

Canadian Geriatrics Society

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HEALTH LITERACY: IMPROVING COMMUNICATION BETWEEN HEALTH CARE PRACTITIONERS AND OLDER ADULTS

Abstract

Health literacy is the degree to which individuals have the capacity to obtain, process and understand health information and services to make appropriate health decisions.¹ Limited health literacy has been linked to: problems with utilization of preventive health care measures; poor medication adherence; increased risk for hospitalization; increased health care costs; increased mortality; and worse clinical outcomes. Practitioners experience communication difficulties with patients with limited health literacy skills especially in the aging population. It is important to recognize the problem of limited health literacy and take a universal precaution approach to help patients with limited health literacy.^{2,3} Several techniques including the teach-back technique have been applied to assess and improve spoken communication and understanding.^{4,5} Patient education with appropriate written materials at lower reading levels has been used to improve written communication.⁶⁻⁸ A provider education program may help practitioners better address health literacy and improve communication.^{9,10} Improving communication between health care practitioners and older adults enables us to better serve patients and strive for excellent patient outcomes.

La littératie en matière de santé est définie par la capacité des individus à obtenir, analyser et comprendre l'information et les services en lien avec la santé afin de prendre des décisions appropriées concernant leur santé. Une faible littératie dans le domaine de la santé est associée à des difficultés à appliquer les mesures de santé préventives, une faible adhérence au traitement médicamenteux, un risque accru d'hospitalisation, des coûts de santé accrus ainsi qu'à une mortalité plus élevée et un moins bon pronostic. Les cliniciens éprouvent des difficultés à communiquer avec les patients- surtout les plus âgés- avec une faible littératie en matière de santé. Il est important de reconnaître ce problème et de prendre des précautions afin d'aborder de façon appropriée ce type de clientèle. Plusieurs techniques, incluant la technique de 'teach-back', ont été appliquées dans le but d'évaluer et d'améliorer la communication verbale et la compréhension des patients. L'enseignement au patient par du matériel écrit dans un langage simple, a été utilisé dans le but d'améliorer la communication écrite. Un programme d'éducation destiné aux cliniciens peut les aider à mieux gérer le problème d'une faible littératie en santé et à améliorer la

communication avec les patients. L'amélioration de la communication entre les cliniciens et les personnes âgées nous permet de servir nos patients de manière exemplaire.

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Introduction

Health literacy is defined in the Institute of Medicine report 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.*"¹¹ After two decades of growing evidence about the magnitude and consequences of limited literacy on health and health care, the health literacy epidemic is receiving greater attention.¹² Research indicates that some segments of Canadian society exhibit disproportionately lower levels of health literacy. Older adults, the Aboriginal population, recent immigrants, those with lower levels of education and with low English or French proficiency, and persons receiving social assistance are over-represented among those with low health literacy skills.^{13,14} Older Canadians (aged 65 and older) comprise 13% of our population, with this number expected to rise to more than 25% by 2036.¹⁵ Limited health literacy is of particular concern among older adults, who often have increased needs for health information and services to maintain their health and well-being.¹⁶ Yet, research demonstrates that 88% of older Canadians do not have the ability to obtain, understand and act on health information and services, nor do they have the ability to make appropriate health decisions on their own.^{17,18} A rising portion of older adults are unable to speak either English or French as highlighted in 2001 with 5% of men aged 85 years and older unable to speak either official language.¹⁵

Effects of limited health literacy

Evidence shows that limited health literacy acts as an independent risk factor for poor health,¹⁹⁻²¹ often because of medication errors^{22,23} and a decreased understanding of disease and treatments.²² Also, there is lower use of preventive health services, increased hospitalization and increased overall mortality.^{20,24,25} Low health literacy is a serious and costly problem that is likely to grow as the population ages and the incidence of chronic disease increases.¹³ For example, a systematic examination of the cost of low health literacy in 2009 found that the additional expense of limited health literacy ranged from 3-5% of the total health care cost per year.²⁵ In Canada, this amounts to an extra \$8 billion per year spent on health care as a result of low health literacy.²⁶

Screening for health literacy

As health care practitioners become increasingly more aware of health literacy, multiple instruments and methods have been developed to assess ability to understand and make decisions pertaining to health. In Canada, two international surveys are the most commonly used measures of literacy. The International Adult Literacy Survey (IALS)²⁷ developed measures of prose and documented quantitative skills for a survey conducted in Canada in 1994. The 2003 International Adult Literacy and Skills Survey (IALSS),²⁸ was similar but changed the quantitative scale to a numeracy measure and added a problem-solving domain. Neither of the two surveys measure oral skills. One of the most commonly used measures of health literacy in clinical settings is the Rapid Assessment of Literacy in Medicine (REALM) test with a revised version,^{29,30} which measures the ability to read health terms. Another health literacy screening tool

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is the Test of Functional Health Literacy in Adults (TOFHLA),³¹ which measures the ability to understand health information.

