



**LANGUAGE AS A DETERMINANT OF HEALTH STATUS
AND SERVICE QUALITY**

Language Adaptation in Health Care and
Health Services: Issues and Strategies

**INSTITUT NATIONAL
DE SANTÉ PUBLIQUE
DU QUÉBEC**

Language Adaptation in Health Care and Health Services: Issues and Strategies

Vice-présidence aux affaires scientifiques

January 2013

AUTHORS

Anne-Marie Ouimet, Planning, Programming, and Research Agent
Institut national de santé publique du Québec

Normand Trempe, Project Manager
Institut national de santé publique du Québec

Bilkis Vissandjée, Professor
Faculty of Nursing, Université de Montréal

Isabelle Hemlin, Advisor to Institutions
Agence de la santé et des services sociaux de Montréal

ABSTRACT AND SUMMARY

Jean-François Bourdon, External Consultant

LAYOUT

Hélène Fillion, Administrative Assistant
Institut national de santé publique du Québec

ACKNOWLEDGMENTS

We would like to thank Ronald McNeil, Director, Secrétariat à l'accès aux services en langue anglaise, ministère de la Santé et des Services sociaux, for his careful reading and comments.

This analysis was produced as part of the Official Language Minority Community Health Projects at Institut national de santé publique du Québec (INSPQ) with funding from the Community Health and Social Services Network (CHSSN) within Health Canada's Official Languages Health Contribution Program.

This document is available in its entirety in electronic format (PDF) on the Institut national de santé publique du Québec Web site at: <http://www.inspq.qc.ca>.

Reproductions for private study or research purposes are authorized by virtue of Article 29 of the Copyright Act. Any other use must be authorized by the Government of Québec, which holds the exclusive intellectual property rights for this document. Authorization may be obtained by submitting a request to the central clearing house of the Service de la gestion des droits d'auteur of Les Publications du Québec, using the online form at <http://www.droitauteur.gouv.qc.ca/en/autorisation.php> or by sending an e-mail to droit.auteur@cspq.gouv.qc.ca.

Information contained in the document may be cited provided that the source is mentioned.

LEGAL DEPOSIT – 3rd QUARTER 2013
BIBLIOTHÈQUE ET ARCHIVES NATIONALES DU QUÉBEC
LIBRARY AND ARCHIVES CANADA
ISBN: 978-2-550-62942-9 (French PDF [set])
ISBN: 978-2-550-68017-8 (French PDF)
ISBN: 978-2-550-62944-3 (PDF [set])
ISBN: 978-2-550-68712-2 (PDF)

© Gouvernement du Québec (2013)

ABSTRACT

For the 20% of Québec's population whose mother tongue is not French, communication in this language can create difficulties when dealing with the health and social services system. The presence of linguistic barriers in available services can have major negative repercussions on the health of patients. To ensure that anglophones and other linguistic minorities have access to services in their mother tongue, Québec health care facilities may use bilingual or translated documents, hire bilingual employees, offer second language courses to health professionals, or use interpretation services.

While bilingual or translated documents can make it easier to ask questions in another language, they do not ensure that the answers will necessarily be understood. Moreover, in Québec, documents translated into English may not be relevant in communications with allophone or aboriginal clientele.

The use of bilingual employees has many benefits in terms of communication quality. However, the second language skills of these employees are rarely formally assessed. Furthermore, studies have shown that using bilingual employees as interpreters can negatively affect their productivity and cause human resource management problems. In Québec, hiring bilingual English-French employees seems to be a common practice for adapting services.

Second language courses for health professionals may help such professionals establish a relationship of trust with minority language patients. However, if their second language skills are not assessed and they do not use interpreters, use of the second language may lead to communication errors that can have negative consequences on the health of patients. Assuming that language proficiency is closely related to the frequency of language use, the appropriateness of this measure may be limited in situations where the second language is rarely used by professionals in their work. In Québec, English second language (ESL) courses offered to health professionals could be beneficial for facilities with a high percentage of patients whose mother tongue is English.

Use of professional interpretation services for patients with a limited knowledge of French would be the most beneficial solution for optimizing the quality of communication and care. It is therefore important to make professionals and managers aware of the benefits, while ensuring that interpretation services are available and interpreters are properly trained. In Québec, where resources are limited, especially in facilities with a low percentage of minority language patients, access to a central bank of interpreters would be one avenue to explore for both the anglophone minority and other linguistic groups.

SUMMARY

Introduction

This report was written as part of the project to improve knowledge on the health of official language minority communities. The purpose of this project is to improve the knowledge of the health status and well-being of individuals in Québec's language minority communities and document linguistic adaptation in health and social services.

The report is based on a review of scientific articles and grey literature obtained through bibliographical queries using search engines such as PubMed, Sociological Abstracts, PsycINFO, and Embase. The purpose of this literature review is to present the strengths and weaknesses of several approaches to optimizing language communication between health and social service professionals and their minority language clients.

The issue

French is the mother tongue of approximately 80% of Quebecers. For the other 20%, communication in this language can create difficulties when dealing with the health and social services system. The communication problems that may occur between health professionals and their patients if they don't speak the same language are linguistic barriers that can harm the health of patients.

Mother tongue is a language indicator used by the Canadian census. It is generally the language in which a person is most proficient and feels the most comfortable when speaking in stressful or emotional situations, which may often be the case when seeking health or social services. The census also uses the language spoken at home as an indicator. When this is not the mother tongue, it is difficult to determine the proficiency level of the language spoken at home and ensure that an individual can communicate effectively in this language. The census also uses the notion of the first official language spoken (FOLS), which, if different from the mother tongue, offers even less assurance that an individual is proficient enough in communications aimed at providing or receiving health or social services.

Given the importance of communication in health and social services, we will give preference to using the notion of mother tongue rather than the others, because poor quality linguistic communication may have major repercussions for patients and health professionals and facilities. Patients who are provided with care and services in a language other than their mother tongue more frequently receive inappropriate medication or do not fully understand how to take their medication, do not have a clear understanding of their diagnosis, are prescribed medication more often, use mental health services less often, are less satisfied with the care they receive, spend more time on average in the emergency room, and are more likely to be exposed to undesirable events than majority language patients. Professionals who work in a second language are less satisfied with their work, experience more stress, and run a greater risk of being sued for a medical error due to a communication problem. As for care facilities, they must assume the consequences associated with these repercussions.

Under the *Act respecting health services and social services*, the Québec network is required to provide services in English to anglophones and adapt its services to the needs of the members of cultural communities. These measures must take into account the language situation of the regions and the facility users, as well as their financial and human resources.

Approaches to optimizing linguistic communication and reflections on their applicability in Québec

Lexicons and bilingual and translated documents

Lexicons are useful for professionals who use a second language in the context of their work. Bilingual and translated forms allow them to ask minority language patients questions in a second language more accurately, but do not guarantee they will understand the answers that patients provide. Using documents translated specifically for patients also entails risks. Translated instructions for treatment work only when an interpreter first explains the instructions to a language minority patient. Written documents are not very useful for linguistic minorities with a lower literacy rate and may be replaced with videos. In Québec, documents translated into English may not be understood by allophone and aboriginal clientele.

Hiring bilingual health professionals

Hiring bilingual health professionals is another way to adapt services that has certain benefits in terms of optimizing linguistic communication between patients and health professionals. However, it is important to assess the second language proficiency of professionals who use a second language as part of their practice. The literature indicates that some tend to overestimate their proficiency in another language. In situations where health professionals have a poor grasp of a second language they use with linguistic minority patients, major communication errors are likely to occur. In Québec, hiring health professionals who claim to be proficient in English appears to be a common approach for adapting services for the anglophone linguistic minority. Second language proficiency assessments seem rare; certain Québec researchers are currently working on developing tools to assess the ESL skills of francophone health professionals.

Using bilingual professionals for interpretation purposes is a widespread practice, but also has its limits. First, it may reduce productivity, because professionals must interrupt their work to assist colleagues. Studies have also shown that bilingual staff express considerable dissatisfaction with being frequently called upon to provide interpretation services. They do not always feel competent as interpreters and are not always compensated for these services. Furthermore, health professionals' salaries are often higher than those of interpreters; using them as interpreters is therefore of little benefit from the resource management point of view.

Second language courses for health professionals

There are benefits to health professionals learning a second language, notably the relationship of trust that can be established with patients. However, becoming proficient enough in a second language to communicate without error is a huge challenge. It is therefore important to target medical content in language courses, assess the language

proficiency of professionals at the end of courses, and most importantly, call on trained interpreters when health professionals are not proficient enough. The absence of these measures could entail certain risks, particularly the risk of communication errors (e.g., failure to understand the duration of symptoms). Second language courses available to health professionals should make them aware of the importance of using an interpreter if they are not proficient enough to deal with patients on their own in their second language. In Québec, about \$1.6 million was invested in 2007 to teach English to francophone health professionals. Assuming that language proficiency is closely related to the frequency of language use, the appropriateness of this measure may be limited in situations where the second language is rarely used by professionals in their work. Given the financial resources this approach requires, such courses may only be appropriate for professionals working in facilities serving a critical mass of anglophone patients.

There are two categories of interpreters: trained interpreters, who have received formal training in the field, and informal interpreters, who are called upon to interpret but have no specific training (e.g., bilingual employees, volunteers who speak a second language, or family members). Many studies show that the use of trained interpreters is the most effective approach and involves less risk for patient health and fewer ethical issues. One study has shown that informal interpreters are more likely to make serious interpretation errors that can affect understanding of the patient's symptoms.

Calling on family members to interpret may lead to awkward situations where they may refuse or deliberately or involuntarily omit to communicate all information to the patient. Using children as interpreters is not recommended, given their lack of emotional and cognitive maturity. The use of informal interpreters may also result in major breaches of confidentiality.

In a context of limited resources, trained or professional interpreters are often hard to find. Priorities can be established by first taking into account the clinical situations of patients or the extent of the language barrier. During interventions in a second language without a trained interpreter, health professionals must use their knowledge of the other language with great caution and continually validate their understanding and that of their patients. A trained interpreter should be called upon as soon as possible to check whether both parties have understood each other.

There are various ways to use trained interpreters, and interpretation quality varies little from one method to the other. The satisfaction of patients, doctors, and interpreters does, however, differ depending on the method used. One study showed that doctors and interpreters prefer face-to-face interpreting and video conferencing. Patients reported being more satisfied with telephone or face-to-face interpreting and less satisfied with interventions conducted by bilingual health professionals.

It is important to provide health professionals with training that addresses the importance of communication in the provision of health care and health services and the issues associated with interpretation services. Health professionals should be made aware of their and their patients' language limits and understand the effect that these limits can have on the quality of the care or services provided. Such training could have a positive effect on the frequency

with which interpreting services are used. Training of interpreters should include specialization in medical interpretation.

In Québec, there are a number of regional interpreter banks that seem to be designed mainly for patients whose mother tongue is not English or French. Setting up a central interpreter bank would be a worthwhile option for facilities with a low percentage of anglophone and other minority language patients. This measure would not be an excessive financial burden for such facilities and would be in line with the principle of equitable access to health care. Facilities facing high demand for interpretation services could hire trained interpreters to offer on-site services. As previously mentioned, these services would help reduce the risk of medical error and inefficient use of human resources. There seem to be few training programs for interpreters in Québec, which creates a barrier to implementing such measures.

Conclusion

Our literature review reaffirms the fact that quality communications and mutual understanding are essential components in the provision of health care and social services. This review allows us to examine the different options available and qualify the relative value of these options in the Québec context. Given the importance of adapting services to take the mother tongue of patients into account, we conclude that the use of trained medical interpreters is the best option. However, it is important not to dismiss the other options, as they can be beneficial in certain situations. In the case of adapting services by hiring bilingual health professionals, it is essential to assess their second language proficiency with the appropriate tools and to avoid using them as interpreters.

TABLE OF CONTENTS

INTRODUCTION.....	1
1 THE ISSUE.....	3
1.1 Demographic data on languages spoken in Québec	3
1.2 The consequences of language barriers on access to health care and social services.....	3
1.3 Indicators of language knowledge and use in Québec	5
1.4 Right to health care and services in one’s own language	7
1.5 Québec’s legislative context with respect to language.....	8
1.6 Objectives and methods.....	8
1.6.1 Objectives	8
1.6.2 Method	8
2 RESULTS.....	11
2.1 Use of bilingual or translated documents.....	11
2.2 Second language courses for health and social service professionals	12
2.3 Hiring and using bilingual employees	13
2.4 Using interpreters.....	15
2.5 Summary of recommendations from literature on good practices for language adaptation in health and social services.....	19
3 APPLICABILITY OF CERTAIN ADAPTATION MEASURES IN THE QUÉBEC CONTEXT.....	21
3.1 Interpretation.....	21
3.2 Hiring bilingual employees	21
3.3 Second language courses for health professionals	22
3.4 Bilingual or translated documents	23
4 ETHICAL AND ORGANIZATIONAL ISSUES.....	25
CONCLUSION.....	27
REFERENCES.....	29
APPENDIX 1 LITERATURE SEARCH AND STRATEGY.....	35

INTRODUCTION

This report was written as part of the project to improve knowledge on the health of official language minority communities. The purpose of this project is to improve the knowledge of the health status and well-being of Québec's anglophones and document linguistic adaptation in health care and social services.

