the **SOS memory aid** to screen for patients with limited health literacy:

**S**chooling: concerns if below **S**econdary **S**chool  
**O**pinion of own reading ability: concerns if **O**nly an **O**kay reader  
**S**upport needed for reading: concerns if **S**ometimes **S**olicits help

When you are with a patient, look for cues that tell you the patient may have low literacy (see **Table 3**).

Having a basic understanding of the patient's health literacy from the start is a practical way to guide the direction of future visits. It is easy to assume that patients understand what is being discussed during visits. Even when asked, some patients may not admit they do not understand.

### Use plain language in written and visual materials, following these principles:<sup>9</sup>

- Focus on the patient's role in their own care
- Write at a Grade 5 or 6 reading level; avoid words with three or more syllables and use short sentences
- Use white space to improve readability
- Use diagrams/images as appropriate
- Avoid medical jargon and define medical terms using plain language
- Use the active voice (eg, I and you)
- Use bullet points instead of paragraphs for written information
- Reflect the cultural diversity of the practice environment/community
- Use positive, active, supportive, and specific language

**Table 3. Patient behaviour cues that may point to low health literacy**

Patient Behaviour	Cause	Possible Intervention
Shows up to appointments with someone else to help "keep track of things"	Patient may want to mask literacy level by asking a trusted friend or family member with better literacy to sit in on appointments	Welcome the extra person as a partner in patient care and check on their understanding, but deal with the patient directly and not solely with the surrogate
"Forgets" glasses, expresses a lack of interest in or frustration with written material, or uses another way to avoid filling out forms	Understanding forms while feeling under pressure may overwhelm a patient with a low literacy level; taking forms home for assistance from friends/family could be a coping mechanism	Alter the interaction by creating a structure for staff to fill out forms for the patient as part of a question-answer session
Tunes out or avoids talking about medication or prescription routines	Patient may not be able to follow instructions on medication forms, and therefore may not take prescriptions fully or correctly	Work through a medication routine with the patient to check on understanding of the particular regime, using visual aids, props, or role playing



## Special situations and health literacy strategies

*Illiteracy has different consequences depending on the patient's medical issues. Some special circumstances require more specific approaches. For example, one health literate care model suggests that using health literacy interventions will help patients manage their chronic diseases.<sup>7</sup> In this case, regularly using health literacy tools can reduce literacy issues, and improve clinical interactions and patient self-management. The CFPC Best Advice guide Chronic Care Management is another useful resource.<sup>10</sup> Similar applications in mental health interventions have also been proposed.<sup>11,12</sup>*

Often, there are gaps between health information, patient understanding, and behaviour change. There are practical models that can be adapted and applied to help with literacy challenges. All of these models reflect a patient-centred approach and uphold the principles of the PMH. Most models follow a few basic principles:

- Focus on the basic medical complaint using plain language, rather than focusing on the literacy issue
- Use relevant visual aids or examples, pictures, and drawings
- Adapt easily to many clinical settings; have broad applicability

The following are some practical approaches to use in the office with all patients.

### “Teach back”

The “Teach back” (or “teach me”) method<sup>13</sup> is based on patient-centred communication. When physicians share new information with a patient, they should ask a series of questions. Using plain language makes this tool all the more useful. The goal is to have the patient “teach” the physician what was just discussed. This checks the patient’s level of understanding. It also acts as a bridge between physician and patient. For example:

- “We’ve talked about a lot of things today and I want to make sure you understand everything. Can you tell me what you’re going to do when you get home?”<sup>14</sup>
- “Now that we’ve looked at how to use this puffer, can you show me how you plan to use it?”
- “Can you tell me how you will manage your diabetes at home?”



## Ask-Me-3

Ask-Me-3,<sup>15</sup> from the National Patient Safety Foundation, creates a short but powerful conversation between patient and physician. Physicians should encourage patients to ask these three simple questions when seeing any health care provider:

- “What is my main problem?”
- “What do I need to do?”
- “Why is it important for me to do this?”

