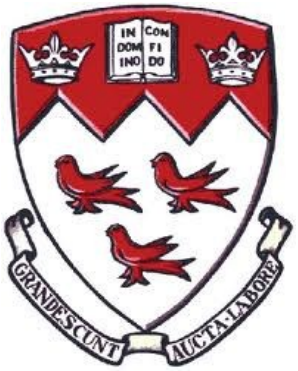

FAMILY PHYSICIANS' ATTITUDES TO AND SUPPORT OF RESEARCH: A MIXED METHODS ANALYSIS OF PHYSICIAN PARTICIPATION IN A STUDY ON DEPRESSION SELF-CARE

Deniz Sahin

Division of Experimental Medicine/Family Medicine Option

McGill University, Montreal

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PREFACE

This thesis is part of an interdisciplinary research project (Project DIRECT-sc: Depression Intervention via Referral, Education, and Collaborative Treatment – Self-Care)[*], funded by the Fonds de recherche du Québec - Santé (FRQS). The composition of its Steering Committee is cited below.[†] This Committee permitted me to use specific portions of that study as the basis of my work, for example, questionnaires and interview guides in appendices do not represent full versions

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[*] Currently unpublished but initial presentation as follows: McCusker et al. A Pilot Study of a Telephone-Supported Self-Care Intervention for Depression Among Older Adults with a Chronic Physical Illness in Primary Care. In: Book of Abstracts. Annual CAHSPR Conference; 2012 May 29-31; Montreal: Canadian Association for Health Services and Policy Research; 2012. p. 9.

[†] **PRINCIPAL INVESTIGATOR**

Jane McCusker, MD DrPH Professor, Department of Epidemiology, Biostatistics and Occupational Health, McGill University; Principal Scientist, St. Mary's Research Center

CO-INVESTIGATORS

Martin Cole, MD Professor, Department of Psychiatry, McGill University; Psychiatrist, Geriatric Psychiatry Division, St. Mary's Hospital Center

Kim Lavoie, PhD Associate Professor, Department of Psychology, Université du Québec à Montréal; Researcher, Hôpital du Sacré-Coeur de Montréal and Montreal Heart Institute

Maida Sewitch, PhD Associate Professor, Department of Medicine, McGill University

Erin Strumpf, PhD Assistant Professor, Department of Economics and Department of Epidemiology, Biostatistics and Occupational Health, McGill University

Tamara Sussman, PhD Assistant Professor, School of Social Work, McGill University

Mark Yaffe, MDCM MClSc Professor, Department of Family Medicine, McGill University and St. Mary's Hospital Center

but those portions that were used for the thesis. Although this thesis focuses on family physicians, it had the benefit of regular input and interpretation from co-investigators from a number of different fields.

The specific components of the thesis derived from Project DIRECT-sc include: funding from FRQS and ethics approval from McGill University and St. Mary's Research Center; developing family physicians' recruitment methods, including study invitation letters, telephone and face-to-face meeting scripts, consent forms, questionnaires, and study newsletters; actual meeting with physicians to promote the study and obtain consent forms; creating patient eligibility screening forms and providing practices with these forms; following-up with practices and physicians on patient screening implementation; preparing and sending invitation letters to physicians to participate in focus groups; and providing financial incentives for physicians.

In utilizing Project DIRECT-sc for my thesis I worked in two capacities: (1) in collaboration with project team members; and (2) on work that was uniquely my own. The former included the following components of the thesis: collecting and compiling all data pertaining to physicians; receiving faxed patient screening forms and physicians' questionnaires; entering, cleaning, managing, and analysing quantitative data pertinent to thesis objectives; organising format and content of the focus group and developing focus group and telephone interview guides of physicians. The components of the thesis that were uniquely my own are as follows: conducting a reproducible literature review on family physicians' involvement in research; analysing family physician recruiter logs to describe the recruitment outcome; using quantitative results to inform areas of exploration for qualitative component; observing and taking notes during the focus group meeting and the telephone interview with physicians; transcribing, storing and analysing all qualitative data; developing a mixed methods design to inform the integration of qualitative and quantitative data; and presenting the work-in-progress at various conferences and symposiums as part of knowledge translation plan.

ABSTRACT

Objectives: The recruitment and retainment of family physicians (FPs) in research projects is problematic. Contradictory literature exists as to why this is the case. This thesis uses the specific context of Project DIRECT-sc: Depression Intervention via Referral, Education and Collaborative Treatment – Self-Care to further address this problem. Specifically this study aimed to explore factors that affect FP recruitment and retention within a study examining the implementation of self-care for depression in adults with chronic physical diseases.

Methods: Prospective participants were randomly approached using the physician registry of the Collège des Médecins du Québec, specifically targeting FPs in the core of Montreal. A mixed methods study adapting sequential explanatory design was conducted. A quantitative phase, including completion of self-administered structured questionnaires at study enrolment and termination, was followed by a qualitative complementary phase involving either participation in a semi-structured post study focus group or a telephone interview.

Results: 59 office-based FPs (predominantly remunerated fee-for-service) were recruited, a recruitment rate of 16.8% of an initial random sample of 375. Factors impacting on FPs' enrolment were past involvement with research projects, interest in the specific topic of mental health care delivery, enthusiasm about supported self-care, collegiality, and credibility of the members of the research team and/or the research institution. 66% of recruited FPs complied to varying extent with patient screening, occurring more often for those with previous research experience or in non-government run solo practices. 63% of FPs returned end of study questionnaires, this being more often likely from those younger than 50 or in government run practices.

Conclusions: Successful involvement by FPs to research projects appears not only linked to interest in the research topic, but also to issues of professional relationships. This speaks to a role for departments of family medicine and professional organizations to promote cultures of research and to help institutionalize and validate research within community practices.

RÉSUMÉ

Objectifs: Le recrutement et la rétention des médecins de famille (MF) dans des projets de recherche est problématique. La littérature est contradictoire sur les raisons pour lesquelles c'est le cas. Cette thèse utilise le contexte spécifique du Projet DIRECT-sc: «Intervention pour le traitement de la dépression au moyen de référence, d'éducation et de soins de en collaboration-Autogestion» pour s'adresser à ce problème. Plus précisément, cette étude explore les facteurs qui influent sur le recrutement et la rétention de MF dans une étude sur la mise en œuvre de l'autogestion de la dépression chez les adultes atteints de la maladie physique chronique.

Méthodes: Les participants potentiels ont été sélectionnés de façon aléatoire en utilisant le registre des médecins du Collège des Médecins du Québec, ciblant spécifiquement les MF dans le cœur de Montréal. Une étude à méthodes mixtes, adoptant un modèle exploratoire séquentiel, était menée. Une phase quantitative, comprenant la complétion de questionnaires auto-administrés semi-structurés au début et à la fin de l'étude était suivie par une phase qualitative complémentaire impliquant soit la participation à un groupe de consultation semi-structuré, soit la participation à un entretien téléphonique.

Résultats: 59 MF pratiquant en clinique (principalement rémunérés à l'acte) ont été recrutés pour Projet DIRECT-sc, un taux de recrutement de 16.8 % dans un échantillon initial de 375. Les facteurs motivants l'inscription des MF à l'étude étaient l'expérience antécédente avec des projets de recherche, l'intérêt pour le thème spécifique de la prestation des soins de santé mentale, l'enthousiasme pour l'autogestion de la dépression, la collégialité, et la crédibilité des membres de l'équipe de recherche et/ou l'institution de recherche. 66 % des MF recrutés ont respecté à des degrés divers la demande de dépister les patients, ce qui était plus fréquent chez les MF ayant une expérience de recherche précédente ou dans les pratiques en solo non-gouvernementales. 63% des MF ont retourné le questionnaire de fin d'étude, ce qui était plus fréquent chez les MF ayant moins de 50 ans ou dans les pratiques gouvernementales.

Conclusions: La participation réussie des MF aux projets de recherche ne semble pas seulement liée à l'intérêt pour le sujet de recherche, mais aussi à des questions de relations professionnelles. Cela en dit long sur un rôle pour les départements de médecine familiale et les organisations professionnelles dans la promotion de cultures de la recherche et dans l'institutionnalisation et la validation de la recherche dans les pratiques communautaires.

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TABLES & FIGURES

1 INTRODUCTION

Research in health care provides medical, contextual and policy evidence to advance knowledge and to improve care.[1, 2] Given that 95% of health care is given in community settings there is a specific need for recruitment of primary healthcare providers (especially family physicians) and their patients into research protocols. This is a challenging objective[2] that has implications both for the operationalization of studies and for the adequacy of sample sizes.[3]

It has been suggested that the recruitment process of physicians into primary care research involves four stages.[3] In stage 1 there is practitioner acceptance to participate in a study. In stage 2 agreement is given to help recruit potential subjects from the practice. During stage 3 there is patient engagement by consent to participate, and in the final stage the patient follows the study protocol. Understanding what factors promote or hinder each of these stages becomes important and therefore there needs to be more formal empirical examination of the recruitment continuum. Such examination might benefit from a mixed methods research that integrates quantitative and qualitative approaches[4] since such a strategy does not appear to have been employed to explore recruitment processes and outcomes in primary care.[3]

The goal of this thesis was to explore various aspects of family physician involvement in research. Such exploration should optimally occur for conditions that are commonly seen by family doctors, and depression, one of the most common mental health disorders of later life, is often associated with chronic physical diseases and disability.[5, 6] Therefore Project DIRECT-sc: Depression Intervention via Referral, Education and Collaborative Treatment – Self-Care, a Montreal-based study of implementation of self-care intervention for depression in adults with chronic physical disease in primary care settings, appeared to be an appropriate study on which to base research on recruitment processes into primary care research since little exists within this domain of health care.

This nested thesis had as objectives to describe: (1) the recruitment outcome of family physicians into the Project DIRECT-sc feasibility study and factors that affected such recruitment and (2) the extent of family physicians' involvement in the study and factors that specifically affected such involvement.

2 LITERATURE REVIEW

2.1 Significance of the Review

Mixed studies reviews (MSRs), a comparatively new form of literature review, have three major attributes: a) a reviewer or reviewer team concomitantly reviews qualitative and quantitative studies, and/or mixed methods studies; b) a breadth and depth of understanding and corroboration of knowledge based on all types of empirical research; and c) synthesis of qualitative findings and quantitative results of primary studies. MSRs can be systematic, reproducible or convenience MSRs.[7] MSRs can be used for the purpose of identifying aspects absent in the literature.[8] This type of review also allows managing the heterogeneity amongst the selected studies. The foundation of this thesis was a reproducible MSR.

2.2 Review Objectives

In order to better understand the role of family physicians in primary care research and factors positively and negatively associated with this role, the specific objectives of the literature review were:

1. To identify primary care research studies (qualitative, quantitative and mixed) that had family physician involvement (enrolment and/or compliance with protocol expectations),
2. To delineate these studies by (a) methods used; (b) country where research was carried out; and (c) nature of the study,
3. To identify different aspects of family physician involvement in research in order to categorize them, and
4. To summarize known factors positively or negatively associated with family physician involvement into research studies.

2.3 Methods of the Literature Search

To identify potentially relevant English language journal articles, common bibliographic databases (Medline, Embase, PsycINFO) and SCOPUS citation database were searched from 1996 to December 2011. Google Scholar and

BioMed Central (BMC) Medical Research Methodology (a peer-reviewed journal that considers articles on methodological approaches to healthcare research) were also searched until December 2011 without time limitation.

After defining the objectives of the literature review, two relevant articles[9, 10] possessing useful terminologies and methodologies were used to develop the search strategy with the guidance of a reference librarian at McGill. The search strategy was adjusted for each database and other sources. As an example, the strategy (choice of subject headings, key words, and phrases) used for Medline was as follows: (exp physicians/ AND (primary care.mp. OR exp Primary Health Care/ OR exp general practice/ OR exp family practice/ OR family medicine.mp.) AND (exp research/ OR primary care research.mp. OR practice based research.mp.) AND (barriers.mp. OR facilitators.mp. OR physician involvement.mp. OR exp "Attitude of Health Personnel" / or physician attitude.mp. OR participation.mp. OR enrolment.mp. OR recruitment.mp.)); limit to English.

2.3.1 Selection of articles for review

Titles and abstracts were initially screened by applying sensitive eligibility criteria as shown in Table 1. Specific inclusion-exclusion criteria, shown in Table 2, were then applied to the selected full-text articles. Since the scope of the review was not a "systematic" one, review was done by a single reviewer and no formal tool was used to appraise identified articles. Thus the main focus was on the content.

Table 1. Sensitive eligibility criteria applied to titles and abstracts

Study characteristics	Report characteristics
• Primary health care • Research focusing on family physicians' involvement (e.g. physicians either helped conduct a study and/or were themselves studied in a project) • Quantitative, qualitative, or mixed research study	• English language studies • Primary studies

Table 2. Specific inclusion and exclusion criteria applied to full texts

Inclusion criteria	Exclusion criteria
• Primary health care • Research focusing on family physicians' involvement (e.g. physicians either helped conduct a study and/or were themselves studied in a project) • Practice-based or community-based research • Including methodologies of recruitment and/or actual participation of physicians • Primary research*	• Secondary or tertiary health care • Involving other health care professionals but no family physician involvement in research • Not including statement of methodologies of recruitment and/or actual participation of physicians • Review, editorial, note, conference paper

*Studies collecting original primary data or original studies reporting their recruitment methodologies and results were considered as primary research

2.3.2 Synthesis of retained studies

Content analysis is an approach to documents and texts which seeks to quantify content in terms of predetermined categories in a systematic and replicable manner.[11] Retained full-text articles comprised a data set, and a summative thematic content analysis was performed by counting and comparing, followed by interpretation of the underlying context.[12] The focus was on the results and discussion sections of each data item, i.e. of each individual article. Our data extracts included:

1. Study characteristics: Author(s), year, country, methods, design, context (e.g. the context of study if the recruitment methodology was nested),
2. Aspects of family physician involvement, and
3. Data for summative content analysis:
   - Qualitative data: A qualitative descriptive method was used to seek factors both positively and negatively associated with family physicians' enrolment in and compliance with the study protocols. Thematic analysis (an approach common to qualitative research which looks at themes or patterns that describe, organize, and interpret aspects of a phenomenon) was

performed.[13, 14] In this review deductive thematic analysis was used since the search objectives guided the identification of the themes. Realist method was chosen as the theoretical position; therefore, the analysis was only at a semantic level (explicit, surface meanings).[14]

- Quantitative data: To describe the prevalence of each factor affecting family physician involvement in research, their occurrences across the entire data set were displayed in matrix tabulation by using a binary system. This process is called a manifest content analysis, referring to looking for the appearance of a particular word or content in textual materials.[15] The numbers of articles relevant to subthemes were summed under main themes.
- A summative approach goes beyond the counts to include latent content analysis, which refers to a process of interpretation to discover underlying meanings of the content.[14] This allowed us to see gaps and controversies in the literature.

2.4 Results of Literature Search

2.4.1 Study selection

Appendix Figure A1 shows the outcome of our article search and selection process. From the four main data bases 1489 potential relevant documents were identified, while 205 and 56 relevant documents were found in Google Scholar and BMC Medical Research Methodology, respectively. Endnote reference management software was used to retrieve these references. After removing duplicates, 1302 potentially eligible documents were screened by applying the sensitive eligibility criteria on the titles and abstracts. 1201 irrelevant documents were excluded; the remaining 101 references were screened in greater detail. 92 full text articles were retrieved and assessed for eligibility by using the sensitive inclusion-exclusion criteria. Of these, 36 articles were not eligible: 24 were review, editorial, note, or conference papers; 6 were on secondary or tertiary health care; 4 did not describe methodologies; and 2 involved non-family physicians. This process generated 56 eligible articles.

2.4.2 Study characteristics

Common rubrics for which information was found across all studies are tabulated in Appendix Table A1. They include country, methods used in the study (quantitative, qualitative, or both), design of the study, nature of the study, and how family physicians were involved.

Of the 56, 42 used quantitative method, 7 qualitative, and 7 used both quantitative and qualitative methods. The predominant countries from which the 56 papers originated were USA (n=15), Australia (n=11), UK (n=9), Canada (n=5), Germany (n=5); and, others (n=11) were conducted in different countries. Of the total, only 5 pertained to mental health, including 2 on depression and 1 each on panic disorder/generalized anxiety disorder, emotional symptoms, and employee fatigue.

2.4.3 Aspects of family physicians' involvement in research

When doctors are recruited for participation in research it is with hope that such involvement will be comprehensive and for the duration of the project. The specific nature of physician participation was actually found to be quite variable: discussion of studies while conducting patient care,[4, 16-19] conducting and obtaining consent forms,[20, 21] referring patients to studies,[22, 23] completing and faxing patient screening forms,[24] using a soft-ware tool to identify potential eligible patients,[17] undertaking or helping a study team with patient database searches to identify potential eligible patients,[25-27], and sending introductory letters to pre-identified potentially eligible patients. [25, 28, 29] Other activities that doctors have engaged in include completing questionnaires,[4, 23, 30-52] participating in informational or training meetings, [20, 33, 38, 52-54] facilitating data collection, [16, 52, 54] giving interviews (telephone or face to face) ,[16, 30, 31, 40, 52, 55-57] overseeing or performing interventions with patients,[21, 33, 38, 39, 58, 59] assisting with patient randomization,[30, 60-64] audio taping office visits with patients,[65] acting in a specific research capacity (e.g. principle investigator, co-investigator, or collaborator—including the reviewing and interpreting of data and contributing to manuscripts for publication).[30]

2.4.4 Findings from synthesis of factors affecting physicians' involvement in research

All 56 studies were included in the synthesis. Findings are summarized below under four themes. Sub-themes include factors that range from most to least prevalent, recognizing that there may be some overlap in the allocation to these groups and that some findings contradict others. The most prevalent factors found to have an effect in each category are emphasized in the text in italics.

Theme 1- Factors promoting physicians' enrolment in research projects

Physicians' personal factors: *Financial compensation,*[4, 10, 23, 31, 35, 62, 66, 67] male physicians,[27, 36, 44, 63] previous research experience,[4, 37, 57] interest and motivation in research,[16, 57, 59] friendship or acquaintance with research team members[21, 57] younger age,[4, 27] preference for research that does not interfere with the patient-physician relationship,[25] flexible working hours or in part-time research,[57] interest in research that is not on complementary or alternative medicine research,[48] willingness for a change in pace, and proclivity to get involved into shaping research questions or publishing articles.[35]

Professional factors: *Relevance of the research question and topic,*[4, 10, 16, 23, 25, 31, 33, 63, 65] willingness to learn, undergo training and perform interventions relevant to research,[4, 33, 35, 38, 59, 66] membership in a research network,[4, 27, 41, 65, 68] recognition for research participation with postgraduate training/Continuing Medical Education credits,[4, 10, 35, 54, 62] desire for research that has minimal impact on practice workload [10, 21, 25, 31] or potential benefits to practice and patients,[9, 25, 66, 69] university affiliated and/or teaching practice,[4, 36, 45, 65] willingness to contribute to improving primary care,[35, 57, 66] desire for feedback or report of research results from team,[4, 33, 65] desirability to improve reputation,[35, 56, 66] availability of protected time for physician, and larger practice (2-9 physicians) rather than solo practices.[41]

Study protocol issues: *Working with physician recruiters,*[52, 54, 58, 65] *informational meetings at the practice site (education & free lunch),*[21, 34, 52, 62] *simplicity and*

flexibility of study procedures,[9, 31, 52, 55] payments offered by researchers to offset practice costs of research,[21, 31] invitation method (database, letter, phone),[10, 21, 51] offering a chart audit,[54, 55] appointing a project coordinator in practice,[21, 52] establishing relationships with practice staff,[21, 34] close and early collaboration with family physicians and consideration of their needs,[9, 69] pre-screening practice databases for identifiable eligibility criteria,[52] and computer assistance to practice.[4]

Theme 2- Factors promoting specific physician behaviours in studies

Personal factors:

- Patient recruitment: Older family physicians.[20]
- Questionnaire completion: Younger family physicians.[63]

Practice and patient related factors:

- Patient recruitment: *Computerized patient registries,*[17, 28, 53, 70] involvement of nurse (practice or research) in the study,[21, 47] smaller practice size (one or two physicians),[20] larger practices,[28] practice population are suitable for the topic being studied,[32] rural practice location,[32] patients' understanding of randomisation and acceptability of treatment arms in randomisation process,[20] patients who are already on the intervention being studied,[20] patients' personal physicians are study investigators,[71] and patients having a family member or friend working in health care.[71]

Study protocol issues:

- Patient recruitment: *Minimal impact on practice workload,*[10, 16, 21, 28] payment upon meeting pre-agreed targets,[16, 69] clear communication between research team and physicians,[10, 16] providing practices with a checklist with simple directions,[10, 34] patient initiated requests for enrolling in studies through the provision of written information,[21, 39] reminder calls/practice needs assessment/support,[10, 21] keeping exclusion criteria to a minimum,[28] simple study

procedures,[20] setting a deadline for physician-participants to complete study-related materials,[34] conducting group seminars with potential patient-participants.[26]

- Questionnaire completion: Inducements (financial or non-financial),[51] registered mailed surveys to family physicians.[63]

Theme 3- Factors in inhibiting physicians' enrolment in research projects

Personal factors: *Lack of time,*[4, 22, 33, 39, 41, 49, 59, 61, 65] *no interest in specific research topic,*[4, 10, 16, 23, 25, 31, 33, 63, 65] no general interest in research,[22, 25, 39, 41, 59] feeling of being monitored,[40, 56, 65] low income/job insecurity in research,[22, 57] being unable to complete the training to participate in the study,[56, 61] low communication or absent/limited professional association between researchers and family physicians,[56, 61] research is not thought of as a part of career,[40, 44] ambivalent feelings towards research or research training,[43, 67] satisfaction with current treatment options,[22, 56] lack of trust/transparency issues,[40, 58] not seeing benefit out of research,[56] isolation during the research process,[57] familial/social reasons,[44] previous negative research experience.[58]

Professional factors: *Concern for disruption of clinical care which was of prime importance,*[4, 22, 25, 44, 56, 57, 65, 72] perceived lack of skill or confidence in using research outcomes in practice,[4, 37, 56, 72] involvement in other research projects,[22, 25, 56] inadequate patient population required for study,[22, 33, 61] perceived lack of available management options to conduct the research in practice,[22, 41, 61] preference for clinical experience over research evidence in making clinical decisions,[30, 31] patient privacy and confidentiality issues using electronic patient records,[40, 61] no access to information databases and the internet,[31] research topics on sensitive conditions,[61] remuneration with fee-for-service,[9] not being in office-based practice,[22] study duration outlasts existence of practice,[22] practice establishes barriers for research teams contacting physicians about participation.[34]

Study protocol issues: *Big commitment required for a project,*[4, 33, 37, 56, 61, 73] letter of agreement at onset,[54] geographical barriers,[73] costs for patients(e.g. travel),[61] unclear incentives.[58]

Theme 4- Factors inhibiting physicians' compliance with research protocols

Physicians' related factors:

- Patient recruitment*: Targeted patients are not found in the practice,*[19, 59, 69] *staff turnover/renovations in practice,*[21, 22, 61] forgetfulness,[19, 46] time constraints,[10, 46] seasonal increase in workloads,[10] perceived impact of the study on patients,[10] fee-for-service & worry about a negative business outcome due to clients' offence,[61] personal issues. [10]
- Questionnaire completion: *Physician is too busy for paperwork, finds the questionnaire too long, or lost questionnaires in paperwork.*[42]

Patient related factors:

- Patient recruitment: *Patients refuse to participate,*[10, 24, 33, 46, 59, 61] patients' perceptions of their illness severity,[20, 21, 67] patient expectation for compensation,[24, 46] patient reluctance to receive intervention,[24, 33] patient time commitment problems, fear of side effects, personal issues, other health problems, lost contact information, living outside courier boundary, improved health status, no need for help, and failure on a prior study intervention.[24]