The validation studies for health literacy screening tools each has their own enrollment criteria to differentiate literacy barriers from visual and cognitive limitations. Older age is strongly associated with limited health literacy in analyses that measure health literacy with reading comprehension, reasoning and numeracy skills.¹⁶ The developers of these health literacy tests recommend that clinicians be sensitive to a patient's potential shame of being tested. Rather than focusing on using these research tools to determine the health literacy scores, health care practitioners can use an alternative approach while assuming that most older adults have low health literacy and apply "*universal precautions for comprehension*."^{2,3} If lack of understanding is encountered, it is recommended that the treatment plan be simplified and work with the patient continue until the treatment regimen is understood.³² The Agency for Healthcare Research & Quality (AHRQ) starts with this assumption and outlines a systematic approach to raising awareness, improving spoken and written communication, improving self-management and empowerment and creating supportive systems to promote health literacy and improve health outcomes (see <u>www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/</u>).³

Tools to help boost communication skills

Effective communication skills are an inherent component to health literacy and involve more than "the ability to read or understand numbers."³³ Numerous strategies are available that health care practitioners can implement that will help their patients overcome limited health literacy (Table 1).^{34,35} It has been suggested that older patients with cognitive dysfunction have the greatest need for health literacy interventions.³⁶ Disclosing a diagnosis of dementia has been recognized as a key medical intervention for person-centred and optimal management of dementia.^{37,38,39} An excellent example of techniques to improve communication and understanding during the disclosure of a diagnosis of dementia can be found in another article in this journal (see <u>www.canadiangeriatrics.ca/default/index.cfm/linkservid/86F2E2D9-030F-7402-63EADBDC803170DB/showMeta/0/</u>).⁴⁰

Strategy	Key points
Greet patient warmly	Maintain eye contact when you greet patients warmly and during the interaction to encourage questions and disclosure
Modify clinical skills	Use plain language (e.g., high blood pressure rather than hypertension; heart attack, not myocardial infarction) Avoid jargon Speak slowly and clearly Be specific and concrete
Limit content	Focus on 3-5 key points per visit and repeat them
Use multiple forms of communication	Use more than one communication modality Draw simple pictures, use illustrations, demonstrate with 3D models Show videos or interactive computer programs Adapt format for patients with limited English proficiency
Provide encouragement	Encourage patients to ask questions about their health and treatment plans and to take an active role in managing their own health care
Confirm comprehension	Stop asking, "Do you understand?" Instead you can ask, "What questions do you have for me?" Confirm understanding by using "teach back" – asking patients to explain to you the information you provided to them

Table 1. Recommendations for helping patients with limited health literacy^{34,35}

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Provide additional patient support gr	romote adherence and self-management skills by instituting roup visits, implementing telephone/online coaching, reminders or nonitoring linking patients, as needed, to one or more members of an nterdisciplinary health care team

Information from *Roett MA, Wessel L. Help your patient "get" what you just said: a health literacy guide.* J Fam Pract 2012;61(4):190-196.

Hironaka LK, Paasche-Orlow MK. *The implications of health literacy on patient-provider communication*. Arch Dis Child 2008;93:428-432.

Tools to improve spoken communication

Several techniques have been utilized to optimize verbal communication. Using open-ended questions (e.g., "Tell me what you will do when you get home") and the Teach-back method⁴¹ helps to confirm that the patient understands the information provided. The Teach-back method has been shown to be a top safety practice.⁴² One study found that the Teach-back method improved outcomes for diabetic patients with low literacy.⁴ You may ask, "*I want to be sure that I explained your medication correctly. Can you tell me how you are going to take this medication?*" or "*What are you going to do when you get home?*" Such questions are helpful in determining the extent of understanding and also what parts of the action plan the patient may not have understood fully. Health care practitioners can then provide immediate feedback and educational efforts to correct items the patient did not comprehend.⁴³ YouTube videos are available demonstrating this method in action.⁴⁴

There are other strategies to be considered to improve spoken communication. Cultural and language differences interact with and contribute to low health literacy.⁴⁵ The L.E.A.R.N model⁴⁶ (Listen, Explain, Acknowledge, Recommend, Negotiate) and the R.E.S.P.E.C.T model⁴⁷ (Rapport, Empathy, Support, Partnership, Explanations, Cultural Competence, Trust) of cross-cultural communication have been used to enhance awareness and improve cultural competence in health care. It is important to consider patient's language preferences and interpreter needs and to provide language assistance to avoid communication errors.