Asking each question is designed to prompt the physician to answer clearly, and allows the patient to file answers under clearly written questions.

## Understanding risk

Risk can be difficult to understand, no matter the education level or language skills. If health risks are not properly explained, patients cannot make informed decisions about treatment or care plans.

**Table 4** contains strategies<sup>16</sup> to simplify discussions of risk during patient interactions.

**Table 4. Strategies to address limited numeracy**

Strategy	Example
Express probabilities in terms of natural frequencies rather than percentages	“One out of 20 people (instead of 5% of people) get colorectal cancer in their lifetime.”
Provide absolute risks rather than relative risk; this is particularly important when risk reduction is small	“At your age and with your family history, the chance of developing this kind of cancer is about 2 out of 1,000, instead of 1 out of 1,000 for people without your family history,” rather than saying that the risk “doubles” or increases by 100%
Avoid using only positive (gain) or negative (loss) risk framing, and instead use both	“Pressure from the camera that passes through the whole wall of the colon is very rare. This happens in less than 1 out of 1,000 people. In other words, it doesn’t happen in 999 people.”
Keep time spans at about 10 years if possible, rather than talking about lifetime risk	To a 60-year-old man: “One or two out of 10 men your age will get colorectal cancer in the next 10 years.”

Adapted or reprinted with permission from Health Literacy in Primary Care Practice, July 15, 2015, Vol 92, No 2, *American Family Physician*. Copyright © 2015 American Academy of Family Physicians. All Rights Reserved.

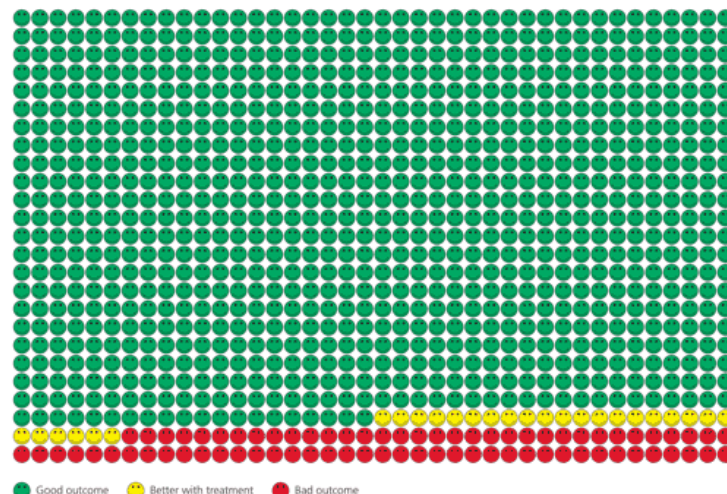
Many patients do not want to admit they have difficulty reading or understanding information. Shame and stigma are commonly associated with low literacy levels. Knowledge of health practices varies among cultures, regions, education levels, and ages. The best approach is to recognize how important the relationship with the patient is, and create a non-judgmental environment. Know the people your practice serves and tailor your approach to their needs. While the tools outlined in this guide are useful with patients who are at a low health literacy level, they can apply to all patients.

It also helps to relate risk to everyday experiences, or describe risk using plain language or terms that are more easily understood. For example, state the risk in whole numbers instead of fractions (eg, one out of 10, rather than a 10% chance).<sup>17</sup> To use a real world example, explain the risk of being hit by a car when jaywalking instead of crossing at a traffic light. The goal is to relate the discussion about medical risk to an example found in daily life that the patient can understand.

Another way of explaining risk is through visual aids,<sup>18</sup> such as the one shown in **Figure 2:**

**Figure 2. Cates Plot: Visualizing the risk of negative outcome.**

**Cates Plot Showing Risks and Benefits of Aspirin Chemoprevention**



Reproduced with the permission of, Dr Chris Cates, VisualRx, [www.nntonline.net](http://www.nntonline.net).