Study protocol issues:

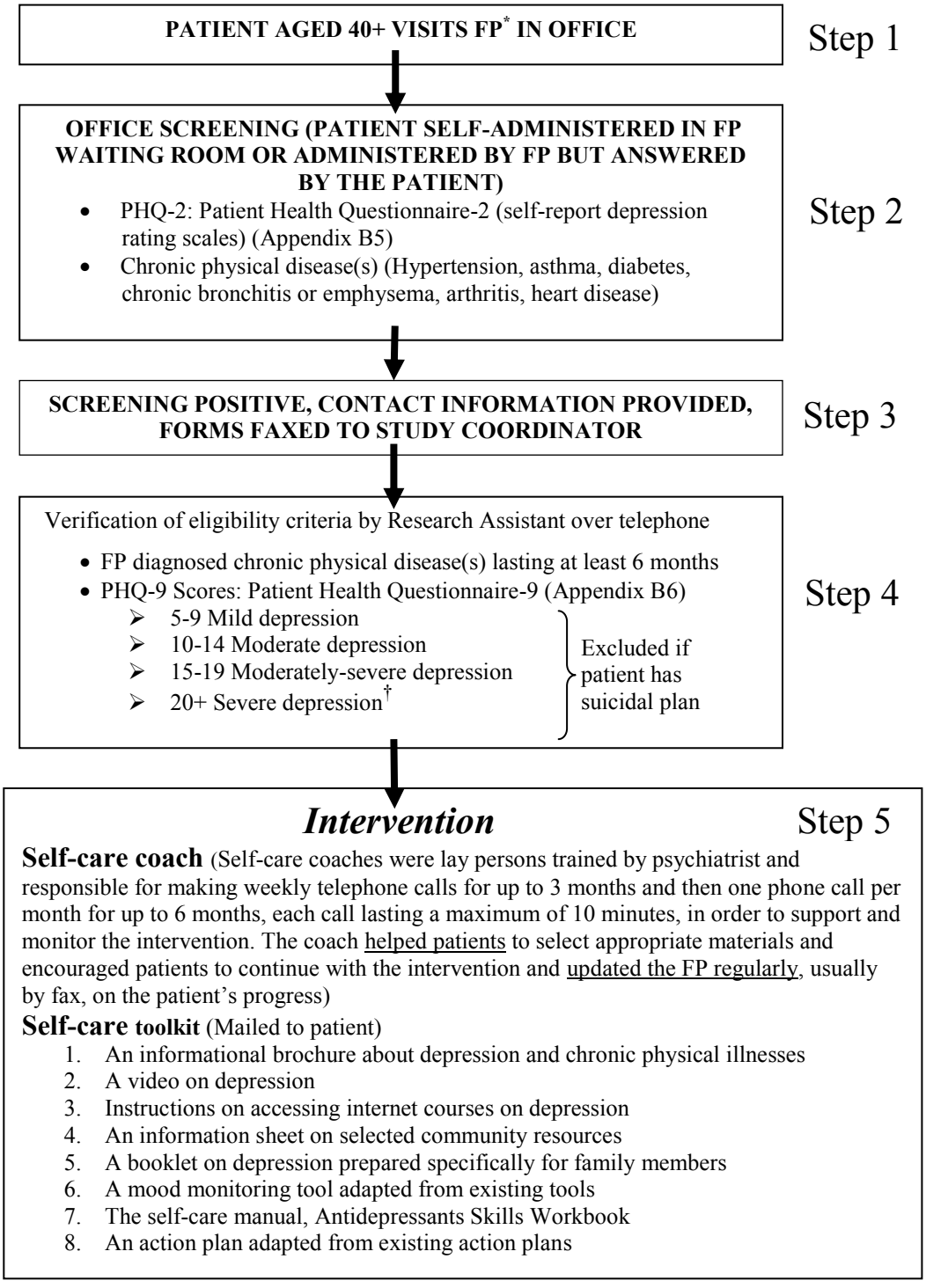
- Patient recruitment*: Overly strict eligibility criteria,*[10, 46, 59, 67] studies on minors,[61] usual care or no treatment as the control condition,[59] privacy legislation/opt-in requirements.[74]
- Questionnaire completion: *Physician indicates it was sent back already or lost in post.*[21, 42]

2.4.5 Implications of the literature review findings

There appears to be a complex and often contradictory interplay between personal and professional characteristics of physicians, patient-related factors, and study protocol issues impacting on physicians' involvement in research. This may be a reflection of the broad range of methodologies used to study physician involvement in research and factors related to it within different countries, as well as the heterogeneous nature of the types of research questions and target populations. Understanding the complexity of recruitment may be particularly important in longitudinal family medicine studies where it is necessary to develop methods of long-term data collection on cohorts of specific patient population followed by family physicians as well as for promoting community-based participatory research.[75] Our review did not identify any study that investigated recruitment methodologies in the context of mental health and chronic disease management of older adults.

Methods to increase research participation have been felt to require more systematic attention by research teams, providers, training programs, health care funders and other stakeholders interested in generating a primary care evidence base.[9] In the current views of mixed methods research, studies incorporating quantitative and qualitative data should possess the following "core characteristics": 1) taking a philosophical position, 2) having a specific design, and 3) using valued methods.[76] In our literature review we observed that none of the retained studies using both qualitative and quantitative methods had these characteristics at the same time. This finding validated the mixed methods approach that we have taken to attempt to close gaps in the literature and to guide further work on Project DIRECT-sc for which a summative description is illustrated in Figure 1 below.

Figure 1. Summative description of Project DIRECT-sc



* Family Physician

† Study psychiatrist consultation and FP informed

Note: This thesis concerns the steps 1, 2, and 3

3 METHODS

3.1 A synergistic approach

This thesis was embedded within an interdisciplinary collaborative project involving input from the disciplines of family medicine, epidemiology, psychiatry, psychology, social work and health economics. The actual thesis committee was comprised of a clinician/researcher in family medicine, an epidemiologist, and a social worker with qualitative research background. A mixed methods approach was used for the thesis to maximize perspectives and research approaches.[76] As such, a synergistic approach guided our project.[77]

3.2 Ethical considerations

Study protocol, consent procedures and forms used in Project DIRECT-sc were approved by the McGill University Institutional Review Board and by the St. Mary's Hospital Research Ethics Committee. Physicians were asked to sign informed consent forms before the onset of the study. All study materials pertinent to physicians and patients were kept anonymous and confidential.

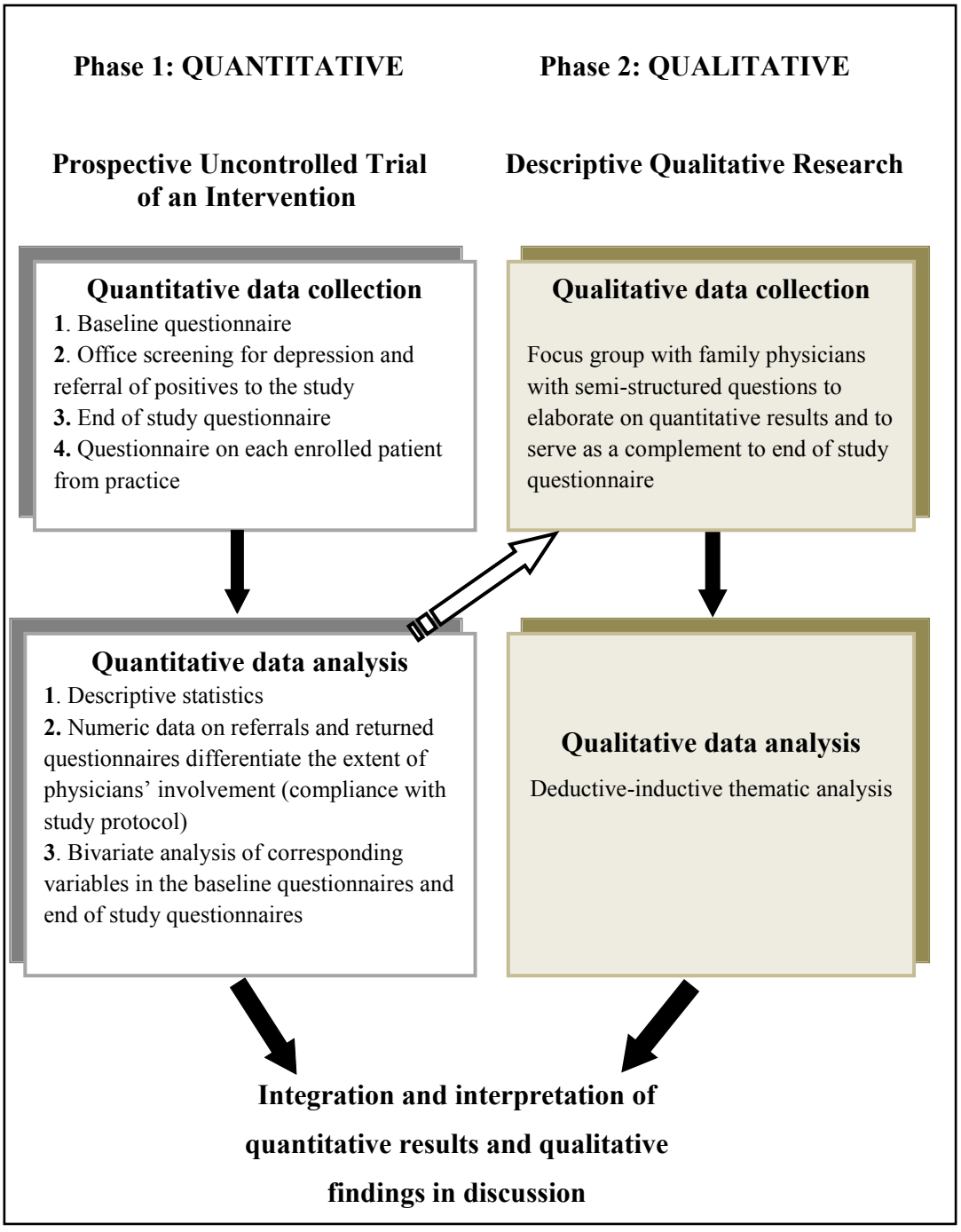
3.3 Mixed method research design

A mixed method was used to collect, analyse, and interpret data on family physician recruitment and participation within Project DIRECT-sc. We adapted a sequential explanatory design, quantitative followed by qualitative.[76] (See Figure 2) The latter was used to elaborate on the former, to which we gave priority.

Our main purpose for mixing methods was complementarity, i.e. "seeking elaboration, enhancement, illustration, and clarification of the results from one method with the results from the other method to increase the interpretability, meaningfulness, and validity of constructs and inquiry results."[78, 79] The rationale for this strategy was twofold. Firstly, the quantitative data from the physician surveys were possibly limiting since these questionnaires were investigator driven, rather than evidence driven. Secondly, given that the physician questionnaires were expected to take 15-20 minutes to complete there was

concern about the degree of consideration that would be given to each question. Therefore, at the termination of the feasibility study additional qualitative remarks on the issues addressed in the questionnaire were sought.

Figure 2. Diagram of mixed methods sequential explanatory design



3.4 Phase 1: Quantitative: Prospective uncontrolled trial of an intervention

3.4.1 Participants: Family physicians' (FPs) recruitment

Between February and September 2010 Montreal FPs were recruited from different primary care settings, representing different types of practice: solo, small groups, GMFs, CLSCs. Recruitment occurred in the following 4 stages.

3.4.1.1 Randomization

The names and contact information for 2239 English or French speaking Montreal FPs listed in the membership registry of the Collège des médecins du Québec (CMQ) were reviewed. A first pass scan eliminated 60 physicians who clearly practiced in sites remote from our research centre and therefore hard for our research assistant to visit. A random bank of 400 physicians who could be approached for study participation was identified. The process involved the following three steps: (1) a research assistant consecutively assigned numbers to each name of the remaining 2179 FPs; (2) a statistician generated a list of 400 random numbers; and (3) physicians' names corresponding to those numbers were identified.

3.4.1.2 Approaching doctors

From that list of 400, we excluded 25 FPs who were known by the team as not meeting eligibility criteria, i.e. those who were not in active office family practice providing continuous care of adults, and those for whom the contact information was incomplete or inaccurate. French and English introductory letters (See Appendix B1) describing the study and signed by the co-investigator family physician on behalf of the project investigators were sent by postal mail to the remaining 375 physicians based on an estimated recruitment rate of 16% (60 doctors). To allow a Research Assistant (RA) to rapidly follow up those letters with telephone calls to the doctors, the letters were sent out bi-weekly in batches of 25-60 until all had been mailed.

3.4.1.3 Follow-up phone calls

The RA was trained using a prepared script and role plays to do follow-up telephone calls to request an appointment with the doctors in order to discuss the study. The scripts and approach used for these are shown in Appendix B2, and took place within 7-20 days after letters were mailed. Logs were maintained by the RA to document (1) outcomes of those attempts; (2) reasons for FP ineligibility and refusals; (3) whether responses to follow-up calls were obtained by telephone (RA or doctor office initiated), fax or email; and (4) whether those responses were directly from the FP or from his/her staff; (5) language of FP; and (6) date of scheduled appointment. A flow diagram showing the results of that recruitment is presented in Figure 3 in results section.

3.4.1.4 Meeting with interested FPs

Remuneration: FPs were offered a gift certificate of $50 for meeting with the RA for an average of 20 minutes, regardless of whether the doctors actually participated in the study. The RA logged whether such meetings occurred, were postponed or were cancelled by the FP.

Meeting materials: The RA provided FPs with an information leaflet describing study goals, nature of the intervention, brief 4-question screening forms (Appendix B3) to assess patient eligibility for being approached to consider study participation, and a RA business card for contact information.

Physician informed consent and demographics: Consenting FPs signed the Physician Consent Form (Appendix B4). The RA also collected FP normative information including sex, age, practice type, office staff names, FP preferred mode of communication with the study team and fax number or email address.

Meeting with office staff: When possible the RA also met with office staff (secretaries, receptionists, nurses) to orient them to the study and to formalize arrangements for distribution of screening forms to the patients and for faxing back completed ones to the study.

3.4.2 Procedures

3.4.2.1 Role of FPs in study

FPs were expected to assist with:

A) Patient screening protocol by: (1) distributing and collecting either themselves (FPs) or by office staff (secretary or nurse) a 4-question screening form to patients aged 40 and over visiting for any medical reason (Figure 1, steps 1 and 2); (2) faxing forms of eligible patients (positive screening forms) to the study centre (Figure 1, step 3); (3) keeping non-eligible or incomplete forms to be mailed using stamped pre-addressed envelopes at the end of screening period;

B) Protocol operationalization by (4) completing a self-administered mailed attitudinal questionnaire at study onset (Appendix C1); (5)providing usual care* to enrolled patients; (6) allowing the research team to give standardized supported self-care intervention for depression to consenting eligible patients; (7) accepting occasional fax or phone calls from a self-care coach to receive updates on patients;

C) Study follow-up protocol by: (8) completing a self-administered mailed study termination questionnaire pertaining to their experiences with the study (Appendix C2); and (9) completing a brief questionnaire at study end pertaining to their interface with study participants (Appendix C3).

3.4.2.2 Remuneration for patient recruitment

To support office administrative costs of study participation FPs were offered $10 for every screening form returned to the study for a patient who screened positive.

*In Project DIRECT-sc, self-care interventions were not a substitute for the care and treatment usually provided by the family physician.

3.4.3 Data collection, measurements and statistical analyses

3.4.3.1 Descriptive data on physicians and practice characteristics

Data were obtained from participating FPs through self-administered mailed questionnaires at baseline. Basic descriptive statistics were done using frequency distributions for categorical and ordinal variables as presented below:

Physician characteristics: Gender (female, male), age (20-30, 31-40, 41-50, 51-60, 60+), years of practice (0-5, 6-10, 11-20, 21-40, 41+), previous research experience (yes, no).

Practice organizational characteristics: Type of remuneration at recruitment site (percent of salary obtained from fee for service, hourly or fixed salary: 0%, 1-49%, 50-99%, 100%); type of clinic (CLSC[*] / GMF[†], CLSC / Non-GMF, UMF[‡] / GMF, UMF / Non-GMF, Clinique Réseau[§] / GMF, Clinique Réseau / Non-GMF, Solo Practice, Other Group Family Practice, Polyclinic, Other Type); predominant age grouping of patients in practice (0-17, 18-35, 36-64, 65+); nurses at clinic/practice (yes, no); functions of nurses (independently, with own roster of patients; independently, on FP's roster of patients; collaboratively with FP on FP's roster); presence in clinic/practice of other health professionals (psychiatrist, psychologist, or social worker).

Approach to depression management: Queries were made about:

1. How much confidence FPs had in their ability to carry out patient education/counseling (none, a little, moderate, a lot, not applicable),
2. How familiar FPs were with use of patient self-care for (a) chronic physical disease management and for (b) depression management (not at all, somewhat, moderately, very),

[*] Centre Local de Services Communautaires (Local Community Service Centre)
[†] Groupe de Médicine Familiale (Family Medicine Groups)
[‡] Unité de Médecine Familiale (Family Medicine Units)
[§] Network Clinic

3. How effective FPs believed patient self-care was for (a) chronic physical disease management and (b) depression management (not at all effective, somewhat effective, moderately effective, very effective, don't know),

4. How much confidence FPs had in managing chronic diseases in patients above age 65 (none, a little, moderate, a lot), and

5. FPs' usual management of patients who present with depressive symptoms (Assess and treat vs assess/refer for consultation and do follow-up vs refer patient to mental health services for all assessments and care).

3.4.3.2 End of study descriptive data

Data were collected from FPs through self-administered mailed questionnaires at the termination of the study. Basic descriptive statistics were computed using frequency distributions for categorical and ordinal variables as presented below:

Signing up for study: Queries were made about:

1. Factors influencing FPs' decision to meet with RA to learn more about the study [Multiple responses possible]: Initial introductory letter about the study, gift card, follow-up calls from the RA, secretary expressed interest in the study, encouragement from another health professional in practice/clinic, credibility of the research team, personal knowledge of one or more members of the research team, interest in the research topic, interest in the way care is delivered to patients with depression,

2. Perception that RA accurately reflected what was required of physicians, staff and patients during the study (Five-point Likert scale; everything happened as was explained=1; the study was not at all what was presented=5), and

3. FPs' level of satisfaction with the amount of financial recognition given to the practice for participation (Five-point Likert scale; very satisfied=1, very dissatisfied=5).

Screening patients in the office: Queries were made about:

1. How the screening forms were most commonly distributed in the practice (secretary, nurse(s), FP, no screening forms were distributed, don't know),

2. How FPs/their clinic staff found the process of distributing screening forms to patients (Five-point Likert scale; very easy=1, very difficult=5),

3. How the screening forms were most commonly collected in the practice (secretary, nurse(s), FP, deposited by patients into the DIRECT-sc collection box, don't know),

4. How FPs/their clinic staff found the process of collecting screening forms to patients (Five-point Likert scale; very easy=1, very difficult=5), and

5. Possible source of problems in distribution, collection and/or returning of forms [Multiple responses possible]: Difficulty in starting or maintaining momentum, unavailability of forms on hand, I (we) forgot, I (we) felt the patient was not likely to be capable of self-care, I (we) felt the patient did not meet combined eligibility criteria, forms generated too many patient queries, lost interest in the study, limited opportunity due to changing schedule (e.g. on leave, illness), don't know.

3.4.3.3 Measurements for the extent of physicians' involvement in the study

Outcomes: We described the extent of physicians' involvement in the study as defined by their compliance with the following two expectations of the research protocol: patient screening and study follow-up (expectations (2) and (8) (9) in section 3.4.2.1).

We performed bivariate statistical tests on outcomes defined below for descriptive purposes, but not for hypothesis testing. We explored potential relationships between the characteristics of physicians and their practices that were found in our literature review (section 2.4.4) to be most relevant to the thesis objectives.

Statistical tests: We used the Chi-square test to compare binary or categorical variables and performed the Fisher's Exact test when at least one of the expected cells counts had less than five observations.[80] To examine potential relationships between ordinal or continuous scales among different groups and to manage small sample size, we used Kruskal-Wallis non-parametric test.[81]

Based on two tailed tests, a p-value of less than 0.05 was considered to be statistically significant. As the objectives of the thesis were descriptive and sample size was small, potential predictors showing marginal non-significant p-values between 0.05 and 0.10 were also indicated in the text and tables. We did not correct for multiple testing. We did not perform multivariate analysis because of the inadequate sample size. Calculations were carried out using SAS, Version 9.2.

Outcome 1- Compliance with screening: We defined compliance with screening as returning positive screening forms (binary and continuous).

We used the return of only positive screening forms for this outcome measure since we observed that many presumably negative screening forms completed in the practices were not returned while others were returned incomplete.

(a) Returning one or more positive patient screening forms (binary): We used Chi-square test to study the relationships between characteristics of physicians and practices and compliance with this study expectation in accordance with the following groups: gender (male, female); age (< 50 vs ≥50), years in practice (<20 vs ≥ 20), previous research experience (yes, no). Comparisons for the same outcome were also done for three different practice organisational models: 1) solo vs group; 2) government run (CLSC, UMF) vs non-government run solo vs non-government run group (Clinique Réseau, other group, polyclinic), and 3) GMF vs non-GMF.

Informed by our literature review, we compared practice characteristics and physicians' approach to patient screening with the following variables: familiarity with self-care strategies for chronic physical diseases or depression (not at all to somewhat vs. moderate and very), believe that self-care is effective for chronic physical diseases or depression (not at all to somewhat vs. moderately to very).

We also used Chi-square test to examine whether there was an association between the completion of either physician questionnaire (baseline and/or end of study) and their involvement with patient screening.

Protocol factors impacting on FPs' compliance with patient screening also were assessed. We first examined potential relationships between physicians' satisfaction with how the study was introduced to them, financial recognition, and ease of the protocol (ordinal five point Likert scale) with screening compliance (yes, no) by using Kruskal-Wallis test. Secondly, we performed Chi-square test to assess potential relationships between who distributed and who collected the screening forms and the ultimate returning of those forms.

(b) Total number of positive screening forms returned (continuous): We tested the relationships between characteristics of physicians and practices and this outcome measure specifically in accordance with the following groups: gender (male, female); age (< 50 vs ≥50), years in practice (<20 vs ≥ 20), previous research experience (yes, no). Comparisons for the same outcome were also done for three different practice organisational models: 1) solo vs group; 2) government run (CLSC, UMF) vs non-government run solo vs non-government run group (Clinique Réseau, other group, polyclinic), and 3) GMF vs non-GMF. We used Kruskal-Wallis test for these comparisons since the distribution of the number of screening forms returned was non-normal and sample size was small.

Outcome 2- Compliance with study follow-up protocol: We defined compliance with study follow-up protocol as completing self-administered mailed study termination questionnaires which included:

(a) End of study questionnaire pertaining to doctors' experiences with the study (binary), and

(b) Individual patient questionnaire pertaining to doctors' interface with patients who received self-care (binary).

We used Chi-square test to compare compliance with each of the aforementioned questionnaires with the following characteristics of physicians and practices: gender (male, female); age (< 50 vs ≥50), years in practice (<20 vs ≥ 20), previous research experience (yes, no). Comparisons for the same outcome were also done for three different practice organisational models: 1) solo vs group; 2) government run (CLSC, UMF) vs non-government run solo vs non-government run group (Clinique Réseau, other group, polyclinic), and 3) GMF vs non-GMF.

3.5 Phase 2: Qualitative: Descriptive qualitative research

3.5.1 Design and participants

Qualitative description is a flexible approach to seeking answers or clarifications to questions or issues of particular concern.[13] Our objective was to gather additional information from the participating family physicians. At the conclusion of the study the physicians were invited first by letter (Appendix D1) and then by follow-up phone calls to either a French or an English-speaking focus group following dinner at a highly respected restaurant.