Tools to improve written communication

Evidence shows knowledge is enhanced when appropriate written materials are provided. Health care providers should rely more heavily on printed materials to communicate with patients. Despite the average American and Canadian adult reading at an Grade 8 level, it has been suggested written material be tailored to the Grade 5-6 reading level.^{48,49} More than 300 studies show that health information is typically written well above this average reading level. Many older adults therefore, will not understand the educational handouts, consent forms, medical-history questionnaires and discharge summary sheets with instructions.⁵⁰

Written communication should focus on the essentials, using short and simple sentences. Jargon-free and plain language should be used with at least 12-point font, double spacing and clear headings. Pictures can be used to convey messages. There are guidelines and other resources to help create easy-to-read health materials. The Health Literacy Style Manual is one of the resources for developing and improving applications, notices and other print materials related to government programs. (See www.coveringkidsandfamilies.org/resources/docs/stylemanual.pdf).⁵¹

Patients and families should be encouraged to take notes during the interaction. If they are not writing then ask if you can write abbreviated notes for them (i.e., they may be illiterate and unable to write notes but may be too embarrassed to tell you).^{52,53} Important instructions following the visit should be written

down. Useful educational materials can be given to patients to allow more time to absorb new information. Such materials should also be accessible to family members who may be helping the older adult at home.⁵²

Other ways for health care practitioners to improve communication

A number of online resources are available to help health care practitioners address health literacy. The AHRQ Health Literacy Toolkit applies "*universal precaution for comprehension*" and provides tools, specific steps, worksheets and sample forms to improve practitioner-patient communication and teach patients self-management skills.³ The Health Resources and Services Administration offers a free online course titled "Effective Communication Tools for Healthcare Professionals" to help health care professionals and students improve patient-provider communication.⁵⁴ "**Ask Me 3**" program⁵⁵ is designed to promote communication by encouraging patients to ask three questions at each visit to ensure that patients understand the answers: *What is my main problem? What do I need to do? Why is it important for me to do this?*

Medication adherence is critically important. There are several strategies to improve this: having support of family or trusted friends,³⁴ and utilizing health care practitioners who could meet with a group of patients.⁵⁶ This is particularly important for patients with mild cognitive impairment, dementia or mental health issues where "self-management" may, in fact, be family-management of chronic disease.^{40,57,58} Interdisciplinary care has also been found to have a positive effect on management of chronic disease and medication adherence.⁵⁹ Direct patient care provided by pharmacists has been associated with increased medication adherence and improvements in blood cholesterol levels and HbA1c levels.⁶⁰ A method to reduce medication errors is to do a "brown bag" and "show me" medication review by asking patients to bring prescription drug and over-the-counter products and review each one while providing updated medication lists.^{3,34,48}

Other strategies for improving communication include the use of visual aids using simple graphics,^{3,61} telephone, Internet, video conference or other remote networks.^{62,63}

Summary: five key points

- Poor health literacy is common especially among older adults and other vulnerable populations and has been associated with problems of poor use of preventive health care services, poor medication adherence, frequent hospitalization, increased health care cost, increased mortality and poor health outcomes.
- The Teach-back technique and other strategies have been used to assess and improve spoken communication and understanding.
- Encourage patients and families to take notes while you are explaining. If they are not writing, then ask if you can write abbreviated notes for them.
- Patient education with appropriate written materials at a lower reading level may improve written communication.
- Internet sites that include tools to help boost communication skills: Age-friendly communication <u>www.phac-aspc.gc.ca/seniors-aines/alt-</u> <u>formats/pdf/publications/public/various-varies/afcomm-commavecaines/AFComm-Commavecaines-</u> <u>eng.pdf</u>
 AHPO Health Literacy Toolkit www.abrg.gov/gual/literacy/index/html