One of the project's specific objectives is to produce a summary of scientific knowledge on best practices for improving the quality of communication in health care and social services offered to patients who have a limited knowledge of French, especially English speakers.

Quebecers who lack proficiency in French may encounter language problems in their dealings with health and social service professionals in Québec, the majority of whom speak French as their mother tongue. Although many professionals can provide care or service in English, there are few mechanisms to assess their actual proficiency in the language if it is their second language. The number of health professionals able to provide services in languages other than French and English is obviously even more limited.

Language barriers can negatively impact the health of patients who have a limited knowledge of French. From this standpoint, facilities must attempt to adapt services and care to the needs of this clientele, as provided for in the *Act respecting health services and social services*.¹

This report is the result of an analysis of scientific and grey literature on various approaches to language adaptation in health care and social services. It identifies good practices that should provide guidelines for future initiatives, given the importance of quality communication between health workers and their patients. Issues related to these various practices are addressed to define the optimal conditions for their implementation and use. The report then suggests certain avenues of exploration adapted to the Québec context.

The report addresses four approaches to language adaptation in health care and social services:

1. Using bilingual lexicons and bilingual or translated health assessment forms, and using translated literature in health and social services
2. Offering second language courses to health professionals
3. Hiring and using bilingual employees
4. Using interpreters.

¹ RSQ, Chapter S-4.2, *Act respecting health services and social services*, Section 2, subsections 5 and 7, and Section 15.

1 THE ISSUE

1.1 DEMOGRAPHIC DATA ON LANGUAGES SPOKEN IN QUÉBEC

French is the mother tongue and daily language of about 80% of Quebecers.² English speakers represent the largest language minority in Québec. Fully 8% of the Québec population identify English as their mother tongue and 10% report speaking English at home. Furthermore, 12% of the population identify a language other than English or French as their mother tongue and 7% speak a language other than English or French at home.

The Québec population also includes 40,000 individuals who identify an aboriginal language as their mother tongue according to the 2006 census, and 34,000 who speak this language at home.³ A relatively limited number of them identify English or French as their mother tongue.⁴

Among the Québec population born outside Canada reported in 2006 (850,000 people), 20% identified French as their mother tongue, 9.2% English, and 70% another language. As for the language spoken at home, 36% speak French, 19% English, and 43% another language.⁵

The census also allows us to take a look at knowledge of the official languages. Of the 20% of the Québec population that does not speak French as their mother tongue and for whom communication in this language can cause problems when dealing with the health and social services system, over 70% speak French, 23% speak only English, and 5% speak only a language other than English or French. Of course, knowledge of an official language, be it English or French, does not guarantee that a person can communicate effectively in that language with health and social service workers.

1.2 THE CONSEQUENCES OF LANGUAGE BARRIERS ON ACCESS TO HEALTH CARE AND SOCIAL SERVICES

Language barriers that hinder access to health care and social services generally take the shape of communication problems between professionals and patients due to the fact that the two parties do not speak the same language. In Québec, 85% of general practitioners and nearly 90% of nurses, psychologists, and social workers have French as their first official spoken language⁶ (Trempe & Lussier, 2011).⁷ For the 20% of the Québec population whose mother tongue is not French, this can result in language barriers when accessing care or

² All statistical data presented below is taken from a special order of data from the 2006 census for analyses performed by INSPQ.

³ We are fully aware that a major portion of the aboriginal population was not enumerated in the census.

⁴ The Mohawk and Wendat nations identify English and French as their mother tongue respectively. These two nations were not enumerated in the 2006 census.

⁵ About 2% say they speak both languages at home.

⁶ Commonly known as FOLS. The definition can be found in Section 1.3.

⁷ This data also refers to the 2006 census. The demographic and linguistic situation in Québec is changing rapidly. The 2011 census data may shed new light.

services. It is not unusual in Québec for francophone health professionals to deal with anglophone, allophone, or aboriginal patients.⁸

Communication problems in the provision of health care and social services may take other forms. Good communication between two parties also depends on their cultural and social references. Expressions of pain and suffering may vary from one culture or social group to another. Studies have shown a tendency toward somatization of mental health problems among certain ethnic groups (Kirmayer & Young, 1998). Individuals belonging to different social groups within the same culture and language may experience certain communication problems. Studies have shown that comprehension of medical jargon by illiterate individuals or those with limited literacy skills is often quite low, and this may lead to consequences for their health (Bernèche & Traoré, 2007; Rootman & Gordon-El-Bihbety, 2008).

Another aspect of communication between health workers and their patients is the expression of empathy and emotions. Workers must sometimes discuss subjects that may be sensitive and emotionally distressing with patients who speak another language. Examples include telling patients they have a lethal disease, explaining the need for treatments with unpleasant side effects, or seeking consent for interventions that can have serious consequences. In addition to communicating such information in language that is clear and understandable to patients, health professionals operating in a second language must be linguistically proficient to express empathy.

Without wishing to downplay the importance of intercultural aspects in communication, our analysis will focus mainly on communication issues between people who speak different languages when care and services are provided.

The quality of linguistic communication between francophone health professionals and patients with a limited knowledge of French can have major repercussions on patient health. If a health professional misunderstands a patient's symptoms, for example, this may result in unnecessary treatments due to misdiagnosis. Since the medical condition of the patient will not improve, miscommunication may not only lead to unnecessary costs, but also to a worsening of the patient's health. At the request of Health Canada, Bowen performed a review of scientific literature in 2001 on the impact of language barriers on access to health care (Bowen, 2001). According to the review, language barriers are thought to have a number of harmful effects on patients with a limited knowledge of the majority language (French in Québec, English elsewhere in Canada). In particular, they limit access to health prevention programs and affect the quality of care received. Some studies surveyed in her report showed that minority language patients are more often discharged from hospital without any followup appointment, more often receive the wrong medication or insufficient information on how to take medication, use mental health services less often, are less satisfied with the care they receive, and spend more time on average in the emergency room than majority language patients. The report also cites studies showing that health professionals dealing with minority language patients are less satisfied with their work,

⁸ The term "allophone" is used in Québec to refer to people whose mother tongue is not English, French, or an aboriginal language.

experience more stress, and are more at risk of being sued for medical malpractice due to communication problems.

A survey conducted among a representative sample of Québec hospital patients showed that those who have difficulty communicating are more likely to be exposed to adverse events (unintentional injuries or complications arising from care received) than other patients (Bartlett, Blais, Tamblyn, Clermont, and MacGibbon, 2008).

Other studies have shown that, compared to a cohort of majority language patients, minority language patients are hospitalized more often, have more medical tests, and receive intravenous hydration more often. Because these measures are costly, the authors demonstrated that poor communication between patients and doctors increases the cost of care (Hampers & McNulty, 2002). Another study showed that poor communication between patients and clinical practitioners may result in some patients not showing up for further appointments and not following treatment as prescribed to them (Drennan, 1996). A literature review by Yeo found that language barriers are associated with longer, less frequent visits to medical clinics, more visits to the emergency room, fewer followups, and greater dissatisfaction with services received. He also points out that older and poorer people and women are the ones who suffer most from language barriers (Yeo, 2004). Language barriers are therefore thought to contribute to health inequalities among minority language populations (Diamond & Jacobs, 2009).

Studies have shown that implementing certain language adaptation measures in services for minority language patients lead to better care quality (Karliner, Jacobs, Chen, and Mutha, 2007), an increase in their use of services (Snowden, Masland, Peng, Wei-Mien Lou, and Wallace, 2010), lower costs associated with their treatment (Hampers & McNulty, 2002), and better understanding in discussions with health professionals (Han, Laranjo, and Friedman, 2009) and help health professionals adopt less discriminatory care practices (Bishop, 2008). According to Beach et al., inviting Spanish-speaking women by phone in their mother tongue to have certain screening tests (cervical, breast, or colorectal cancer) would significantly increase use of these services by this population (Beach et al., 2007).

1.3 INDICATORS OF LANGUAGE KNOWLEDGE AND USE IN QUÉBEC

A number of Canadian census indicators help provide an idea of the language skills of Quebecers. It is important to clearly understand these indicators in order to be attentive to their limits, keeping in mind that they involve self-declarations of language knowledge and use. Some of the conclusions that we draw respecting the language proficiency of health and social service workers could evidently also apply to their clients.

Mother tongue: This refers to the first language learned at home in childhood and still understood by the person at the time the data was collected (Statistics Canada, 2010). This is the indicator that should be most closely associated with a high proficiency level in a given language. Emotional and affective content is better expressed and understood in this language (Bowen, 2001; Musser-Granski & Carrillo, 1997). In health care and social services, the mother tongue is the language in which communication is likely to be more effective and free of interpretation errors that may affect the health of patients. It is also the

language in which health professionals are in principal more at ease during interventions (Verdinelli & Biever, 2009).

Language spoken at home: For most people, the language spoken at home is the same as the mother tongue. In this regard, it may be a very good predictor of the ability to communicate well in this language. For some, however, the English or French spoken at home is a second language. We can assume that it indicates an ability to converse easily in a given language, but it does not necessarily reflect sufficient proficiency to offer quality services and care in this language.

Bilingualism: According to *Le Petit Robert 2007*, a “bilingual” person is someone who “can speak two languages fluently.” According to *Le grand dictionnaire de la langue française*, bilingualism may also be defined as “fluency in two languages learned simultaneously.” For the Canadian census, bilingualism means the ability to have a conversation in the two official languages (English and French).⁹

People can be bilingual with dual mother tongues or have learned their second language later in life; linguistic proficiency may vary depending on the situation. Health and social service professionals who are bilingual in dual mother tongues are more likely to be proficient enough in both languages to provide quality communication, even if they are not trained to do so as part of their profession.

The generally accepted assumption is that bilingualism is widespread in Québec and meets a linguistic need in the provision of health care and social services. However, according to the 2006 Census, only 0.7% of Quebecers are thought to be “bilingual” with dual mother tongues of English and French and 0.9% in terms of the languages spoken at home.

First official language spoken (FOLS): This indicator helps categorize people with a third language as their mother tongue into the anglophone and francophone linguistic groups. This variable is based first on the ability to conduct a conversation in one of the two official languages, then in the mother tongue and the language spoken at home. For example, the FOLS of a person whose mother tongue is Spanish and who speaks Spanish at home and can conduct a conversation in French but not in English would be French. In principle, the FOLS of those whose mother tongue is English or French would be the mother tongue.

The FOLS may be a misleading indicator of the ability to communicate properly in this language. However, in the case of health and social service professionals, it is quite likely that this is the language in which they were trained and quite often their language in the workplace. Their ability to communicate properly when providing care is therefore probably very good.

However, we can also assume that some patients with English or French as their FOLS and another mother tongue are rarely exposed to the vocabulary used in medical or social services in one of the two official languages. They likely prefer to receive care in their mother

⁹ For the purposes of the Canadian census, bilingual individuals do not include those who can conduct a conversation in only one of the official languages and a third language.

tongue, given the linguistic complexity of explaining symptoms and understanding medical or social services vocabulary in a second language (Bowen, 2001).

Use of a minority official language in the workplace: This indicator refers to the use of English in the workplace in Québec. The use of English as a second language in the workplace by health and social service professionals does not necessarily indicate that they are highly proficient in this language. For example, a francophone professional may regularly use English in the workplace but make linguistic errors that may affect the health of patients.

According to a report by Institut national de santé publique, 15.3% of doctors, 8.6% of nurses, and 10.7% of psychologists and social workers in Québec stated that English was their FOLS in 2006 (Trempe & Lussier, 2011).¹⁰ However, much higher percentages reported using English most often or regularly in the workplace (Trempe & Lussier, 2011). We therefore note that a significant percentage of professionals who say they use English in their workplace regularly or very often do not have this language as their FOLS.

Many francophone health and social service professionals in Québec report being able to conduct a conversation in English, i.e., 85% of doctors, 45% of nurses, and 50% of psychologists and social workers (Blaser, 2009). However, caution must be taken when using this data, because the ability to conduct a conversation in a language is not a proficiency indicator for translating medical content or providing services and care in this language (Moreno, Otero-Sabogal, and Newman, 2007).

