Integrated service delivery networks for seniors

Early perceptions of family physicians

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ABSTRACT

OBJECTIVE To document the early perceptions of family physicians regarding integrated service delivery (ISD) networks a few weeks before and 6 months after establishing these networks and to identify obstacles to using case managers.

DESIGN Cross-sectional survey with two questionnaires mailed 6 months apart.

SETTING Three regional municipalities (one urban and two rural) in the Eastern Townships of Quebec.

PARTICIPANTS All family physicians in the three areas (n = 267). A total of 124 physicians (of 206 eligible; 60% response rate) answered the first questionnaire, and 104 of these the second (86% response rate).

MAIN OUTCOME MEASURES The first questionnaire asked what family physicians thought about ISD networks and the emerging case management function, and whether they were interested in participating in ISD networks. The second measured physicians' participation in ISD networks, asked whether their perceptions of case management had changed, and identified obstacles to using case managers.

RESULTS Nearly all (98%) respondents to the preimplementation questionnaire believed that family physicians will increasingly have to belong to ISD networks. Very few (8.2%), however, felt involved or consulted in decisions about developing and implementing these networks. More than one quarter (27%) did not know that an ISD network for older people would be established in their area, and 84.3% did not feel sufficiently informed to be involved. Most family physicians (85.7%) said they were interested in using case managers. Six months after implementation, 70.2% of physicians knew that case managers were available; 35.6% had used a case manager. During implementation, physicians' opinions about case management were slightly less positive than they had been. The three main obstacles to using case managers were forgetting to use them (69.1%), the habit of using social workers instead (63.6%), and not knowing how to contact them (59.4%).

CONCLUSION Physicians are interested in participating in ISD networks and working with case managers. They must be better informed, however, about the availability of case managers, how they can reach case managers, case managers' precise role, and the advantages to themselves and their patients of using these services.

EDITOR'S KEY POINTS

- Integrated service delivery (ISD) networks are being established across Canada to provide a continuum of services to certain populations, such as seniors. This study examines perceptions of family physicians before and after introduction of ISDs in three communities in Quebec.
- The preimplementation survey found physicians very positive about ISD networks, citing the benefits of a case manager to coordinate all aspects of care and to provide FPs with easier access to various services.
- Postimplementation comments at 6 months were somewhat less positive, but many physicians had only limited experience with using case managers.
- The main obstacle for physicians was forgetting to use the case managers when they had been used to using social workers who were already available or not knowing how to contact them. More experience with the system and better marketing of the case managers' role should improve this situation.

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The demographic importance of older people is increasing quickly in Canada. Although older people are in generally better health than those of similar age 20 years ago, a substantial proportion of them will become frail and need home care or residential facilities. These patients have complex needs and require more services to cope with their impairments. In order to support frail older people at home for as long as possible, services for them must be easy to access, coordinated, and delivered on a continuous basis. Establishing integrated service delivery (ISD) networks offering case-management services is intended to achieve this objective.

An ISD network is defined as a "network of organizations that provide or arrange to provide a continuum of services to a defined population"[1] in order to improve continuity and increase the efficacy and efficiency of services. An ISD model based on coordinating all institutions, services, and organizations in a particular area is being implemented in the Eastern Townships of Quebec by the Regional Health Authority. This model, the Program of Research to Integrate Services for the Maintenance of Autonomy (PRISMA), comprises six elements[2]: coordination between institutions; a single entry point; a case-management system; individualized service plans; a single assessment tool with a case-mix classification system; and a continuous information system. A full description of the model was previously published in *Canadian Family Physician*.[3]

For an ISD network to be effective, family physicians, as patients' main medical professionals, must be actively involved in the network and work closely with the case manager.[3] Case managers are usually social workers or nurses whose role is to assess patients' overall needs, to plan required services, to negotiate and coordinate required services with service providers, and to ensure that services are delivered and modified as the situation evolves. Case managers need the cooperation of family physicians because they are the hub around which specialized medical services are coordinated.