These types of diagrams can help patients understand the risks and benefits associated with different treatments and interventions. They can also help patients understand what happens when a treatment is not selected (see **Figure 3**).<sup>19</sup> These kinds of aids work better with visual learning styles.

**Figure 3. Taking a medication versus not taking a medication.**

**1 What is my risk of having a heart attack in the next 10 years?**

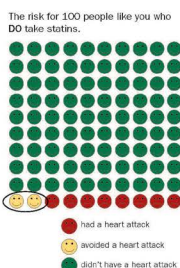
**NO STATIN**

90 people DO NOT have a heart attack (green)  
 10 people DO have a heart attack (red)



**YES STATIN**

90 people still DO NOT have a heart attack (green)  
 2 people AVOIDED a heart attack (yellow)  
 8 people still DO have a heart attack (red)  
 98 people experienced NO BENEFIT from taking statins



AVERAGE (<10%) | © 2010 Mayo Foundation for Education and Research. All Rights Reserved.

**2 What are the downsides of taking statins (cholesterol pill)?**

- Statins need to be **taken every day** for a long time (maybe forever).
- Statins cost money. (to you or your drug plan)
- **Common side effects:** nausea, diarrhea, constipation (most patients can tolerate)
- **Muscle aching/stiffness:** 5 in 100 patients (some need to stop statins because of this)
- **Liver blood test goes up** (no pain, no permanent liver damage): 2 in 100 patients (some need to stop statins because of this)
- **Muscle and kidney damage:** 1 in 20,000 patients (requires patients to stop statins)

**3 What do you want to do now?**

- ☐ Take (or continue to take) statins
- ☐ Not take (or stop taking) statins
- ☐ Prefer to decide at some other time

Reproduced with permission of Mayo Foundation for Medical Education and Research. All rights reserved.

**Office environment:** You can help patients by making sure your office considers different levels of health literacy in the materials available. Use clear, plain language in all areas including signs.

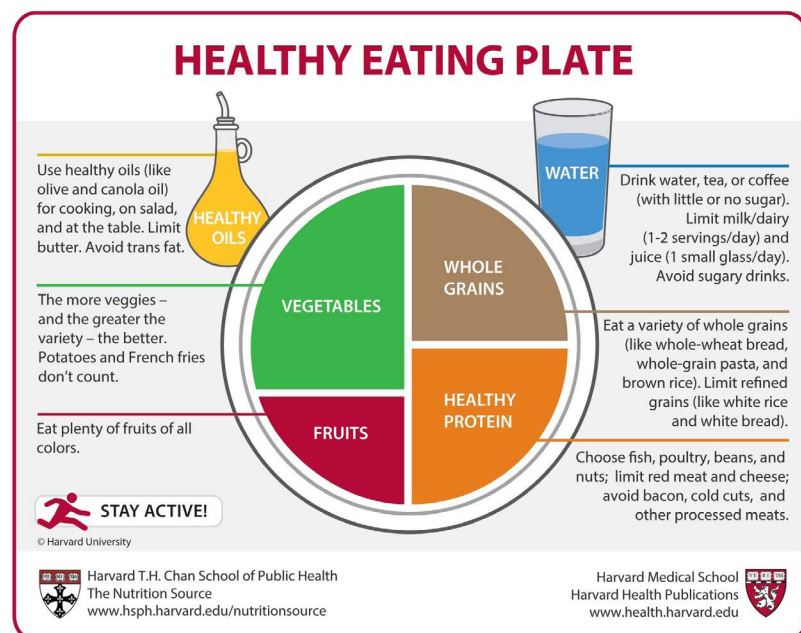
**Office communication:** Make sure staff are aware of health literacy challenges to reduce the chance of problems during patient visits. Start at reception, and have staff give simple, specific, and clear instructions. They should have patients repeat the instructions until they are confident that patients understand what is being asked of them. Provide patients with plenty of chances to ask questions about instructions. Varying the wording with each response can improve the results.