Although a number of immigrants and a boriginal people have English as their FOLS, the majority have a mother tongue other than English. They may therefore not have the level of English required to understand medical vocabulary, explain their symptoms, or express their suffering (Blaser, 2009). We should therefore not jump to the conclusion that English should be the language of communication in their case. The same thing goes for French when it is the FOLS but not the mother tongue.

1.4 RIGHT TO HEALTH CARE AND SERVICES IN ONE'S OWN LANGUAGE

The health and social services network is responsible for adapting services to the cultural and linguistic context. Under Section 15 of the *Act respecting health services and social services*, RSQ, chapter S-4.2), “English-speaking persons are entitled to receive health services and social services in the English language, in keeping with the organizational structure and human, material, and financial resources of the institutions providing such services and to the extent provided by an access program referred to in Section 348.” The network must also take account of the linguistic, sociocultural, and ethnocultural characteristics of each region (Subsection 2.5) and foster access, to the extent resources allow, to health and social services in their own languages for members of the various cultural communities of Québec (Subsection 2.7).

¹⁰ This also includes staff whose mother tongue is English.

1.5 QUÉBEC'S LEGISLATIVE CONTEXT WITH RESPECT TO LANGUAGE

The *Charter of the French Language*¹¹ establishes French as the only official language in Québec, and as the language of work. All workers have the right to work in French, and requiring them to have knowledge of a language other than French is prohibited, with some exceptions. Québec health and social service facilities are subject to the provisions of the Charter, which governs public administration. This includes all facilities that offer services in English, some of which have been officially recognized as having a majority English-speaking clientele. The Charter also imposes certain restrictions on the use of languages other than French at such facilities, e.g., in internal communications, on signage, etc. The abovementioned recognition gives facilities flexibility in applying certain provisions of the Charter.

1.6 OBJECTIVES AND METHODS

1.6.1 Objectives

The purpose of this literature review is to present the strengths and weaknesses of several approaches to optimizing language communication between health and social service professionals and their minority language clients in the provision of care and services.

1.6.2 Method

A literature review was the methodological approach used for this report. First, we consulted articles from scientific journals and grey literature documents suggested by experts in the field. Following an initial analysis performed using N'Vivo8 software, four types of language adaptations were identified. These four types constituted the basis of the themes that were subsequently explored by means of bibliographic search queries in various databases (PubMed, OvidSP, Embase, EBSCOhost, Proquest, Google Scholar, NCBI) and by browsing various sites providing access to grey literature and academic work (Nyam, Érudit). The only inclusion criterion was the publication date (from 2000 to 2011), given the small number of articles dealing with most of these themes.

¹¹ RSQ, chapter C-11, *Charter of the French Language*.

Table 1 Inclusion Criteria for Studies

Publication	Theme (should include at least one element in column A and one in column B)	
Inclusion criteria	A	B
<ul style="list-style-type: none"> • Published between 2000 and 2011 • Published before 2000 in the case of relevant articles cited in reviewed articles or when there were too few query results 	<ul style="list-style-type: none"> • Language courses • Hiring of bilingual staff • Interpretation • Bilingual lexicon • Bilingual form • Translated form • Translated information • Bilingual information 	<ul style="list-style-type: none"> • Health professionals • Health
Exclusion criteria		
<ul style="list-style-type: none"> • Students • Future health professionals • Health professionals whose mother tongue is not the majority language of the region where the clientele speaks the official language 		

Other articles and documents referenced in reviewed articles were then included. In these cases, the publication dates of such documents could be prior to 2000 if they were relevant to the review.

A number of meetings were held with Québec experts specialized in the issues of cultural and linguistic communication. The document was also reread by other experts on the subject.

A significant number of the studies reviewed came from the United States, whose health care system is quite different from the Québec system. These studies generally involved Spanish-speaking populations with a limited knowledge of English. We know full well that many countries share situations of linguistic duality that may be similar to the one in Québec. Unfortunately our literature review did not uncover very many studies on these countries.

The possibility of generalizing these studies to the Québec context is therefore limited. They nevertheless help provide an overview of the various approaches to language adaptation in health care and social services.

2 RESULTS

2.1 USE OF BILINGUAL OR TRANSLATED DOCUMENTS

This literature review identified certain studies assessing improvements in communication between health professionals and their minority language patients through the use of bilingual or translated health assessment forms, translated health information, and bilingual lexicons.

Bilingual health assessment forms are preconstructed documents with spaces for health professionals to enter required information. The questions are written in both languages. Translated health information is often in the form of leaflets or posters. Bilingual lexicons are lists of terms that are accompanied by their equivalents in one or more other languages, but do not include definitions (Office québécois de la langue française, 1985).

In recent decades, French-English lexicons have been developed for health professionals. In 2006, the members of the Training and Retention of Health Professionals Project led by McGill University set up a committee tasked with drawing up a list of assessment criteria for these tools and evaluating seven of them. The committee made a number of recommendations for improving lexicon content and suggested developing such a tool for mental health professionals and social workers. But it also expressed reservations about the use of lexicons, even as it recognized their usefulness for francophone health professionals studying English in the context of their work (McLaughlin & Rogers, 2006).

Bilingual or translated health assessment forms seem to help health professionals who have some knowledge of the second language formulate questions correctly when talking to patients, but do little to help them understand the answers provided. A study on the use by English-speaking doctors of a bilingual medical assessment form accompanied by an English-Portuguese lexicon showed that compared to discussions conducted only in English, patient understanding improved by 68% when doctors asked questions in Portuguese using the bilingual form. However, doctors reported having difficulty understanding the responses of their patients despite using the lexicon (Han et al., 2009). In another study where nutritionists used a form translated into Spanish to help them establish nutrition profiles, the nutritionists reported that the form helped them ask questions but that they sometimes had difficulty understanding the responses. They said their clients tended to overestimate the nutritionists' ability to understand Spanish and expressed themselves at a level that exceeded the linguistic proficiency of the nutritionists (Lear, 2005).

Simple translation of a form is not enough to ensure that user symptoms are understood. The form must also be adapted to the culture associated with the language. A study on a pain assessment questionnaire for people suffering from chronic pain that had been translated from English into Portuguese concluded that the questionnaire was poorly adapted to the Brazilian cultural context because the terms it used to describe pain did not correspond to terms used by Brazilians. The Brazilian experience of suffering due to chronic pain tended to be associated with symptoms of depression, while the questionnaire dealt mainly with descriptors of somatic pain. Simple translation of the tool was therefore insufficient to properly assess the condition of patients. The authors of this study stressed that tools such

as physical or mental health assessment questionnaires must not only be translated, but culturally adapted (Cardoso & Faleiros Sousa, 2009).

The translation of health information also has certain limits. A study measuring patients' adherence to treatment when provided with a translation into their language of directions for using medication showed that adherence to treatment improved only when such directions were first explained to them by an interpreter (Larizza, Wilson, and Dooley, 2009). A study assessing the literacy level of patients with a limited knowledge of English at a hospital in Great Britain showed that English and mother tongue illiteracy rates could be as high as 86.9% in certain ethnic groups. The hospital, which had been adapting its services by translating health information brochures into several languages, opted instead to produce videos that could be presented to patients (Tuffnell, Nuttall, Raistrick, and Jackson, 1994).

Although these bilingual communication tools can improve understanding on the part of minority language patients, they can also lead to major comprehension and interpretation problems that can have a negative impact on their health. These tools should be used with caution and should not replace the services of an interpreter.

2.2 SECOND LANGUAGE COURSES FOR HEALTH AND SOCIAL SERVICE PROFESSIONALS

The purpose of second language courses for professionals is to improve communication between professionals and health and social service users. However, becoming proficient enough in a second language to communicate without making comprehension errors is a huge challenge. A number of authors point out that second language courses offered to health professionals should be provided in conjunction with interpreter services and should not replace them (Mazor, Hampers, Chande, and Krug, 2002; Prince & Nelson, 1995a).

Teaching health professionals a second language has certain benefits. Health professionals who know some second language basics and use them during their first contact with patients can help build a relationship of trust, which can have a positive impact on the therapeutic relationship (Bender & Harlan, 2005). The presence of professionals with language training increases patient satisfaction with the care received (Mazor et al., 2002). However, a number of authors stress the importance of assessing the second language skills of professionals who have taken such courses before they use these skills in their practice. This assessment helps reduce the risk of communication errors that may have a negative effect on the health of patients (Diamond & Jacobs, 2009; Huang J et al., 2009).

According to several authors, second language courses for professionals should include psycho-emotional and medical content (vocabulary, scenarios) to encourage use of the knowledge acquired (Isaacs, D. Laurier, Turner, and Segalowitz, 2011; Lear, 2005). A study conducted among French-speaking Québec nurses identified certain linguistic difficulties they experienced in learning English as a second language. According to the nurses, the most difficult skills to assimilate were expressing emotions and communicating medical content (Isaacs et al., 2011). Second language courses should also focus more on communication and understanding than grammar. For example, strategies focusing on pronunciation, active listening, and asking patients to repeat what they've said and speak more slowly should be encouraged (Bender & Harlan, 2005; Bloom, Timmerman, and Sands,

2006; Lear, 2005). Some authors have stressed the importance of professionals taking intensive immersion courses that include medical content to maximize learning (Bender & Harlan, 2005).

Some employers offer financial incentives such as bonuses to encourage employees to take language courses (Huang J et al., 2009). Because professionals have limited time for taking courses, some organizations offer second language courses in the workplace to make them more accessible (Lear, 2005).

However, language adaptation in health and social services that concentrates exclusively on teaching health professionals a second language, with no recourse to interpreters or language proficiency assessments, may entail certain risks. A U.S. study showed that after taking a 45 hour course in medical Spanish, English-speaking medical residents working in Spanish frequently made communication errors that could affect the health of patients. In 34 interviews with Spanish-speaking patients, minor communication errors (incorrect vocabulary or grammar) were detected in half, and five contained major communication errors (misunderstanding of vocabulary and of the duration of patient symptoms) that may have significantly affected the health of the patients. These residents also reportedly reduced their use of interpreters by half (Prince & Nelson, 1995b). Another study also demonstrated that the use of interpreters dropped among doctors who had taken a beginner's course in medical Spanish, which may have led to medical errors (Mazor et al., 2002). Second language courses for health professionals should include awareness training on the importance of using interpreters and help professionals understand the limits of their own linguistic skills in the context of their work (Diamond & Jacobs, 2009).

2.3 HIRING AND USING BILINGUAL EMPLOYEES

Hiring bilingual employees¹² is another form of language adaptation in services. Organizations recruit employees who speak both the majority language and another language so that they can offer services directly in the language of users or serve as interpreters where required.

Several authors have stressed the importance of assessing the language proficiency of bilingual employees (Huang J et al., 2009; Moreno et al., 2007; Verdinelli & Biever, 2009). Some employees tend to overestimate their linguistic skills in a second language. A study conducted among family doctors showed that the patients of doctors who claimed to be bilingual tended to report that these doctors did not speak the second language (Rosenthal, Wang, Schillinger, Pérez Stable, and Fernandez, 2011). In a qualitative study conducted among English-speaking American psychologists who had learned and occasionally worked in Spanish, the psychologists reported feeling uncomfortable and sometimes less confident when using the language. They were reportedly so preoccupied with making themselves understood and trying to understand what their clients were saying that they weren't able to focus on the content itself. The pace of therapy was reportedly affected, becoming slower, less fluid, and less natural (Verdinelli & Biever, 2009).

¹² Bilingual or multilingual.

One study, whose goal was to assess the language proficiency of 840 hospital employees who claimed to be bilingual and spoke or interpreted in another language, demonstrated that only 77% were sufficiently bilingual to speak the other language or interpret medical content. The majority of the 23% who were not linguistically proficient enough to interpret medical content were nevertheless proficient enough to interpret nonmedical content (Moreno et al., 2007).

The cost and absence of bilingualism assessment tools are often cited as barriers to assessing the language proficiency of employees who offer care in a second language or serve as interpreters (Huang J et al., 2009). According to a researcher at the Polytechnic University of Valencia, the use of a Web platform for assessing second language proficiency may be a reliable, low-cost option for health care facilities. His conclusion is based on a satisfaction survey on the use of such a platform that he conducted among university language professors (Garcia Laborda, 2009). According to researchers at George Washington University, using phone assessments may be a good option. At the Ukia Valley Medical Center, located in a rural area of California where about 20% of the population served is Spanish-speaking, the directors of various units solicit their bilingual employees to take a phone test to assess their language proficiency. The test lasts about 30 minutes and each participant receives \$50 in compensation. Depending on their results, participants are put on a list of staff deemed proficient to interpret medical content or on a list of staff who can interpret nonmedical content. These lists are posted on the hospital's intranet so that all medical staff have access to them (Huang J et al., 2009). Work conducted by Norman Segalowitz at Concordia University in Montréal and the Health-Care Access for Linguistic Minorities (H-CALM) research group seems to be promising for second language proficiency assessments (Segalowitz, 2010).