AHRQ Health Literacy Toolkit <u>www.ahrq.gov/qual/literacy/index/html</u> Communication course for providers <u>www.hrsa.gov/publichealth/healthliteracy</u> The Teach-back method <u>www.nchealthliteracy.org/toolkit/tool5.pdf</u> "Ask Me 3" campaign <u>www.npsf.org/?page=askme3</u>

Conclusion and future ideas

As the population ages and the incidence of chronic disease increases, limited health literacy is becoming a more serious and costly issue. Effective communication between health care practitioners and patients is the key to successful health encounters and outcomes.⁶⁴ Unfortunately, this cannot occur without first recognizing that health literacy is an important issue that needs to be addressed through implementation of change and available resources. As such, one must look to future strategies that should include:

- 1. Greater time allotment for communication. The development of provincial baskets of billing codes to encourage physicians to spend more time assessing health literacy and thereby improving communication. In addition, the optimization of communication amongst all members of the health care team should be considered.
- 2. Utilization of the Internet to provide easy access to information regarding health literacy. As part of national or provincial seniors' strategies, the development of national online open access "at your fingertips" repositories of written communications for family members at different literacy levels (i.e., tailor complexity of written information to each family member's level encourage younger family members to go to websites to learn more, as is done with the Alzheimer Society websites). These should be printable so as to allow health care practitioners to review and provide a copy to patients and caregivers.
- 3. Utilization of bedside monitors or whiteboards in hospital to allow patients and families to access written material and to promote open and ongoing communication. This would better utilize the "down time" when patients and families are in the hospital room but the medical teams are not available.
- 4. Collaborative efforts with other partners including community advocates should be pursued.

REFERENCES:

1. Institute of Medicine. Health literacy: a prescription to end confusion. Washington, DC: National Academies Press July 13, 2004.

2. Dewalt DA, Broucksou KA, Kawk V, et al. Developing and testing the health literacy universal precaution toolkit. Nurs Outlook 2011;59(2):85-94

3. Dewalt DA, Callahan L, Hawk V, et al. Health literacy universal precautions toolkit. AHRQ Publication No. 10-0046-EF, Rockville, MD, Agency for Healthcare Research and Quality, 2010.

4. Schillinger D, Piette J, Grumbach K. Closing the loop: physician communication with diabetic patients who have low health literacy. Arch Intern Med 2003;163(1):83-90.

5. Sudore RL, Schillinger D. Interventions to improve care for patients with limited health literacy. J Clin Outcomes Manag 2009;16(1):20-29

6. American Medical Association, Health Literacy Resources 2007.

7. Berkman ND, Dewalt DA, Pignore MP, et al. Literacy and health outcomes. Evid Rep Technol Assess 2004;87:1-8

8. Schwartzberg JG, Cowett A, Vangeest J, et al. Communication techniques for patients with low health literacy: a survey of physicians, nurses and pharmacist. Am J Health Behav 2007 Suppl 1:S96-104.

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9. Coleman CA, Hudson S, Maine LL. Health literacy practices and educational competencies for health professionals: a consensus study. J Health Commun 2013;18(Suppl 1):82-102

10. Baur C. The national action plan to improve health literacy. US Department of Health and Hunan Services. Washington, DC:2010.

11. Nielsen-Bohlman L, Panzer AM, Hamlin B, et al. Health literacy: a prescription to end confusion. Institute of Medicine of the National Academies, Washington, DC, National Academies Press. 2004

12. Parker RM, Wolf MS, Kirsch I. Preparing for an epidemic of limited health literacy: weathering the perfect storm. J Gen Intern Med 2008;23(8):1273-1276

13. Rootman I, Gordon-El-Bihbety D. A vision for a health literate Canada: report of the expert panel on health literacy. Canadian Public Health Association 2008. Retrieved from http://www.cpha.ca/uploads/portals/h-l/report_e.pdf

14. Paasche-Orlow MK, Parker RM, Gazmararian JA, et al. The prevalence of limited health literacy. J Gen Intern Med 2005;20:175-184

15. Baker DW, Parker RM, Williams MV, et al. Health literacy and the risk of hospital admission. J Gen Intern Med 1998;13:791-800.