Physicians and staff should give the most important information top priority to ensure understanding. Finally, it helps to summarize the visit or instructions into three key points.<sup>17</sup>

**Office materials:** The Agency for Healthcare Research and Quality\* (AHRQ) has an excellent guide, the *Patient Education Materials Assessment Tool (PEMAT)*.<sup>20</sup> Use the guide when writing and evaluating patient materials. It can help determine whether patients will understand and be able to use the materials. It can also help you decide whether materials can be used in your practice. Any materials you use for patient appointments should make it easier for patients to understand their health issues.

For example, **Figure 4** helps physicians show patients proper serving sizes and food options. This may be useful when working with patients who have diet concerns.

**Figure 4. Visual guide to healthy eating**



\*See Appendix B for other relevant AHRQ resources.

Copyright © 2011 Harvard University. For more information about The Healthy Eating Plate, please see The Nutrition Source, Department of Nutrition, Harvard T.H. Chan School of Public Health, [www.thenutritionsource.org](http://www.thenutritionsource.org), and Harvard Health Publications, [www.health.harvard.edu](http://www.health.harvard.edu). Reproduced with permission.

## In the community

Health literacy lends itself well to another pillar of the PMH—Evaluation and Quality Improvement. Involving patients in their own care is the key to providing patient-centred care. One of the most effective methods is using continuous quality improvement and patient feedback tools. You can find more information about the tools in the CFPC Best Advice guide *Patient-Centred Care in a Patient's Medical Home*.<sup>3</sup>

Ask for feedback and reviews to help identify where patient literacy barriers exist. Use surveys to gauge how well the practice improves patient health literacy. Through evaluation, patients can help practices simplify the language they use on a daily basis. They can provide clear guidance on the level of health literacy within the patient community.

## In society

Physicians can encourage increased awareness and interventions to support literacy in society as a whole. Upstream advocacy means working outside of your practice to influence larger-scale issues such as literacy. What could you focus on? Where and how could you get involved? Many physicians are keen to engage. With that in mind, look for opportunities as part of your professional role with refugees, in schools, in adult reading programs, and other initiatives that support improving literacy in your community.

One of the 10 pillars of the PMH is Education, Training, and Research. PMHs make ideal sites for teaching. Practising physicians can offer guidance about the daily challenges in health literacy from their own professional experience. They can highlight an issue that is often not well understood by new physicians. Using this experience to their advantage, physicians can advocate for more opportunities for students to directly observe clinical communication methods discussed in this guide and elsewhere by:

- Building links with medical programs and making the practice available to host learning opportunities for students. This is a good way to improve awareness of health literacy challenges in the long term. Specifically, the way medical students acknowledge and interpret their role in reducing literacy challenges in their future practice.
- Engaging medical students in group appointments. Encourage them to spend time with other members of primary care teams that help to address literacy-related issues.
- Involving residents in creating education materials and learning “teach back” skills and other methods that engage patients as partners in their health care. These family medicine graduates will start their practice with the skills needed to address health literacy.

Physicians can work to address health literacy beyond their everyday practice:

- Encourage workplaces, including hospitals, to provide clear signs and health education materials suitable for all literacy levels
- Share details about successful interventions through conferences and meetings
- Give examples of literacy aids to other physicians and primary care teams, spreading the literacy message to others



## CONCLUSIONS

Often not seen as a barrier to informed health management, low health literacy can profoundly influence outcomes for patients. Because the challenges can be difficult to see, it is easy to miss the fact that a patient does not understand what happens during an appointment. Physicians see many patients each day, making it difficult to spot the ones who have literacy challenges. It is not easy for patients to be full partners in their own care when they do not understand the effect of the information on their health. This weakens the concept of patient-centredness in the PMH, on which this guide is based.