However, using bilingual employees who have been trained as interpreters and whose skills have been assessed has other limitations. Facility managers should consider the real costs associated with this approach and ask themselves whether it is an efficient use of their human resources. A qualitative study led by Battaglini stresses that the use of health professionals as interpreters is a costly solution in the context of a labor shortage (Battaglini et al., 2005). According to Drennan, using nurses as interpreters at a psychiatric hospital led to a lack of productivity, because nurses had to leave their workstations to help colleagues. When no bilingual nurses were available in a unit, patients had to wait a long time before receiving care. Bilingual nurses also reported a lot of dissatisfaction with being repeatedly called upon to interpret. They did not always feel competent to interpret and were not compensated for this additional task, which was not in their job description. For their part, psychiatrists reported wasting considerable time trying to find available bilingual staff and, because they felt uncomfortable about having staff perform this task, tried to keep patient assessments to a minimum, which raised the risk of compromising care quality. Eventually the nurses were paid double the salary of an interpreter, resulting in a waste of financial resources (Drennan, 1996).

2.4 USING INTERPRETERS

There are several types of interpreters who can assist in the provision of health and social services. This report concentrates mainly on two types that we identify as follows: trained interpreters and informal or ad hoc interpreters.¹³ Trained interpreters are individuals who have received formal training in interpreting.¹⁴ Ideally, they should also be specifically trained in medical interpretation and their linguistic proficiency in both languages should be assessed¹⁵ (Huang J, Ramos C, Jones K, and Regenstein M, 2009). Informal interpreters refer to individuals who are called upon to interpret, but are not specifically trained in this field. They may be bilingual employees at a facility, volunteers who speak the required language, or members of a patient's family or community, all of whom may have been evaluated for language proficiency, although this rarely seems to be the case according to the literature (Huang J et al., 2009).

Many studies show that the use of trained interpreters is the most effective approach, because it entails a lower risk to patient health and fewer ethical issues (Flores et al., 2003; Jacobs et al., 2001). The use of hospital-trained interpreters in face-to-face situations rather than informal interpreters or trained telephone interpreters¹⁶ is the approach that gave the greatest satisfaction to parents in a pediatric emergency room (Garcia, Roy, Okada, Perkins, and Wiebe, 2004). A study on the quality of communication during interpreting sessions with informal interpreters showed that half of the 21 sessions analyzed contained serious interpretation errors that could affect the understanding of the patient's symptoms or the credibility of the patient's comments (Elderkin-Thompson, Silver, and Waitzkin, 2001). In another study comparing interpretation errors made by informal and trained interpreters, informal interpreters committed errors with potentially major clinical consequences more frequently than trained interpreters (Flores et al., 2003). According to a study conducted in California among bilingual nurses with no interpreter training, about half the interviews assessed contained serious interpretation errors that had affected the attending physician's understanding of the patient's symptoms or concerns (Elderkin-Thompson et al., 2001). In another study on the use of bilingual nurses not trained in interpretation at a psychiatric center, some psychiatrists reported they sometimes had to redo patient assessments because there was too much vital information missing (Drennan, 1996). Bauer and Alegria note in a literature review that there are many potential sources of miscommunication and distortion in the provision of psychiatric care, particularly in the absence of an interpreter or where informal interpreters are used. Assessing patients in a language other than their mother tongue may lead to incomplete or erroneous conclusions about their mental health.

¹³ We use the same terms here as Battaglini and Léonard in the *Projet de Cadre national de référence en matière d'interprétariat* (forthcoming). In our minds, "trained" can be replaced with "professional," indicating that individuals have been specifically trained in interpretation, whether at a university or elsewhere.

¹⁴ Interpretation training may vary considerably, e.g., from the university Master's level to in-house training offered by a bank or association of interpreters.

¹⁵ Although most studies on trained interpreters specify that such individuals have received interpreter training, few indicate whether they received specialized training in medical interpretation, or how the language proficiency of the interpreters was assessed.

¹⁶ Hospital-trained interpreters obtained a score of 85% or more on a test taken at the hospital and undergo continuous training and assessment. Informal interpreters may be any other hospital staff not specifically trained and assessed or users' relatives or friends. Telephone interpreters are part of a national bank of interpreters and interpret simultaneously using earphones.

The use of informal interpreters may also lead to interpretation errors that yield similar results. The use of trained interpreters helps minimize these problems and helps patients open up to clinicians (Bauer & Alegría, 2010).

Several authors stress that employing family members as informal interpreters may lead to awkward situations where they either refuse or omit, deliberately or involuntarily, to communicate all the necessary information about a patient, whether for cultural reasons or because they feel uncomfortable or think they are protecting the patient (Drennan, 1996; Vissandjée, Ntetu, Courville, Breton, and Bourdeau, 1998). Jones and Gill emphasize in particular the danger of using children as interpreters to translate discussions between their parents and health professionals, given their lack of emotional and cognitive maturity (Jones & Gill, 1998). The use of informal interpreters may also result in major breaches of confidentiality that may have social consequences for patients or their communities (Battaglini, Alvarado, Poirier, and Caulet, 2005; Bowen, 2001; Vissandjée et al., 1998).

However, in a context of limited resources, trained or professional interpreters are often hard to find according to Schenker et al. at the University of California (Schenker, Lo, Ettinger, and Fernandez, 2008). Jones and Gill feel that making interpreters available 24 hours a day at all health care facilities is unrealistic (Jones & Gill, 1998).

Schenker et al. suggest that doctors facing this problem explore various language adaptation options that can help them ensure minority language patients receive better quality service. In their view, doctors must first take into account the clinical situations of patients. If a patient requires immediate care and no trained interpreters are available, the use of informal interpreters may be necessary. If doctors are familiar with the patient's language, they may also use what they know. However, it is important to call upon a trained interpreter as soon as possible to validate information that has been communicated and understood and to rule out any medical errors as soon as possible.

According to these same authors, doctors must also consider the extent of the language barrier between patients and themselves and call upon trained interpreters when necessary. If doctors have some knowledge of their patients' language and their proficiency has been assessed,¹⁷ they may directly address patients in their language. If doctors are proficient in the language but their skills have not been assessed and no trained interpreters are available, they must use what they know with extreme caution and continually validate their understanding and that of patients during discussions. A trained interpreter must be called as soon as possible to validate that both parties have understood each other. If no interpreters are available at their facility, health professionals may resort to telephone or video conference interpretation services.¹⁸ In cases where access to trained interpreters is limited, priority should be given to patients whose clinical profile is serious or where the language barrier is highest.

¹⁷ Schenker et al. do not address second language proficiency assessments. They stress, instead, the importance of continually ensuring that both parties understand each other. Second language proficiency assessments have been suggested by Huang et al. (2009).

¹⁸ Video conferencing can take various forms. It simply means that there is visual contact between patients, staff, and interpreters as well as verbal contact.

Schenker et al. recommend that doctors also take into account patient preferences. Some people prefer not to use interpreters, often for reasons of confidentiality. In cases where health professionals deem it important to use the services of a trained interpreter and patients refuse, professionals should try to explain what is at issue and mention to patients that the service is free if such is the case (Schenker, Lo, Ettinger, and Fernandez, 2008).

In a Québec publication, Muñoz and Kapoor-Kholi present a very good summary of the pros and cons of various interpreting methods and provide a list of guidelines for staff who use interpreters in the provision of care (Munoz & Kapoor-Kholo, 2007).

Professional interpretation can take various forms, i.e., face to face, by phone, or by video conferencing. The quality of interpretation does not change from one method to the next (Crossman, Wiener, Roosevelt, Bajaj, and Hampers, 2010). However, the satisfaction of patients, doctors, and interpreters varies depending on the method used. Doctors and interpreters prefer face-to-face interpretation rather than video conference interpretation because of the time required to set up audiovisual equipment and the relative loss of visual contact with patients (Price, Pérez-Stable, Nickleach, López, and Karliner, 2011). They do, however, prefer video conference interpretation to telephone interpretation because the expressions and movements of all parties can be seen, despite a partial loss of visual contact with patients, who often tend to watch the monitor. The poor sound quality of telephone interpretation also appears to be a shortcoming of this tool (Locatis et al., 2010). According to interpreters, telephone interpretation can be effective for transmitting small amounts of information to patients, about appointment scheduling for example, but is less effective during discussions involving educational or psychosocial aspects (Price et al., 2011). Patient satisfaction varies among studies. In a study comparing patient satisfaction levels based on the use of face-to-face or telephone interpreters or the use of no interpreters (consultations with bilingual doctors), patients reported being more satisfied with telephone or face-to-face interpretation and less satisfied with interventions conducted by bilingual doctors (Crossman et al., 2010). In another study, patients were equally satisfied with face-to-face, telephone, and video conference interpretation (Locatis et al., 2010).

According to an article comparing the pros and cons of various remote professional interpretation methods (telephone and video conference), telephone interpretation is advantageous because access is fast, interpreters in several languages are available, and the service is easy to use and can be accessed at any time. This system is effective for short, simple discussions that do not require visual communication. Video conference interpretation offers the same advantages as telephone interpretation, but is more appropriate in clinical situations requiring visual communication. It is similar to face-to-face interpretation in terms of benefits. This method is particularly effective for mental health interventions (Masland, Lou, and Snowden, 2010).

A number of authors have stressed the importance of offering health professionals training that makes them aware of the importance of communication when providing health and social services and familiarizes them with the use of interpretation services (Bereknyei et al., 2010; Bowen, 2001; Huang J et al., 2009; Karliner, Pérez-Stable, and Gildengorin, 2004). One study showed that training in the use of interpretation services in the health care and service context affects the frequency with which doctors use such services and doctors'

satisfaction with the services offered (Karliner et al., 2004). Another study demonstrated that teaching these skills to doctors during training is effective and the knowledge acquired is retained for a period of four years (Bereknyei et al., 2010).

In a literature review by the Palo Alto Medical Foundation Research Institute in California, the authors identified certain components that should be part of training on linguistic services available to health professionals (Diamond & Jacobs, 2009):

- Learning how language barrier issues affect the provision of health care and services
- Understanding why language barriers are likely to lead to health disparities among patients with a limited knowledge of the majority language
- Developing the ability to use interpretation services effectively
- Developing the ability to recognize an interpretation session that is not working well
- Developing critical judgment regarding the advisability of using their own language skills with patients who have a limited knowledge of the majority language.

To maximize communication during sessions with interpreters, especially in the case of informal interpreters, health professionals should always speak in the simplest terms and tell interpreters to interrupt them as often as is necessary to clarify any points or give them the time they need to translate everything. When professionals suspect errors in interpretation or communication, they should closely observe the non-verbal language of patients. The amount of information communicated by interpreters should correspond to what patients or health professionals have said. If professionals suspect that interpreters are expressing their own opinions, they should immediately intervene to clarify the interpreter's role and ask them to communicate information as accurately and neutrally as possible (Diamond & Jacobs, 2009).

Currently, there doesn't seem to be any consensus in scientific and grey literature on the content and minimum number of hours of training required to qualify as a proper medical interpreter. However, Bowen suggests that such training should cover the following components (Bowen, 2005):

- Development of interpretation skills
- Ethical issues associated with interpretation
- Medical or health-related vocabulary
- Development of the ability to explain hard-to-translate medical concepts
- Development of interpretation skills in a specific medical field, e.g., mental health
- Training should be offered to bilingual students who are proficient in the majority language and any other language
- The language proficiency of students should be assessed.

2.5 SUMMARY OF RECOMMENDATIONS FROM LITERATURE ON GOOD PRACTICES FOR LANGUAGE ADAPTATION IN HEALTH AND SOCIAL SERVICES

This summary of good practices for language adaptation in health and social services is based on our complete literature review and draws on summaries written by Huang et al. at the George Washington University School of Public Health on language adaptation in health care and services at 800 U.S. hospitals (Huang J et al., 2009); the work of Bowen at the University of Alberta, which served to develop an access program for the Winnipeg area in Manitoba, Canada (Bowen, 2004); and the work of Anderson et al., whose goal is to improve the cultural competencies of the U.S. health care system (Anderson, Scrimshaw, Fullilove, Fielding, and Normand, 2003).

The work of Huang et al. is based on Section 1259 of the *California Health and Safety Code*, which deals with access to health care and services for patients with a limited knowledge of English. This code was formulated on the basis of numerous studies on the subject (*CA Health & Safety Code § 1259*; Huang J et al., 2009). Bowen's studies are relevant not only for their quality, but also because they involve a region whose linguistic context bears similarities with that of a number of Québec regions, i.e., the largest minority group speaks one of Canada's official languages and the health care system is universal (Bowen, 2004). The studies of Anderson et al. are a systematic review of five interventions aimed at improving cultural skills in the U.S. health care system, including linguistic communication.