Qualitative sampling designs should specify minimum sample sizes "based on expected reasonable coverage of the phenomenon".[82] Although the number usually recommended is between six and ten, it is suggested that between six and eight participants for a focus group is sufficiant for a group to have potential.[83] Three or four focus groups are usually needed to answer a simple research question;[83] however, it depends on the goal and scale of the research, as well as the heterogeneity of the participants.[84]

3.5.2 Methods

Focus group: Data were generated from a two hour focus group meeting facilitated by two members of the research team using a semi-structured interview guide (Appendix D2) that was developed to explore the following: (1) family physicians' reasons for enroling into the study; (2) factors that enhanced or interfered with patient screening in their care settings; and (3) recommendations about how to achieve successful patient recruitment. The focus group discussion was audio-recorded and transcribed verbatim.

Telephone interview: For those unable to attend the focus group but interested in providing feedback a 15 minute telephone interview was conducted using a specific interview guide (Appendix D3) developed to obtain confirmatory data on the findings observed during focus group. It was also audio-recorded and transcribed verbatim.

3.5.3 Analysis: A hybrid approach of deductive-inductive coding

Thematic analysis is considered appropriate for a qualitative descriptive design.[13] It can be done by data-driven inductive or concept-driven deductive approach.[85] Most qualitative analyses does both, i.e. starts with some theoretical ideas which are derived from literature, research questions, or interview agenda, which then generates new ideas, theories, or explanations.[11] In this thesis a hybrid approach was used. That is, the qualitative data were analysed both in light of pre-determined themes developing from end of study questionnaire and quantitative analysis (deductive) and more openly for themes emerging solely from the interview and focus group data itself (inductive).[85] The manageble size of our data allowed us to perform this analysis without using software. The content of the verbatim transcripts of focus group and telephone interview was analysed using the following step-by-step procedure, accompanied by iterative reflection:

Stage 1- Developing the template: Using a matrix based method for ordering and synthesizing data,[86] a template was developed based on our research objective. The two main research questions covered in the end of study questionnaire were

used *a priori* to construct an index of codes and presented in a matrix using a Excel worksheet. Content of the matrix template for deductive thematic analysis is found in Appendix D4.

Stage 2- Applying the initial index of codes to the text and developing additional coding by seeking inductive codes: The initial coding index was used to analyse each segment of the transcripts. Additional codes were also developed at this stage of the analysis when excerpts appeared to represent other ideas or phenomena not included in the initial coding structure.

Stage 3- Connecting the codes and identifying the themes: Since we were only able to convene one focus group instead of a projected two, we kept the analysis at a semantic descriptive level. We believed that the last step of mapping and interpretation, which refers to corroborating and legitimating coded themes to identify second-order theme,[85] would not be saturated or comprehensively "filled out". Further, transferability would be questionable.[87] As well, the main purpose of the focus group method was to explore content and not process, hence ideas explored during the phone interview were analysed alongside the focus group data.

Stage 4- Intercoder agreement: To enhance the credibility of the analysis and interpretation of the data, themes were refined with two members of the thesis committee in a series of meetings each lasting 2 hours.

3.6 Integration and interpretation of quantitative and qualitative phases

The study contained a large quantitative component and a smaller qualitative one. They will be addressed in the discussion section, where meta-inferences* will be made. In our sequential explanatory design the meta-inferences were related to whether the qualitative data provided some understanding or nuance to interpret

*Meta-inference (or integrated mixed inference) is an inference developed through an integration of the inferences that are obtained on the basis of quantitative and qualitative of a mixed methods studies.

the quantitative results.[76] We focused on the meta-inferences addressing our mixed methods objectives and also pointed out some inferences unique to quantitative methodology. This approach was taken keeping in mind the limitations imposed on making inferences directly from qualitative findings as a result of the small number of participants in the qualitative component.

4 RESULTS

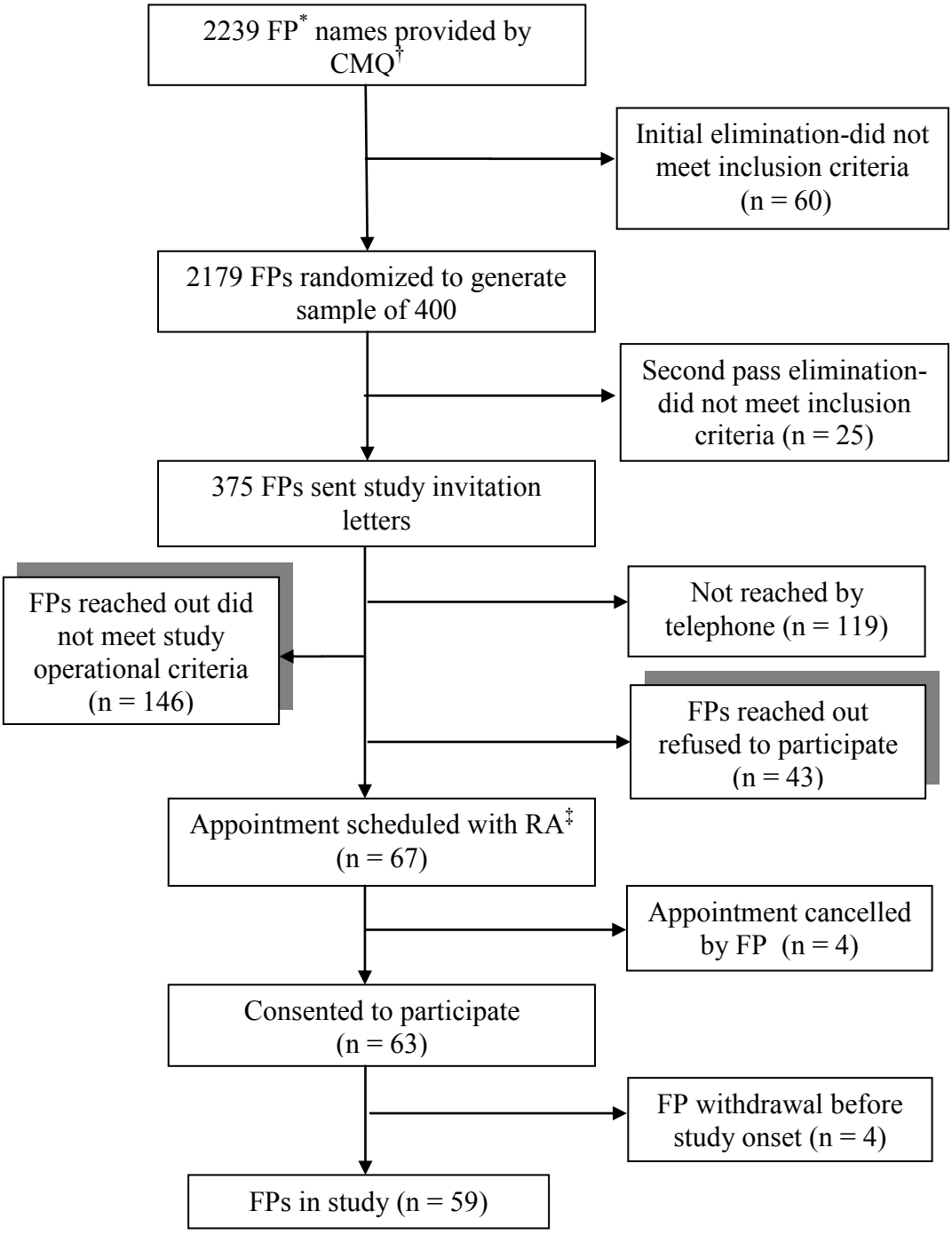
4.1 Results from quantitative phase

4.1.1 Outcome of physician recruitment

An analysis of the FP recruiter log was conducted to track physicians' recruitment at various stages of the study. Results of each step are shown in Figure 3. Of 400 names, 6.2% (25/400) were excluded *ab initio* because they were known by the team not to be in office family practice[*] (n=20), active (n=3) or continuous[†] care office practice (n=1), or for whom contact information was unavailable (n=1). Among those who were sent study invitation letters, 31.7% (119/375) were later unreachable by telephone. Following direct verbal contact with the remaining physicians, an additional 38.9% (146/375) were ineligible for comparable reasons: 37 were not giving continuous care[†], 34 were not in office family practice[*], 31 were on leave[‡], 28 were not actively practicing, 13 did not have patients fitting study profile, and 3 were too far from study site. An additional 12.6% did not agree to participate, 36 giving specific reasons, 7 gave no reasons, and 4 cancelled meeting the RA. Specific reasons for refusals included 19 having no time, 9 not interested in the project, 5 never participating in research, 1 finding remuneration for participation insufficient, 1 being satisfied with present approach to care, and 1 having patients with language barriers. This yielded a recruitment rate at 57.3% of the 110 eligible physicians, 24.6% of the 256 contacted physicians, and 16.8% of the 375 initial target physician sample.

[*] Researcher (1), administrator (1), armed forces (2), government (1), work site physician (2), insurance (4), noncertified specialists (30), other (13).
[†] Emergency (25), walk-in (10), work disability (2), replacement (1).
[‡] Retirement (8), unspecified (7), maternity (6), medical (4), personal (3), sabbatical (2), vacation (1).

Figure 3. Flow diagram showing the outcome of family physician recruitment



* Family physicians
† Collège de Médecin du Québec
‡ Research assistant

4.1.2 Results of descriptive analyses

4.1.2.1 Characteristics of enrolled family physicians and practices

86% of participating FPs returned baseline questionnaires (n=51). Descriptive characteristics of enrolled family physicians, including their practice patterns for management of depression are summarized in Tables 3-6.

The physician sample was predominantly male, middle aged, experienced clinicians, working fee-for-service, having previous research experience, in some form of group practice, and the predominant patient age demographic was middle aged. Just over half of the recruitment sites had nursing staff, and ¾ of those nurses worked in collaboration with FPs on patients from the FPs' rosters.

Vast majority were strongly confident in their chronic disease management, somewhat to moderately familiar with patient self-care for chronic physical diseases but a little less believing in the effectiveness of such self-care. By contrast, the physician sample was actively engaged in depression assessment and treatment, less familiar with patient self-care for depression management and had a variable belief in the effectiveness of self-care for depression.

Table 3. Characteristics of the study physicians sample (n = 51)

	n	(%)
Male	29	(56.9)
Age		
20-30	2	(3.9)
31-40	9	(17.7)
41-50	12	(23.5)
51-60	16	(31.4)
61+	12	(23.5)
Years in practice		
0-5	6	(11.8)
6-10	4	(7.8)
11-20	8	(15.7)
21-40	28	(54.9)
41+	5	(9.8)
Participated in research studies before	39	(76.5)
Remuneration structure for work done at recruitment sites		
Percent of salary obtained from fee-for-service		
0	6	(11.8)
1-49	3	(5.9)
50-99	3	(5.9)
100	39	(76.5)
Percent of salary obtained from tarif horaire		
0	39	(76.5)
1-49	2	(3.9)
50-99	4	(7.8)
100	6	(11.8)
Percent of salary obtained from fixed salary		
0	51	(100.0)

Table 4. Characteristics of physicians' practices (n = 51)

	n	(%)
Clinic types		
CLSC* / GMF†	2	(4.0)
CLSC / Non-GMF	2	(4.0)
UMF‡ / GMF	2	(4.0)
UMF / Non-GMF	1	(2.0)
Clinique Réseau / GMF	6	(12.0)
Clinique Réseau / Non-GMF	4	(8.0)
Solo Practice	18	(36.0)
Other Group Family Practice	3	(6.0)
Polyclinic	8	(16.0)
Other Type	4	(8.0)
(Missing)	(1)	
Predominant patient age groups [Multiple age groups possible]		
Infants, children, and adolescents (0-17)	6	(12.0)
Young adults (18-35)	19	(38.0)
Middle aged adults (36-64)	34	(68.0)
Older adults (65+)	21	(42.0)
(Missing)	(1)	
Clinics with on-site nursing staff	26	(51.0)
Nurse work structure among the clinics with on-site nursing staff (n = 26) [Multiple work structure possible]		
Independently; own roster of patients	9	(34.6)
Independently; FP's roster	4	(15.4)
In collaboration with FP; FP's roster	19	(73.1)
Other	3	(11.5)
Clinics with other staff	35	(68.6)
Types of other staff among the clinics with other staff (n = 35) [Multiple types possible]		
Social Worker(s)	8	(22.9)
Psychologist(s)	30	(85.7)
Psychiatrist(s)	2	(5.7)

* Centre Local de Services Communautaires (Local Community Service Centre)
† Groupe de Médicine Familiale
‡ Unité de Médecine Familiale

Table 5. Physicians' self-reported experience with chronic disease management (n = 51)

	n	(%)
Confidence in ability to carry out patient education/counselling?		
None	0	(0.0)
A little	0	(0.0)
Moderate	29	(56.8)
A Lot	21	(41.2)
Not Applicable	1	(2.0)
Familiarity with concept of patient self-care for the management of chronic physical diseases		
Not At All	6	(12.0)
Somewhat	23	(46.0)
Moderately	20	(40.0)
Very	1	(2.0)
(Missing)	(1)	
Belief in effectiveness of self-care for patients with chronic physical diseases		
Not At All	1	(2.0)
Somewhat	9	(18.0)
Moderately	22	(44.0)
Very	14	(28.0)
Don't Know	4	(8.0)
(Missing)	(1)	
Confidence in chronic disease management with patients above age 65		
None	0	(0.0)
A little	0	(0.0)
Moderate	17	(34.0)
A Lot	33	(66.0)
(Missing)	(1)	

Table 6. Physicians' self-reported experience with depression management (n=51)

	n	(%)
For patients who present with depressive symptoms, usually[*]…		
Assess and treat	39	(83.0)
Assess, refer for consultation, and follow-up	11	(23.4)
Refer to mental health services for all assessments and care	1	(2.1)
(Missing)	(4)	
Familiar with the concept of patient self-care for depression management		
Not at all	17	(33.3)
Somewhat	27	(52.9)
Moderately	6	(11.8)
Very	1	(2.0)
Believe self-care options are effective		
Not at all	1	(2.0)
Somewhat	13	(25.5)
Moderately	16	(31.4)
Very	10	(19.6)
Don't Know	11	(21.5)

[*] 2 FPs checked first two options and 1 FP checked all three options

4.1.2.2 FPs' feedback on the study procedures

63 % of participating FPs returned an end of study questionnaire (n=37). Of those, 3 FPs had not completed baseline questionnaire. Descriptive statistics from this questionnaire are summarized in Tables 7 and 8.

Table 7. Physician recruitment parameters (n=37)

	n	(%)
Factors influencing FPs' interest in meeting RA [Multiple responses possible]		
Interest in ways of delivering care to patients with depression	21	(56.8)
Credibility of the research team	19	(51.4)
Interest in the research topic	18	(48.6)
Follow-up calls from the RA	17	(46.0)
Initial introductory letter about the study	16	(43.2)
Personal knowledge of one or more members of research team	4	(10.8)
Gift card	4	(10.8)
Encouragement from another health professional in the practice	2	(5.4)
Other reason	2	(5.4)
Secretary expressed interest in the study	0	(0.0)
Accuracy of information from RA		
1=Everything happened as was explained	21	(58.3)
2 ↑	8	(22.2)
3 ↕	5	(13.9)
4 ↓	2	(5.6)
5=The study was not at all what was presented	0	(0.0)
(Missing)	(1)	
Satisfaction with financial recognition		
1=Very satisfied	10	(29.4)
2 ↑	15	(44.1)
3 ↕	6	(17.7)
4 ↓	3	(8.8)
5=Very dissatisfied	0	(0.0)
(Missing)	(3)	

Table 8. Screening Patients in Office (n=37)

	n	(%)
Methods used to distribute screening forms [Multiple responses possible]		
Distributed by physician	20	(54.1)
Distributed by secretary	18	(48.7)
No screening forms were distributed	3	(8.1)
Distributed by nurse(s)	2	(5.4)
Distributed by other method	1	(2.7)
Ease of distributing forms		
1=Very easy	3	(9.4)
2	5	(15.6)
3	14	(43.8)
4	7	(21.9)
5=Very difficult	3	(9.4)
(Missing)	(5)	
Methods to collect screening forms [Multiple responses possible]		
Collected by physician	24	(70.6)
Collected by secretary	9	(26.5)
Collected by nurse(s)	1	(2.9)
Deposited by patients into the DIRECT-sc study box	1	(2.9)
Don't know	1	(2.9)
(Missing)	(3)	
Ease of collecting screening forms		
1=Very easy	11	(35.5)
2	6	(19.4)
3	6	(19.4)
4	7	(22.6)
5=Very difficult	1	(3.2)
(Missing)	(6)	
Problems within the office regarding screening [Multiple responses possible]		
Forgetfulness	22	(62.9)
Difficulty in starting or maintaining momentum	13	(37.1)
Feeling the patient did not meet eligibility criteria	11	(31.4)
Limited opportunity due to changing schedule	7	(20.0)
Feeling the patient was not likely to be capable of self-care	6	(17.1)
Losing interest in the study	5	(14.3)
Forms generated too many patient queries	4	(11.4)
Unavailability of forms on hand	4	(11.4)
Other problems	11	(31.4)
(Missing)	(2)	

4.1.2.3 FPs' interface with patients receiving self-care intervention

22 FPs had patients who received self-care interventions.73% of those FPs completed one or more individual patient questionnaire* about the interface with these patients (n=16).

4.1.3 Results of bivariate analyses

59 physicians participated, of whom 21 (36%) were from solo and 38 (64%) from group practice. To assess potential difference between different groups, we analysed study entry physician data. A sample of 51 was available for bivariate analyses. All results of exploratory group comparisons with Chi-square, Fisher's exact, and Kruskal-Wallis nonparametric tests are presented in Tables 9-11. Significant results are bolded in the table and marginally non-significant results are identified by footnotes.

* Descriptive data from those forms are not presented because they are not relevant to this thesis' objectives.

Table 9. Comparison of characteristics of family physicians and their practices as to their compliance with the study protocol (n=51)

		Compliance with screening		Compliance with follow-up protocol		
		Returning ≥ 1 positive screening form	Total number of positive screening forms returned	Completing end of study questionnaire	Completing ≥ 1 individual patient questionnaire (n=21*)	
Variable	n	(%)	Median (Q1-Q3)†	(%)	n	(%)
Family physicians' characteristics						
Gender						
Male	29	(72.4)	2.0 (0.0-6.0)	(58.6)	13	(61.5)
Female	22	(77.3)	2.5 (1.0-9.0)	(33.3)	8	(100.0)
Age						
< 50 years-old	23	(69.6)	1.0 (0.0-3.0)‡	**(82.6)**§	7	(71.4)
≥ 50 years-old	28	(78.6)	4.0 (1.0-9.0)‡	**(53.6)**§	14	(78.6)
Years in practice						
<20	18	(66.7)	1.0 (0.0-3.0)‡	(83.3)**	5	(60.0)
≥ 20	33	(78.8)	3.0 (1.0-8.0)‡	(57.6)**	16	(81.3)
Previous research experience						
No	12	(50.0)**	**0.5 (0.0-2.0)**††	(66.7)	2	(50.0)
Yes	39	(82.1)**	**3.0 (1.0-8.0)**††	(66.7)	19	(79.0)
Practice organisational model						
Solo vs. group						
Solo	18	(83.3)	**7.5 (1.0-11.0)**††	(50.0)**	10	(80.0)
Group	33	(69.7)	**1.0 (0.0-4.0)**††	(75.8)**	11	(72.7)
Government vs. Non-government run						
Government run (CLSC and UMF)	11	(63.6)	1.0 (0.0-3.0)‡	**(100.0)**§	2	(100.0)
Non-government run/solo	18	(83.3)	7.5 (1.0-11.0)‡	**(50.0)**§	10	(80.0)
Non-government run/group (Clinique Réseau, other group, polyclinic)	21	(76.2)	1.0 (1.0-5.0)‡	**(61.9)**§	9	(66.7)
GMF vs. non-GMF						
GMF	10	(77.5)	3.0 (0.0-7.0)	(80.0)	3	(100.0)
Non-GMF	40	(70.0)	2.0 (1.0-8.0)	(62.5)	18	(72.2)

* Comparison of characteristics of physicians' by this outcome measure was done for 21 FPs since this requirement was not expected from all enrolled physicians, but from only those who had patients who received depression self-care intervention (n=22). Of those, 1 FP had not sent baseline questionnaire.
† First and third quartiles
‡ Kruskal-Wallis test 0.05 < p-value < 0.10
§ Chi-square or Fisher's exact test (see section 3.4.3.3) p-value < 0.05
** Chi-square or Fisher's exact test (see section 3.4.3.3) 0.05 < p-value < 0.10
†† Kruskal-Wallis test p-value < 0.05

Table 10. Impact of familiarity with and attitudes to self-care on family physicians' compliance with patient screening (n=51)

Variable		Returning ≥ 1 positive screening form	p-value	Total number of positive screening forms returned	p-value
	n	(%)	Chi^2 or Fisher's exact test*	Median (Q1-Q3)†	Kruskal-Wallis test
Familiarity with self-care strategies for CPD‡ (1 missing)					
Moderate to very	21	(76.2)	0.763	2.0 (1.0-6.0)	0.611
Not at all to somewhat	29	(72.4)		3.0 (0.0-9.0)	
Familiarity with self-care strategies for depression					
Moderate to very	7	(71.4)	1.000	7.0 (0.0-15.0)	0.298
Not at all to somewhat	44	(75.0)		2.0 (0.5-7.5)	
Belief in the effectiveness of self-care for CPD‡ (1 missing)					
Moderate to very	36	(77.8)	0.415	3.0 (1.0-8.0)	0.205
Not at all to somewhat	10	(60.0)		1.0 (0.0-3.0)	
(Don't know)	(4)				
Belief in the effectiveness of self-care for depression					
Moderate to very	26	(65.4)	0.484	1.0 (0.0-8.0)	0.306
Not at all to somewhat	14	(78.6)		4.0 (1.0-8.0)	
(Don't know)	(11)				

* See section 3.4.3.3
† First and third quartiles
‡ Chronic physical diseases

Table 11. Protocol factors impacting on family physicians' compliance with patient screening (n=37)

Variable	Returned ≥ 1 positive screening form (n=24)	Did not return ≥ 1 positive screening form (n=13)	p-value
Ordinal (Five-point Likert scale)	Median (Q1-Q3)[*]	Median (Q1-Q3)	Kruskal-Wallis test
Information received from RA reflected what was required of FPs and staff[†]	1.0 (1.0-2.0)	2.0 (1.0-2.5)	0.086[‡]
(Missing)		(1)	
Level of satisfaction with the financial recognition[§]	2.0 (1.0-3.0)	2.0 (1.0-2.0)	0.357
(Missing)		(2)	
Ease of process of distributing screening forms[**]	3.0 (2.0-3.0)	4.0 (3.0-4.5)	0.060[‡]
(Missing)		(5)	
Ease of process of collecting screening forms[**]	2.0 (1.0-3.0)	4.0 (1.0-4.0)	0.130
(Missing)	(2)	(4)	
Categorical	n (%)	n (%)	Chi^2 or Fisher's exact test
Distributing screening forms			
Secretary helped	14 (58.3)	4 (30.8)	0.170
FP distributed	14 (58.3)	6 (46.2)	0.512
Collecting screening forms			
Secretary helped	**3 (12.5)**	**6 (60.0)**	**0.009**[††]
(Missing)	(3)	(3)	
FP collected	19 (79.2)	5 (50.0)	0.116
(Missing)	(3)	(3)	

[*] First and third quartiles
[†] 1=Everything happened as was explained, 5=The study was not at all what was presented
[‡] Kruskal-Wallis test 0.05 < p-value < 0.10
[§] 1=very satisfied, 5= very dissatisfied
[**] 1=very easy, 5= very difficult
[††] Chi-square or Fisher's exact test (see section 3.4.3.3) p-value < 0.05

4.1.3.1 Outcome measure 1: Compliance with screening

A measure of FP engagement in the study protocol was the returning of eligible (positive) patient screening forms. Overall, 66% of the practices returned one or more positive screening forms. The mean (sd) number of positive screening forms returned by all practices was 4.3 (6.9), with a range of 0 to 43 (median=1).