16. Kobayashi LC, Wardle J, Wold MS, et al. Aging and functional health literacy: a systematic review and meta-analysis. J Gerontol B Psychol Sci Soc Sci 2014 10.1093/geronb/gbu161

17. Health Literacy in Canada. (2007) Canadian Council on Learning. http://www.cclcca.ca/ccl/reports/HealthLiteracy/HealthLiteracy2007.html

18. An inter-sectoral approach for improving health literacy for Canadians: a discussion paper, lead editors Mitic W, Rootman I. Public Health Association of BC 2012

19. Age Friendly Communication: Facts, Tips, and Ideas. Public Health Agency of Canada 2010

20. Baker DW, Wolf MS, Feinglass J, et al. Health literacy and mortality among elderly patients. Arch Intern Med 2007;167(14):1503-1509.

21. Sudore RL, Yaffe K, Satterfield S, et al. Limited literacy and mortality in the elderly: the health, aging and body composition study. J Gen intern Med 2006;21:806-812

22. Williams MV, Baker DW, Parker RM, et al. Relationship of functional health literacy to patients' knowledge of their chronic disease: a study of patients with hypertension and diabetes. Arch Intern Med 1998;158:166-172

23. Wolf MS, Davis TC, Tilson HH, et al. Misunderstanding of prescription during warning labels among patients with low literacy. Am J Health-syst Ph 2006;63:1048-1055

24. Dewalt DA, Berkman ND, Sheridan S, et al. Literacy and health outcome: a systematic review of the literature. J Gen Intern Med 2004;19:1228-1239

25. Berkman ND, Sheridan SL, Donahue KE, et al. Low health literacy and health outcomes: an updated systematic review. Ann Intern Med 2011;155(2):97-107

26. Eichler K, Wieser S, Brugger U. The costs of limited health literacy: a systematic review. Int J Public Health 2009;54:313-324

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27. Statistics Canada. International adult literacy survey: literacy scores, human capital and growth across fourteen OECD countries. Statistics Canada, Human Resources and Skills Development Canada Catalogue no. 89-552-MIE. Retrieved from http://www.publications.gc.ca/site/eng/261583/publication.html

28. Statistics Canada. Building our competencies: Canadian results of the international adult literacy and skills survey. Catalogue no. 89-617-XIE 2003. Retrieved from http://publications.gc.ca/Collection/Statcan/89-617-X/89-617-XIE2005001.pdf

29. Davis TC, Long SW, Jackson RH et al. Rapid estimate of adult literacy in medicine: a shortened screening instrument. Fam Med 1993;25:391-395

30. Bass PF, Wilson JF, Griffith CH. A shortened instrument for literacy screening. J Gen Intern Med 2003;18(12):1036-1038. Retrieved from http://adultmeducation.com/AssessmentTools_1.html

31. Parker RM, Baker DW, Williams MV, et al. The test of functional health literacy in adults: a new instrument for measuring patients' literacy skills. J Gen Intern Med 1995;10(10):537-541

32. Paasche-Orlow MK, Schillinger D, Greene SM, et al. How health care systems can begin to address the challenge of limited literacy. J Gen Intern Med 2006;21(8):884-887

33. Health literacy in Canada: A health understanding. Canadian Council on Learning, Ottawa 2008 Retrieved from http://www.ccl-cca.ca/pdfs/HealthLiteracy/HealthLiteracyReportFeb2008E.pdf

34. Roett MA, Wessel L. Help your patient "get" what you just said: a health literacy guide. J Fam Pract 2012;61(4):190-196

35. Hironaka LK, Paasche-Orlow MK. The implications of health literacy on patient-provider communication. Arch Dis Child 2008;93:428-432

36. Kaphingst KA, Goodman MS, MacMillan WD, et al. Effect of cognitive dysfunction on the relationship between age and health literacy. Patient Education & Counseling 2014;95(2):218-225

37. Hogan DB, Bailey P, Black S, et al. Diagnosis and treatment of dementia: approach to management of mild to moderate dementia. CMAJ 2008;179(8):787-793

38. Bamford C, Lamont S, Eccles M, et al. Disclosing a diagnosis of dementia: a systematic review. Int J Geriatr Psychiatr 2004;19(2):151-169

39. Lee L, Wayne W. Disclosing a diagnosis of dementia: helping learners to break bad news. Can Fam Physician 2011;57:851-852

40. Aminzadeh F, Byszewski A, Lee L, et al. Disclosing a diagnosis of dementia: recommendations for a person-centred approach. Canadian Geriatrics Society Journal of CME 2012;2(3):27-31