Integrating case managers into medical practice, however, requires changes in how physicians do things. So far, family physicians' participation in ISD networks has often been spotty, and the reasons have not been explored in detail.[4,5] Few studies have explored physicians' perceptions regarding the introduction of ISD networks and case management. In a survey done in 1999 by the Fédération des médecins omnipracticiens du Québec (Quebec Federation of General Practitioners), 72% of physicians who responded thought that family physicians should become part of an ISD network.[6] A few North American studies showed that family physicians were reluctant to introduce a new professional (ie, case manager) who could interfere in patient-doctor relationships.[7-10]

The main objective of our study was to document the early perceptions of family physicians regarding ISD networks and case management before and after introduction and to identify obstacles to using case managers.

METHODS

This mailed survey of family physicians was part of a much larger research project evaluating the implementation and effect of ISD networks for older people in three regional municipalities in the Eastern Townships: Sherbrooke, Granit, and Coaticook. These regions were chosen because of their contrasting characteristics both in sociodemographic makeup and in service organization. Sherbrooke is an urban area (population 145 000; 13% older than 65) with numerous health institutions including a university hospital, a university geriatric institute, a university-based local community service centre (CLSC), a rehabilitation centre, two nursing homes, and 16 community agencies. Coaticook is a rural

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area (population 16 000; 14% older than 65) with a multi-function health centre comprising a CLSC, a day-care centre, an emergency room (no hospital beds), and a nursing home. Granit is also a rural area (population 22 000; 15% older than 65) with a multi-function health care centre comprising a CLSC, an acute care hospital, and a nursing home.

All family physicians in the three regional municipalities (n = 267) listed in the files of the Quebec Health Insurance Board formed the sample frame. To be eligible for the study, physicians had to care for at least some older people. The first questionnaire asked how respondents felt about the forthcoming introduction of ISD networks for older people, how receptive they were in regard to the new case-management function, and how they perceived their role in the network. The second questionnaire was sent only to those physicians who had answered the first, in order to track the changes in their perceptions and to identify obstacles to using case managers.

In both questionnaires, physicians were asked to indicate to what extent they agreed or disagreed with each statement on a Likert-type response scale: strongly agree, agree, disagree, or strongly disagree. The procedure for designing and sending the questionnaires followed Dillman's recommendations[11] with two reminders for each mailing. The questionnaire had been pilot-tested with 10 family physicians from other areas.

For the analysis, Likert-type responses were dichotomized between those who agreed and disagreed. McNemar statistical tests (for dependent groups, categorical data) were carried out to verify any statistically significant change in perceptions from before to during implementation. Probability of type I error was set at 0.01 given the multiple comparisons. The study was approved by the Ethics Review Board of the Sherbrooke University Geriatric Institute.

RESULTS

Of the 267 family physicians sent the first questionnaire, 61 were ineligible; they returned the questionnaire indicating that they did not have any older clients. Of the 206 who were presumed eligible, 124 completed the questionnaire, for an overall response rate of 60.2%. For the second questionnaire, only three of the 124 physicians who were contacted again were no longer eligible; 104 responded, for a response rate of 86.0% (**Figure 1**).

Most respondents worked in Sherbrooke (83.1%), had between 11 and 30 years of experience (69.1%), and worked between 35 and 54 hours weekly (69.9%). Most practised in groups (82.1%), except for the Granit area where most physicians worked in solo practices. Overall, 48.2% of their daily work consisted of private office practice, and the percentage of older people in their practices averaged 42.2% (16.8% to 67.6%). **Table 1** presents sociodemographic characteristics of respondents.