(a) Binary (FP returned ≥ 1 positive screening form; yes, no): As presented in Table 9, previous research experience by participants was a marginally non-significant predictor of this outcome (p=0.053). Age (p=0.529), gender (p=0.755), years in practice (p=0.502) were not related to FPs' involvement with patient screening. We performed a similar analysis examining the impact of the organizational structure on returning forms. There was no significant difference between the following: solo vs. group practices (p=0.335); government run vs. non-government run practices (p=0.531); or GMF vs. non-GMF practices (p=0.685).

FPs' familiarity with and attitudes to the effectiveness of self-care strategies for chronic physical diseases or depression was not found to be associated with their compliance with patient screening as shown in Table 10.

As shown in Table 11, satisfaction with the initial orientation to the study and perceived ease of the distribution of screening forms were marginally non-significant in affecting compliance with screening. Neither satisfaction with financial recognition for participation nor perceived ease of the collection of screening forms was linked with the rates of returning screening forms. Our examination of who distributed and collected screening forms found that if this was left to the secretaries, there was less likelihood of screening form returns.

FPs who completed the baseline questionnaire were more likely to adhere to the study protocol of returning ≥ 1 positive screening forms (p= 0.001). This relationship was not found for the end of study physician questionnaire (p= 0.502) (Data are not included in tables).

(b) Continuous (total number of returned positive screening forms): As shown in Table 9 and as measured by Kruskal-Wallis test, a history of FPs having previously participated in research was a significant factor (p=0.020) affecting the extent of FPs' involvement as reflected in the numbers of returned screening forms. When we compared the number of screening forms between solo and group practices, a higher number of screening forms returns was found in solo practices (p= 0.030). Being 50 years of age and older (p=0.093), having more than 20 years in practice (p=0.075), and being in nongovernment run solo practices (p=0.057) were found to be marginally non-significant predictors of FP' attentiveness in returning screening forms. Gender (p=0.475) was not found to be associated with this compliance.

4.1.3.2 Outcome measure 2: Compliance with follow-up protocol

(a) Another measure of FP engagement in the study protocol was completing the questionnaire at the end of study. A sample of 34 was available for bivariate analyses since 3 FPs completed questionnaires only at the end of study but not at baseline. The association of physician gender, age, years in practice and clinic type with the questionnaire completion was explored and presented in Table 9. Physicians who were younger than 50 years old (p= 0.039) and those in government run practices (CLSC or UMF) (p=0.002) were more likely to complete the questionnaires. Having less years in practice (p= 0.072) and being in group practices (p=0.062) were marginally non-significant predictors of this compliance. End of study questionnaire completion was not influenced by any of the followings: gender (p=0.233), previous research experience (p=1.000), and GMF vs non-GMF practices (p=0.460).

(b) Another measure of FP engagement in the study protocol was completing individual patient questionnaires at the end of study about patients receiving self-care intervention. Among FPs who were expected to do so, no significant relationship was found between physicians' and practices' characteristics and compliance with this study requirement (see Table 9).

4.2 Findings from qualitative phase: deductive-inductive thematic analysis

4.2.1 Characteristics of participants

Eight FPs responded to this invitation, 7 in an English focus group, and one by a specifically requested telephone interview in French. They were a highly experienced group of clinicians with 7 having been in Canadian family practice between 24 and 37 years; an eighth was less experienced (5 years in practice). 6 were male. 3 were practicing as solo and 5 were in group practice (five practices were government run, the remainder non-governmental). 2 were from teaching practices and 2 participated despite having returned no completed screening forms.

4.2.2 Theme 1- Factors impacting on FPs' enrolment in the study

Sense of collegiality or obligation to a research team member or to the organization

Commonly voiced reasons for FPs to meet with the study recruiter to learn more about it and to decide about participation were sense of collegiality and obligation. The credibility of both the family physician Co-Investigator and the research institution were considered very important by most participants. For example, one physician stated (P1): "I realized that it was a *XX*[*] project- that was the major thing for me to go into it...I kinda felt for myself a little bit of a *duty* to try to do it." Another physician (P2) supported: "I figured- if *XX*[†] was involved with something, I can help, I would try to *help*." A third one (P7) also agreed: "I would do hundred percent because I was in XX[*] and that was coming from XX[*], it was a part of my obligation." While obligation appeared to be a motivator for initial recruitment, it did not for actual participation discussed below under theme 2.

[*] Research institution.
[†] FP on the study team.

Attitudes to incentives for participation

All participants agreed that financial incentives to meet the RA did not play a role in their enrolment. One physician (P1) commented: "Financial incentives were absolutely no consequence at all!...you wouldn't wanna do that because you're competing with pharmaceuticals who gives such big incentives...don't go there, don't do incentives, make the incentive moral." P6 agreed: "I think the incentive was there…but it was *not a deciding factor*[*] by any means." A third physician (P5) spoke about the *credibility of topic outweighing financial incentives* by saying "No! I could have paid you; you could have bought me, to sign up for self-help; a little... a little percentage."

Potential benefits of research to practice and existing gaps in care

A decision to participate was also influenced by a need for solutions to help depressed patients, particularly linked to lack of time and expertise. One physician (P3) stated: "I saw the *benefit of the patients* in that." Another physician (P2) concurred: "Because I know there is a need for it, but I did not have time and expertise to do. Time and expertise, I didn't have either one." P5 expressed the same need:

> I think XX[†] caught me on a day that I was really feeling quite overwhelmed. My patients [are] coming in with- you know [they ask]: 'here I am, I sit, what can you do for me, what tool could you give me?', or what whatever- you know. And I remember, when she call[ed] me [I thought]: "Oh my God! *Self-help tools*. That would be great. If only I could get them to understand or to be motivated."

Some of the physicians expressed curiosity about the research topic. One physician (P6) stated: "The question like 'Does self-help stuff work?' which I think is a very frequent question so I was interested in the topic." Another physician (P5) said: "I am a firm believer in the self-help... I saw it as a tool maybe [would] help us with the chronic illnesses…I thought it might be *a way to*

[*] Italics in quotations identify the specific emphasis used by speakers.
[†] RA who recruited family physicians.

bring them up to do the level of being a partner." P8[*] also expressed an interest in the topic: "Ç'est vraiment nouveau comme approche pour nous donc je trouve l'idée très intéressante mais ça prendrais des arguments et une organisation pour aller dans ce sens-là".

Role of physicians in Project DIRECT-sc

The small commitment expected of FPs in the study was another expressed reason for participation. One physician (P1) stated: "It seemed like a very *simple* thing to do, and did not sound that it would take up a lot of my time...It was practically nothing." Another physician (P7) agreed: "It really *didn't take a lot of time* for being in the study itself." Another physician (P4) even posed that time should not be a concern for this type of research as he said: "To me I think I don't know who started the threat on the time business, but time commitment for participating [in] something [like that] I think that's minimal...I do that any day."

Appreciated qualities of RA recruiting FPs

Most physicians acknowledged the importance of the characteristics of the FP recruiter and commented on her personal and professional qualities. These included her energy, enthusiasm for the topic, ability to relate to office staff, and openness to finding ways to make things work. P1 thought that the RA was "very bright, very exuberant and vivacious, and she gives some life." P2 stated: "If she had acted as a PR *representative*, she would have convinced [about] what she said. There was nothing negative about the presence in my office...she was able to clarify it very easily." P8 also noted that the "*dynamism*" of the RA was the major reason for enrolling into study.

[*] Physician and practice nurse who could not attend the focus group participated in a telephone interview.

4.2.3 Theme 2- Practice factors impacting on patient screening

Organizational system issues that depend on the practice type

Discussion revolved around different practice types and which had easier or more difficult time ensuring that screening forms were handed to the patients to complete. *FPs in government run practices felt lack of control getting help from secretaries or nurses*, while in non-government run solo practices the relationship with the secretaries and staff was much more facilitative. A physician in a non-government run solo practice (P1) stated: "I have the secretary I have *confidence* in…It was never an issue-it went very very well. We could control, we are not in bureaucratic place." P2 also added: "There is *hierarchy*, [if she says]: 'that is not in my job descriptions', [I say]: 'but honey it is in your job description!'." P3 supported: "I did nothing, my secretary did everything…I would even add that my secretary was happy to do distribution." In contrast, three physicians in government run practices expressed lack of *authority over the staff*. P5 stated: "We do have the problem with the secretarial and workers at the main entrance there, at the main reception. And we had to do acrobatics to get them to sign our patients in as members of the family practice unit." P6 maintained: "We have absolutely no ability to control in front of the practice whatsoever." Likewise, P8 expressed having the same difficulty: "On avait passé la directive, mais ça n'a jamais été réalisé. Donc, par problèmes de collaboration avec le secrétariat…J'avais pas de lien d'autorité…Ç'était pas moi qui faisais la définition de taches."

Concerns were voiced about giving incentives to practice staff to help with the research. *Interpersonal relationships and loyalty within the practice* appeared to be important in physicians' decisions whether to offer financial incentives. Some considered it acceptable to offer incentives, e.g. gift certificates, dinner invitations by the research team for secretaries and nurses. A physician working in a CR (P7) elaborated on the benefits of creating *loyal relationships* within the practice by providing a good example: "It happened in one of the studies that I was involved with. They sent me an invitation for a dinner. I [gave] it to my nurse [who] did the

job. So he was very happy at the end. And he did the job for me and I was happy [at the] same time." However, two physicians from non-government run solo practices were completely confident about giving tasks to their secretaries; therefore, they did not see any necessity to offer incentives. P2 believed: "I think they shouldn't get anything, they are getting salary," and P1 supported: "I don't think they should get anything either."

Factors influencing approach to distribution of screening forms

Some physicians feared a selection bias if they distributed the forms themselves; in fact, most physicians *preferred waiting room screening* before the patients were seen by them. As Physician (P1) pointed out:

> I did not have a *bias*. They didn't feel pressure from me, and I guess the ones who actually followed up on it who really wanted it, but it was voluntary completely...Once the doctor is involved it is a bit of twister. It's different. It's like what you have said-you are pushing them a little bit.

Time constraints were seen as another obstacle to physician involvement with the screening forms. Physician (P8) and his nurse felt that research should not add extra work on physicians and staff since it is difficult for them to incorporate it in an overloaded clinical practice. The nurse observed "Parce que dans la dynamique des rendez-vous, ou on est pressée puis tout ça, je pense que ça ne s'est pas fait." P8 also noted :

> Ça je pense que c'était par *manque de temps*… Disons que dans le cadre de notre pratique, oui on est rushés à faire plusieurs choses en même temps, et d'ajouter à penser à ça en plus…donner la directive aux secrétaires comme un geste étant automatique, ça serait un meilleur dépistage.

Two physicians proposed having a research assistant in waiting rooms to screen patients. P2 suggested: "If you had a budget to do it, you have a secretary or whoever spend a week in each patients…doctors' office and do the recruitment that would be helpful." P8 supported this view: "Ça occuperait les gens pendant qu'ils sont en attente de voir le médecin. Ç'est pas mauvais." Physician (P2)

disagreed and said that patients would not accept to be in the study when they are approached by a study team: "I have a few studies having co-care, and I find it, unless I approach the patient directly I would have all these bushes* in my office."

Some suggested posters in waiting rooms to describe the study, to increase its credibility and to provide contact numbers for patients to call. P1 said: "But you have to market it well, the brochure, the display, the attractiveness of it, things like that." Physician (P5) disagreed: "I think it has to be done *on the spot* where they get to see the patient, give the paper information to sign up. Because I think if they leave with the info, I am not sure if anybody [will] call then."

Some physicians, especially the ones practicing in CR and GMF, saw providing a study team with a list of potential eligible patients from the practice to be screened by the team as feasible. CR physician (P7) said: "In our system, for patients we have code[s]. Each name has a code and each name has a different code so you are gonna know what type of chronic conditions they have."Physician (P8) concurred: "Oh oui. Puis on a *la liste de tous les patients* qui sont inscrits ici au nom de chaque médecin avec les codes de vulnérabilités qui sont associés. Au complet." Such an approach raised a discussion about patients' *confidentiality issues*. For example, physician (P2) argued: "Is there gonna be some confidentiality issue?", while (P1) noted: "All my patients are paranoid and they would be so suspicious. [They would think] "Who the heck is calling?" Physician (P8) objected too: "Je ne crois pas que vous puissiez le faire à distance. Donc c'est à nous à l'interne à faire ça de façon systématique pour recruter des patients puis demander leur collaboration. Ç'est vraiment ma clientèle." Generally, there was clearly not that much consensus on this issue, which speaks to need to consider diverse strategies.

* Dictionary definition: A low shrub with many branches. P2 uses this term metaphorically to refer to "obstacles."

Patient resistance and/or cultural barriers

Some physicians noted the impact of *having predominantly immigrant populations* who may be more sceptical and resistant than others. P5 noted: "We are in a highly immigrant area; people may not speak the language. If you tell them "you have to make a phone call or you have to go somewhere", I am not sure that they are ready or willing to do that." P2 added: "I have a large immigrant population too…each of them think they were gonna be a guinea pig- and that was one of my big downfalls for recruiting patients in your study."

5 DISCUSSION

In this thesis we examined the involvement of family physicians in Project DIRECT-sc, a feasibility study of implementation of self-care for depression in adults with chronic physical diseases in Montreal. In a mixed methods study, we described both the outcomes of the family physician recruitment and factors that affected such recruitment and the extent to which family physicians were involved and factors that influenced such involvement. Recruitment rate was 16.8% of the initial target sample, and this was determined mainly by difficulty in reaching and finding eligible physicians. Amongst eligible FPs, major factors positively affecting their engagement were previous research experience, collegiality, and credibility of the project's topic. Adherence to the study protocol was 66% with patient screening and 63% with end of study questionnaire completion. 73% of the FPs, whom were asked to complete individual patient questionnaires, respected to do so. Whereas past research experience facilitated participation with patient screening, younger physicians and those in government practices were more likely to complete end of study questionnaires. Neither enrolment nor actual participation appeared to be influenced by financial incentives. Having control on the logistic issues occurred to be important for a practice to increase the amount of patient screening. In section 5.1 and 5.2 below, we discuss the results obtained in the quantitative phase, complemented by qualitative findings, and interpret them in light of existing literature.

5.1 Recruitment of Physicians

5.1.1 Approaching Physicians

5.1.1.1 Introductory Letters

Initial introductory letters to physicians about research projects have been reported as useful in gaining entry to physicians' offices.[21] In our study the data suggest this influenced almost half of the physicians, following physicians' interest in the way care is delivered to patients with depression, credibility of the

research team, interest in the research topic, and follow-up calls from the RA. This interest then permitted the FP recruiter contact with the FPs either on the phone and/or by face-to-face meetings.

5.1.1.2 Telephone Contact

Difficulty in making first contact with physicians has been reported as a barrier to studies that require physician participation.[34] This was encountered in Project DIRECT-sc where a large number of FPs could not be reached on the telephone or when not reachable, messages left on answering machines were not returned. This problem is anecdotally reported by patients as well. It is therefore not clear if this is intentional gate-keeping by practices, or physicians' inability/reluctance to make the expenditure necessary to improve telephone access.

5.1.1.3 Face to face encounters

Face-to-face recruitment has also been reported in the literature to be effective in introducing studies to physicians.[9] In our study, all physicians who met the recruiter eventually consented to be in the project. Focus group participants were quite strongly of the belief that the personality, knowledge and enthusiasm of the FP recruiter then took them to the next level of agreeing to participate. We recognize that there were still some physicians who were not influenced by the recruiter calls since they refused to meet to learn details about the study. Hence it is important for researchers to find experienced and skilled physician recruiters who understand physicians' work pace and expectations, and ensure sufficient project funding to permit extensive training for physician recruiters. Once that is achieved researchers might want to pool finances to ensure that well-trained and successful recruiters are retained on their payrolls for other studies.

5.1.1.4 Financial incentives

Offering financial incentives played little role in getting FPs to meet with our study recruiter. The lack of influence of remuneration contradicts some published literature. [4, 10, 23, 31, 35, 62, 66, 67] The physicians' interest in the study topic far exceeded any influence the financial incentives we offered might have had.

Possible reasons for this difference include enrolled physicians' need for new approaches to give better mental health care to their patients, and hope that the collaborative care model that the study offered would meet those needs. The latter point deserves further study in the "social exchange" versus "economic exchange" perspective.

5.1.2 Ineligibility or refusal to participate

5.1.2.1 Participation rates and obstacles to finding eligible physicians

Literature on physician recruitment rates in primary care is inconsistent in defining the denominators used to calculate such rates. Notwithstanding this we have noted that the outcomes for Project DIRECT-sc were 16.8% of the initial target sample, and this appears to be at the lower end of the range reported in the literature (2% [22]-81% [65]). This may be the result of how physicians in Quebec are categorized by the Collège des Médecins du Québec in its physicians' directory. The latter does not distinguish a traditional "omnipracticien or a generalist" from noncertified specialists, or those physicians who work in insurance, research, armed forces, administration, or government, or are hospitalists and emergentologists. Hence in our project a common cause of ineligibility was the elimination of a large number of family physicians who participate in the growing range of activities expected of family practitioners in Quebec. Research might be facilitated if professional organizations or provincial ministries of health were able to maintain lists containing accurate descriptors of health care providers, but with frequently changing profiles of doctors the maintaining of up to date lists may be heavily time-consuming and costly. Researchers may be forced to accept such realities by selecting a larger sample size for randomization than if there was more homogeneity amongst practices. Or one might opt for the decreased representativeness that may accompany a convenience sample that fits study criteria.

5.1.2.2 Refusals: time limitations

Amongst eligible physicians the project achieved a recruitment rate comparable to other studies in primary care (19% [9]-63%[69]). Similar to what has been reported in the literature we found that the predominant reason for refusal to participate was perceived lack of time. [4, 22, 33, 39, 41, 49, 59, 61, 65] Research teams therefore need to find innovative means to support practices interested in collaborating in research. Protected hours for physicians interested in engaging in research projects needs to be encouraged,[41] research should be seen as continuing education, [4, 10, 35, 54, 62] research could be designed in way that will have minimal impact on practice load, [10, 21, 25, 31] and full time researchers may need to adjust their work schedules to accommodate the clinicians, and not the other way around, as sometimes occurs. As well, given the growing emphasis on the need for community-based primary care research, funding agencies need to recognize the old adage that "you get what you pay for" and include practice remuneration as an acceptable budget line item request. Finally, one has to do some cost-benefit analysis of not recruiting ambivalent physicians whose contributions might turn out to be low or non-existent versus the desire not to lose data that may be obtained from their patients.

5.1.3 Factors affecting physician enrolment

5.1.3.1 Physicians' characteristics and beliefs

We observed that a high proportion of participants had previously engaged in research projects. This is supported by findings of others,[4, 37, 57] and this information is important not only in seeking potential collaborators, but also would seem to justify the orientation to research currently being given in family medicine residency programs.

The age of physicians was considered since the literature suggests that younger physicians would be more interested in the study,[4, 27] possibly by being more open to new ways of doing clinical practice. In fact a high proportion of our participants had been in practice over 20 years, raising the possibility that experienced clinicians are seeking new approaches to problems they have been

unable to solve. Such an interpretation was supported by focus group participants who talked about lack of time, tools and expertise, and saw self-care as "anti-Pharma". They also identified challenges in themselves supporting self-care.

Physician gender was also explored as to impact on physician participation. We anticipated that female physicians would be more attracted to the study because some literature has suggested they are more concerned with the relational aspects of their work and more open to holistic approaches than their male counterparts.[88] Male physicians were in fact slightly predominant in this study, possibly because female physicians might be more comfortable with mental health issues and in less need of practice help, or they may have had less time to dedicate to research since females on average tend to work fewer hours than male physicians.[89]

5.1.3.2 Physicians' interest in research topic

Family physicians attempt to provide comprehensive, continuous care within the longitudinal relationship that they have with their patients.[90,91] This study attempted to understand factors affecting physicians' recruitment into research that specifcally addressed the self-management of comorbid depression in adults with chronic physical diseases. The former was a particular target given that between 5 to 12% of men and 10 to 25% of women experience at least one major depressive episode during their lifetimes.[92]

This specific relevance that a research question has to clinicians has been described as a predominant explanation for what attracts them to be participants in research.[4, 10, 16, 23, 25, 31, 33, 63, 65] This was observed in our work where family physicians indicated strong interest in delivering better care to their patients with depression, despite the challenges that it presents. For example, when depression is identified the practicing clinician is confronted with the dilemma of how to choose the most appropriate therapy from amongst many for a specific patient. [91, 93] Nonetheless the majority of our FPs preferred to treat depressed patients on their own (rather than referring them elsewhere), a finding observed amongst e.g. Saskatchewan family doctors.[94]

Self-care is a potential approach to improve healthcare outcomes, and for depression may be one solution for poor access to doctor, therapist or cognitive-behavioural therapy.[95] In our study, participating physicians' familiarity with self-care for depression was less than that for chronic physical illnesses, and they were more ambivalent about its effectiveness when used for depression. The latter findings would seem to validate the need for a study such as Project DIRECT-sc to help FPs understand self-care, a conclusion validated by a few physicians in the focus group who indicated they had joined the study in order to learn more about self-care.

5.1.3.3 Interface between chronic disease and depression

Since mild to moderate depression is very common and is a significant health burden especially amongst those with chronic physical disease[6, 96] it might be anticipated that physicians who were less confident with chronic disease management would be more interested in a study providing management help. However, at least 2/3 of participating physicians were moderately confident with managing chronic diseases, and even more confident with patient education/counseling. Despite such interest and skills focus group participants noted that time constraints prevented them from spending too much time on patient education. Some also voiced concerns about the expertise needed to convince patients to becoming partners in their care.

5.1.3.4 Practice characteristics

Physicians were predominantly remunerated by fee-for-service in our study, a finding that differs from the literature.[61] However, since we do not know the characteristics of our original sample of 400 physicians, caution is observed on how to interpret this finding. But, since fee for service payment generally is not supportive of time spent talking with patients, study physicians may have gravitated to it as a way of finding new ways for their patients to receive care for mental health problems.

We expected that physicians in practices without interdisciplinary collaboration e.g. from a nurse, social worker, or psychologist, might be attracted to the study because if one doesn't have sufficient options for practice one may seek out solutions derived from research protocols. Interestingly however, half of the physicians worked in sites where there were one or more nurses. One interpretation might be that this made the physicians open to broader models of work models such as collaborative care. Another interpretation may be that while 3/4 of the nurses worked with patients on the physicians' rosters, that involvement may not have been meeting physicians' needs. Both of these impressions were supported in the focus group where general support was expressed for collaborative care, but physicians in non-solo practice universally reported that they had no authority over defining staffs' job descriptions and activities. Further, while a large proportion of FPs had a psychologist in the clinic, and to a far lesser extent a social worker, the latter professionals might have had their practices governed by institutional norms that were not congruent with physician needs, or, from an opposite perspective, they may have been in private practices with professional fees exceeding what most patients could afford to pay.

It is logical that physicians participate in studies that reflect the needs of their patients.[32] The participating practices did have relatively high percentages of older individuals, i.e. those more likely to have chronic illness. Therefore it would seem that while the described level of physician participation was variable once the physicians were in the study, they did correctly understand the types of patients desired for the research. This would support the value of the initial introductory letter about the study as well as the successful work of the physician recruiter.