41. North Carolina program on health literacy. University of North Carolina at Chapel Hill 2007. Web June 01, 2014 Retrieved from http://www.nchealthliteracy.org/toolkit/tool5.pdf

42. National Quality Forum. Improving patient safety through informed consent for patients with limited health literacy. Washington D.C. 2005

43. Oates DJ, Paasche-Orlow MK. Communication strategies to improve patient comprehension of cardiovascular health. Circulation 2009;119:1049-1051

44. North Carolina program on health literacy ttps://www.youtube.com/watch?v=IKxjmpD7vfY

45. Shaw SJ, Huebner C, Armin J, et al. The role of culture in health literacy and chronic disease screening and management. J Immigrant Minority Health 2009;11(6):460-467

46. Berlin E, Fowkes WA. A teaching framework for cross-cultural health care. Western Journal of Medicine 1983;139:934-938

47. Welch M. Enhancing awareness and improving cultural competence in health care: A partnership guide for teaching diversity and cross-cultural concepts in health professional training. University of California at San Francisco 1998. http://cirrie.buffalo.edu/culture/curriculum/resources/models/

48. Weiss BD. Manual for clinicians: health literacy and patient safety: help patients understand. 2nd edition American Medical Association Foundation 2007

49. Good medicine for seniors: guidelines for plain language and good design in prescription medication. Canadian Public Health Association, Ottawa 2002 Retrieved from http://www.cpha.ca/uploads/portals/hl/goodmed_e.pdf

50. Age-friendly communication: facts, tips and ideas. Public Health Agency of Canada, Ottawa 2010. Retrieved from http://www.phac-aspc.gc.ca/seniors-aines/alt-formats/pdf/publications/public/various-varies/afcomm-commavecaines/AFComm-Commavecaines-eng.pdf

51. The health literacy style manual: prepared for covering kids & family, Maximus. CKF National Program Office Oct 2005 http://www.coveringkidsandfamilies.org/resources/docs/stylemanual.pdf

52. Kripalani S, Weiss BD. Teaching about health literacy and clear communication. J Gen Intern Med 2006;21(8):888-890

53. Shaller D. Patient-centered care: what does it take? Commonwealth Fund pub no. 1067. Oct 2007 http://www.commonwealthfund.org/usr_doc/Shaller_patient-centeredcarewhatdoesittake_1067.pdf?section=4039

54. Health literacy: effective communication tools for healthcare professionals. Health Resources and Services Administration. U.S. Department of Health and Human Services http://www.hrsa.gov/publichealth/healthliteracy/

55. Ask me 3. National Patient Safety Foundation. http://www.npsf.org/?page=askme3

56. Anderson KM, Siems LV, Holloway SC, et al. Group counselling improves quality for patients with limited health literacy. Qual Prim Care 2012;20(1):5-13

57. Aminzadeh F, Byszewski A, Molnar FJ, et al. Emotional impact of dementia diagnosis: exploring persons with dementia and caregivers; perspectives. Aging & Mental Health 2007;11(3):281-290

58. Byszewski A, Molnar FJ, Aminzadeh F, et al. Dementia diagnosis disclosure: a study of patient and caregiver perspectives. Alzheimer Dis Assoc Disord 2007;21(2):107-114

59. Vale MJ, Jelinek MV, Best JD, et al. Coaching patients on achieving cardiovascular health: a multicenter randomized trial in patients with coronary heart disease. Arch Intern Med 2003:163:2775-2783

60. Chisholm-Burns MA, Lee JK, Spivey CA, et al. US pharmacists' effect as team members on patient care: systematic review and meta-analyses. Med Care 2010;48:923-933

61. You WB, Wolf MS, Bailey SC et al. Improving patient understanding of preeclampsia: a randomized controlled trial. A J Obstec Gynecol 2012;206(5):431.e1-421.e5

62. McLean S, Chandler D, Nurmatov U, et al. Telehealthcare for asthma: a Cochrane review. CMAJ 2011;183(11):E733-742

63. Liang X, Wang Q, Yang X, et al. Effect of mobile phone intervention for diabetes on glycaemic control: a meta-analysis. Diabet Med 2011;28(4):455-463

64. Tucker CM, Herman KC, Pedersen TR, et al. Cultural sensitivity in physician-patient relationships: Perspectives of an ethnically diverse sample of low-income patients. Med Care 2003;41(7):859-870