Think of the suggestions presented here as a set of tools and refer to more comprehensive resources such as the AHRQ *Health Literacy Universal Precautions Toolkit* (Appendix C). Literacy challenges frequently present in patients who are also affected by the social determinants of health. You can find more information in the CFPC Best Advice guide *Social Determinants of Health*.<sup>21</sup>

You can make small changes to your practice to help reduce the complications associated with low health literacy. Start by building on the foundation of patient-centred communication. By applying some of the tools and approaches presented in this guide, you can identify and help patients with low health literacy.





## *Appendix A: Definition of Terms*

**Cultural competence:** Regarding health literacy, cultural competence enables physicians to deliver services that lead to positive health outcomes. They are aware of and respect their patients' health beliefs, practices, and needs.<sup>22</sup>

**Functional literacy:** Functionally literate persons can engage in activities that require literacy in order for the group and community to function. They can continue using reading, writing, and calculation to develop themselves and the community.<sup>23</sup>

**Health literacy:** The degree to which individuals can obtain, process, understand, and use the basic health information needed to interact with physicians, make appropriate health decisions, follow treatment instructions, and navigate the health care system.<sup>25</sup>

**Illiteracy (general):** Persons who are illiterate cannot, with understanding, both read and write a short simple statement on everyday life.<sup>23</sup>

**Literacy (general):** A person is literate who can read and write a short, simple statement on everyday life.<sup>23</sup>

**Numeracy:** The ability to use and understand numbers in daily life. For example, reading and understanding nutrition details on food labels, blood sugar readings, and so on.<sup>24</sup>

**Patient education:** Topics included are health promotion, prevention, disease-specific information, tools, and guidelines. It is more than just transferring information. It assists behavioural change and encourages self-management.<sup>26</sup>

**Plain language:** Limits medical jargon, uses clear everyday language, and focuses on using words of fewer than three syllables. It is an important part of health literacy strategies.<sup>26</sup>



## *Appendix B: Communication Principles*

### **CanMEDS 2015 COMMUNICATOR ROLE<sup>s</sup>**

1. Establish professional therapeutic relationships with patients and their families
  - 1.1 Communicate using a patient-centred approach that encourages patient trust and autonomy and is characterized by empathy, respect, and compassion
  - 1.2 Optimize the physical environment for patient comfort, dignity, privacy, engagement, and safety
  - 1.3 Recognize when the values, biases, or perspectives of patients, physicians, or other health care professionals may have an impact on the quality of care, and modify the approach to the patient accordingly
  - 1.4 Respond to a patient's non-verbal behaviours to enhance communication
  - 1.5 Manage disagreements and emotionally charged conversations
  - 1.6 Adapt to the unique needs and preferences of each patient and to his or her clinical condition and circumstances
3. Share health care information and plans with patients and their families
  - 3.1 Share information and explanations that are clear, accurate, and timely, while checking for patient and family understanding
  - 3.2 Disclose harmful patient safety incidents to patients and their families accurately and appropriately
4. Engage patients and their families in developing plans that reflect the patient's health care needs and goals
  - 4.1 Facilitate discussions with patients and their families in a way that is respectful, non-judgmental, and culturally safe
  - 4.2 Assist patients and their families to identify, access, and make use of information and communication technologies to support their care and manage their health
  - 4.3 Use communication skills and strategies that help patients and their families make informed decisions regarding their health

<sup>s</sup>Copyright © 2015 The Royal College of Physicians and Surgeons of Canada; [www.royalcollege.ca/portal/page/portal/rc/canmeds](http://www.royalcollege.ca/portal/page/portal/rc/canmeds).  
Reproduced with permission.