Some practices involve policy guidelines or facility managers, while others more directly affect individuals called upon to intervene in the provision of care and services. A selective list of recommendations is presented below without any assumption of whether they have already been applied at Québec facilities:

- Implement a language access policy for the facility
- Determine the facility's ability to meet the needs of a clientele with limited knowledge of the majority language
- Conduct a study on the language needs of the population served by the facility
- Demonstrate leadership in implementing language adaptation measures in care and services at the facility
- Find out about possible language adaptation measures and the recommendations of research studies on the subject
- Inform patients verbally or in writing of their right to receive services in the language in which they feel most comfortable
- Ensure that patients are informed of the fact that professional interpretation services are free of charge
- Use trained interpreters (medical interpretation if possible) rather than other language adaptation approaches
- Encourage the recruitment of trained medical interpreters
- Ensure that trained interpreters are proficient in the languages of interpretation (assessment)
- Train staff on the use of interpretation services

- Ensure that informal interpreters are proficient in the languages of interpretation (assessment) and provide them with training in medical interpretation to the extent possible
- Assess the language proficiency of staff considered capable of intervening in a second language
- Call on bilingual staff only as a last resort and only in emergency situations
- Use family members, friends, or neighbors as interpreters only in emergency situations or at the express request of patients
- Make clinical material written in easy-to-understand language available in the languages most frequently encountered in the community where the facility is located.

3 APPLICABILITY OF CERTAIN ADAPTATION MEASURES IN THE QUÉBEC CONTEXT

3.1 INTERPRETATION

In Québec there are a number of regional interpreter banks (Lafrenière, 2008) that seem to be solely intended for users who speak languages other than English or French. Some regions may therefore have interpreter banks for various languages, but very few have made provision for interpretation services into English—even regions with few staff who are proficient in English. The exception that seems to prove the rule is the Mauricie et Centre-du-Québec region, which has such a provision in its 2007 regional language accessibility policy.¹⁹ In general, other regions rely solely on the presence of facilities with English-speaking staff or staff who are or considered to be bilingual.²⁰

According to our literature review, the services of trained medical interpreters should be preferred over all other forms of language adaptation. A central interpreter bank accessible to all Québec health facilities could be an option worth exploring insofar as it would make services available across Québec (Bowen, 2001; Lafrenière, 2008). In particular, the bank could offer remote interpretation services via video conference or telephone for users with a limited knowledge of French. This would be especially useful for facilities located in remote regions or for users living in regions where a small percentage of the population is allophone, anglophone, or speaks an aboriginal language. At the same time, if a facility receives a significantly high number of requests for interpretation into English or other languages, trained interpreters could be hired to offer on-site services.

As recommended in the scientific literature, medical interpretation training should be offered to all those wishing to interpret in the health field to ensure the quality and consistency of interpretation services (Bowen, 2001). Currently, there doesn't seem to be any specific university interpretation training program in Québec.²¹ In Montréal, those wishing to acquire a background in this field must enroll in a university course on community interpreting.²²

At the same time, training on the use of interpretation services as suggested by Diamond and Jacobs should be offered to Québec health and social service professionals in the event that such services are created (Diamond & Jacobs, 2009).

3.2 HIRING BILINGUAL EMPLOYEES

Hiring bilingual health professionals could be beneficial in regions where a significant proportion of users have limited knowledge of French. For example, professionals who speak English and French could be recruited in Montréal, where 17% of the population identifies

¹⁹ <http://www.agencesss04.qc.ca/images/images/agence/politique%20regionale.pdf>, consulted on August 30, 2012.

²⁰ It should be pointed out that the Québec government is currently working on an interdepartmental framework for organizing and offering interpretation services.

²¹ To our knowledge, the only university interpretation program in eastern Canada is at the University of Ottawa at the master's level.

²² It seems that this course is rarely taught due to low enrollment.

English as their mother tongue, and in the regions of Outaouais (14%), Gaspésie–Îles-de-la-Madeleine (9%), Montérégie (8%), and Estrie (7.6%). Hiring professionals who speak French and a language other than English could also be beneficial in Montréal and Laval, where 32% and 25% of the population respectively have a mother tongue other than English or French. Ideally, the same should be the case in regions where the mother tongue of a large percentage of the population is an aboriginal language. However, as a number of authors cited in this literature review recommend, the language proficiency of bilingual health professionals should be assessed to ensure the quality of communication with users who have a limited knowledge of French.

At a number of health and social service facilities, especially designated facilities,²³ positions may be identified as requiring the knowledge of a language other than French—notably English—and the professionals called upon to fill them must usually demonstrate high proficiency in this other language. This practice, however, is limited by certain provisions of the *Charter of the French Language*.

To our knowledge, there do not seem to be any standard methods for assessing the language proficiency of these professionals. The evaluation of the 2007–2010 regional program on access to services in English performed for Agence de la santé et des services sociaux de Montréal seems to confirm this fact (CROP, 2010).

However, a distinction must be made between professionals called upon to practice their profession in two languages and those called upon with varying frequency by colleagues to serve as informal interpreters. Ideally, in the interests of rational use of resources, such professionals should not be hired to serve as informal interpreters for other health professionals—even less so if they have not been trained in interpretation (Bowen, 2001; Drennan, 1996). They should be hired only to offer services in another language themselves.

3.3 SECOND LANGUAGE COURSES FOR HEALTH PROFESSIONALS

Because English is the minority language most widely spoken in Québec, English language courses for health professionals could be considered on two conditions:

1. That facilities that employ such professionals serve a critical mass of users whose mother tongue is English.
2. That professionals who take these courses not use their second language skills without interpreter assistance unless their second language proficiency has been assessed and deemed sufficient.

In Québec, about \$1.6 million has been invested annually in English language training for francophone health and social service professionals (Kishchuk, 2007). To our knowledge, however, the English language proficiency of these participants is not assessed at the end of

²³ Designated facilities are facilities that the government designates from among recognized institutions. They are required to make health and social services available in English to English-speaking persons (Section 508 of the *Act respecting health services and social services*).

A recognized facility is a facility that provides services to persons who, in the majority, speak a language other than French, and has obtained recognition from Office québécois de la langue française under Subsection 29.1 of the *Charter of the French Language*.

their training. Consequently, their ability to provide care in English or serve as medical or social service interpreters remains uncertain. Furthermore, these courses do not seem to include any interpretation skills.

Some Québec regions have a critical mass of users who have a limited knowledge of French and speak a language other than English, notably Nunavik and Terres-Criées-Baie-James, where 84% and 92% of the population respectively speak an aboriginal language. Because the mother tongue of professionals working in these regions is mainly French, it may be worth offering them aboriginal language training (Cree and Inuktituk), in conjunction with the use of interpreters and aboriginal language proficiency assessments once they have completed their training. To our knowledge, very few Cree or Inuktituk language courses are currently offered in Québec (Gervais, 2011).

3.4 BILINGUAL OR TRANSLATED DOCUMENTS

Bilingual lexicons are useful tools for health and social service professionals studying a second language. However, their usefulness has limits in dispensing health and social services to users with a limited knowledge of French (McLaughlin & Rogers, 2006).

Bilingual or translated health assessment forms may be useful for anglophone and bilingual health professionals as well as interpreters insofar as they optimize the quality of information communicated to or provided by English-speaking users. However, based on the results of our literature review, they must be used with caution by professionals who are not proficient enough in English to provide care in this language. Under these circumstances, their use may lead to communication errors that affect the health of users. Using such forms with speakers of aboriginal or other languages can also lead to communication problems that may compromise care quality.

Translating health information literature may be effective in improving communication at certain Québec facilities that serve a critical mass of users with a limited knowledge of French. However, facilities should ensure that the average literacy level of the target group is high enough and that the literature is culturally adapted where required.

4 ETHICAL AND ORGANIZATIONAL ISSUES

Health facility managers need to consider certain ethical and organizational issues when determining which language adaptation approach to use for the health care and services they provide.

According to Déry, equitable access to health care and services is a principle that should be promoted. This principle refers to the right of individuals with special needs to have access to special services (Déry, 2010). In cases where users have a limited knowledge of French, this principle refers to their right to have access to quality care, which is closely related to the quality of communication in the delivery of care. However, the author notes that this principle must be followed to the extent that adaptation of services does not place undue demands on the organization. A facility serving only a small number of users with limited knowledge of French may consider some forms of language adaptation excessive if the costs of implementing them are significant and they have limited use. For example, some regions with a small percentage of anglophone users could use remote interpretation services provided by an interpreter bank on the grounds that this measure would be more economical and would ensure better communication quality in the delivery of care. Such a measure would not place undue demands on the facility and would respect the principle of equitable access to quality care.

How can we determine the threshold at which the number of users with limited knowledge of French justifies costly measures such as second language courses for health professionals and hiring bilingual staff or interpreters? In California every facility is required by law to provide language assistance services 24 hours a day for language groups that comprise at least 5% of the population it serves (Huang J et al., 2009). In Finland, a municipality is recognized as bilingual if at least 8% of its population speaks the minority language (Health Canada, 2007).²⁴

Bowen suggests that health facility managers consider the issue of language barriers under the label of organizational needs. Language barriers represent risks for facilities, and the adaptation of services is required to reduce these risks, which may be in the form of medical errors or poor management of human and financial resources. Health facility managers should therefore choose the approach(es) most likely to reduce the organizational risks that language barriers represent (Bowen, Gibbens, Roy, and Edwards, 2010).

Health and social service workers need to be made aware of their ethical responsibility when intervening in a second language. As we mentioned at the beginning, census data (Blaser, 2009) shows that 85% of doctors, 45% of nurses, and 50% of psychologists and social workers report being able to conduct a conversation in English. Many workers tend to overestimate their English language skills, which may lead to numerous errors. It is therefore necessary to assess their actual language proficiency and more importantly, make them aware of the fact that they may not be proficient enough in English to ensure quality intervention. A study conducted in Switzerland among health professionals underscored the

²⁴ Finland's *Federal Language Act* has multiple ramifications that do not deal solely with health services. The 8% figure is an illustration only.

importance of making staff aware of the language barrier issue. This study demonstrated that the availability of professional interpretation service alone was not enough to ensure it would be used by these same professionals. Additional efforts must be made to correctly identify language assistance needs and convince professionals that they exist (Bischoff & Hudelson, 2010); these professionals must also recognize their own limits in using a second language.

In closing, we should point out that every code of ethics that health and social service workers abide by stipulates they must do everything in their power to provide service of the highest possible quality. This means that they must ensure that the level of mutual understanding they have with users does not interfere with the quality of service. Health professionals should therefore not only make every possible effort to speak the language of users, but—and most importantly—use every means available to ensure mutual understanding in cases where they are not proficient in the users' language. For their part, managers must accept that appointments and meetings with users who speak a different language than the person providing a service require more time, and take this into account in how they organize services.

CONCLUSION

Our literature review helps shed light on various strategies for improving the quality of service provided to Québec's English-speaking minority and other linguistic groups that may have a limited knowledge of French. It also raises certain issues and risks with respect to the use of these different strategies.

Although certain service adaptation measures have been implemented at health and social service facilities, it is not clear whether current service delivery meets all language adaptation needs. Some types of adaptation that are currently little used are worth consideration, such as the use of remote interpretation services for anglophone, allophone, and aboriginal users in regions where they represent a small percentage of the population.

With regard to Québec's English-speaking population, current measures seem to rely mainly on the use of bilingual staff who are not trained as interpreters, second language courses for some staff (with no proficiency assessment), and translated material used by professionals who do not necessarily speak English well. According to the results of this literature review, however, the use of professional interpretation services for users with a limited knowledge of French would have numerous benefits, both in terms of optimizing the quality of communication and care and the savings it could generate. A cost-benefit analysis of such a measure should help confirm this hypothesis.

Lastly, the development of a Québec medical and social service interpreter training program for those wishing to become professional interpreters in these fields would help such individuals acquire the skills required to ensure quality communication between health and social service professionals and users with a limited knowledge of French. Such training should be offered to those proficient in French and another language, whether English or a third language.