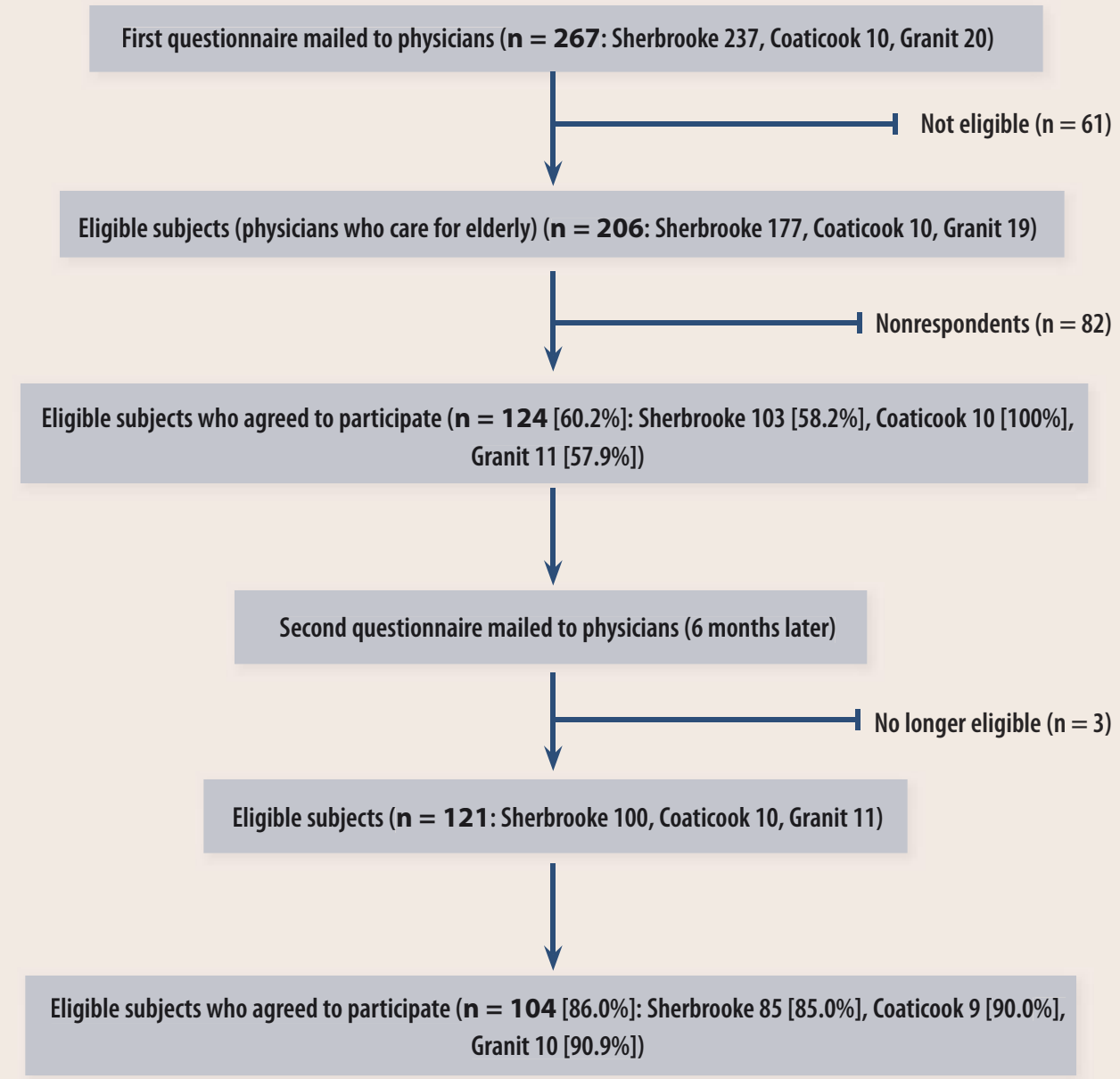
Table 1. Sociodemographic characteristics of physician respondents (n=124)

CHARACTERISTICS	FREQUENCY (%)*
Sex	
• Male	69 (55.6)
• Female	55 (44.4)
Regional municipality	
• Sherbrooke	103 (83.0)
• Coaticook	10 (8.1)
• Granit	11 (8.9)
University training	
• Internship	29 (23.8)
• Residency in family medicine	93 (76.2)
Number of years in practice	
• <5	13 (10.6)
• 5-10	22 (17.9)
• 11-20	41 (33.3)
• 21-30	44 (35.8)
• >30	3 (2.4)
Type of practice	
• Solo	22 (17.9)
• Group that does not share patients	8 (6.5)
• Group that shares patients	93 (75.6)
Number of hours worked weekly	
• <25	5 (4.1)
• 25-34	10 (8.1)
• 35-44	47 (38.2)
• 45-54	39 (31.7)
• 55-64	17 (13.8)
• >65	5 (4.1)

**Totals sometimes differ from 124 because of missing values.*

The preimplementation questionnaire showed that 98% of respondents believed that family physicians will increasingly have to belong to ISD networks. Very few (8.2%), however, felt involved or consulted in decisions relating to development and implementation of these networks. More than one quarter (27%) did not know that an ISD network for older people would be established in their area in the coming weeks, and 84.3% did not feel sufficiently informed to be able to get involved. In addition, use of case managers, which is the central element of ISD networks, seemed necessary because 85.7% of family physicians said they were interested in using their services. Examining the results for each regional municipality, we see that the desire to use case managers differed considerably between the

Figure 1. Flow of participants



physicians in Granit (63.6%) and those in the two other areas (Coaticook: 100%; Sherbrooke: 86.7%) (P = .057; Fisher exact test). A multivariate logistic regression analysis showed that this difference is more related to practice setting (solo) than to the area itself (odds ratio 8.23; 95% confidence interval 2.50 to 27.11).