- 5. Document and share written and electronic information about the medical encounter to optimize clinical decision-making, patient safety, confidentiality, and privacy
  - 5.1 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements
  - 5.2 Communicate effectively using a written health record, electronic medical record, or other digital technology
  - 5.3 Share information with patients and others in a manner that respects patient privacy and confidentiality and enhances understanding

## CFPC COMMUNICATION EVALUATING OBJECTIVES<sup>28</sup>

**Listening skills:** Uses both general and active listening skills to facilitate communication.

**Language skills—verbal:** Adequate to be understood by the patient; able to converse at an appropriate level for the patient's age and educational level; appropriate tone for the situation—to ensure good communication and patient comfort.

**Language skills—written:** Clearly articulates and communicates thoughts in a written fashion (eg, in a letter to a patient, educational materials for the patient, instructions for a patient).

**Non-verbal skills—expressive:** Being conscious of the impact of body language on communication with the patient and adjusting it appropriately when it inhibits communication.

**Receptive:** Aware of and responsive to body language, particularly feelings not well expressed in a verbal manner (eg, dissatisfaction, anger, guilt).

**Culture and age appropriateness:** Adapts communication to the individual patient for reasons such as culture, age, and disability (eg, the young child or teenager, or someone with speech deficits, hearing deficits, or language difficulties).

**Attitudinal:** This permeates all levels of communication. This includes the ability to hear, understand, and discuss an opinion, idea, or value that may be different from your own while maintaining respect for the patient's right to decide for him or herself. Communication conveys respect for the patient.



## Appendix C: Web-Based Resources and Practical Tools

### AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (AHRQ)

- The Health Literacy Universal Precautions Toolkit. Available from: [www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit](http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit)
- Health literacy topics, [www.ahrq.gov/health-care-information/topics/topic-health-literacy.html](http://www.ahrq.gov/health-care-information/topics/topic-health-literacy.html)
- Cifuentes M, Brega AG, Barnard J, Mabachi NM, Albright K, Weiss BD, et al. *Implementing the AHRQ Health Literacy Universal Precautions Toolkit: Practical Ideas for Primary Care Practices*. Rockville, MD: Agency for Healthcare Research and Quality; 2015.
- Brega AG, Barnard J, Mabachi NM, Weiss BD, DeWalt DA, Brach C, et al. *AHRQ Health Literacy Universal Precautions Toolkit, Second Edition*. Rockville, MD: Agency for Healthcare Research and Quality; 2015.

### OTHER RESOURCES

- Canadian Task Force on Preventive Health Care: <http://canadiantaskforce.ca>
- Health Literacy Consulting: [www.healthliteracy.com](http://www.healthliteracy.com)
- Institute for Healthcare Improvement. Model for Improvement, Plan-Do-Study-Act (PDSA) cycles: [www.ihl.org/resources/Pages/HowtoImprove/default.aspx](http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx)
- Mayo Clinic Bone Health Choice Decision Aid: <http://osteoporosisdecisionaid.mayoclinic.org>
- National Academy of Medicine, Ten attributes of health literate health care organizations: [http://nam.edu/wp-content/uploads/2015/06/BPH\\_Ten\\_HLit\\_Attributes.pdf](http://nam.edu/wp-content/uploads/2015/06/BPH_Ten_HLit_Attributes.pdf)
- National Network of Libraries of Medicine, Health Literacy: <http://nnlm.gov/outreach/consumer/hlthlit.html>
- Nova Scotia Department of Health and Wellness. Primary Health Care and Health Literacy: <http://novascotia.ca/dhw/primaryhealthcare/resources.asp>
- Stroke Prevention in Atrial Fibrillation Risk Tool (SPARC): [www.sparctool.com](http://www.sparctool.com)
- The Absolute CVD Risk/Benefit Calculator: <http://chd.bestsciencemedicine.com/calc2.html>
- U.S. Department of Health and Human Services, Health Resources and Services Administration. Health Literacy: [www.hrsa.gov/publichealth/healthliteracy/index.html](http://www.hrsa.gov/publichealth/healthliteracy/index.html)
- U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Quick Guide to Health Literacy: <http://www.health.gov/communication/literacy/quickguide/factsbasic.htm>



