



### Editor's key points

- ▶ Shared decision making requires 2 key competencies: explaining potential benefits and harms (risk communication) and clarifying what matters to patients and families (values clarification).
- ▶ Risk communication and values clarification occurred together in nearly two-thirds of visits in routine daily family practice, but risk communication occurred more frequently than values clarification.
- ▶ Certain factors were associated with the occurrence of both competencies. Visits with health care professionals who preferred a collaborative decision-making style and visits that included discussions about beginning something new, treatment options, or postponing a decision were more likely to demonstrate both elements. Visits that were longer were also more likely to contain both competencies, even when controlling for the number of decisions made. Other decisions might benefit from an increased focus on discussions of harms, benefits, values, and preferences.

# How often do both core competencies of shared decision making occur in family medicine teaching clinics?

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## Abstract

**Objective** To assess how often risk communication and values clarification occur in routine family medicine practice and to explore factors associated with their occurrence.

**Design** Qualitative and quantitative cross-sectional study.

**Setting** Five university-affiliated family medicine teaching clinics across Quebec.

**Participants** Seventy-one health professionals (55% physicians, 35% residents, 10% nurses or dietitians) and 238 patients (76% women; age range 16 to 82 years old).

**Main outcome measures** The presence or absence of risk communication and values clarification during visits in which decisions were made was determined. Factors associated with the primary outcome (both competencies together) were identified. The OPTION5 (observing patient involvement in decision making) instrument was used to validate the dichotomous outcome.

**Results** The presence of risk communication and values clarification during visits was associated with OPTION5 scores (area under the curve of 0.80, 95% CI 0.75 to 0.86,  $P < .001$ ). Both core competencies of shared decision making occurred in 150 of 238 (63%) visits (95% CI 54% to 70%). Such an occurrence was more likely when the visit included discussion about beginning something new, treatment options, or postponing a decision, as well as when health professionals preferred a collaborative decision-making style and when the visit included more decisions or was longer. Alone, risk communication occurred in 203 of 238 (85%) visits (95% CI 82% to 96%) and values clarification in 162 of 238 (68%) visits (95% CI 61% to 75%).

**Conclusion** Health professionals in family medicine are making an effort to engage patients in shared decision making in routine daily practice, especially when there is time to do so. The greatest potential for improvement might lie in values clarification; that is, discussing what matters to patients and families.



# À quelle fréquence rencontre-t-on les deux principales compétences de la prise de décisions en commun dans les cliniques d'enseignement universitaire de médecine familiale?

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## Résumé

**Objectif** Déterminer à quelle fréquence la communication des risques et la clarification des valeurs sont présentes ensemble dans les cliniques de santé familiales habituelles et examiner les facteurs associés à cette fréquence.

**Type d'étude** Une étude transversale qualitative et quantitative.

**Contexte** Cinq unités d'enseignement universitaire de santé familiale du Québec.

**Participants** Un total de 71 professionnels de la santé (55 % médecins, 35 % résidents, 10 % infirmières ou diététiciens) et 238 patients (76 % femmes; âgés de 16 à 82 ans).

**Principaux paramètres à l'étude** On a déterminé la présence ou l'absence de la communication des risques et de la clarification des valeurs au cours des consultations où des décisions étaient prises. On a identifié les facteurs qui influençaient sur la présence des 2 compétences. L'instrument *OPTION5 (observing patient involvement in decision making)* a servi à valider un résultat dichotomique.

**Résultats** On a observé une association entre la présence de la communication des risques et de la clarification des valeurs, et les scores obtenus à *OPTION5* (surface sous la courbe de 0.80, IC à 95% 0.75 à 0.86,  $P < .001$ ). Les deux compétences pour la prise de décision partagée étaient présentes dans 150 consultations sur 238 (63 %, IC à 95% 54 % à 70 %). Cette situation était plus susceptible de survenir lorsque la visite incluait des discussions sur la possibilité d'entreprendre quelque chose de nouveau, les traitements possibles ou le report d'une décision, mais aussi lorsque les professionnels de la santé préféraient un type de prise de décision collaborative et quand la consultation était plus longue ou portait sur plusieurs décisions. Dans 203 cas sur 238, on avait utilisé seulement la communication des risques, (85 %, IC à 95% 82 % à 96 %) et dans 162 cas sur 238, seulement la clarification des valeurs (68 %, IC à 95% 61 % à 75 %).

**Conclusion** Dans la pratique quotidienne, les professionnels de la santé en médecine familiale s'efforcent d'amener les patients à prendre des décisions en commun, particulièrement lorsqu'il est temps de le faire. Discuter avec les patients des choses qui leur importent est ce qui présente le plus fort potentiel d'amélioration.