5.1.3.5 Credibility of the research team and the protocol

Credibility of the research team was cited by our participating physicians as carrying high weight in their decision to join the study; interestingly this has only been seen in two other studies identified in our literature review.[21, 57] As interpreted by focus group physicians credibility meant that they would not be wasting their time by study participation. They appreciated the minimal time

effort the protocol required of them, and as such it respected their clinical practice, a finding that has been observed elsewhere.[10, 21, 25, 31]

Unlike what was seen in other studies,[4, 10, 23, 31, 35, 62, 66, 67] most of the physicians were not influenced by financial recognition for their time to meet the recruiter. They valued integrity in their practice, and noted that they receive offers from pharmaceuticals that give big financial incentives to participate in research, but they usually refuse them because they give priority to credibility of studies, not to the incentives. This philosophy was also evident in that while the study offered dinner in an elegant restaurant as an incentive for physicians to participate in the focus group, the majority of participants indicated that familiarity with one or more of the research team was what motivated them to attend. Despite the possibility of this generating biased feedback, it suggests that collegiality and reputation of the FP on the research team may play an important mediating role that research groups need to foster and capitalize on.

5.2 The extent of family physicians' involvement in the study

5.2.1 Compliance with study protocol for patient screening

5.2.1.1 Physician characteristics

Involvement with patient screening in the office was positively associated with past involvement with research projects. That experience may have sensitized physicians to the creativity or flexibility necessary to operationalize a protocol. Alternatively, it may simply be that repeat participants have a greater understanding of the requirement of research participation and so when they agree they are prepared for the obligation and expect to carry it out.

While the literature suggests that older physicians[20] are more likely to recruit patients into studies, this finding was marginally non-significant in our sample. Such difference may be idiosyncratic to the studies at hand or to what is expected of physicians within the studies.

We observed that physicians who completed baseline questionnaires were more likely to be compliant with patient screening. While this suggests that early commitment to a study maybe a positive predictor of later study involvement, our data on this are sufficiently limited as to make this hypothesis predominantly conjectural.

The most common reason cited for non-screening was FP forgetfulness. This occurred despite the project sending the physicians frequent reminders and newsletters covering study updates. The role of forgetfulness has been described by others[19, 46] and suggests that despite initial good intentions of physicians and/ or their staff, that reminders may need to be individualized, i.e. projects might consider enquiring of each practice as to what sort of creative reminder approach might be best suited to that specific practice.

5.2.1.2 Practice characteristics

Research studies that reimburse physicians to recruit patients to research studies have been a common practice, but it has been controversial because of the need to avoid a conflict of interest and to ensure that the interests of the patient take precedence over physicians' self-interests.[97] The literature on this approach is somewhat conflicting: some suggest that paying clinicians improves recruitment, but may reduce quality;[98,99] others say that payment upon meeting pre-agreed targets is a better way to ensure appropriate patient recruitment.[16, 69] In our study, while physicians indicated that financial incentives played little or no role in promoting involvement, the large variability in the number of screening forms returned per practice suggests that for some practices the presence of a substantial incentive might have improved the low adherence to the protocol. These contradictions in both the literature and some of our findings suggest that a study of FPs looking in depth and generically at the pros and cons of incentives might be valuable.

Arising from this discussion on "buy-in" the focus group physicians were divided as to whether any incentives should be given to, or shared with office staff. While

physicians may participate in a study out of interest or collegiality, those motivations do not necessarily extend to office staff. Those who opposed incentives for staff were most often physicians in solo practice who believed that giving incentives to secretaries was not needed since they were expected to do whatever the practice defined as relevant to the practice. These physicians considered that staff might have to do additional work for a project, but with no perceived benefits. By contrast, in a multi-staff office the logistics of dividing up incentives could be a barrier to use of incentives, and might be overcome by gift certificates for all, or incentives for predetermined achievement. This suggests that one needs to consider the culture of the practice when organizing incentives. This complex issue of reward might better be solved if the idea of a practice being used for research could be formally institutionalized and understood by all who work in a practice.

The availability of patients meeting the study criteria for those aged 40 and over did not appear to be a factor affecting the number of completed screens submitted since the predominant age group in practices tended to be between 36 and 64. Doctors in the focus group suggested that beyond forgetfulness, practice dynamics and patients' cultural and language issues were far more important factors in their failure to screen or to screen systematically. Further, since some doctors felt their own direct involvement in patient recruitment (as distinct from waiting room recruitment) might create bias in favour of prompting patients to participate, researchers need to be open to methods that permit a broad range of physician preferences.

We observed conflicting findings about the association between practice size and patient screening. The literature is similarly contradictory: both smaller (one or two physicians)[20] and larger practices[28] have been found linked to good patient recruitment. In our study, while the type of practice (solo vs. group) had no influence on whether or not a practice participated by returning at least one positive screening form, greater numbers of screening forms were received from solo practices, likely the result of more collaboration from practice secretaries or

nurses. On the other hand, in the quantitative survey results FPs reported that the secretaries were less compliant with screening. The reasons for this contradiction are not readily apparent, but practices, when committing to involvement in studies, must *a priori* ensure that there is "buy-in" from all staff to operationally support the project. This approach might be advanced by the presence of a practice member who acts as a champion for promoting the study. Then research teams might also support local efforts by regularly having a research assistant rotate into the practice in order to be on the lookout for and to troubleshoot any problems.

5.2.1.3 Chronic disease and depression management

No relationship was found between FPs' familiarity with and attitudes to self-care for chronic disease and depression management and with their compliance to patient screening. This outcome might be the result of complex interactions amongst the various personal and practice variables described above, despite good intention of physician participants.

5.2.1.4 Study team and protocol related dynamics

Physicians were attracted to the study by, amongst other things, the enthusiasm and credibility of the research assistant. However, they felt it important that information given to them about how the study would unfold would be accurate. Physicians' without previous research experience were less likely to participate in the study with patient screening. For that reason study teams should pay particular attention to such individuals and give them sustainable support. This strategy may increase success in operationalizing protocols and may create a better first experience with research. This might improve sense of comfort for future projects, noting that bad experiences with research may be a deterrent to future collaboration.[58]

Intricate patient eligibility criteria have been described in other studies[10, 46, 59, 67] as influencing levels of physician involvement. Specifically within our own project there were complex variables to be considered: Patients were expected to

be 40 years or older, to have one or more of six defined chronic physical diseases, and to have at least one positive response on the PHQ-2.

5.2.2 Factors influencing physicians' compliance with follow-up protocol

The relatively high return rates for the study questionnaires would suggest that even though physicians had difficulty operationalizing the distribution and collection of screening forms, many were nonetheless committed to the study. This might be due to frequent reminders given by the RA. Of the roughly 1/3 of physicians who did not complete the questionnaires, some were reported by staff to be on leave, some thought there was too much paperwork, and some indicated that their completed questionnaires must have been lost in the mail. No reason could be obtained from some of the physicians since they were unreachable. The question remains as to why someone would make a commitment to a study and then not fulfill it. One explanation would be that collegiality might have been enough to enlist but not to actualize participation.

Since older physicians were less likely to complete the end of study questionnaire, one might hypothesize that their interest with the study waned over time, or perhaps they had more competing personal and/or professional time obligations compared to younger physicians. This suggests that more attention may need to be paid to such participants in order to ensure their on-going commitment.

Physicians in solo practices were less likely to complete end of study questionnaires. We were not able to analyse specific causes to explain this. However, given that solo practitioners had heavier study involvement by virtue of larger numbers of patient participants and completion of patient-specific questionnaires, it would be conceivable that at the point of end of study questionnaire completion, they felt they had adequately contributed to the study. Another interpretation may be that screening forms and end of study questionnaires had different symbolic meanings for the doctors: the former might

have been seen in a more positive light since they had direct relevance to patient care, while the latter might have been seen as more of an evaluation of them.

Individual patient questionnaires related to the clinical encounter with patients who received self-care interventions were completed by ¾ of the physicians who were expected to do so. Neither physicians' nor practices' characteristics were found to be related to that compliance. This relatively high rate also suggests these physicians' commitment to the study since these questionnaires required extra time from them to recall the encounters with these patients and fill out the questionnaires. Another interpretation is that the end of study questionnaire was study-based in the sense that it gathered information of relevance more to the researchers than to the physicians. The individual patient questionnaires, on the other hand, had more relevance for the physicians in that they reflected process and content on the physician-patient relationships.

5.3 Strengths as compared to other studies

5.3.1 Reproducible literature review

We performed a reproducible mixed studies literature review and conducted a summative content analysis. This review was first of its kind since we did not see this kind of review in the reviews that we found and excluded in our literature review. Findings of the review supported this thesis in two ways. First, it described the characteristics of the studies conducted on the recruitment process in primary care research. Second, our synthesis provided a broad perspective on factors affecting physicians' involvement in primary care research.

5.3.2 Use of mixed methods

A recent trend in primary care research is towards diversification of types of studies through mixed methods integrating quantitative and qualitative approaches. To date mixed methods have not been used rigorously to investigate recruitment processes in primary care research. This is the first study that we are aware of that has explored issues pertaining to physician involvement into

research projects using mixed methods. This approach allowed us both to capitalise on the strengths and also to counteract any biases within the methods.

5.4 Limitations

5.4.1 Quantitative phase

Although we are confident in our randomisation process, the relatively small sample of FPs may prevent us from having similar confidence in its representativeness. This could, in fact, not be assessed since it was not possible to compare our sample to non-participants. Such a concern was not viewed as major for the main study since Project DIRECT-sc was a feasibility study. However, it was a potential problem for the questions asked in this thesis since those who consented to be in the study were self-selected. We had a small sample size available for bivariate tests therefore we did not perform multiple testing. We suggest that most of the relationships observed in this study should be tested with bigger sample size.

The Project team had asked practices to return negative screening forms back to the team once the screening period terminated. Practices had been provided with pre-addressed, stamped postage envelopes to facilitate this, but not all physicians were compliant with this approach. Therefore we had no reliable estimate of how many screening forms were actually distributed and completed in the practices. Because of this limitation we used the return of positive screening forms as a measure of physicians' compliance with the protocol. However, we acknowledge that positive screening does not uniquely depend on physicians' compliance, but may also be related to patient volume and unexplored demographics, as well as to the amount of time per week any physician actually devotes to his or her practice.

5.4.2 Qualitative phase

We had planned to have two focus groups, but only had sufficient participation for one. This limited the amount of data to include in our qualitative analysis. Much of the focus group questioning was directed at issues pertaining to the

operationalization of patient screening, to the detriment of enquiry about the physicians' questionnaires. The absence of the latter is felt to be a weakness.

5.5 Knowledge translation plan

This study addresses an audience that include researchers, medical educators, family physicians, residents, and other members of primary health care teams. We have presented our study as work-in-progress posters at the Family Medicine Forum (FMF) Research Day, November 2011, Montreal, Quebec; at the 39th North American Primary Care Research Group (NAPCRG) Annual Meeting, November 2011, Banff, Alberta; at St. Mary's Hospital Patient Engagement Quality of Care & Research Symposium, April 2012, Montreal, Quebec (runner-up in the Research Category for the Poster Competition); and in "Journées annuelles de santé mentale- De la rupture à la croissance", May 2012, Montreal, Quebec. We will be presenting the specific literature review that was conducted for this thesis as a free-standing paper at Family Medicine Forum (FMF) Research Day, November 2012, in Toronto, Ontario. We are also invited to present this work at a research seminar at the Department of Family Medicine at McGill University. We plan further diffusion through publications in peer reviewed journals to reach primary care researchers who are particularly interested in practice and community-based research.

As well, some of the results of this thesis have been implemented in the recruitment approach taken in the second phase of Project DIRECT-sc which involves a randomized controlled trial; mainly, using a convenience family physician sampling with multisite approach, rotating a research assistant between practices to help screen patients, significantly broadening the list of chronic diseases to be included in the eligibility criteria, and adapting family physicians' end of study feedback questionnaire.

6 CONCLUSIONS

This thesis provides evidence about the contributing factors influencing family physician recruitment to and the extent of involvement in a Montreal–based community research project aimed at improving management of co-morbid chronic illness and depression.

Major factors affecting eligible physicians' enrolment were their engagement in previous research projects, interest in and need of support for the delivery of mental health care, and collegiality. Participants made a decision to participate based on their perceptions of the value of research in general, and the topic specifically, rather than because of financial incentives. The majority of participants had proclivity to assess and treat depression on their own, as opposed to referring patients for consultation or other mental health care. Credibility of the project, of the institution, and of the study team members also appeared to influence family physician participation.

Only 2/3 of participants were actually involved in the study by patient screening and/or end of study questionnaire return. Previous research increased physicians' actual participation with patient screening by providing them with the competency to adopt different strategies. Having control on receiving help from secretaries allowed physicians mainly in non-government run solo practices to have greater participation with patient screening. Physician questionnaire completion at the end of study, however, was related to younger age and government run practices.

Our findings suggest that if the idea of a practice being used for research could be formally institutionalized and accepted within a practice, logistical problems and the complex issue of incentives might be easier to resolve. Moreover, in order to establish partnerships with physicians in primary care research, both raising and sustaining general interest in research activities and connections with research institutions are fundamental.

Physicians' interest in research could be enhanced through increasing their early exposure to research and by promoting their associations with teaching family

medicine institutions. As well as sponsoring continuing medical education (CME), family medicine departments might promote a research culture within the department including research interest groups, journal clubs, evidence-based case discussions, and research update newsletters. Professional organizations such as the College of Family Physicians of Canada and provincial counterparts could also play a role in supporting a research culture through CME events or by highlighting research results in professional communications. Reciprocally, physicians' clinical interests might be surveyed on a regular basis through their membership. This might then create a roster of potential specific cohorts of physicians whom researchers could target for specific projects. This would also help future studies incorporate participatory approaches by having physicians as partners *a priori* to define research questions, to interpret the results, and to translate the knowledge into practice.

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8 APPENDICES

APPENDIX A

Figure A1. Flow diagram of mixed studies review identification and selection

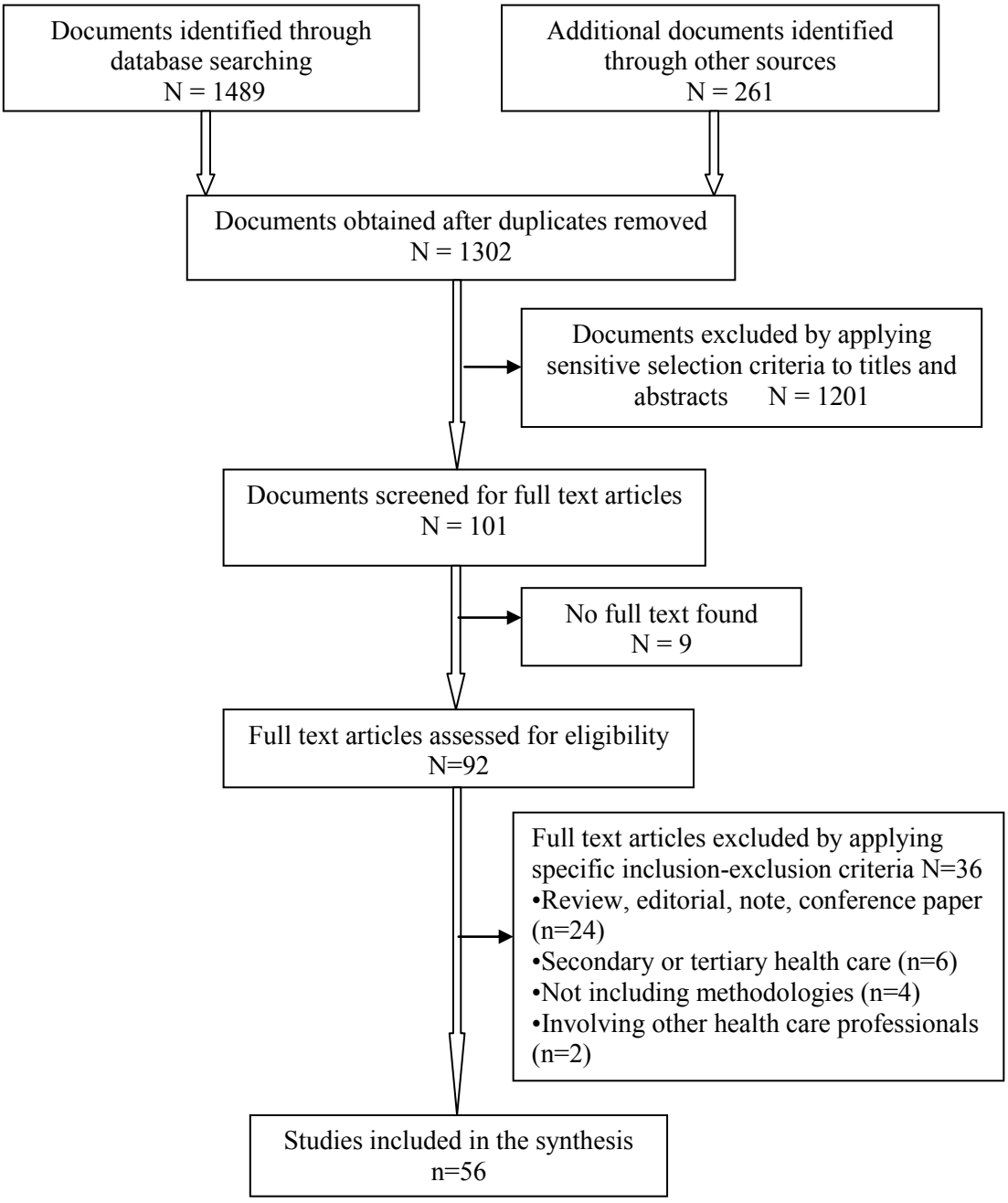


Table A1. Description of the characteristics of selected studies for the synthesis

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Mainous[45]	1995	USA	Quantitative	Self-administered survey on research activity to elucidate FPs' characteristics related to participation in community-based primary care (PC) research	Questionnaire completion
McBride[52]	1996	USA	Quantitative	Study of heart disease risk factors	Participating in informational meeting, cooperating with data collection, questionnaire completion and selected phone interviews
Deehan[32]	1997	UK	Quantitative	Study on clinical work with alcohol-misusing patients, comparing the effect of cash and offered charity donation for FPs' questionnaire completion	Questionnaire completion
Giveon[36]	1997	Israel	Quantitative	Study identifying factors that encourage or deter FPs' and residents' participation in family practice research	Questionnaire completion
Kaner[42]	1998	UK	Qualitative	Self-administered survey on FPs' reasons for not responding to postal survey	Questionnaire completion
Halbert[28]	1999	Australia	Quantitative	Study of the effectiveness of advice on exercise and health outcomes	Introducing the trial to their patients by mailing
Levinson [65]	1999	USA	Quantitative	Study of the relationship between physician-patient communication and medical malpractice claims	Audiotaping office visits with patients, questionnaire completion
Mountcastle-Shah [66]	2000	USA	Qualitative	Study of self-reported attitudes of FPs towards research on recruiting patients for genetic testing	Interviews

Table A1. Description of the characteristics of selected studies for the synthesis cont'd

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Van der Windt[19]	2000	Netherlands	Quantitative	Study of comparing the effects of corticosteroid injections and physiotherapy for painful stiff shoulder	Patient recruitment
Jowett [41]	2000	UK	Quantitative	Self-administered survey on determinants of research involvement	Questionnaire completion
Harris[39]	2000	Australia	Quantitative	Study on the effectiveness of a pamphlet to prompt screening request by a patient who has first degree relative with colorectal cancer	Complete questionnaire before and after the trial; provide patient with Fecal Occult Blood Test (FOBT) request slip, send completed FOBT to pathology, receive results and follow-up patient
McCarney[25]	2002	UK	Quantitative	Study of complementary and alternative medicine(CAM)-acupuncture for chronic headache	Undertake database searches to find potentially eligible patients, introduce the trial to their patients by mailing
Richardson [47]	2002	New Zealand	Quantitative	Study on the association between recruitment process and questionnaire responses	Questionnaire completion
Askew [31]	2002	Australia	Quantitative and qualitative	Study of self-reported attitudes of FPs towards research	Questionnaire completion and interviews
Sellors[70]	2002	Canada	Quantitative	Study of the effectiveness of expanded role of pharmacists providing consultations to FPs to optimize the pharmacotherapy of seniors taking multiple medications	Receive intervention
Shelton [54]	2002	USA	Quantitative	Study of evaluating interventions designed to improve FPs' adoption and maintenance of recommended cancer screening and counseling activities	Allowing project staff to collect record data, assisting project staff in collection of patient survey data, attending a regional orientation of the program

Table A1. Description of the characteristics of selected studies for the synthesis cont'd

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Lord [62]	2003	USA	Quantitative	Study of improving breast cancer screening in primary care practices	FPs in the intervention arm receive an informational presentation and demonstration of updated breast examination technique
Pearl [69]	2003	New Zealand	Quantitative	Study of brain natriuretic peptide in the diagnosis of heart failure	Referring patients, questionnaire completion
Huibers[59]	2004	Netherlands	Quantitative	Study of cognitive behavioral therapy (CBT) for *fatigued employees absent from work*	Undergoing training, supervising and performing CBT intervention
Lloyd [44]	2004	USA	Quantitative	Self-administered survey on research activity of 10 consecutive years of recent graduates from one medical school	Questionnaire completion
Rosemann[56]	2004	Germany	Qualitative	Study of self-reported attitudes of FPs towards research	Interviews
Wetzel[27]	2004	Germany	Quantitative	Study of comparing process measures in practices to current clinical guideline recommendations	Assisted computer export of electronic medical data
Trevena[74]	2005	Australia	Quantitative	Study of evaluating six tailored decision aids for screening for colorectal cancer by fecal occult blood testing	Sending an introductory letter to patient
Thomsen[57]	2006	Denmark	Qualitative	Study with maximum variation sampling from primary care medical researchers	Interviews
Hudson [58]	2006	USA	Quantitative	Study of the effectiveness of a quality improvement program to improve guideline adherence for multiple chronic diseases	Implementing intervention
Fletcher[20]	2007	UK	Quantitative	Study of comparing Aspirin vs. warfarin for stroke prevention	Undergoing training and meeting with patients to introduce the trial to have their consent

Table A1. Description of the characteristics of selected studies for the synthesis cont'd

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Rogulj[48]	2007	Croatia	Quantitative	Self-reported attitudes of FPs towards research	Questionnaire completion
Mason [72]	2007	UK	Qualitative	Self-reported attitudes of FPs towards research on RCT recruiting patients with *depression*	Interviews
Salmon [67]	2007	UK	Qualitative	Study of training FPs to manage medically unexplained symptoms	Interviews
Williamson[10]	2007	Australia	Quantitative	Study of *depression/suicidality* management intervention	Recruiting patients to complete questionnaire, recruit patients as part of a practice audit
Rollman[53]	2007	USA	Quantitative	Study of telephone based collaborative care to treat *panic and generalized anxiety disorders* in PC	Undergoing training, obtaining verbal consent once sees the prompt for patient eligibility and electronically referring patients to the trial
Hummers-Pradier[40]	2008	Germany	Quantitative and qualitative	Study to elucidate FPs' motives for non-participation in general practice research	Responding survey and interviews
Leahy [43]	2008	Canada	Quantitative	Study of self-reported attitudes of FPs towards education in research skills	Questionnaire completion
Franke[33]	2008	Australia	Quantitative	Study of the effectiveness of registrars using problem solving treatment (PST) vs. usual care for patients with *emotional symptoms*	Intervention arm receives 2 days training for PST and provide the psychological treatment to recruited patients, two arms complete questionnaire
Dormandy[16]	2008	UK	Quantitative and qualitative	Study of assessing the effectiveness of delivering antenatal sickle cell and thalassemia screening in PC	Introducing the trial to patients, data collection, interviews
Paine [26]	2008	Australia	Quantitative	Study of hormone therapy for menopause	Screening out medical case note for obvious exclusion criteria, send out invitation letter to remaining potential eligible patients

Table A1. Description of the characteristics of selected studies for the synthesis cont'd