REFERENCES

- Anderson, L. M., Scrimshaw, S. C., Fullilove, M. T., Fielding, J. E., and Normand, J. "Culturally Competent Healthcare Systems. A Systematic Review." *American Journal of Preventive Medicine* 24, Issue 3, Supplement (April 2003): 68–79.
- Battaglini, A., Alvarado, E., Poirier, L.-R., and Caulet, M. "Les services de première ligne et les populations immigrantes. Projet pilote: synthèse." Agence de développement de réseaux locaux de services de santé et de services sociaux de Montréal, February 2005.
- Bauer, A. M., and Alegría, M. "Impact of Patient Language Proficiency and Interpreter Service Use on the Quality of Psychiatric Care: A Systematic Review." *Psychiatric Services* 61, 8 (August 2010): 765–773. doi: 10.1176/appi.ps.61.8.765.
- Beach, M. L., Flood, A. B., Robinson, C. M., Cassells, A. N., Tobin, J. N., Greene, M. A., and Dietrich, A. J. "Can Language-Concordant Prevention Care Managers Improve Cancer Screening Rates?" *Cancer Epidemiology, Biomarkers & Prevention* 16, 10 (October 2007): 2058–2064. doi: 10.1158/1055-9965.EPI-07-0373.
- Bender, D. E., and Harlan, C. "Increasing Latino Access to Quality Health Care: Spanish Language Training for Health Professionals." *Journal of Public Health Management and Practice* 11, 1 (Jan.–Feb. 2005): 46–49.
- Bereknyei, S., Nevins, A., Schillinger, E., Garcia, R. D., Elizabeth Stuart, A., and Braddock, C. H., 3rd. "Beyond Knowledge, Toward Linguistic Competency: An Experiential Curriculum." *Journal of General Internal Medicine* 25, Issue 2, Supplement (May 2010): S155–159. doi: 10.1007/s11606-010-1271-7.
- Bernèche, F., and Traoré, I. "Y a-t-il des liens entre la littératie et la santé? Ce que montrent les résultats québécois de l'Enquête internationale sur l'alphabétisation et les compétences des adultes, 2003." *Zoom santé. Santé et bien-être*. Institut de la statistique du Québec, November 2007. Consulted at http://www.stat.gouv.qc.ca/publications/sante/pdf2007/zoom_sante_litteratie_nov07.pdf.
- Bischoff, A., and Hudelson, P. "Communicating with Foreign Language-Speaking Patients: Is Access to Professional Interpreters Enough?" *Journal of Travel Medicine* 17, 1 (Jan.–Feb. 2010): 15–20. doi: 10.1111/j.1708-8305.2009.00314.x.
- Bishop, V. "Why Learn a Language? The Potential of Additional Language Tuition for Linguistic Identity Awareness and Anti-Discriminatory Practice within British Social Work Education." *Social Work Education* 27, 8 (December 2008): 913–924. doi: 10.1080/02615470701844357.
- Blaser, C. "Health Care Professionals and Official-Language Minorities in Canada, 2001 and 2006." Statistics Canada, catalogue no. 91-550-XWE, April 2009, 60 p.
- Bloom, M., Timmerman, G. M., and Sands, D. "Developing a Course to Teach Spanish for Health Care Professionals." *Journal of Nursing Education* 45, 7 (July 2006): 271–274.

Bowen, S. "Language Barriers in Access to Health Care." Statistics Canada, catalogue no. H39-578/ 2001E, November 2001, 141 p. Consulted at <http://www.hc-sc.gc.ca/hcs-sss/pubs/acces/2001-lang-acces/index-eng.php>.

Bowen, S. "Language Barriers within the Winnipeg Regional Health Authority: Evidence and Implications." Winnipeg Regional Health Authority, September 2004.

Bowen, S. "Development of a Coordinated Response to Addressing Language Barriers within the WRHA: Final Report." Winnipeg Regional Health Authority, July 2005, 47 p.

Bowen, S., Gibbens, M., Roy, J., and Edwards, J. "From 'Multicultural Health' to 'Knowledge Translation'—Rethinking Strategies to Promote Language Access within a Risk Management Framework." *The Journal of Specialised Translation* 14 (July 2010).

California Health & Safety Code, Section 1259.

Cardoso, R., and Faleiros Sousa, F. A. E. "Identification and Validation of Brazilian Chronic Pain Descriptors." *Pain Management Nursing: Official Journal of the American Society of Pain Management Nurses* 10, 2 (June 2009): 85–93.e3. doi: 10.1016/j.pmn.2008.07.004.

CROP. "Évaluation du Programme régional d'accès aux services en anglais 2007-2010. Rapport d'analyse." Agence de la santé et des services sociaux de Montréal, 2010.

Crossman, K. L., Wiener, E., Roosevelt, G., Bajaj, L., and Hampers, L. C. "Interpreters: Telephonic, In-Person Interpretation and Bilingual Providers." *Pediatrics* 125, 3 (March 2010): e631–638. doi:10.1542/peds.2009-0769.

Désy, M. "Qu'est ce que l'Accessibilité culturelle et linguistique des services? Proposition de réponse." *Les services sociaux et de santé en contexte pluriethnique*, Éditions Saint-Martin (2010), p. 306.

Diamond, L. C., and Jacobs, E. A. "Let's Not Contribute to Disparities: The Best Methods for Teaching Clinicians How to Overcome Language Barriers to Health Care." *Journal of General Internal Medicine* 25, Issue 2, Supplement (May 2009): S189–193. doi: 10.1007/s11606-009-1201-8.

Drennan, G. "Counting the Cost of Language Services in Psychiatry." *South African Medical Journal (Suid-Afrikaanse Tydskrif Vir Geneeskunde)* 86, 4 (April 1996): 343–345.

Elderkin-Thompson, V., Silver, R. C., and Waitzkin, H. "When Nurses Double as Interpreters: A Study of Spanish-Speaking Patients in a US Primary Care Setting." *Social Science & Medicine* 52, 9 (May 2001): 1343–1358.

Flores, G., Laws, M. B., Mayo, S. J., Zuckerman, B., Abreu, M., Medina, L., and Hardt, E. J. "Errors in Medical Interpretation and Their Potential Clinical Consequences in Pediatric Encounters." *Pediatrics* 111, 1 (January 2003): 6–14.

Garcia, E. A., Roy, L. C., Okada, P. J., Perkins, S. D., and Wiebe, R. A. "A Comparison of the Influence of Hospital-Trained, Ad Hoc, and Telephone Interpreters on Perceived Satisfaction of Limited English-Proficient Parents Presenting to a Pediatric Emergency Department." *Pediatric Emergency Care* 20, 6 (June 2004): 373–378.

Garcia Laborda, J. "Using Internet-Based Language Testing Capacity to the Private Sector." *CALL-EJ Online* 11, 1 (July 2009): 7.

Gervais, L.-M. "On parle du Plan Nord, mais les Inuits?" *Le Devoir*, October 8, 2011. Consulted on March 1, 2012, at <http://www.ledevoir.com/societe/actualites-en-societe/333262/on-parle-du-plan-nord-mais-les-inuits>.

Hampers, L. C., and McNulty, J. E. "Professional Interpreters and Bilingual Physicians in a Pediatric Emergency Department: Effect on Resource Utilization." *Archives of Pediatrics & Adolescent Medicine* 156, 11 (November 2002): 1108–1113.

Han, A., Laranjo, H., and Friedman, S. M. "The Design and Pilot of a Translation Aid to Help ED Clinicians Enhance Communication with the Portuguese-Speaking Patient." *International Journal of Emergency Medicine* 2, 1 (April 2009): 41–46. doi: 10.1007/s12245-008-0081-8.

Health Canada. "International Comparisons: An Overview of Access to Health Services for Language Minority Communities in Canada, Spain, Belgium and Finland." Government of Canada, November 2007.

Huang J, Ramos C, Jones, K, and Regenstein M. "Talking with Patients. How Hospitals Use Bilingual Clinicians and Staff to Care for Patients with Language Needs." George Washington University School of Public Health and Health Services, September 2009.

Isaacs, T., D. Laurier, M., Turner, C. E., and Segalowitz, N. "Identifying Second Language Speech Tasks and Ability Levels for Successful Nurse Oral Interaction with Patients in a Linguistic Minority Setting: An Instrument Development Project." *Health Communication* 26, 6 (September 2011): 560–570.

Jacobs, E. A., Lauderdale, D. S., Meltzer, D., Shorey, J. M., Levinson, W., and Thisted, R. A. "Impact of Interpreter Services on Delivery of Health Care to Limited-English-Proficient Patients." *Journal of General Internal Medicine* 16, 7 (July 2001): 468–474.

Jones, D., and Gill, P. "Breaking Down Language Barriers." *British Medical Journal* 316, 7143 (May 1998): 1476–1480.

Karliner, L. S., Jacobs, E. A., Chen, A. H., and Mutha, S. "Do Professional Interpreters Improve Clinical Care for Patients with Limited English Proficiency? A Systematic Review of the Literature." *Health Services Research* 42, 2 (April 2007): 727–754. doi: 10.1111/j.1475-6773.2006.00629.x.

Karliner, L. S., Pérez-Stable, E. J., and Gildengorin, G. "The Language Divide. The Importance of Training in the Use of Interpreters for Outpatient Practice." *Journal of General Internal Medicine* 19, 2 (February 2004): 175–183.

Kirmayer, L. J., and Young, A. "Culture and Somatization: Clinical, Epidemiological, and Ethnographic Perspectives." *Psychosomatic Medicine* 60, 4 (Jul.–Aug. 1998): 420–430.

Kishchuk, N. "Review of Secondary Data within the Context of Evaluation of McGill University's Training and Human Resources Development Project," 2007.

Lafrenière, K. "Banque d'interprètes au Québec. Étude comparative." Agence de la santé et des services sociaux de la Mauricie et du Centre-du-Québec and Ministère de l'Immigration et des Communautés culturelles, 2008.

Larizza, M. A., Wilson, R., and Dooley, M. J. "Individualised Foreign language Medication Lists for Non-English Speaking Hospital Patients." *Journal of Pharmacy Practice and Research* 39, 4 (December 2009): 277–280.

Lear, D. W. "Spanish for Working Medical Professionals: Linguistic Needs." *Foreign Language Annals* 38, 2 (May 2005): 223–235.

Locatis, C., Williamson, D., Gould-Kabler, C., Zone-Smith, L., Detzler, I., Roberson, J., Maisiak, R., et al. "Comparing In-Person, Video, and Telephonic Medical Interpretation." *Journal of General Internal Medicine* 25, 4 (April 2010): 345–350. doi: 10.1007/s11606-009-1236-x.

Masland, M. C., Lou, C., and Snowden, L. "Use of Communication Technologies to Cost-Effectively Increase the Availability of Interpretation Services in Healthcare Settings." *Telemedicine Journal and E-Health: The Official Journal of the American Telemedicine Association* 16, 6 (Jul.–Aug. 2010): 739–745. doi: 10.1089/tmj.2009.0186.

Mazor, S. S., Hampers, L. C., Chande, V. T., and Krug, S. E. "Teaching Spanish to Pediatric Emergency Physicians: Effects on Patient Satisfaction." *Archives of Pediatrics & Adolescent Medicine* 156, 7 (July 2002): 693–695.

McLaughlin, S., and Rogers, J. "Findings and Recommendations of the Lexicon Evaluation Committee." Montréal: McGill University, 2006, 49 p. Consulted at <http://www.mcgill.ca/hss/access/trainers/resourceteachers>.

Moreno, M. R., Otero-Sabogal, R., and Newman, J. "Assessing Dual-Role Staff-Interpreter Linguistic Competency in an Integrated Healthcare System." *Journal of General Internal Medicine* 22, Issue 2, Supplement (November 2007): 331–335. doi: 10.1007/s11606-007-0344-8.

Musser-Granski, J., and Carrillo, D. F. "The Use of Bilingual, Bicultural Paraprofessionals in Mental Health Services: Issues for Hiring, Training, and Supervision." *Community Mental Health Journal* 33, 1 (February 1997): 51–60.

Office québécois de la langue française. *Le grand dictionnaire terminologique*. Lexicon, 1985. Consulted on March 19, 2012, at http://www.granddictionnaire.com/btml/fra/r_motclef/index800_1.asp.

Office québécois de la langue française. *Le grand dictionnaire terminologique*. Form, 2004. Consulted on March 19, 2012, at http://www.granddictionnaire.com/btml/fra/r_motclef/index800_1.asp.

Price, E. L., Pérez-Stable, E. J., Nickleach, D., López, M., and Karliner, L. S. "Interpreter Perspectives of In-Person, Telephonic, and Videoconferencing Medical Interpretation in Clinical Encounters." *Patient Education and Counseling* (September 2011). doi: 10.1016/j.pec.2011.08.006.

Prince, D., and Nelson, M. "Teaching Spanish to Emergency Medicine Residents." *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 2, 1 (January 1995a): 32–36; discussion 36–37.

Prince, D., and Nelson, M. "Teaching Spanish to Emergency Medicine Residents." *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 2, 1 (January 1995b): 32–36; discussion 36–37.

Rootman, I., and Gordon-El-Bihbety, D. "A Vision for a Health Literate Canada." Canadian Public Health Association, 2008. Consulted at http://www.cpha.ca/uploads/portals/h-l/report_e.pdf.