## References

1. Public Health Agency of Canada. Chronic Diseases: Health Literacy. Ottawa, ON: Public Health Agency of Canada; 2014. Available from: [www.phac-aspc.gc.ca/cd-mc/hl-ls/index-eng.php](http://www.phac-aspc.gc.ca/cd-mc/hl-ls/index-eng.php). Accessed 2016 January 6.
2. The Patient's Medical Home. <http://patientsmedicalhome.ca/>. Accessed April 2016.
3. The College of Family Physicians of Canada. *Patient-Centred Care in a Patient's Medical Home*. Mississauga, ON: CFPC; 2014. Best Advice. [http://patientsmedicalhome.ca/files/uploads/BA\\_PatCentred\\_EN\\_WEB\\_FINAL.pdf](http://patientsmedicalhome.ca/files/uploads/BA_PatCentred_EN_WEB_FINAL.pdf). Accessed April 2016.
4. Center for Health Policy Research. *Low Health Literacy: Implications for National Health Policy*. Washington, DC: George Washington University; 2007. Available from: [http://publichealth.gwu.edu/departments/healthpolicy/CHPR/downloads/LowHealthLiteracyReport10\\_4\\_07.pdf](http://publichealth.gwu.edu/departments/healthpolicy/CHPR/downloads/LowHealthLiteracyReport10_4_07.pdf). Accessed 2016 January 6.
5. Dr Paul Sawchuk, email communication, 10 December 2015.
6. Miller-Matero LR, Clark KB, Brescacin C, Dubaybo H, Willens DE. Depression and literacy are important factors for missed appointments. *Psychol Health Med*. 2015 Dec 23:1-10.
7. Koh HK, Brach C, Harris LM, Parchman ML. A proposed 'health literate care model' would constitute a systems approach to improving patients' engagement in care. *Health Aff (Millwood)*. 2013;32(2):357-67. doi: 10.1377/hlthaff.2012.1205.
8. Government of Nova Scotia. *Messages for All Voices*. Halifax, NS: Nova Scotia Department of Health, Primary Health Care; 2010. Available from: <http://novascotia.ca/dhw/primaryhealthcare/documents/Messages-for-All-Voices-Full-Length-Tool.pdf>. Accessed 2016 January 12.
9. Dr Pierre Pluye, email communication, 15 May 2015.
10. The College of Family Physicians of Canada. *Chronic Care Management*. Mississauga, ON: CFPC; 2014. Best Advice.
11. Canadian Alliance on Mental Illness and Mental Health (CAMIMH). *Mental Health Literacy in Canada: Phase One Draft Report Mental Health Literacy Project*. Available from: [http://camimh.ca/wp-content/uploads/2012/04/Mental-Health-Literacy\\_-\\_Full-Final-Report\\_EN.pdf](http://camimh.ca/wp-content/uploads/2012/04/Mental-Health-Literacy_-_Full-Final-Report_EN.pdf). Accessed April 2016.
12. Canadian Alliance on Mental Illness and Mental Health (CAMIMH). *National Integrated Framework for Enhancing Mental Health Literacy in Canada*. Available from: [http://camimh.ca/wp-content/uploads/2012/04/2008-July\\_-\\_CAMIMH\\_-\\_Mental-Health-Literacy\\_-\\_National-Integrated-Framework\\_-\\_Full-Final-Report\\_E.pdf](http://camimh.ca/wp-content/uploads/2012/04/2008-July_-_CAMIMH_-_Mental-Health-Literacy_-_National-Integrated-Framework_-_Full-Final-Report_E.pdf). Accessed April 2016.
13. Schillinger D, Piette J, Grumbach K, Wang F, Wilson C, Daher C, et al. Closing the loop: physician communication with diabetic patients who have low health literacy. *Arch Intern Med*. 2003;163(1):83-90.
14. Silberman J, Tentler A, Ramgopal R, Epstein RM. Recall-promoting physician behaviors in primary care. *J Gen Intern Med*. 2008;23(9):1487-90. doi: 10.1007/s11606-008-0597-x.