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Gunn [38]	2008	Australia	Quantitative	Study of the effectiveness of FP delivered clinical intervention for childhood obesity	Receiving training and deliver a clinical intervention consisting of lifestyle education, motivational interviewing techniques and solutions focused therapy, responding survey
Askew [30]	2008	Australia	Quantitative and qualitative	Study of testing whether direct experience with data that is of benefit to the clinical care of patients would positively impact on FPs research attitudes	Participating N of 1 trial, respond survey and interviews
Thorpe [51]	2009	Canada	Quantitative	Study of modified Dillman approach for mail surveys to increase the response rate	Questionnaire completion
Sherber[71]	2009	USA	Quantitative	Study of the impact of personal physicians as study investigators on patient participation in trials from cardiology clinics	FPs are study investigators
Goodyear-Smith [55]	2009	New Zealand	Quantitative and qualitative	Study to determine general practice characteristics of immunization coverage	Semi-structured telephone interviews
Schoen[63]	2009	UK	Quantitative	Study of Internet-delivered educational intervention to improve care to post-myocardial infarction patients	Intervention arm provided an Internet-based, multimodal educational program
Tempte[50]	2009	USA	Quantitative	Study of assessing the ability to rapidly organize sentinel surveillance in PC settings	Questionnaire completion
Glynn [37]	2009	Ireland	Quantitative	Study of assessing the level of research activity and capacity for research among PC health professionals	Questionnaire completion
Herber[22]	2009	Germany	Qualitative	Study of fostering the cooperation between the medical and nursing professions in leg ulcer care	Affixing a patient identification badge on a prepared fax form for referring patients

Table A1. Description of the characteristics of selected studies for the synthesis cont'd

First author's last name	Year	Country	Methods	Nature of the study	How family physicians (FPs) involve in primary care research
Leathem[21]	2009	Ireland	Quantitative	Study of optimising secondary prevention for coronary heart disease in PC with intervention(FPs recall participant patients and delivering a consultation at 4 monthly intervals)	Perform initial baseline consultation with patient, obtaining consent form, implementing the intervention, receive quality assurance visits from the research nurses
Spaar[49]	2009	USA	Quantitative	Study of respiratory rehabilitation for COPD	Responding survey
Butt [24]	2010	Canada	Quantitative	Study of comparing Gabapentin vs. placebo to reduce hot flush scores in postmenopausal women	Completing and faxing a screening form for each interested and suitable patient from their practice
Gibson [35]	2010	USA	Quantitative	Self-reported attitudes of FPs towards research	Questionnaire completion
Johnston [9]	2010	Canada	Quantitative and qualitative	Study on recruitment methodologies in 5 projects about quality assessment, chronic disease management, and primary care reform	Questionnaire completion, attending meetings, patient recruitment
Foster [73]	2010	USA	Quantitative	Study of Internet intervention to improve rural diabetes care	Intervention arm receives interactive learning modules
Jones [61]	2011	Australia	Quantitative	Comparison two methods of up skilling FPs/practices to improve the detection and management of obesity in children	Control group: comprehensive interactive workshop; intervention group: the quality improvement Breakthrough Series methodology
Supper [4]	2011	France	Quantitative	Self-administered survey of FPs towards participating in future research	Questionnaire completion
Fulda [34]	2011	USA	Quantitative	Needs assessment study	Questionnaire completion
Page [46]	2011	Australia	Quantitative and qualitative	Study of the effectiveness of a theory-based intervention to implement a clinical practice guideline for acute non-specific low-back pain	Questionnaire completion
Heinemann [17]	2011	Germany	Quantitative	Study of implementation of self-developed, practice software-based clinical trial alert tool to enrol patients for an osteoporosis survey	Using the tool to identify eligible patients, introducing the study, asking for informed consent, performing patient online survey

APPENDIX B

Appendix B1. Family Physician Introductory Letter

Please turn over for English

Date

Nom du médecin
Nom de la clinique
Addresse
Ville, province, code postale

Projet DIRECT-sc

Intervention pour le traitement de la dépression au moyen de référence, d'éducation et de soins en collaboration -Autogestion-

Centre hospitalier de St. Mary
Départements d'épidémiologie, médecine familiale et psychiatrie
Chercheure principale: Dre Jane McCusker, Tel:(514) 345-3511 poste 5060

Financé par les Fonds de la recherche en santé du Québec.

Docteur _____,

L'exigence de l'apport des soins aux adultes avec des maladies chroniques peut être compliquée par la présence de symptômes dépressifs. Pourtant, de nouveaux outils d'autogestion crédibles (textes, films, modules d'autogestion structurés) pour les patients gérant la dépression peuvent améliorer le contrôle que les patients ont sur leurs maladies et peuvent possiblement réduire la charge de travail des médecins.

Je vous écris de la part d'une équipe interdisciplinaire*, avec participants de 5 universités**, qui mène actuellement un projet sur la gestion de la dépression chez les adultes avec maladies physiques chroniques, traités en première ligne. Cette activité est subventionnée par les Fonds de recherche en santé du Québec (FRSQ) et est soutenue par un groupe divers de parties prenantes professionnelles et communautaires***.

Notre Assistante de Projet, Mme _____, appellera votre bureau dans les semaines à venir pour demander un bref rendez-vous. En quelques minutes, elle illustrera comment ce projet pourrait vous aider dans votre pratique. J'apprécierais si vous pouviez demander à votre secrétaire de faciliter la mise en place du rendez-vous.

Lors de cette brève rencontre, vous apprendrez quelles sont certaines nouvelles tendances dans le domaine de la gestion des soins chroniques et vous recevrez un certificat cadeau d'une valeur de $50 pour un magasin de livre et de médias réputé, en remerciement du temps que vous nous aurez accordé. Vous serez alors peut-être d'accord pour permettre à notre équipe d'essayer certaines des ces

nouvelles approches avec les patients qui vous causent peut-être déjà des problèmes de gestion.

Je vous remercie de votre considération et vous prie d'agréer l'expression de mes sentiments distingués,

Mark J. Yaffe, MDCM, MClSc, CCFP, FCFP

Professeur agrégé, Départements de médicine familiale, Université McGill et Centre hospitalier de St. Mary

* Départements d'épidémiologie, médecine familiale, travail social, psychologie, sciences des exercices et d'économie

** Université McGill, Université de Montréal, Université de Québec à Montréal, Université Concordia, et Université Simon Fraser.

*** Action on Mental Illness (AMI Québec), la Fondation des maladies mentales, Association des médecins psychiatres du Québec, the RUIS McGill Mental Health Subcommittee, the Canadian Psychological Association, la Direction de la santé publique de Montréal, and seniors and / or mental health programs of the CSSS Cavendish and the CSSS Pierre Boucher.

Veuillez voir au verso pour version française

Date

Project DIRECT-sc

Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

Physician name
Clinic name
Clinic address
City, province, postal code

St. Mary's Hospital Center
Departments of Epidemiology, Family Medicine, and Psychiatry
Principal investigator: Dr. Jane McCusker,
Tel: (514) 345-3511 ext 5060

Funded by the Fonds de la recherche en santé du Québec.

Dear Dr_____,

The challenging provision of care to those with chronic illness is sometimes made more difficult by the presence of depressive symptoms or a definitive diagnosis of depression. However credible new self-help tools for patients' use in the management of depression (readings, videos, DVDs, structured self-care modules) may improve patients' control of their illnesses with possible reduction in doctors' work loads.

I am writing on behalf of an interdisciplinary team* with participants from 5 universities** that is conducting a project on the primary care management of depression in adults with chronic illness. This activity is funded by the Fonds de recherche en santé du Québec (FRSQ) and supported by diverse community partners and professional organizations.***

I would like to interest you in learning more about how this project may be of help to you in your practice. Our Project Assistant, Ms. _____, will therefore be calling your office in the coming weeks to request a short visit with you to describe this project in more detail. I would appreciate if you would ask your secretary to help facilitate this.

Through this brief visit you will learn about some new creative trends in chronic care management and will receive a $50 gift certificate redeemable at a well-known book and audiovisual store in appreciation for the time you will have given us. In addition, you might agree to have our team try out some of these approaches with patients who may already be causing you management difficulties.

Thank you for your consideration,

Mark J. Yaffe, MDCM, MClSc, CCFP, FCFP

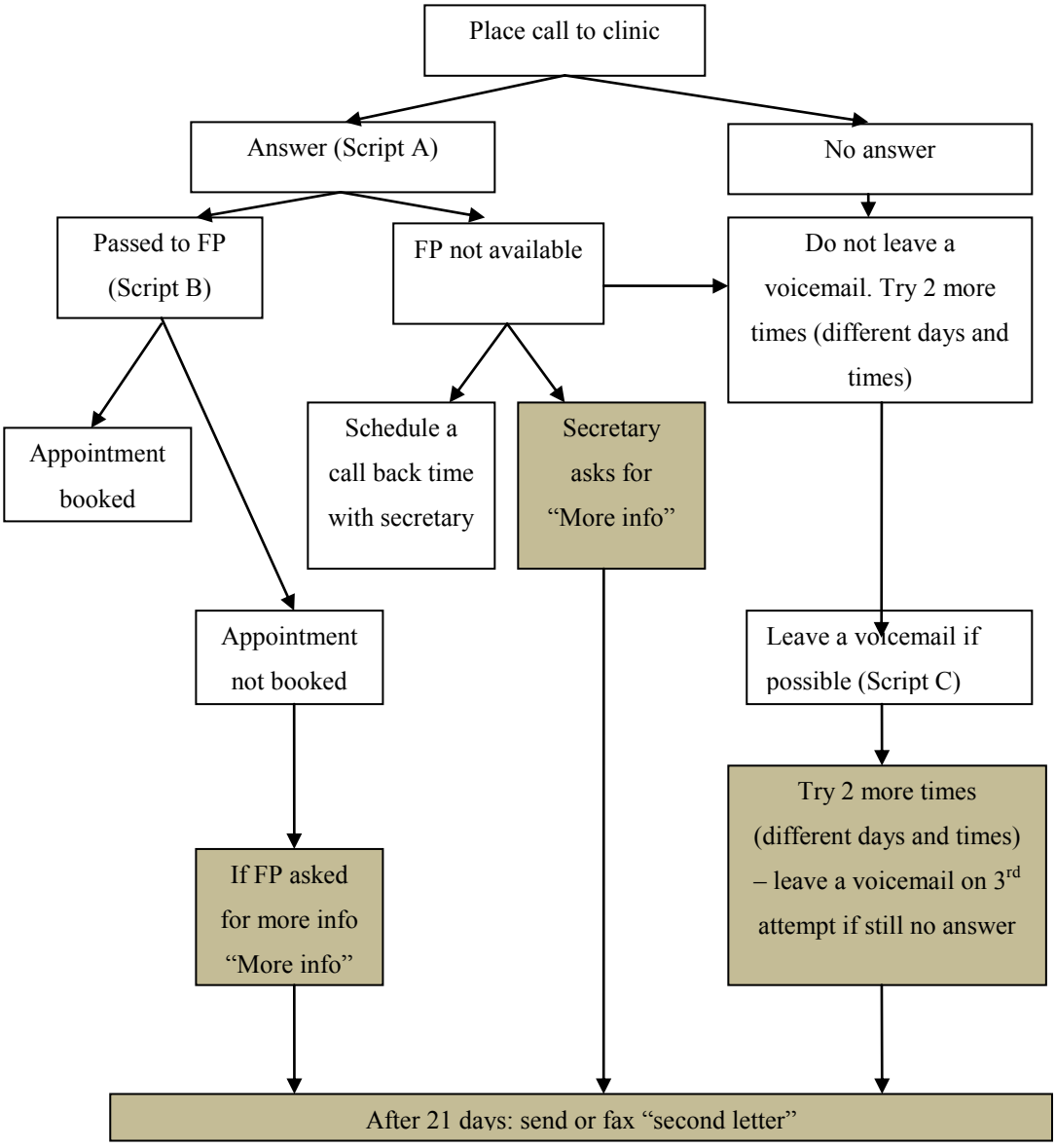
Assoc. Professor, Departments of Family Medicine, McGill and St. Mary's Hospital Center

*Departments of epidemiology, family medicine, psychiatry, social work, psychology, exercise science, and economics

**McGill University, Université de Montréal, Université de Québec à Montréal, Concordia University, and Simon Fraser University.

*** Action on Mental Illness (AMI Québec), la Fondation des maladies mentales, Association des médecins psychiatres du Québec, the RUIS McGill Mental Health Subcommittee, the Canadian Psychological Association, la Direction de la santé publique de Montréal, and seniors and / or mental health programs of the CSSS Cavendish and the CSSS Pierre Boucher.

Appendix B2. Flow diagram of RA's strategic phone calls and the scripts



For all shaded boxes: *These are points when information is given to physician/clinic with the understanding that physician will call RA if interested in participating. It is inappropriate to continue follow-up beyond this as persistent calling or sending of information can be considered obtrusive.*

Script A:

"Hello, my name is ____. I'm calling from St. Mary's Hospital Centre to follow up on a letter sent to Dr. ____ by Dr. Mark Yaffe, physician at the Family Medicine Centre here. The letter concerns Project DIRECT-sc and mentions that I would be calling to schedule a brief meeting with Dr. ____. Has Dr.____ let you know when he/she would be able to meet with me? / When is the next available time to meet with Dr. ____ ?"

►Secretary does not know about the letter/the project:

"The letter was sent two weeks ago, perhaps Dr. ___ just hasn't mentioned it to you yet? Project DIRECT-sc involves doctors from all over Montreal, is funded by the government of Quebec and will help physicians respond to the Health Ministry's plans for improved mental health care in family doctors' clinics. Depression and chronic illness is very common, I am certain that many of the patients you see every day would benefit from the tools we are offering Dr. ____ and, again, the idea is to facilitate care for you and the family medicine team."

-If there is sincere confusion on the secretary's part regarding the letter, you may offer to fax a copy, but immediately schedule a follow-up call:

"I can fax you another copy of the letter right away. Please confirm with Dr. ____ that he/she is aware of Project DIRECT-sc. I'll call you back at (give 2 hours time) to finalize the meeting with Dr. ___."

►Physician is busy/not interested:

"I understand that Dr. _____ is very busy, please be assured that I would only be meeting with him/her briefly, at his/her convenience as mentioned in the letter. 5 minutes between appointments, during lunch or at the end of the day even... I am very flexible. As I mentioned, this is an opportunity to receive materials to help your chronically ill patients better manage their conditions on their own and so in fact we can help take some of the burden off the family medicine team. Dr. ____'s experience is very important to us; it will help ensure that the tools we are developing are well-adapted to his clientele."

Script B:

"Hi Dr. _____. this is_____. I am following up on the Project DIRECT-sc letter sent to you by Dr. Mark Yaffe here at the St. Mary's Family Medicine Centre. As you know, Project DIRECT-sc is funded by the Fonds de la recherche en santé du Québec and targets primary care patients with chronic physical illnesses who may also be suffering from depression. We are testing simple screening tools and offering self-management materials so that these patients can be identified and treated as efficiently as possible. I'd like to meet with you briefly, at your convenience, to learn a little bit more about your experience with these patients and understand how to best adapt these new materials to suit your needs as well as those of your patients."

Script C:

"Hello, my name is _____. I'm calling from St. Mary's Hospital Center on behalf of Dr Mark Yaffe. Please return my call at (514) _____.

I am following up on a letter recently sent to Dr_____ in regards to our project on self-care for depressive symptoms in patients with chronic illness.

"More info" procedure:

If the physician requests more information before deciding to accept a meeting with the RA, the physician is sent another copy of the letter, the Toolkit Information Sheet (Figure B3), Screening l Questionnaire (Figure B4) and a cover letter. The Screening Questionnaire is included since a general concern among physicians is whether patients must already be diagnosed with depression to participate. The questionnaire illustrates that we would in fact help them quickly screen their patients for depressive symptoms.

Appendix B3.1. Patient Screening Form English Version

Project DIRECT-sc

Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

St. Mary's Hospital Center
Departments of Epidemiology, Family Medicine, and Psychiatry
Principal Investigator: Dr. Jane McCusker,
Tel: (514) 345-3511 ext 5060
Fax: (514) 734-2747

Funded by the Fonds de la recherche en santé du Québec

SCREENING FORM

The purpose of the DIRECT-sc study is to evaluate materials that may help patients with chronic physical illnesses accompanied by mood problems. These may include guidebooks, manuals, internet courses, self-help groups, audio or video materials. Patients will be supported by their doctors and by study staff in using these materials. If you are interested in finding out more about this study in which your doctor is participating, please complete the questions below. If you are not interested, please return this form to the secretary.

1. Are you aged 40 or over? ☐yes ☐no

2. Has your doctor diagnosed you with (check all that apply):
☐asthma? ☐chronic bronchitis or emphysema?
☐arthritis?
☐high blood pressure ? ☐heart disease? ☐diabetes?
☐none of the above

If you answered yes to question 1 and checked off at least one illness in question 2, please answer the following 2 questions.

3. During the past month have you often been bothered by feeling down, depressed or hopeless? ☐yes ☐no

4. During the past month have you often been bothered by little interest or pleasure in doing things? ☐yes ☐no

If you answered yes to <u>either</u> question 3 or question 4, you may be eligible for this study. If you are interested in finding out more about this study, please complete the section below and return this form to the secretary.

I am **interested** in finding out more about this study. I understand that a member of the research team will contact me during the next few weeks to explain what the study involves. I also understand that there is no obligation for me to participate, and that my decision whether or not to participate will not affect my usual care from my doctor.

_____ _____
Name (please print) Telephone number + best times to contact me

_____ _____
Signature Date

Family doctor's name: _____

Appendix B3.2. Patient Screening Form French Version

Projet DIRECT-sc

Intervention pour le traitement de la dépression au moyen de référence, d'éducation et de soins en collaboration -Autogestion-

Centre hospitalier de St. Mary
Départements d'épidémiologie, de médecine familiale et de psychiatrie
Chercheuse principale: Dre Jane McCusker,
Tel: (514) 345-3511 poste 5060
Fax: (514) 734-2747

Financé par les Fonds de la recherche en santé du Québec

QUESTIONNAIRE DE DÉPISTAGE

Le but de l'étude DIRECT-sc est d'évaluer des outils qui pourraient aider les patients souffrant de maladies physiques chroniques avec troubles de l'humeur. Les outils incluent des manuels, des cours par internet, des groupes d'entraide ou des documents audio ou vidéo. Les patients seront appuyés dans leur utilisation de ces outils par leurs médecins et par le personnel de l'étude. Si vous êtes intéressé(e) par cette étude à laquelle votre médecin participe, veuillez répondre aux questions ci-dessous. Sinon, veuillez simplement retourner ce formulaire à la secrétaire.

1. Avez-vous 40 ans ou plus ? ☐oui ☐non

2. Avez-vous reçu d'un médecin un diagnostic de (cocher toutes les réponses qui s'appliquent) :
☐asthme ? ☐ bronchite chronique ou emphysème ? ☐arthrite ?
☐hypertension artérielle ? ☐cardiopathie (maladies du cœur) ? ☐diabète ?
☐aucune

Si vous avez répondu oui à la question 1 et coché au moins une maladie à la question 2, veuillez répondre aux deux questions suivantes.

3. Au cours du dernier mois, est-ce qu'il vous est arrivé souvent de vous sentir triste, déprimé(e) ou découragé(e) ? ☐oui ☐non

4. Au cours du dernier mois, est-ce qu'il vous est arrivé souvent d'avoir peu d'intérêt ou peu de plaisir à faire des choses ? ☐oui ☐non

Si vous avez répondu oui à la question 3 <u>ou</u> à la question 4, vous pourriez être choisi(e) pour participer à l'étude. Si vous désirez en savoir davantage au sujet de l'étude, veuillez remplir la section ci-dessous et remettre ce formulaire à la secrétaire.

Je suis **intéressé(e)** à en apprendre davantage au sujet de cette étude. Je comprends qu'un membre de l'équipe de recherche communiquera avec moi au cours des prochaines semaines pour m'expliquer ce que l'étude implique. Je comprends également que je ne suis pas obligé(e) à participer à l'étude et que ma décision de participer ou non n'aura aucun effet sur les soins habituels que je reçois de mon médecin.

_____ _____
Nom (lettres moulées) N° téléphone + meilleurs moments pour m'appeler

_____ _____
Signature Date

Nom de mon médecin de famille : _____

Appendix B4.1. Family Physician Consent Form English Version

Funded by the Fonds de la recherche en santé du Québec.
St. Mary's Hospital, Departments of Epidemiology, Family Medicine, and Psychiatry
Principal investigator: Dr. Jane McCusker
Tel: (514) 345-3511 ext 5060

Project DIRECT-sc
Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

FAMILY PHYSICIAN CONSENT FORM

Purpose of the study. To assess the feasibility and acceptability of engaging in self-care strategies for depression (in conjunction with your usual care) among patients in your practice aged 40 and over who have depressive symptoms and a chronic physical illness.

If you agree to participate in this study. During a 3 month period to be mutually agreed upon, you will allow us to identify patients in your practice who are eligible for the study by having your secretary distribute screening forms to patients during office visits, and to collect and fax these forms to the study coordinator. If you wish, you may review the completed forms before they are sent. You will receive a confirmation of which patients have consented to be enrolled in the study. We expect that each doctor in the study will have an average of 4 enrolled during the duration of the study. Patients will be followed by study staff for up to 6 months.

Interventions. We are testing different types of self-care materials for depression (books and manuals, action plans, audio, video, and internet materials). A care manager from the study will be assigned to collaborate with you (if you wish) in providing support to patients in using these materials for up to 6 months and will keep you updated on the progress of patients according to a mutually agreed way of giving you regular feedback.

Questionnaires. You will be asked to complete and return (mail or fax) the following short questionnaires (each of which will take 5-10 minutes):

- At the beginning of the study a questionnaire that asks about your professional background and experience with self-care interventions.
- At the end of the study a questionnaire on your perceptions on the self-care interventions and on the role of the care manager.
- A questionnaire on each of your patients enrolled in the study, sent to you 6 months after patient enrolment. It will include questions on any contacts you had with the patient during that 6-month interval, including any support you may have provided for their self-care.

Patient care. Regardless of any self-care interventions selected by your patients, you will continue to provide discretionary care as usual (which may include antidepressant medications, psychotherapy, or consultations). You will continue to have legal responsibility for the care of your patients.

Benefits. As a physician, you will have the opportunity to learn about the range of self-care materials available for depression, and may gain insight into supporting your patients' self-care efforts. Your patients may learn to better recognize symptoms of depression, and gain a greater understanding of what possible options and approaches work best when tackling their depressed mood which can help them better manage their chronic physical illnesses.

Risks. Self-care materials like the ones used in the context of Project DIRECT-sc have been widely used in volunteer populations and no risks have been reported. The research assistants and care managers who talk to your patients will be trained to recognize severe depression and will inform you should depressive symptoms worsen.

Withdrawal. Your participation in this study is voluntary and you may withdraw at any time.

Optional end-of-study focus group. At the end of the study, a small number of participating doctors will be invited to participate in a focus group at which they will provide feedback on their experience with the study. If you are invited, there is no obligation to participate in the focus group.

Compensation. In addition to the $50 gift certificate offered as thanks for agreeing to hear more about DIRECT-sc, we will offer your clinic $10 for each positive screening form that is faxed back to the study coordinator as recognition of the time and effort put in by your office staff.

Research staff will keep information confidential. ***All information obtained during the course of the study will be kept strictly confidential.*** All forms will be kept in a locked file cabinet in the Department of Epidemiology at St. Mary's Hospital Center and will be destroyed 10 years after the end of the study. Only the study identification number will be entered in the computer to identify you. Only researchers, members of the St. Mary's Hospital Center and McGill University ethics committees will have access to study data. All results will be reported in aggregate. No individual will be identifiable in any analysis, document or report generated from the results of this study.