Rosenthal, A., Wang, F., Schillinger, D., Pérez Stable, E. J., and Fernandez, A. "Accuracy of Physician Self-Report of Spanish Language Proficiency." *Journal of Immigrant and Minority Health* 13, 2 (April 2011): 239–243. doi: 10.1007/s10903-010-9320-1.

RSQ, chapter S-4.2.

Schenker, Y., Lo, B., Ettinger, K. M., and Fernandez, A. "Navigating Language Barriers Under Difficult Circumstances." *Annals of Internal Medicine* 149, 4 (August 2008): 264–269.

Segalowitz, N. *Cognitive Bases of Second Language Fluency*. Taylor & Francis, 2010.

Snowden, L. R., Masland, M. C., Peng, C. J., Wei-Mien Lou, C., and Wallace, N. T. "Limited English Proficient Asian Americans: Threshold Language Policy and Access to Mental Health Treatment." *Social Science & Medicine* 72, 2 (January 2011): 230–237. doi: 10.1016/j.socscimed.2010.10.027.

Statistics Canada. *2006 Census Dictionary*. Catalogue no. 92-566-X. Ottawa, 2010. Consulted at <http://www12.statcan.gc.ca/census-recensement/2006/ref/dict/pdf/92-566-eng.pdf>.

Trempe, N., and Lussier, M.-H. "Knowledge and Use of the English Language by Healthcare and Social Services Professionals in Québec." No. 1331. Institut national de santé publique du Québec, 2011, 12 pages + appendices. Consulted at http://www.inspq.qc.ca/pdf/publications/1331_ConnUtiliAnglaisProfSSQc.pdf.

Tuffnell, D. J., Nuttall, K., Raistrick, J., and Jackson, T. L. "Use of Translated Written Material to Communicate with Non-English Speaking Patients." *BMJ (Clinical Research Ed.)* 309, 6960 (October 1994): 992.

Verdinelli, S., and Bieber, J. L. "Spanish-English Bilingual Psychotherapists: Personal and Professional Language Development and Use." *Cultural Diversity & Ethnic Minority Psychology* 15, 3 (July 2009): 230–242. doi: 10.1037/a0015111.

Vissandjée, B., Ntetu, A., Courville, F., Breton, É. R., and Bourdeau, M. "The Interpreter in an Intercultural Clinical Milieu." *The Canadian Nurse* 94, 5 (May 1998): 36–42.

Yeo, S. "Language Barriers and Access to Care." *Annual Review of Nursing Research* 22 (2004): 59–73.

APPENDIX 1
LITERATURE SEARCH AND STRATEGY

BIBLIOGRAPHIC DATABASES

Pub Med

Search performed on December 13, 2011

Query 1:

((("second language" OR "foreign language" OR multilingual OR multilinguism OR bilingual OR bilinguism) AND ("education".SH OR "education, public health professional".SH OR "inservice training".SH OR "staff development".SH OR "teaching".SH OR class OR classes OR course OR courses OR development OR "educational activity" OR "educational activities" OR learn OR learning OR pedagogy OR pedagogies OR training OR teach OR teaching OR training OR workshop OR workshops))

AND

("Health Personnel".SH OR "Allied health personnel".SH OR "Allied health personnel" OR "Allied health staff" OR "community health aides".SH OR "community health aide" OR "community health aides" OR "dental auxiliaries".SH OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistants".SH OR "dental assistant" OR "dental assistants" OR "dental hygienists".SH OR "dental hygienist" OR "dental hygienists" OR "dental technicians".SH OR "dental technician" OR "dental technicians" OR "denturists".SH OR dentist OR denturists OR "emergency medical technicians".SH OR "emergency medical technician" OR "emergency medical technicians" OR "Employee of health institutions and programs".SH OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR "health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel" OR "medical staff".SH OR "medical staff, hospital".SH "Medical staff" OR "Medical staffs" OR "nurses' aides".SH OR "nurses' aide" OR "nurses' aides" OR "nursing staff".SH OR "nursing staff, hospital".SH OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR "psychiatric aides".SH OR "psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technicians".SH OR "operating room technician" OR "operating room technicians" OR "pharmacists' aides".SH OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistants".SH OR "physician assistant" OR "physician assistants" OR "ophthalmic assistants".SH OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistants".SH OR "pediatric assistant"

OR "pediatric assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff".SH OR "dental staff" OR "dental staffs" OR "dental staff, hospital".SH OR "dentists".SH OR dentist OR dentists OR "dentists, women".SH OR "health educators".SH OR "health educator" OR "health educators" OR "infection control practitioners".SH OR "infection control practitioner" OR "infection control practitioners" OR "nurses".SH OR nurse OR nurses OR "nurse clinicians".SH OR "nurse midwives".SH OR "nurse practitioners".SH OR "nurses, male".SH OR "personnel, hospital".SH OR "dental staff, hospital".SH OR "pharmacists".SH OR pharmacist OR pharmacists OR "physicians".SH OR physician OR physicians OR "general practitioners".SH OR "general practitioner" OR "general practitioners" OR "occupational health physicians".SH OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physicians".SH OR "osteopathic physician" OR "osteopathic physicians" OR "physicians, family".SH OR "physicians, primary care".SH OR "physicians, women".SH OR "health manpower".SH OR "medical secretaries".SH OR "medical secretary" OR "medical secretaries" OR "medical receptionists".SH OR "medical receptionist" OR "medical receptionists" OR "dental faculty" OR "Faculty, Dental".SH OR "medical faculty" OR "Faculty, Medical".SH OR "Nursing Faculty" OR "Faculty, Nursing" .SH OR "Health Facility Administrators" OR "Health Facility Administrators".SH OR «hospital chief executive officers" OR «hospital chief executive officers".SH OR "Nurse Administrators" OR "Nurse Administrators.SH" OR "hospital auxiliaries" OR "hospital auxiliaries".SH OR "hospitalists" OR "hospitalists".SH OR "Hospital Nursing Staff " OR "Hospital Nursing Staff".SH OR "Physician Executives" OR "Physician Executives".SH)

Query 2:

((Bilingual OR "foreign-language" OR "second language")

AND

("Health Personnel".SH OR "Allied health personnel".SH OR "Allied health personnel" OR "Allied health staff" OR "community health aides".SH OR "community health aide" OR "community health aides" OR "dental auxiliaries".SH OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistants".SH OR "dental assistant" OR "dental assistants" OR "dental hygienists".SH OR "dental hygienist" OR "dental hygienists" OR "dental technicians".SH OR "dental technician" OR "dental technicians" OR "denturists".SH OR denturist OR denturists OR "emergency medical technicians".SH OR "emergency medical technician" OR "emergency medical technicians" OR "Employee of health institutions and programs".SH OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR "health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital

medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel" OR "medical staff".SH OR "medical staff, hospital".SH "Medical staff" OR "Medical staffs" OR "nurses' aides".SH OR "nurses' aide" OR "nurses' aides" OR "nursing staff".SH OR "nursing staff, hospital".SH OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR "psychiatric aides".SH OR "psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technicians".SH OR "operating room technician" OR "operating room technicians" OR "pharmacists' aides".SH OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistants".SH OR "physician assistant" OR "physician assistants" OR "ophthalmic assistants".SH OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistants".SH OR "pediatric assistant" OR "pediatric assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff".SH OR "dental staff" OR "dental staffs" OR "dental staff, hospital".SH OR "dentists".SH OR dentist OR dentists OR "dentists, women".SH OR "health educators".SH OR "health educator" OR "health educators" OR "infection control practitioners".SH OR "infection control practitioner" OR "infection control practitioners" OR "nurses".SH OR nurse OR nurses OR "nurse clinicians".SH OR "nurse midwives".SH OR "nurse practitioners".SH OR "nurses, male".SH OR "personnel, hospital".SH OR "dental staff, hospital".SH OR "pharmacists".SH OR pharmacist OR pharmacists OR "physicians".SH OR physician OR physicians OR "general practitioners".SH OR "general practitioner" OR "general practitioners" OR "occupational health physicians".SH OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physicians".SH OR "osteopathic physician" OR "osteopathic physicians" OR "physicians, family".SH OR "physicians, primary care".SH OR "physicians, women".SH OR "health manpower".SH))

AND

(hire OR hiring OR "personnel selection" OR recruitment OR "personnel selection".SH)

AND

(evaluation OR "Health Care Quality, Access, and Evaluation".SH OR "Program Evaluation".SH OR "Self-Evaluation Programs".SH OR "Health Care Evaluation Mechanisms".SH OR "Evaluation Studies" [Publication Type] OR "Nursing Evaluation Research".SH OR "Evaluation Studies as Topic".SH)

Query 3:

((bilingual OR bilinguism OR "foreign-language" OR multilingual OR multilinguism OR "second language") AND ("Dictionary"[PT] OR "Phrases"[PT] OR "Terminology"[PT] OR dictionary OR dictionaries OR glossary OR glossaries OR lexicography OR lexicographies OR lexicology OR lexicologies OR lexicon OR lexicons OR terminology OR terminologies OR vocabulary OR vocabularies OR word OR words))

AND

(health OR healthcare OR "health care" OR medical OR hospital)

AND

("Evaluation Studies as Topic".SH OR "Evaluation studies"[PT] OR "Nursing Evaluation Research".SH OR "Health Care Evaluation Mechanisms".SH OR "Self-Evaluation Programs".SH OR "Program Evaluation".SH OR "Health Care Quality, Access, and Evaluation".SH OR Evaluation OR Study OR studies OR Analysis)

OvidSP

Search performed on December 14, 2011

Query 1:

((("second language" OR "foreign language" OR multilingual OR multilinguism OR bilingual OR bilinguism) AND ("education".SH OR "education, public health professional".SH OR "inservice training".SH OR "staff development".SH OR "teaching".SH OR class OR classes OR course OR courses OR development OR "educational activity" OR "educational activities" OR learn OR learning OR pedagogy OR pedagogies OR training OR teach OR teaching OR training OR workshop OR workshops))

AND

("Health Personnel" OR "Allied health personnel" OR "community health aides" OR "dental auxiliaries" OR "dental assistants" OR "dental hygienists" OR "dental technicians" OR "denturists" OR "emergency medical technicians" OR "Employee of health institutions and programs" OR "medical staff" OR "operating room technicians" OR "pharmacists' aides" OR "physician assistants" OR "ophthalmic assistants" OR "pediatric assistants" OR "dental staff" OR "dentists, women" OR "dental staff, hospital" OR "health educators" OR "dentists" OR "infection control practitioners" OR "nurses"

OR "nurse clinicians" OR "nurse midwives" OR "nurse practitioners" OR "nurses, male" OR "personnel, hospital" OR "dental staff, hospital" OR "pharmacists" OR "general practitioners" OR "physicians" OR "occupational health physicians" OR "osteopathic physicians" OR "physicians, family" OR "physicians, primary care" OR "physicians, women" OR "health manpower" OR "medical secretaries" OR "medical receptionists" OR "Faculty, Dental" OR "Faculty, Medical" OR "Faculty, Nursing" OR "Health Facility Administrators" OR "hospitalists" OR "hospital chief executive officers" OR "hospital auxiliaries" OR "Physician Executives" OR "Hospital Nursing Staff").sh

("Allied health personnel" OR "Allied health staff" OR "community health aide" OR "community health aides" OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistant" OR "dental assistants" OR "dental hygienist" OR "dental hygienists" OR "dental technician" OR "dental technicians" OR denturist OR denturists OR "emergency medical technician" OR "emergency medical technicians" OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR

"health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel" OR "Medical staff" OR "nurses' aide" OR "nurses' aides" OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR "psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technician" OR "operating room technicians" OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistant" OR "physician assistants" OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistant" OR "pediatric assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff" OR "dental staffs" OR dentist OR dentists OR "health educator" OR "health educators" OR "infection control practitioner" OR "infection control practitioners" nurse OR nurses OR pharmacist OR pharmacists OR physician OR physicians OR "general practitioner" OR "general practitioners" OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physician" OR "osteopathic physicians" OR "medical secretary" OR "medical secretaries" OR "medical receptionist" OR "medical receptionists" OR "dental faculty" OR "medical faculty" OR "Nursing Faculty" OR "Health Facility Administrators" OR "hospital chief executive officers" OR "Nurse Administrators" OR "Nurse Administrators.SH" OR "hospital auxiliaries" OR "hospitalists" OR "Hospital Nursing Staff" OR "Physician Executives").ti

AND

("Evaluation Studies as Topic".sh OR "Evaluation studies".PT OR "Nursing Evaluation Research".sh OR "Health Care Evaluation Mechanisms".sh OR "Self-Evaluation Programs".sh OR "Program Evaluation".sh OR "Health Care Quality, Access, and Evaluation".sh OR Evaluation OR Study OR studies OR Analysis)

Search performed on December 15, 2011

Query 1:

((course* and language* and (health* or medical or (health adj3 care))) adj3 (personnel or physicien* or staff or worker* or practitioner* or provider*)).ab,ti.