Before implementation, physicians' opinions about case management were very positive (**Table 2**). More than 85% of respondents agreed with most of the positive statements about case management. Responses to two of the statements were almost unanimous: case managers' and physicians' roles are complementary (96.7%), and case managers make it easier to collect information on new patients (95.9%). Accordingly, most family physicians disagreed with the negative statements about case management. For example, 83.6% did not think that case managers would interfere in their patient-physician relationships. Yet 57.9% agreed that case managers should be nurse practitioners who deliver services directly to patients in addition to coordinating their services. Again, physicians from Granit were generally more reluctant to work with case managers, and they believed that case managers would complicate their work (72.7%), add expense to the health care system (72.7%), and make the existing health care system more cumbersome (63.6%).

Table 3 shows that family physicians had a strong interest in participating in the network and working with case managers. For example, 95.6% said they were interested in referring frail patients to a case manager; 94% of family physicians wanted more information about case management and the ISD network for older people, and 98% wanted to know specifically which patients could be referred to case management.

The second questionnaire, sent 6 months after implementation started, reevaluated physicians' perceptions about case management. Among the 50 physicians who had already had patients managed by a case manager, the number who agreed with the positive statements about case management

Table 2. Family physicians' perceptions of case management before implementation

QUESTIONNAIRE STATEMENTS	AGREE OR STRONGLY AGREE FREQUENCY (%)*	DISAGREE OR STRONGLY DISAGREE FREQUENCY (%)*
POSITIVE STATEMENTS: CASE MANAGERS …		
… will have a role that complements mine	118 (96.7)	4 (3.3)
… will make it easier to collect information on new patients	117 (95.9)	5 (4.1)
… will enable the frail elderly to remain at home longer	111 (93.3)	8 (6.7)
… will make it easier to access services for the elderly	111 (93.3)	8 (6.7)
… will make my job easier	105 (92.9)	8 (7.1)
… will help with decision making when hospitalized patients return home	113 (92.6)	9 (7.4)
… will help to reduce duplication of services	100 (86.2)	16 (13.8)
… will give me a better understanding of my patients' living situations	101 (84.9)	18 (15.1)
… will prevent unnecessary hospitalizations	94 (83.9)	18 (16.1)
… will reduce my administrative tasks	78 (66.6)	39 (33.4)
NEGATIVE STATEMENTS: CASE MANAGERS …		
… should be nurse clinicians who deliver care directly to patients in addition to coordinating their services	66 (57.9)	48 (42.1)
… will be an additional expense for the health care system	51 (44.0)	65 (56.0)
… will make the existing health care system more cumbersome	28 (23.9)	89 (76.1)
… will make my job more complicated	28 (23.5)	91 (76.5)
… will interfere in my patient-physician relationships	19 (16.4)	97 (83.6)
… won't be very effective because resources are very limited in my area	18 (15.3)	100 (84.7)

**Totals sometimes differ from 124 because of missing values.*

Table 3. Family physicians' interest in getting involved in the ISD network before implementation

QUESTIONNAIRE STATEMENTS	AGREE OR STRONGLY AGREE FREQUENCY (%)*	DISAGREE OR STRONGLY DISAGREE FREQUENCY (%)*
AS A FAMILY PHYSICIAN, I AM INTERESTED IN …		
… participating in screening for elderly who might benefit from case management	82 (69.0)	36 (31.0)
… discussing with my frail patients the possibility of having a case manager	110 (91.3)	10 (8.7)
… referring to a case manager my frail patients who want a referral	115 (95.6)	5 (4.4)
… discussing with case managers patients that we are both following up	111 (92.9)	8 (7.1)
… being consulted to develop an individualized service plan by a case manager	107 (91.1)	10 (8.9)
… attending meetings of multidisciplinary teams about my patients if my compensation is adjusted accordingly	87 (73.5)	31 (26.5)
… a capitation payment method, ie, based on the number of patients on my "list" and how much care they require	74 (64.8)	39 (35.2)
… putting in the necessary time and energy to use a shared computerized clinical chart (ie, that can be consulted by different health professionals)	79 (66.0)	38 (34.0)
… delaying use of the computerized clinical chart because I have concerns about control of the information	33 (30.5)	80 (69.5)
CASE MANAGERS …		
… should work mainly with a group of physicians specifically identified to care for the elderly	50 (42.0)	69 (58.0)
… should work with all family physicians	108 (88.5)	14 (11.5)