If you have any questions about your rights as a participant in this research project, you may contact the patient representative, Ms. Caroline Roy, at (514) 345-3511 ext: 3301

You will receive a copy of this signed consent form.

I have read the consent form for Project DIRECT-sc and have been made aware of the nature and purpose of this study and my role in it. I have had the opportunity to ask questions and these questions were answered to my satisfaction. I consent to participate in this research project. By signing this consent form, I do not waive any of my legal rights.

_____	
Participant's name (Please print clearly)	
_____	_____
Participant's signature	Date
_____	
Name of person who obtained consent (Please print clearly)	
_____	_____
Signature of person who obtained consent	Date

Appendix B4.2. Family Physician Consent Form French Version

Financé par le Fonds de la recherche en santé du Québec
Hôpital St. Mary, services d'épidémiologie,
de médecine familiale et de psychiatrie
Chercheure principale : Dr Jane McCusker
Tél: (514) 345-3511, poste 5060

Project DIRECT-sc
Depression Intervention
via Referral, Education and Collaborative Treatment - Self Care

FORMULAIRE DE CONSENTEMENT DU MÉDECIN DE FAMILLE

But de l'étude. Évaluer la faisabilité et l'acceptabilité d'adopter des stratégies d'autosoins pour la dépression (en conjugaison avec vos soins habituels) chez les patients dans votre pratique âgés de 40 ans et plus qui manifestent des symptômes dépressifs en même temps qu'ils souffrent d'une maladie physique chronique.

Si vous consentez à participer à cette étude. Durant une période de 3 mois, fixée par entente mutuelle, vous nous permettrez d'identifier des patients dans votre pratique qui sont admissibles pour l'étude et, à cette fin, vous demanderez à votre secrétaire de distribuer des formulaires de consentement aux patients durant les consultations à votre cabinet, de recueillir ces formulaires et de les envoyer par fax à la coordonnatrice de l'étude. Si vous le désirez, vous pourrez lire les formulaires remplis avant qu'ils soient envoyés. Vous recevrez une liste de vos patients qui ont consenti à participer à l'étude. Nous prévoyons que chaque médecin participant à l'étude verra en moyenne 4 de ses patients s'inscrire pour la durée de l'étude. Les patients seront suivis par le personnel de l'étude pendant jusqu'à 6 mois.

Interventions. Nous allons mettre à l'épreuve différents types d'outils d'autosoins pour la dépression (livres et manuels, plans d'action, documents audio et vidéo, sites Internet). Un conseiller en autosoins de l'étude sera assigné pour collaborer avec vous (si vous le souhaitez) afin d'aider les patients à utiliser ces outils pendant jusqu'à 6 mois et vous tiendra informé des progrès des patients en vous faisant parvenir des rapports périodiques suivant une formule sur laquelle vous vous serez entendus.

Questionnaires. On vous demandera de remplir et de retourner (par la poste ou par fax) les courts questionnaires suivants (chacun ne devant vous prendre que 5-10 minutes) :

- Au début de l'étude, un questionnaire portant sur vos antécédents professionnels et votre expérience avec les interventions en autosoins.
- À la fin de l'étude, un questionnaire sur vos perceptions des interventions en autosoins et sur le rôle du conseiller en autosoins.
- Un questionnaire sur chacun de vos patients recruté dans l'étude, qui vous sera envoyé 6 mois après le recrutement du patient. Le questionnaire comprendra des questions sur tous les contacts que vous avez eus avec le patient durant cet intervalle de 6 mois, y compris le soutien que vous pourrez lui avoir apporté pour ses autosoins.

Soins des patients. Quelles que soient les interventions en autosoins choisies par vos patients, vous continuerez à votre discrétion de fournir des soins comme d'habitude (lesquels peuvent comprendre des antidépresseurs, une psychothérapie ou des consultations). Vous conserverez en tout temps la responsabilité légale des soins de vos patients.

Avantages. Comme médecin, vous aurez l'occasion de vous familiariser avec la panoplie d'outils d'autosoins disponibles pour la dépression et vous pourrez apprendre comment

appuyer les efforts d'autogestion de leurs soins de vos patients. Vos patients pourront apprendre à mieux reconnaître les symptômes de la dépression et mieux comprendre quelles options et approches possibles fonctionnent le mieux lorsqu'ils veulent lutter contre leur humeur dépressive, ce qui peut les aider à mieux composer avec leurs maladies physiques chroniques.

Risques. Des outils d'autosoins comme ceux que nous éprouverons dans le cadre du Projet DIRECT-sc ont été largement utilisés dans des groupes de volontaires et aucun risque n'a été signalé. Les assistants à la recherche et les conseillers en autosoins qui parleront à vos patients seront formés pour reconnaître une dépression grave et vous informeront de toute aggravation des symptômes dépressifs.

Retrait. Votre participation à cette étude est volontaire et vous pourrez vous en retirer en tout temps.

Groupe de discussion optionnel à la fin de l'étude. À la fin de l'étude, un petit nombre de médecins participants seront invités à participer à un groupe de discussion où ils pourront faire part de leur expérience dans le déroulement de l'étude. Si vous êtes invité, vous ne serez nullement obligé de participer à ce groupe de discussion.

Compensation. En plus du chèque-cadeau de 50 $ offert pour vous remercier d'avoir manifesté votre intérêt pour DIRECT-sc, nous remettrons à votre clinique 10 $ pour chaque formulaire de dépistage positif faxé à la coordonnatrice de l'étude en reconnaissance du temps et de l'effort consentis par votre personnel.

L'équipe de recherche assure la confidentialité de l'information. Toute l'***information recueillie au cours de l'étude demeurera strictement confidentielle.*** Tous les formulaires ***seront conservés dans un classeur verrouillé au service d'épidémiologie du Centre hospitalier de St. Mary et seront détruits 10 ans après la fin de l'***étude. Seul votre numéro d'identification pour l'étude sera inscrit dans l'ordinateur pour vous identifier. Seuls les chercheurs, les membres du comité d'éthique ***du Centre hospitalier de St. Mary*** et les membres du comité d'éthique de l'Université McGill auront accès aux données de l'étude. Toutes les données seront présentées en agrégat. Aucune personne ne sera identifiable dans les analyses, documents ou rapports résultant de cette étude.

Si vous avez des questions au sujet de vos droits comme participant à ce projet de recherche, vous pouvez communiquer avec Mme Caroline Roy, commissaire aux plaintes, au (514) 345-3511, p. 3301.

Vous recevrez une copie de ce formulaire de consentement signé.

J'ai lu le formulaire de consentement pour le projet DIRECT-sc et on m'a bien expliqué la nature et l'objet de l'étude et mon rôle dans cette étude. J'ai pu poser des questions, auxquelles on a répondu à ma satisfaction. Je consens à participer à ce projet de recherche. En signant ce formulaire de consentement, je ne renonce à aucun de mes droits.

_____ Nom du participant (en lettres moulées) _____ _____ Signature du participant Date

_____ Nom de la personne qui a obtenu le consentement (en lettres moulées) _____ _____ Signature de la personne qui a obtenu le consentement Date

Appendix B5. Patient Health Questionnaire-2 (PHQ-2)

PRIME-MD PHQ (2 Question Screen)

Name _____ Date _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Yes	No
1.During the past month, have you often been bothered by feeling down, depressed, or hopeless?	☐	☐
2.During the past month, have you often been bothered by little interest or pleasure in doing things?	☐	☐

PRIME-MD PHQ (2 Question Screen)
Scoring Instructions

If the response is "yes" to either question, consider administering the PHQ-9 questionnaire or asking the patient more questions about possible depression.

If the response to both questions is "no", the screen is negative.

Whooley et al. (1997) compared the 2-question screen to the Quick Diagnostic Interview Schedule (QDIS-III) and reported a sensitivity and specificity of 96% and 57% respectively.
Whooley MA, Avins AL, Miranda J, Browner WS. Case finding instruments for depression. Two questions are as good as many. *Gen Intern Med.* 1997;12:439-45. From the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD PHQ). The PHQ was developed by Drs. Robert L. Spitzer, Janet B.W. Williams,

Appendix B6. Patient Health Questionnaire-9 (PHQ-9)

APPENDIX

PRIME-MD Patient Health Questionnaire (PHQ-9)

Patient Name:_____

Date:_____

1. Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
	0	1	2	3
a. Little interest or pleasure in doing things	☐	☐	☐	☐
b. Feeling down, depressed, or hopeless	☐	☐	☐	☐
c. Trouble falling/staying asleep, sleeping too much	☐	☐	☐	☐
d. Feeling tired or having little energy	☐	☐	☐	☐
e. Poor appetite or overeating	☐	☐	☐	☐
f. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	☐	☐	☐	☐
g. Trouble concentrating on things, such as reading the newspaper or watching television	☐	☐	☐	☐
h. Moving or speaking so slowly that other people have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	☐	☐	☐	☐
i. Thoughts that you would be better off dead or of hurting yourself in some way	☐	☐	☐	☐

2. If you checked off any problem on this questionnaire so far, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Instructions—How to score PHQ-9

Major Depressive Syndrome is suggested if:

- Of the 9 items, 5 or more are checked as at least "More than half the days"
- Either item #1 or #2 is positive, that is, at least "More than half the days"

Other Depressive Syndrome is suggested if:

- Of the 9 items, 2, 3, or 4 are checked as at least "More than half the days"
- Either item #1 or #2 is positive, that is, at least "More than half the days"

Guide for Interpreting PHQ-9 Scores

Score	Action
≤4	The score suggests the patient may not need depression treatment.
≥5-14	Physician uses clinical judgment about treatment, based on patient's duration of symptoms and functional impairment.
≥15	Warrants treatment for depression, using antidepressant, psychotherapy, or a combination of treatment.

APPENDIX C

Appendix C1.1. Family Physician Baseline Questionnaire (English)

Project DIRECT-sc

Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

St. Mary's Hospital Center
Departments of Epidemiology, Family Medicine, and Psychiatry
Principal investigator: Dr. Jane McCusker, Tel: (514) 345-3511 ext 5060

Funded by the Fonds de la recherche en santé du Québec

FAMILY PHYSICIAN BASELINE QUESTIONNAIRE

Section I: Organizational characteristics

Please note that the following questions pertain to **the site at which recruited patients are treated**. If you work at several sites, please provide only answers that describe the clinic/practice at which DIRECT-sc patients will be recruited.

1) Which of the following best describes the type of clinic/practice at which patients will be recruited? *(Please select one)*

GMF = Groupe de médecine familiale UMF = Unité de médecine familiale

- ☐ CLSC / GMF
- ☐ CLSC /non-GMF
- ☐ UMF / GMF
- ☐ UMF / non-GMF
- ☐ Clinique réseau / GMF
- ☐ Clinique réseau / non-GMF
- ☐ Solo practice
- ☐ Group family practice that is not any of above
- ☐ Polyclinic (family practice + specialists) that is not any of the above
- ☐ Other

2) How are you remunerated at this clinic/practice for clinical work? Please indicate the proportion of each type of remuneration. *(All proportions should add up to 100%)*

Fee-for-service: _____% Tarif horaire: _____% Salary: _____%

3) Do nurses work at this clinic/practice?

- ☐ No → **skip to Question 6 below**
- ☐ Yes

4) Nurses work : *(check all that apply)*

- ☐ Independently with their own roster of patients
- ☐ Independently with patients on a doctor's roster
- ☐ In collaboration with physicians in care of patients on a doctor's roster

5) Do health professionals other than family doctors or nurses work in your clinic/practice?

- ☐ NO → **skip to Question 7**
- ☐ YES → **which health professionals?** *(check all that apply in the list below)*
  - ☐ Social worker(s)
  - ☐ Psychologist(s)
  - ☐ Psychiatrist(s)

6) Which of the following best describes the age group of patients that you predominately care for?

- ☐ Infants, children, and adolescents (0-17)
- ☐ Young adults (18-35)
- ☐ Middle aged adults (36-64)
- ☐ Older adults (65+)

Section II: Information about you

7) ☐ Male ☐ Female

8) Age

- ☐ 20-30
- ☐ 31-40
- ☐ 41-50
- ☐ 51-60
- ☐ 61+

9) For how many years have you been in practice?

- ☐ 0-5
- ☐ 6-10
- ☐ 11-20
- ☐ 21-40
- ☐ 41+

Section III: Chronic disease management

10) How much **confidence** do you have in your chronic disease management with Patients above the age of 65?

- ☐ None
- ☐ A little
- ☐ Moderate
- ☐ A lot

11) Before being recruited to this study, how familiar were you with the concept of patient self-care for the management of **chronic physical illnesses**?

- ☐ Not at all
- ☐ Somewhat
- ☐ Moderately
- ☐ Very

12) Considering all patients with **chronic physical illnesses**, how effective do you believe self-care options are?

- ☐ Not at all effective
- ☐ Somewhat effective
- ☐ Moderately effective
- ☐ Very effective
- ☐ Don't know

13) In your chronic care management, how much **confidence** do you have in your ability to carry out patient education / counselling?

- ☐ None
- ☐ A little
- ☐ Moderate
- ☐ A lot
- ☐ Not applicable

Section IV: Depression care

14) For a patient who presents with depressive symptoms, do you **usually**

- ☐ Assess and treat
- ☐ Assess, refer for consultation, and do follow-up by yourself
- ☐ Refer patient to mental health services for all assessments and care

15) Before being recruited to this study, how familiar were you with the concept of patient self-care for the management of **depression**?

a. Not at all
b. Somewhat
c. Moderately
d. Very

16) Considering all patients with **depression**, how effective do you believe self-care options are?

- ☐ Not at all effective
- ☐ Somewhat effective
- ☐ Moderately effective
- ☐ Very effective
- ☐ Don't know

17) Have you participated in research studies before?

- ☐ Yes
- ☐ No

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY

PLEASE MAIL IT BACK TO US IN THE RETURN ENVELOPE PROVIDED

Appendix C1.2. Family Physician Baseline Questionnaire (French)

Projet DIRECT-sc

Intervention pour le traitement de la dépression au moyen de référence, d'éducation et de soins en collaboration -Autogestion-

Centre hospitalier de St. Mary
Départements d'épidémiologie, de médecine familiale et de psychiatrie
Chercheure principale : Dre Jane McCusker, tél : (514) 345-3511 poste 5060

Financé par le Fonds de la recherche en santé du Québec

QUESTIONNAIRE DE REFERENCE POUR MEDECINS DE FAMILLE

Section I : Caractéristiques organisationnelles

Veuillez prendre note que les questions suivantes portent sur **l'endroit où les patients recrutés sont traités**. Si vous travaillez dans plusieurs sites, veuillez ne fournir que des réponses qui décrivent la clinique/pratique à laquelle les patients pour DIRECT-sc seront recrutés.

1) Qu'est-ce qui décrit le mieux le type de clinique/pratique où les patients seront recrutés ? *(une seule réponse)*

GMF = Groupe de médecine familiale UMF = Unité de médecine familiale

- ☐ CLSC / GMF
- ☐ CLSC /non-GMF
- ☐ UMF / GMF
- ☐ UMF / non-GMF
- ☐ Clinique réseau / GMF
- ☐ Clinique réseau / non-GMF
- ☐ Pratique individuelle
- ☐ Groupe de pratique familiale autre que ci-dessus
- ☐ Polyclinique (médecine familiale + spécialistes) autre que ci-dessus
- ☐ Autre

2) Comment êtes-vous rémunéré à cette clinique/pratique pour du travail clinique ? Veuillez indiquer la proportion de chaque type de rémunération. *(Les proportions additionnées doivent totaliser 100 %.)*

   Paiement à l'acte : ___ % Tarif horaire : ____% Salaire : _____ %

3) Est-ce que des infirmières travaillent à cette clinique/pratique ?
   - ☐ Non → **passez à la question 6**
   - ☐ Oui

4) Les infirmières travaillent :
(cocher toutes les bonnes réponses)

- ☐ Indépendamment avec leur propre liste de patients
- ☐ Indépendamment avec les patients sur la liste d'un médecin
- ☐ En collaboration avec des médecins dans les soins de patients sur la liste d'un médecin

5) Est-ce que des professionnels de la santé autres que des médecins de famille ou des infirmières travaillent dans votre clinique/pratique ?

- ☐ NON → **passez à la question 7**
- ☐ OUI → **quels professionnels de la santé ?** *(cocher toutes les bonnes réponses dans la liste ci-dessous)*

    - ☐ Travailleurs sociaux
    - ☐ Psychologues
    - ☐ Psychiatres

6) Laquelle des catégories suivantes décrit le mieux le groupe d'âge des patients dont vous vous occupez principalement ?

- ☐ Bébés, enfants et adolescents (0-17)
- ☐ Jeunes adultes (18-35)
- ☐ Adultes d'âge moyen (36-64)
- ☐ Adultes plus âgés (65 +)

Section II : Information à votre sujet

7) ☐ Homme ☐ Femme

8) Âge
- ☐ 20-30
- ☐ 31-40
- ☐ 41-50
- ☐ 51-60
- ☐ 61+

9) Depuis combien d'années pratiquez-vous ?
- ☐ 0-5
- ☐ 6-10
- ☐ 11-20
- ☐ 21-40
- ☐ 41+

Section III : Prise en charge des maladies chroniques

10) Quel est votre degré de **confiance** dans votre prise en charge des maladies chroniques avec les Patients âgés de plus de 65 ans?

- ☐ Aucune
- ☐ Faible
- ☐ Modérée
- ☐ Grande

11) Avant d'être recruté pour cette étude, quel était votre degré de familiarité avec le concept d'autogestion des soins par les patients pour la prise en charge de **maladies physiques chroniques** ?

- ☐ Aucune
- ☐ Faible
- ☐ Modérée
- ☐ Grande

12) À votre avis, quel est le degré d'efficacité des options d'autosoins pour les patients souffrant de **maladies physiques chroniques** ?

- ☐ Pas du tout efficaces
- ☐ Quelque peu efficaces
- ☐ Modérément efficaces
- ☐ Très efficaces
- ☐ Ne sais pas

13) Dans votre prise en charge des soins chroniques, quelle **confiance** avez-vous dans votre capacité de faire de l'éducation / du counseling des patients ?

- ☐ Aucune
- ☐ Faible
- ☐ Modérée
- ☐ Grande
- ☐ Sans objet

Section IV : Soins de la dépression

14) **Habituellement**, quand un patient manifeste des symptômes de dépression, est-ce que vous

- ☐ Évaluez et soignez
- ☐ Évaluez, envoyez en consultation et assurez vous-même le suivi
- ☐ Dirigez le patient vers des services en santé mentale pour l'ensemble des évaluations et des soins ?

15) Avant d'être recruté pour cette étude, quel était votre degré de familiarité avec le concept d'autogestion des soins par les patients pour la prise en charge de la **dépression** ?

- ☐ Aucune
- ☐ Faible
- ☐ Modérée
- ☐ Grande

16) À votre avis, quel est le degré d'efficacité des options d'autosoins pour les patients souffrant de **dépression** ?

- ☐ Pas du tout efficaces
- ☐ Quelque peu efficaces
- ☐ Modérément efficaces
- ☐ Très efficaces
- ☐ Ne sais pas

17) Avez-vous déjà participé à des études de recherche auparavant ?

- ☐ Oui
- ☐ Non

MERCI D'AVOIR PRIS LE TEMPS DE RÉPONDRE À CE QUESTIONNAIRE.VEUILLEZ NOUS LE RETOURNER PAR LA POSTE DANS L'ENVELOPPE PRÉAFFRANCHIE CI-JOINTE

Appendix C2.1. Family Physician End of Study Questionnaire (English)

Project DIRECT-sc
Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

St. Mary's Hospital Center
Departments of Epidemiology, Family Medicine, and Psychiatry
Principal investigator: Dr. Jane McCusker
Tel: (514) 345-3511 ext 5060

Funded by the Fonds de la recherche en santé du Québec.

END OF STUDY QUESTIONNAIRE

Thank you for participating in this feasibility study on self-care of depression for patients with chronic physical illness who are treated in primary care settings.

Your involvement included: 1) signing up for the study; 2) screening patients in your office; and 3) collecting and returning screening forms. All your enrolled patients received a self-care toolkit and regular follow-up by a self-care coach for up to 6 months.

We are interested in your feedback on these aspects; your answers will help us prepare for the second phase of the research.

SIGNING-UP FOR THE STUDY

1. Which factors influenced your interest in meeting with the research assistant to learn more about the study? (Check all that apply and circle the one that may have influenced you the most)

- ☐ Initial introductory letter about the study
- ☐ Gift card
- ☐ Follow-up calls from the research assistant
- ☐ My secretary expressed interest in the study
- ☐ Encouragement from another health professional in my practice/clinic
- ☐ Apparent credibility of the research team
- ☐ Personal knowledge of one or more members of the research team
- ☐ Interest in the research topic
- ☐ Interest in the way I deliver care to patients with depression

2. In retrospect, did the information you received from the research assistant accurately reflect what was required of you, your team and your patients during the study? Please circle a number on the scale below:

Everything happened as was explained	1	2	3	4	5	**The study was not at all what was presented**

3. Please indicate your level of satisfaction with the amount of financial recognition given to the practice by circling a number on the scale below:

Very satisfied	1	2	3	4	5	**Very dissatisfied**

SCREENING PATIENTS IN YOUR OFFICE:

4. Check all that apply and circle the method that you believe was most commonly used to **distribute screening forms**:

- ☐ Forms were distributed by my secretary
- ☐ Forms were distributed by nurse(s)
- ☐ Forms were distributed by me
- ☐ No screening forms were distributed → **skip to Question 8**
- ☐ Don't know

5. Please indicate how you/your clinic staff found the process of **distributing** screening forms to patients by circling a number on the scale below:

Very easy	1	2	3	4	5	**Very difficult**

6. Check all methods that you used to **collect completed screening forms**, and then circle the method you believe was most commonly used:

- ☐ Collected by my secretary
- ☐ Collected by nurse(s)
- ☐ Collected by me
- ☐ Deposited by patients into the Direct-sc study box
- ☐ Don't know

7. Please indicate how you/your clinic staff found the process of **collecting** screening forms from patients by circling a number on the scale below:

Very easy	1	2	3	4	5	**Very difficult**

8. Check all that apply to indicate where problems may have existed within your office for distribution, collection and/or returning of forms:

- ☐ Difficulty in starting or maintaining momentum
- ☐ Unavailability of forms on hand
- ☐ I (we) forgot
- ☐ I (we) felt the patient was not likely to be capable of self-care
- ☐ I (we) felt the patient did not meet combined eligibility criteria
- ☐ Forms generated too many patient queries
- ☐ Lost interest in the study
- ☐ Limited opportunity due to changing schedule (e.g. on leave, illness…)
- ☐ Don't know

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY
PLEASE MAIL IT BACK TO US IN THE RETURN ENVELOPE PROVIDED

Appendix C2.2. Family Physician End of Study Questionnaire (French)

Projet DIRECT-sc

Intervention pour le traitement de la dépression
au moyen de référence, d'éducation et de soins en collaboration
-Autogestion-

Centre hospitalier de St. Mary
Départements d'épidémiologie, de médecine familiale et de psychiatrie
Chercheure principale : Dre Jane McCusker
Tél : (514) 345-3511 poste 5060

Financé par le Fonds de la recherche en santé du Québec

QUESTIONNAIRE DE FIN D'ÉTUDE

Merci d'avoir participé à cette étude évaluant la faisabilité de l'autogestion des soins de la dépression chez les patients avec maladies physiques chroniques qui sont traités en première ligne.

Votre participation a impliqué: 1) l'inscription à l'étude, 2) le dépistage des patients dans votre cabinet, et 3) la collecte et le renvoi des questionnaires de dépistage. Vos patients inscrits à l'étude ont reçu une trousse d'outils d'autogestion et des appels de suivi d'un coach de l'autogestion pour une période pouvant aller jusqu'à 6 mois.

Nous sommes intéressés de recevoir vos commentaires sur ces aspects; vos réponses nous permettrons de préparer la deuxième phase de l'étude.