Query 2:

Dictionar* or Glossar* or Lexicograph* or Lexicolog* or Lexicon* or Terminolog* or Vocabular* or Word*).ab,ti.

And

(bilingu* or "Foreign language" or multilingu* or "Second language").ab,ti.

AND

("Allied health personnel" or "Allied health staff" or "community health aide" or "community health aides" or "dental auxiliary" or "dental auxiliaries" or "dental assistant" or "dental assistants" or "dental hygienist" or "dental hygienists" or "dental technician" or "dental technicians" or denturist or denturists or "emergency medical technician" or "emergency medical technicians" or "Employees of health institutions and programs" or "Field worker" or "Field workers" or "Health auxiliary" or "Health auxiliaries" or "Health care personnel" or "Health care practitioner" or "Health care practitioners" or "Health care professional" or "Health care professionals" or "Health care provider" or "Health care providers" or "Health care worker" or "Health care workers" or "Health personnel" or "Health professional personnel" or "health staff" or "health staffs" or "health worker" or "health workers" or "Healthcare personnel" or "Healthcare practitioner" or "Healthcare practitioners" or "Healthcare professional" or "Healthcare professionals" or "Healthcare provider" or "Healthcare providers" or "Healthcare worker" or "Healthcare workers" or "Home health aide" or "Home health aides" or "Hospital medical staff" or "Hospital medical staffs" or "Hospital personnel" or "Hospital staff" or "Hospital staffs" or Hospitalist or Hospitalists or "Medical personnel" or "Medical staff" or "nurses' aide" or "nurses' aides" or "Nursing home personnel" or "Nursing home staff" or "Nursing home staffs" or Paramedic or Paramedics or "Paramedical personnel" or "Paramedical staff" or "Paramedical staffs" or Physician or Physicians or Practitioner or Practitioners or "Professional health personnel" or "psychiatric aide" or "psychiatric aides" or "Public health officer" or "Public health officers" or "operating room technician" or "operating room technicians" or "pharmacists' aide" or "pharmacists' aides" or "physician assistant" or "physician assistants" or "ophthalmic assistant" or "ophthalmic assistants" or "pediatric assistant" or "pediatric assistants" or anatomist or anatomists or caregiver or caregivers or "dental staff" or "dental staffs" or dentist or dentists or "health educator" or "health educators" or "infection control practitioner" or "infection control practitioners nurse" or nurses or pharmacist or pharmacists or physician or physicians or "general practitioner" or "general practitioners" or "occupational health physician" or "occupational health physicians" or "osteopathic physician" or "osteopathic physicians" or "medical secretary" or "medical secretaries" or "medical receptionist" or "medical receptionists" or "dental faculty" or "medical faculty" or "Nursing Faculty" or "Health Facility Administrators" or "hospital chief executive officers" or "Nurse Administrators" or "Nurse Administrators.SH" or "hospital auxiliaries" or "hospitalists" or "Hospital Nursing Staff" or "Physician Executives").ti.

December 22, 2011

Query 1

((health or "health personnel" or "health practitioner" or "health practitioners" or practitioners.
(1 résultat)

Embase

Search performed on December 15, 2011

Query 1:

limit 3 to yr="2000 –

(language or "second language" or "foreign language" or multilingu* or bilingu*) and (course* or class* or learn* or train* or teach*).mp. and ("health personnel" or "health staff" or practitioner* or "health care provider*" or "healthcare provider*")

(LEP or "limited english proficiency" or "limited ADJ proficiency") and (course* or class* or learn* or train* or teach*) and ("health personnel" or "health staff" or practitioner* or "health care provider*" or "healthcare provider*")

(LEP or "limited english proficiency" or "limited ADJ proficiency" language or "second language" or "foreign language" or multilingu* or bilingu*) and (course* or class* or learn* or train* or teach*) and ("health personnel" or "health staff" or practitioner* or "health care provider*" or "healthcare provider*")

EBSCOhost

Search performed on December 22, 2011

Query 1:

(bilingu* OR "foreign language" OR multilingu* OR "second language") AND AB (class* OR course* OR educati* OR Educational activit* OR Educational technic* OR Educational technique* OR Employee cross-training OR Human resources development OR learn* OR pedagog* OR teach* OR Teaching method* OR train* OR Training activit* OR Training program* OR Training technic*) AND AB ("Allied health personnel" OR "Allied health staff" OR "community health aide" OR "community health aides" OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistant" OR "dental assistants" OR "dental hygienist" OR "dental hygienists" OR "dental technician" OR "dental technicians" OR denturist OR denturists OR "emergency medical technician" OR "emergency medical technicians" OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR "health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel"

OR "Medical staff" OR "nurses' aide" OR "nurses' aides" OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR "psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technician" OR "operating room technicians" OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistant" OR "physician assistants" OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistant" OR "pediatric assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff" OR "dental staffs" OR dentist OR dentists OR "health educator" OR "health educators" OR "infection control practitioner" OR "infection control practitioners" nurse OR nurses OR pharmacist OR pharmacists OR physician OR physicians OR "general practitioner" OR "general practitioners" OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physician" OR "osteopathic physicians" OR "medical secretary" OR "medical secretaries" OR "medical receptionist" OR "medical receptionists" OR "dental faculty" OR "medical faculty" OR "Nursing Faculty" OR "Health Facility Administrators" OR "hospital chief executive officers" OR "Nurse Administrators" OR "Nurse Administrators.SH" OR "hospital auxiliaries" OR "hospitalists" OR "Hospital Nursing Staff" OR "Physician Executives").

Query 2:

(bilingu* OR "foreign language" OR multilingu* OR "second language") AND AB (class* OR course* OR educati* OR Educational activit* OR Educational technic* OR Educational technique* OR Employee cross-training OR Human resources development OR learn* OR pedagog* OR teach* OR Teaching method* OR train* OR Training activit* OR Training program* OR Training technic*) AND AB ("Allied health personnel" OR "Allied health staff" OR "community health aide" OR "community health aides" OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistant" OR "dental assistants" OR "dental hygienist" OR "dental hygienists" OR "dental technician" OR "dental technicians" OR denturist OR denturists OR "emergency medical technician" OR "emergency medical technicians" OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR "health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel" OR "Medical staff" OR "nurses' aide" OR "nurses' aides" OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR

"psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technician" OR "operating room technicians" OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistant" OR "physician assistants" OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistant" OR "pediatric assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff" OR "dental staffs" OR dentist OR dentists OR "health educator" OR "health educators" OR "infection control practitioner" OR "infection control practitioners" nurse OR nurses OR pharmacist OR pharmacists OR physician OR physicians OR "general practitioner" OR "general practitioners" OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physician" OR "osteopathic physicians" OR "medical secretary" OR "medical secretaries" OR "medical receptionist" OR "medical receptionists" OR "dental faculty" OR "medical faculty" OR "Nursing Faculty" OR "Health Facility Administrators" OR "hospital chief executive officers" OR "Nurse Administrators" OR "Nurse Administrators.SH" OR "hospital auxiliaries" OR "hospitalists" OR "Hospital Nursing Staff" OR "Physician Executives")

Query 3:

(bilingu* OR "foreign language" OR multilingu* OR "second language") AND AB (class* OR course* OR educati* OR Educational activit* OR Educational technic* OR Educational technique* OR Employee cross-training OR Human resources development OR learn* OR pedagog* OR teach* OR Teaching method* OR train* OR Training activit* OR Training program* OR Training technic*) AND AB ("Allied health personnel" OR "Allied health staff" OR "community health aide" OR "community health aides" OR "dental auxiliary" OR "dental auxiliaries" OR "dental assistant" OR "dental assistants" OR "dental hygienist" OR "dental hygienists" OR "dental technician" OR "dental technicians" OR denturist OR denturists OR "emergency medical technician" OR "emergency medical technicians" OR "Employees of health institutions and programs" OR "Field worker" OR "Field workers" OR "Health auxiliary" OR "Health auxiliaries" OR "Health care personnel" OR "Health care practitioner" OR "Health care practitioners" OR "Health care professional" OR "Health care professionals" OR "Health care provider" OR "Health care providers" OR "Health care worker" OR "Health care workers" OR "Health personnel" OR "Health professional personnel" OR "health staff" OR "health staffs" OR "health worker" OR "health workers" OR "Healthcare personnel" OR "Healthcare practitioner" OR "Healthcare practitioners" OR "Healthcare professional" OR "Healthcare professionals" OR "Healthcare provider" OR "Healthcare providers" OR "Healthcare worker" OR "Healthcare workers" OR "Home health aide" OR "Home health aides" OR "Hospital medical staff" OR "Hospital medical staffs" OR "Hospital personnel" OR "Hospital staff" OR "Hospital staffs" OR Hospitalist OR Hospitalists OR "Medical personnel" OR "Medical staff" OR "nurses' aide" OR "nurses' aides" OR "Nursing home personnel" OR "Nursing home staff" OR "Nursing home staffs" OR Paramedic OR Paramedics OR "Paramedical personnel" OR "Paramedical staff" OR "Paramedical staffs" OR Physician OR Physicians OR Practitioner OR Practitioners OR "Professional health personnel" OR "psychiatric aide" OR "psychiatric aides" OR "Public health officer" OR "Public health officers" OR "operating room technician" OR "operating room technicians" OR "pharmacists' aide" OR "pharmacists' aides" OR "physician assistant" OR "physician assistants" OR "ophthalmic assistant" OR "ophthalmic assistants" OR "pediatric assistant" OR "pediatric

assistants" OR anatomist OR anatomists OR caregiver OR caregivers OR "dental staff" OR "dental staffs" OR dentist OR dentists OR "health educator" OR "health educators" OR "infection control practitioner" OR "infection control practitioners" nurse OR nurses OR pharmacist OR pharmacists OR physician OR physicians OR "general practitioner" OR "general practitioners" OR "occupational health physician" OR "occupational health physicians" OR "osteopathic physician" OR "osteopathic physicians" OR "medical secretary" OR "medical secretaries" OR "medical receptionist" OR "medical receptionists" OR "dental faculty" OR "medical faculty" OR "Nursing Faculty" OR "Health Facility Administrators" OR "hospital chief executive officers" OR "Nurse Administrators" OR "Nurse Administrators.SH" OR "hospital auxiliaries" OR "hospitalists" OR "Hospital Nursing Staff" OR "Physician Executives")

Query 4:

(list Or lists) AND ("second language" OR "foreign language" OR multilingual OR multilingualism OR bilingual OR bilinguism) AND (health OR "health personnel" OR "health practitioner" OR "health practitioners" OR practitioners)

ProQuest

Search performed on December 19, 2011

Query 1:

ab((bilingu* OR "foreign language" OR multilingu* OR "second language")) AND ab((health OR "health care" OR healthcare)) AND ab(class* OR course* OR educati* OR Educational activit* OR Educational technic* OR Educational technique* OR Employee cross-training OR Human resources development OR learn* OR pedagog* OR teach* OR Teaching method* OR train* OR Training activit* OR Training program* OR Training technic*)

Google Scholar

Search performed on December 22, 2011

Keyword: list bilingual workers

Grey Literature

NYAM

Search performed on December 7, 2011

http://nyam.waldo.kohalibrary.com/cgi-bin/koha/opac-search.pl?q=%28cours*+OR+class*+OR+training%29+AND+%28language%29+AND+%28health%29+

Keywords: (cours* OR class* OR training) AND (language) AND (health)

<http://nyam.waldo.kohalibrary.com/cgi-bin/koha/opac-search.pl?q=%28tools%29+AND+%28language%29+AND+%28health%29+>

Keywords: (tools) AND (language) AND (health)

<http://nyam.waldo.kohalibrary.com/cgi-bin/koha/opac-search.pl?q=%28lep+OR+%22limited+ADJ+proficiency%22%29+AND+%28health%29>

Keywords: (lep OR "limited ADJ proficiency") AND (health)

<http://nyam.waldo.kohalibrary.com/cgi-bin/koha/opac-search.pl?q=%28linguistic%29+AND+%28health%29>

Keywords:

(linguistic) AND (health)

Érudit

Search performed on December 22, 2011

(Tous les champs : **liste ou listes**) ET (Tous les champs : **bilingue ou bilingues**) ET (Tous les champs : **santé**) | Fonds : **Érudit, UNB** | Type(s) de document(s) : **Tous** | Date : **Toutes**



EXPERTISE
CONSEIL



INFORMATION



FORMATION

www.inspq.qc.ca



RECHERCHE
ÉVALUATION
ET INNOVATION



COLLABORATION
INTERNATIONALE



LABORATOIRES
ET DÉPISTAGE

Institut national
de santé publique

Québec