15. Ask Me 3. National Patient Safety Foundation. <http://www.npsf.org/?page=askme3>. Accessed 2016 January 7.
16. Hersh L, Salzman B, Snyderman D. Health Literacy in Primary Care Practice. *Am Fam Physician*. 2015;92(2):118-124.
17. Agency for Healthcare Research and Quality. *AHRQ Health Literacy Universal Precautions Toolkit, 2nd Edition*. Available from: [www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/index.html](http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/index.html). Accessed: 4 March, 2016.
18. Letters to the Editor, Cates Plot for Risks and Benefits of Aspirin Chemoprevention. *Am Fam Physician*. 2011;84(6):602-604.
19. Mayo Foundation for Medical Education and Research. *Should I Take Statins: A decision making tool*. 2010. Available from: [http://shareddecisions.mayoclinic.org/files/2011/08/Statin\\_DA\\_avg21.pdf](http://shareddecisions.mayoclinic.org/files/2011/08/Statin_DA_avg21.pdf). Accessed April 2016.
20. Agency for Healthcare Research and Quality. *The Patient Education Materials Assessment Tool (PEMAT) and User's Guide, An Instrument To Assess the Understandability and Actionability of Print and Audiovisual Patient Education Materials*. 2013. Available from: [www.ahrq.gov/professionals/prevention-chronic-care/improve/self-mgmt/pemat/index.html](http://www.ahrq.gov/professionals/prevention-chronic-care/improve/self-mgmt/pemat/index.html). Accessed April 2016.
21. The College of Family Physicians of Canada. *Social Determinants of Health*. Mississauga, ON: CFPC; 2015. Best Advice. Available from: [http://patientsmedicalhome.ca/files/uploads/BA\\_SocialD\\_ENG\\_WEB.pdf](http://patientsmedicalhome.ca/files/uploads/BA_SocialD_ENG_WEB.pdf). Accessed April 2016.
22. National Institutes of Health. Clear Communication: Cultural Respect. Bethesda, MD. Available from: [www.nih.gov/clearcommunication/culturalcompetency.htm](http://www.nih.gov/clearcommunication/culturalcompetency.htm). Accessed: 2016 January 6.
23. UNESCO Institute for Statistics. *International Literacy Statistics: A Review of Concepts, Methodology and Current Data*. Montreal, QC: UNESCO Institute for Statistics 2008. page 17. Available from: [www.uis.unesco.org/Library/Documents/Literacyreport2008\\_en.pdf](http://www.uis.unesco.org/Library/Documents/Literacyreport2008_en.pdf). Accessed 2016 February 17.
24. Rothman RL, Montori VM, Cherrington A, Pignone MP. Perspective: the role of numeracy in health care. *J Health Commun*. 2008;13(6):583-95. doi: 10.1080/10810730802281791.
25. U.S. National Library of Medicine - Medical Subject Headings. Health Literacy. [www.ncbi.nlm.nih.gov/mesh/68057220](http://www.ncbi.nlm.nih.gov/mesh/68057220). Accessed 2016 February 17.
26. American Academy of Family Physicians. AAFP Core Educational Guidelines Patient Education. *Am Fam Physician*. 2000;62(7):1712-1714.
27. U.S. Department of Health and Human Services. Plain Language: A Promising Strategy for Clearly Communicating Health Information and Improving Health Literacy. Available from: <http://health.gov/communication/literacy/plainlanguage/PlainLanguage.htm>. Accessed 2016 January 12.
28. Communication Skills with Patients. The College of Family Physicians of Canada. [www.cfpc.ca/CommunicationSkillsPatients/](http://www.cfpc.ca/CommunicationSkillsPatients/). Accessed April 2016.