L'INSCRIPTION À L'ÉTUDE

1. Quels facteurs ont influencé votre intérêt à rencontrer l'assistante de recherche pour en apprendre plus sur l'étude? (Cocher toutes les réponses qui s'appliquent, et entourer celle qui vous aurait le plus influencé)

- ☐ Lettre d'introduction initiale
- ☐ Carte cadeau
- ☐ Appels de suivi de l'assistante de recherche
- ☐ Ma secrétaire a exprimé un intérêt pour l'étude
- ☐ Les encouragements d'un autre professionnel de la santé dans ma clinique
- ☐ La crédibilité apparente de l'équipe de recherche
- ☐ La connaissance personnelle d'un ou plusieurs membres de l'équipe de recherche
- ☐ Un intérêt pour le sujet de recherche
- ☐ Un intérêt pour ma façon de livrer des soins aux patients avec dépression

2. Avec le recul, est-ce que l'information fournie par l'assistante de recherche reflétait avec exactitude ce qui était requis de vous, de votre équipe et de vos

patients durant le cours de l'étude? Veuillez entourer un chiffre sur l'échelle ci-dessous :

Tout s'est déroulé tel qu'expliqué	**1**	**2**	**3**	**4**	**5**	**L'étude n'a pas été fidèlement présentée**

3. Veuillez indiquer votre niveau de satisfaction par rapport à quantité de reconnaissance financière offerte à votre pratique en entourant un chiffre sur l'échelle ci-dessous :

Très satisfait	1	2	3	4	5	**Très insatisfait**

DÉPISTAGE DES PATIENTS DANS VOTRE CABINET

4. Cocher toutes les réponses qui s'appliquent et entourer la méthode que vous pensez a été le plus utilisée pour **distribuer les questionnaires de dépistage** :

- ☐ Questionnaires étaient distribués par ma secrétaire
- ☐ Questionnaires étaient distribués par une infirmière
- ☐ Questionnaires étaient distribués par moi
- ☐ Aucun questionnaire n'a été distribué → **passer à la question 8**
- ☐ Ne sais pas

5. Veuillez indiquer comment vous/votre personnel de clinique avez trouvé le processus de **distribution** des questionnaires de dépistage en en entourant un chiffre sur l'échelle ci-dessous :

Très facile	1	2	3	4	5	**Très difficile**

6. Cocher toutes les réponses qui s'appliquent et entourer la méthode que vous pensez a été le plus utilisée pour **recueillir les questionnaires de dépistage** :

- ☐ Questionnaires étaient recueillis par ma secrétaire
- ☐ Questionnaires étaient recueillis par une infirmière
- ☐ Questionnaires étaient recueillis par moi
- ☐ Questionnaires étaient déposés par les patients dans la boite DIRECT-sc
- ☐ Ne sais pas

7. Veuillez indiquer comment vous/votre personnel de clinique avez trouvé le processus de **recueillir** les questionnaires de dépistage en en entourant un chiffre sur l'échelle ci- dessous :

Très facile	1	2	3	4	5	**Très difficile**

8. Cocher <u>toutes</u> les réponses qui indiquent où des problèmes auraient pu exister pour ce qui est de la distribution, de la collecte et/ou du renvoi des questionnaires de dépistage:

- ☐ Difficulté à établir ou à maintenir de l'élan
- ☐ Questionnaires pas à portée de main
- ☐ J'ai (nous avons) oublié
- ☐ J'ai (nous avons) senti que le patient ne serait pas capable d'autogestion
- ☐ J'ai (nous avons) pensé que le patient ne remplirait pas les critères d'admissibilité
- ☐ Les questionnaires généraient trop de requêtes de la part des patients
- ☐ J'ai (nous avons) perdu intérêt pour l'étude
- ☐ Peu d'opportunités à cause d'un emploi du temps changeant (par ex. congés maladie ou autres, voyages…)
- ☐ Ne sais pas

MERCI D'AVOIR PRIS LE TEMPS DE COMPLÉTER CE QUESTIONNAIRE
VEUILLEZ SVP NOUS LE RENVOYER AVEC L'ENVELOPPE FOURNIE

Appendix C3.1. Patient Individual Form Completed by Family Physician (English)

St. Mary's Hospital Center
Departments of Epidemiology, Family Medicine, and Psychiatry
Principal investigator: Dr. Jane McCusker
Tel: (514) 345-3511 ext 5060

Project DIRECT-sc
Depression Intervention via Referral, Education and Collaborative Treatment - Self Care

Funded by the Fonds de la recherche en santé du Québec.

You are receiving this questionnaire because your patient [Patient Name] [dob: dd/mm/yyyy] was screened for depression in your office on [date of Screening I] and enrolled in this study from [date of enrolment] - [date of 6 month questionnaire OR DATE OF WITHDRAWAL].

Your patient consented to sharing study information with you.
We would appreciate learning about the general progress of this patient since screening.
In completing this brief questionnaire it may be helpful to consult the patient's medical file.

1. Please indicate how many times you have seen this patient for any reason since the patient was screened for depression in your office on [date of Screening I]: _____ visits

2. Did you review this patient's PHQ-2 screener (one page screening form administered in your office) before it was faxed back to the study?

   ☐ No → Skip to Question 3

   ☐ Yes

   If yes: What initial actions did you take when you learned that this patient screened positive for depression? (Check all that apply and circle any actions that you took that were not part of your usual practice, but rather the result of this patient being in this study)

   ☐ None – this patient did not need treatment

   ☐ None – the patient's current treatment was appropriate

   ☐ Booked a special visit to re-evaluate the patient for depression

   ☐ Performed a routine follow-up assessment

   ☐ Initiated psychotherapy

   ☐ Initiated antidepressant medication

   ☐ Continued antidepressant medication at the same dose

   ☐ Changed dose of antidepressant medication

   ☐ Changed antidepressant medication

- ☐ Prescribed another drug to augment antidepressant medication
- ☐ Referred patient to a psychiatrist
- ☐ Other-please specify: _____

3. Once you were informed by the study that this patient screened positive for depression on the PHQ-9, what additional actions (if any) did you take in the care of this patient's depression? (Check all that apply and circle any actions that you took that were not part of your usual practice, but rather the result of this patient being in this study)
   - ☐ None – this patient did not need treatment
   - ☐ None – the patient's current treatment was appropriate
   - ☐ Booked a special visit to re-evaluate the patient for depression
   - ☐ Performed a routine follow-up assessment
   - ☐ Initiated psychotherapy
   - ☐ Initiated antidepressant medication
   - ☐ Continued antidepressant medication at the same dose
   - ☐ Changed dose of antidepressant medication
   - ☐ Changed antidepressant medication
   - ☐ Prescribed another drug to augment antidepressant medication
   - ☐ Referred patient to a psychiatrist
   - ☐ Other-please specify: _____

4. At any time during this study did this patient initiate discussion about the self-care tools or the self-care coach with you?
   - ☐ No
   - ☐ Yes If yes, what was discussed?

5. At any time during this study did you initiate discussion with this patient about the self-care tools or the self-care coach
   - ☐ No
   - ☐ Yes If yes, what was discussed?

If yes was answered to questions 4 and/or 5, in what way did such discussions contribute or not contribute to your care of this patient?

6. Do you believe that your patient's involvement in this study has been either beneficial or harmful for him/her?

- ☐ Beneficial
- ☐ Neither beneficial nor harmful
- ☐ Harmful
- ☐ Don't know

Comments:

7. Do you believe that your patient's involvement in the study has had a positive or negative effect on your care of this patient?

- ☐ Positive
- ☐ Neither positive nor negative
- ☐ Negative
- ☐ Don't know

Comments:

8. Do you believe that your patient's involvement in the study has had a positive or negative effect on your relationship with the patient?

- ☐ Positive
- ☐ Neither positive nor negative
- ☐ Negative
- ☐ Don't know

Other comments:

Appendix C3.2. Patient Individual Form Completed by Family Physician (French)

Centre hospitalier de St. Mary
Départements d'épidémiologie, de médecine familiale et de psychiatrie
Chercheure principale : Dre Jane McCusker, tél : (514) 345-3511 poste 5060

Projet DIRECT-sc

Intervention pour le traitement de la dépression au moyen de référence, d'éducation et de soins en collaboration -Autogestion-

Financé par le Fonds de la recherche en santé du Québec

Vous recevez ce questionnaire car votre patient NOM [date de naissance: DATE] a complété le formulaire de dépistage de la dépression dans votre bureau le date of Screening I et était inscrit à l'étude entre date of enrolment et date of 6 month questionnaire OR DATE OF WITHDRAWAL
Nous aimerions en apprendre plus sur le progrès général de ce patient depuis le test de dépistage.
En complétant ce bref questionnaire, il pourrait être utile de consulter le dossier du patient.

1. Veuillez indiquer le nombre de fois que vous avez vu ce patient dans votre cabinet (pour n'importe quelle raison) depuis qu'il a été dépisté le DATE : Nombre de visites : _____
2. Avez-vous consulté le PHQ-2 du patient (formulaire orange qu'il a complété dans votre clinique) avant de le retourner par télécopieur au personnel de l'étude DIRECT-sc?

☐ Non → Passer à la Question 3

☐ Oui

Si oui: Quelles premières actions avez vous prises quand vous avez appris que ce patient avait un score PHQ-2 qui indique une dépression? (Veuillez cocher toutes les actions pertinentes et entourer les actions prises qui ne font pas partie de vos pratiques habituelles mais étaient prises en conséquence directe du dépistage.)

☐ Aucune – ce patient n'avait pas besoin de traitement

☐ Aucune – le traitement déjà administré avant le dépistage était suffisant

☐ Prise d'un rendez-vous spécial pour re-évaluer ce patient pour la dépression

☐ Exécution d'une évaluation de suivi habituelle

☐ Initiation d'une psychothérapie

☐ Initiation de médicaments antidépresseurs

☐ Continuation de la médication antidépressive à la même dose

☐ Changement de la dose des médicaments antidépresseurs

☐ Changement du médicament antidépresseur

- ☐ Prescription d'un autre médicament pour augmenter la médication antidépressive
- ☐ Référer le patient à un psychiatre
- ☐ Autre-veuillez préciser: _____

3. Quand vous avez appris que la dépression du patient avait été dépistée à l'aide du PHQ-9 (notification de la part du personnel d'étude), quelles actions avez vous prises? (Veuillez cocher toutes les actions pertinentes et entourer les actions prises qui ne font pas partie de vos pratiques habituelles mais étaient prises en conséquence directe du dépistage.)

- ☐ Aucune – ce patient n'avait pas besoin de traitement
- ☐ Aucune – le traitement déjà administré avant le dépistage était suffisant
- ☐ Prise d'un rendez-vous spécial pour re-évaluer ce patient pour la dépression
- ☐ Exécution d'une évaluation de suivi habituelle
- ☐ Initiation d'une psychothérapie
- ☐ Initiation de médicaments antidépresseurs
- ☐ Continuation de la médication antidépressive à la même dose
- ☐ Changement de la dose des médicaments antidépresseurs
- ☐ Changement du médicament antidépresseur
- ☐ Prescription d'un autre médicament pour augmenter la médication antidépressive
- ☐ Référer le patient à un psychiatre
- ☐ Autre-veuillez préciser: _____

4. Durant le cours de l'étude, est-ce que le patient a à un moment ou un autre initié une conversation avec vous au sujet des outils d'autogestion ou du coach de l'autogestion?

- ☐ Non
- ☐ Oui Si oui, qu'est ce qui a été discuté?

5. Durant le cours de l'étude, est-ce que vous avez à un moment ou un autre initié une conversation avec le patient au sujet des outils d'autogestion ou du coach de l'autogestion?

- ☐ Non
- ☐ Oui Si oui, qu'est ce qui a été discuté?

Si vous avez répondu oui à la question 4 et/ou 5, de quelle manière ces discussions ont-elles contribué ou non à votre soin de ce patient?

6. Croyez-vous que l'implication du patient dans l'étude a été bénéfique ou néfaste pour ce patient?

- ☐ Bénéfique
- ☐ Ni bénéfique ni néfaste
- ☐ Néfaste
- ☐ Ne sais pas

Commentaires:

7. Croyez-vous que l'implication du patient dans l'étude a eu un effet positif ou négatif sur votre soin de ce patient?

- ☐ Positif
- ☐ Ni positif, ni négatif
- ☐ Négatif
- ☐ Ne sais pas

Commentaires:

8. Croyez-vous que l'implication du patient dans l'étude a eu un effet positif ou négatif sur votre relation avec ce patient?

- ☐ Positif
- ☐ Ni positif, ni négatif
- ☐ Négatif
- ☐ Ne sais pas

Autres commentaires:

APPENDIX D

Appendix D1. Family physicians invitation letter for focus group discussion English version

Date: _____

Dear Dr _____:

On behalf of the Project DIRECT-sc research team we would like to thank you again for the interest and support you and your staff have shown in our study exploring the potential for patient self-care in the management of depression in association with co-morbid chronic illness.

As our study approaches completion we are hosting an appreciation dinner for doctors who have helped us in whatever way they could. Beyond enjoying the excellent Italian-Roman cuisine and old world charm of Da Emma Restaurant in Old Montreal we plan, during the dinner, to ask you to consider some specific issues about this project that might help us to plan further research on this topic (to facilitate this process we plan to audio-tape the general discussion for later anonymous transcription by our research staff).

To make this discussion as fruitful as possible we are planning to have one dinner on Tuesday September 20 in English and one on Thursday September 22 in French. We hope this will facilitate your ability to attend, based on either date or language preference.

Da Emma Restaurant is located at 777 rue de la Commune in Old Montreal. Contact information and a map are provided with this invitation. Free parking for restaurant patrons is available adjacent the restaurant. We would ask you to arrive for 6:30 cocktails, with the more structured part of the evening starting just before 7PM. We will aim for our evening completion by about 9:15 PM.

Kindly complete the enclosed RSVP form to indicate whether you will attend (and on which evening) or not, and fax it by September 16th to our Project Coordinator, Mme Manon de Raad at 514-734-2747.

We sincerely hope you will join us!

Mark J. Yaffe, MDCM, MClSc, CCFP, FCFP
Assoc. Professor, Depts. of Family Medicine, McGill and St. Mary's Hospital Center

Cindy Ibberson, BA
Research Assistant, St. Mary's Research Centre

Project DIRECT-sc

Depression Intervention
via Referral, Education and Collaborative Treatment - Self Care

Dinner Discussion Group
RSVP Form

Dr _____:

To help us organize this event, please check off one option below and fax back as soon as possible.

_____ I will attend the English language family physician dinner discussion group to be held at
Da Emma Restaurant on Tuesday September 20th.

_____ I will attend the French language family physician dinner discussion group to be held at
Da Emma Restaurant on Thursday September 22nd.

_____ I am open to attending either dinner and await your confirmation.

_____ I will not attend the dinner discussion group.

If you will attend, please let us know if you have any food allergies:

_____ Dairy

_____ Eggs

_____ Wheat

_____ Other: _____

Please fax this form by September 14th to our project coordinator Manon de Raad.

Fax: (514) 734-2747

French version
Date : _____

Dr _____ :

L'équipe du projet DIRECT-sc aimerait vous remercier à nouveau de l'intérêt et du soutien que vous et votre équipe avez manifesté envers notre étude qui examinait l'impact de l'autogestion sur la prise en charge de la dépression auprès de patients avec maladies chroniques.

Comme notre étude tire prochainement à sa fin, nous organisons un diner pour les médecins inscrits à l'étude pour démontrer notre appréciation pour avoir contribuer selon leurs moyens. Tout en dégustant l'excellente cuisine italienne du Restaurant Da Emma dans le vieux Montréal, nous vous demanderons de considérer certains aspects de notre projet. Vos commentaires nous aideront à planifier d'éventuels projets de recherche sur ce sujet. Pour faciliter ce processus, nous enregistrerons la discussion de groupe et notre équipe fera la transcription des commentaires en assurant votre anonymat.

En espérant rendre la discussion aussi fructueuse que possible, nous planifions deux diners; un diner en anglais aura lieu le mardi 20 septembre, l'autre, en français, aura lieu le jeudi 22 septembre.

Le restaurant Da Emma est situé au 777 rue de la Commune dans le vieux Montréal. Les coordonnées du restaurant, ainsi qu'un petit plan de rue, sont inclus à l'endos de votre invitation.

Nous proposons un apéritif à 18h30 et enchainerons avec le diner et la discussion de groupe plus structurée à 19h00. Nous prévoyons terminer la soirée aux alentours de 21h15.

Pour faciliter l'organisation de cet événement, veuillez s'il vous plait compléter et retourner par télécopieur le formulaire inclus aussitôt que possible. Réservez votre place en cochant la date de votre choix ou laissez nous savoir si vous n'êtes pas disponible. Si vous êtes disponible les deux soirs, svp cocher les 2 options et nous communiquerons avec vous la semaine du 12 septembre pour confirmer la date que nous vous avons réservée.

Nous espérons avoir le plaisir de vous compter parmi les nôtres!

Mark J. Yaffe, MDCM, MClSc, CCFP, FCFP
Assoc. Professor, Depts. of Family Medicine, McGill and St. Mary's Hospital Center

Cindy Ibberson
Assistante de recherche Projet DIRECT-sc

Projet DIRECT-sc

Intervention pour le traitement de la dépression
au moyen de référence, d'éducation et de soins en collaboration
-Autogestion-

Diner et groupe de discussion
Formulaire de réservation

Dr _____ :

SVP cocher l'option qui vous convient :

___ Je serai présent le mardi 20 septembre pour le diner et la discussion de groupe
qui se déroulera en anglais.

___ Je serai présent le jeudi 22 septembre pour le diner et la discussion de groupe qui se déroulera en français.

___ Je peux être présent le 20 ou le 22 septembre et attend votre confirmation de la date.

___ Je ne pourrai pas être présent pour le diner et le groupe de discussion.

SVP indiquer si vous avez des allergies alimentaires :

___ Lait

___ Oeufs

___ Farine

___Autres :_____

SVP compléter et retourner ce formulaire par télécopieur à la coordonnatrice du projet Manon de Raad.

Télécopieur : 514-734-2747

Appendix D2. Family Physician's End of Study Focus Group Guide (English)

Date: September 20, 2011
Time: 6:30-9:15pm
Location: Emma Restaurant Dinner Discussion, 777 de la commune
Moderators: Tamara Sussman, Mark Yaffe,
Introductions & Fielding Post Focus Group Questions on Study: Jane McCusker
Note Taker, Observer: Deniz Sahin

Arrival, informal networking

Formal Welcome, Inform people to Order before beginning

Review the objectives the focus group:

(1) Primary goal: To gather additional information on the trends we noted in feasibility study on family physician enrolment in and compliance with the study
(2) Secondary goal: To inform physician and patient recruitment designs for Project DIRECT-sc second phase effectiveness study

Introduce MY and TS as facilitators and DS as observer note taker

After ordering facilitate a brief go around: name, type of practice

A. We'd like to start by asking you some questions about the reasons FPs may have agreed to meet the RA and enroll in the study.

1. What was the main reason you chose to meet the RA to learn more about the study?
2. Very few of you were influenced by the re-numeration to meet with the research assistant. Why? Is financial re-numeration necessary at this stage to encourage FPs to meet the RA?
3. Tell us about your meeting with the research assistant for the study? What did you like? Dislike? What could have been different?
4. What led you to decide to participate in the study?
5. Any other comments about meeting the RA and deciding to participate?

B. We'd now like to discuss your experiences with screening patients for eligibility in the study.

1. The options for distributing the screening tools were by doctor, nurse, and secretary. What factors influenced the method that you chose? Retrospectively would you have done it differently? Why?
2. If you could have referred patients directly to the study and had us do the screening would this have been an option? Why?
3. Common problems FPs reported at this stage included difficulty getting started, maintaining momentum, forgetting and selectively distributing

screening tools. What could the study have done to help overcome these problems?

   a. Do you have the ability to generate a list of patients who are 40+ with chronic illness? Is this feasible?

4. Do you have any other comments on distribution?

Now we'd like to discuss your experiences with <u>collecting screening tools</u>

1. Tell us about the experience of collecting the completed tools and sending them back to the study.
2. Did you experience any obstacles with either of these steps?
3. Research suggests that when available doctors use study boxes for patients to put their screening in. Most of you did not. Can you explain this?
4. Any other comments about collecting and sending back screening tools?

Do you have other comments on your experiences participating in the study?

Thank you for your participation and for your input both completing the questionnaires and tonight.

Wrap up

End of session

Appendix D3. End-of-Study Telephone Interview Guide (French)

Date: October 28, 2011
Time: 13:30 – 13:45
Location: St. Mary's Research Centre
Moderators: Deniz Sahin, Cindy Ibberson
Remerciement et introductions et enregistrement pour analyse

Objectifs de cet appel :
Obtenir des informations additionnelles sur les tendances que nous avons observées pendant l'étude de faisabilité et le groupe de discussion du mois de septembre.

A. Participation

1. Quelle est la raison principale pour laquelle vous avec choisi de rencontrer l'assistante de recherche pour en apprendre plus sur l'étude?

2. Qu'est ce qui vous a fait choisir de participer à l'étude?

B. Nous aimerions maintenant parler de vos expériences avec le dépistage des patients.

1. Parlez-nous du dépistage et du recrutement des patients pour notre étude dans votre clinique?

2. Est-ce que l'utilisation d'une autre méthode de collection de questionnaires de dépistage aurait facilité le recrutement des patients à votre clinique? Si oui, laquelle?

3. Les options pour la distribution des questionnaires de dépistage étaient :
    a. Distribution par le docteur
    b. Par l'infirmière
    c. Par la secrétaire
    d. Qu'est ce qui a influencé votre choix de méthode? En rétrospective, auriez-vous choisi de faire les choses autrement? Pourquoi?

4. Si vous aviez pu référer des patients directement, et que nous effectuions le dépistage au centre de recherche, auriez vous considéré cette option? Pourquoi?

5. Les problèmes les plus fréquemment reportés à cette étape comptaient
    a. De la difficulté à commencer
    b. De la difficulté à maintenir de l'élan
    c. Des oublis
    d. Et une distribution trop sélective

    Qu'aurions nous pu faire pour vous aider à surmonter ces problèmes?

    Avez-vous les ressources nécessaires pour pouvoir générer une liste de patients qui ont 40 ans ou plus et qui ont une maladie physique chronique?

6. Avez-vous d'autres commentaires sur la distribution des formulaires de dépistage?

    Avez-vous d'autres commentaires sur vos expériences et votre participation?

    Merci de votre participation et de vos contributions.

Appendix D4. Content of matrix template for deductive thematic analysis

Theme 1- The most important factors impacting on FP enrolment in study

Priori codes:

- Study team's mode of approaching FPs
- Financial incentives
- Encouragement from practice staff
- Credibility of research team or FP in the team
- Interest in the research topic
- Interest in depression care

New emerging codes:

- Small effort required from physicians
- Need for solutions to give better care to depressed patients
- Qualities of FP recruiter
- Financial incentives are not a role player

First-order themes:

- *Sense of obligation and collegiality to one of the team members or to the organization*
- *Attitudes to incentives for participation*
- *Potential benefits of research to practice and existing gaps in care*
- *Role of physicians in Project DIRECT-sc*
- *Appreciated qualities of RA recruiting FPs*

Theme 2- Factors specifically affecting patient screening in the practices

Priori codes:

- Forgetting and losing interest in the study
- Strict eligibility criteria in the study protocol
- Feeling of patients' unsuitability for the study

- Change in work schedule

New emerging codes:

- Lack of time
- Lack of support from office staff in group/government-run practices
- Preferred ways of practices' recruiting patients
- Difficulty in claiming interest from patients
- Cultural patient barriers

First-order themes:

- *Organizational system issues that depend on the practice type*
- *Factors influencing approach to distribution of screening forms*
- *Patient resistance and/or cultural barriers*