**Totals sometimes differ from 124 because of missing values.*

dropped significantly ($P < .01$) for six of the 10 statements (**Table 4**). All physicians, regardless of whether they had had any patients followed by a case manager, were asked to indicate factors that could produce a satisfactory and useful relationship with case managers, or simply reasons they are not used. **Table 5** shows that the most important obstacles were forgetting to call the case manager (69.1%), the habit of using social workers from CLSCs or hospitals (63.6%), and not knowing how to contact case managers (59.4%). Only 5% indicated a lack of interest as being an obstacle to using case managers.

DISCUSSION

Before implementation, physicians' attitude to introduction of the ISD network and case management was overwhelmingly positive. Within 6 months after implementation, physicians were slightly but significantly more critical about case management. They were interested in using case managers (86%), were confident that case managers would be helpful and improve care for older people, but wanted to know more about the case manager's role (94%) and the clientele targeted by this new system (98%). This lack of knowledge about case managers' functions and the feeling of being left out of discussions and decisions are two of the reasons for physicians' reservations about case managers.[7-9] Because physicians' participation before implementation was limited, their lack of knowledge is unsurprising. According to the implementation analysis, two factors contributed to physicians' absence from the discussions: their financial compensation structure and very limited availability.

Unlike Netting and Williams,[9] who express concerns, physicians in the Eastern Townships do not seem to fear the intrusion of another professional into their patient-physician relationships; 97.8% consider the case manager's role to be complementary, and 83.8% do not think case managers will interfere in their patient-physician relationships. Their main fears are a heavier administrative workload and an additional expense for the health care system. Reluctance to support case management was more important for physicians practising solo. We presume that they are used to coordinating their patients' services themselves and do not see value added by the new ISD network. Therefore, we recommend paying special attention to physicians in solo practice when setting up ISD networks.

To encourage physicians to participate in ISD

Table 4. Family physicians' perceptions of case management before and 6 months after implementation among those who had contact with case managers

	AGREE OR STRONGLY AGREE		
QUESTIONNAIRE STATEMENTS	FIRST QUESTIONNAIRE FREQUENCY (%	SECOND QUESTIONNAIRE) FREQUENCY (%)	*P* VALUE*
POSITIVE STATEMENTS: THE WORK OF CASE MANAGERS …			
… complemented mine (n=45)	43 (95.6)	44 (97.8)	1
… enabled the frail elderly to remain at home longer (n=33)	29 (87.9)	26 (78.8)	.508
… made it easier to access services for the elderly (n=37)	34 (91.9)	28 (82.4)	.031
… made my job easier (n=36)	35 (97.2)	22 (61.1)	.012
… helped with decision making when hospitalized patients returned home (n=32)	28 (87.5)	20 (62.5)	.008
… made it easier to collect information on new patients (n=35)	33 (94.3)	19 (54.3)	.001
… helped reduce duplication of services (n=38)	34 (89.5)	23 (60.5)	.003
… reduced my administrative tasks (n=43)	29 (67.4)	19 (44.2)	.006
… avoided unnecessary hospitalizations (n=32)	25 (78.1)	11 (34.4)	.001
… gave me a better understanding of the living situations of my patients (n=41)	35 (85.4)	12 (29.3)	.000
NEGATIVE STATEMENTS: THE WORK OF CASE MANAGERS …			
… should have been done by nurse clinicians who deliver care directly to patients in addition to coordinating their services (n=37)	21 (56.8)	20 (54.1)	1
… was an additional expense on the health care system (n=41)	17 (41.5)	14 (34.1)	.607
… wasn't very effective because resources are very limited in my area (n=40)	8 (20.0)	10 (25.0)	.727
… made the existing health care system more cumbersome (n=41)	9 (22.0)	6 (14.6)	.508
… interfered in my patient-physician relationships (n=42)	5 (11.9)	3 (7.1)	.625
… made my job more complicated (n=45)	9 (20.0)	3 (6.7)	.07

**McNemar statistical tests.*

Table 5. Obstacles to using case managers identified 6 months after introduction of case management

OBSTACLES TO USING CASE MANAGERS ARE …	AGREE OR STRONGLY AGREE FREQUENCY (%)*	DISAGREE OR STRONGLY DISAGREE FREQUENCY (%)*
… I forget to use them	67 (69.1)	30 (30.9)
… I use social workers from a local community service centre or hospital rather than calling a case manager	63 (63.6)	36 (36.4)
… I don't know how to contact them	60 (59.4)	41 (40.6)
… I look after coordinating and negotiating my patients' services myself	54 (54.5)	45 (45.5)
… I still don't really understand how case managers can help my patients	54 (54.0)	46 (46.0)
… I don't know which of my clients could benefit from case management	41 (40.2)	61 (59.8)
… I need nurse clinicians, not case managers	34 (37.0)	58 (63.0)
… I didn't know this service was available	35 (35.0)	65 (65.0)
… To date, my clientele is not one that could benefit from case management	28 (28.0)	72 (72.0)
… I have doubts about the effectiveness of this system	24 (25.0)	72 (75.0)
… I would use it if my compensation were adjusted accordingly	22 (23.4)	72 (76.6)
… I am afraid that my workload will increase	22 (22.2)	77 (77.8)
… Without computerized clinical charts, I don't see how they could be useful to me	20 (20.4)	78 (79.6)
… They are not available when I need them	16 (18.6)	70 (81.4)
… I am not interested in using their services	5 (5.0)	95 (95.0)

**Totals sometimes differ from 124 because of missing values.*

networks, it is important to involve them early in the decision process.[12] The critical factor in their participation, however, seems to be receiving the information they need to understand the system. Most physicians are unfamiliar with or do not understand the term "ISD network" and the underlying concepts. Also, physicians must know when the new ISD network services will be available and how to access them. In the Eastern Townships, they were not sufficiently involved in the process before implementation, nor were they adequately informed. Physicians thus believed that case managers could not make any real changes in their day-to-day practice. They forgot to use these services (69.1%), they used CLSC or hospital social workers (63.6%), or they did not know how to contact the case manager (59.4%). As mentioned by White and colleagues,[7] many physicians still do not use case managers because they coordinate their patients' care and services themselves. How they operate is changing slowly, but certain targeted interventions could help this process along.

On the questionnaire 6 months after implementation, physicians who had had contact with case managers were more critical about case management, despite having too few contacts with case managers for an objective assessment. Such a decrease in positive perceptions could be related to excessively optimistic expectations, as Walston and associates[13] report is often the case during implementation of big changes. This second measure will be very important for setting a real baseline for subsequent assessment of perceptions among family physicians.

Some limitations of this study should be pointed out. Although the 60% response rate is relatively high for this type of questionnaire, physicians more reluctant to support this new initiative might be more likely to refuse to respond. Social desirability bias is also common with this type of survey, although we tried to overcome this problem by using a neutral response scheme and mixing positive and negative statements. The finding about solo versus group practice should be considered exploratory, because it was not hypothetized a priori and because so few subjects practise solo. Finally, these opinions are associated with very early implementation. It will be interesting to see how physicians' perceptions evolve as their experience with the ISD system and case managers increases.

CONCLUSION

Family physicians realize the importance of having ISD networks for frail older people. They want to work with case managers and be involved in the networks. Their understanding of their own and the case manager's role, however, is still unclear. It is vital to involve family physicians in decisions and discussions before establishing ISD networks, and to inform them about the availability and functions of case managers, the profile of the target clientele, and the usefulness of case managers to them and their patients. Finally, the visibility of case managers must be enhanced, not just with physicians but also with the general public.

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Contributors

Dr Milette *wrote this article, developed the questionnaire, and performed the statistical analysis.* **Dr Hébert** *supervised the project and helped to revise the article.* **Ms Veil** *helped to develop the questionnaire, tested the questionnaire with physician volunteers, and helped to revise the article.*

Competing interests

None declared

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