## Points de repère du rédacteur

- ▶ Une décision partagée requiert deux compétences principales: l'explication des avantages et des risques éventuels (la communication des risques) et la mise au clair de ce qui est important pour les parents et les familles (la clarification des valeurs).
- ▶ Dans près des deux tiers des consultations dans les cliniques de santé familiale, la communication des risques et la clarification des valeurs ont été présentées ensemble, mais la communication des risques a été abordée plus souvent que la clarification des valeurs.
- ▶ On associait certains facteurs à la présence de ces 2 compétences. Les consultations auprès de professionnels de la santé qui préféraient la prise de décision en commun et celles où on discutait de la possibilité d'entreprendre quelque chose de nouveau, des traitements possibles ou du report d'une décision étaient plus susceptibles de comporter les deux éléments. Les discussions plus longues étaient aussi plus susceptibles de comprendre les deux types de compétences, même après un contrôle du nombre de décisions prises. En insistant pour que les discussions portent davantage sur les risques, les avantages, les valeurs et les préférences, on pourrait améliorer d'autres types de décisions.

Shared decision making is the collaborative process by which health professionals and patients partner to make evidence-informed health decisions that reflect what matters to patients and their families.<sup>1</sup> Such collaboration leads to greater patient knowledge, reduced decision conflict, more active patient involvement, greater patient satisfaction with disease management, more realistic patient expectations, and higher levels of treatment adherence.<sup>2-8</sup>

Shared decision making requires that both the health professional and the patient bring relevant expertise to health decisions. Professionals bring medical expertise, and patients bring expertise about their own lives and what matters to them and their families. Thus, shared decision making requires communicating evidence regarding potential benefits and harms of all available options (risk communication) and clarifying what matters to patients and families regarding those options (values clarification).<sup>1,2,9</sup> Shared decision making might occur less frequently than expected.<sup>10,11</sup> It can present challenges in family medicine because multiple health decisions might occur in a single clinical encounter<sup>12</sup>; decisions are likely to be about chronic conditions, preventive care, and lifestyle issues<sup>12,13</sup>; and the decision-making process might be complicated by issues such as comorbidity and diverse patient populations.<sup>14-16</sup>

Because little is known about how often the 2 core competencies of shared decision making occur in primary care, we assessed the frequency with which both occur, and explored contextual factors associated with this occurrence or lack thereof.

## — Methods —

### Study design and context

We conducted a cross-sectional study with both qualitative and quantitative methods. We aimed to collect a convenience sample of 250 visits in primary care, approximately 50 visits per site, considering both the need for a range of primary care consultations and the feasibility of the study. We collected data in 2014 to 2015 at 5 university-affiliated family medicine clinics across Quebec. The study was approved by the research ethics committees of the Integrated University Health and Social Services Centre of the National Capital in Gatineau; Centre de recherche de la CHU de Québec-Université Laval in Quebec city; and the Jewish General Hospital in Montreal.

### Participants and recruitment

We first invited all health professionals at participating clinics to enrol in the study, including family physicians, residents, nurses, and allied health professionals who were scheduled to provide care (planned visits or walk-in coverage) during each period of data collection. We then invited patients of the health professionals who

agreed to participate and were able to complete a questionnaire in English or French. Our participants included parents or guardians accompanying a minor (defined in Quebec as a person of 14 years of age or younger), as they were the legal decision makers. We refer to such parents and guardians as *patients* in this article. We excluded unaccompanied minors younger than 14 years of age and patients who had been identified by health professionals as having a condition that affected their ability to provide informed consent.

### Data collection

At each clinic, we collected data during 4 to 6 days. Participating adults provided written informed consent and accompanied minors provided written assent. Health professionals completed a single self-administered written questionnaire at recruitment, typically days or weeks ahead of data collection, with closed-ended questions about their sociodemographic characteristics and medical decision-making style preferences.<sup>17</sup> Patients completed 2 self-administered written questionnaires. The questionnaire before the visit contained closed-ended sociodemographic questions, as well as original English or translated French versions of validated measures of health literacy<sup>18</sup> and subjective numeracy.<sup>19,20</sup> The second questionnaire, administered after the visit to avoid biasing patient behaviour during the visit, contained a validated measure of medical decision-making style preferences on a 5-point scale.<sup>17</sup> We audio-recorded visits.

### Data analysis

Audiorecordings were transcribed verbatim by a professional transcriptionist. Two researchers (G.D., R.R.) independently coded all transcripts in NVivo 10, resolving disagreements by discussion until reaching consensus and reviewing all questions at regular meetings held with 2 other researchers (S.C.D., H.O.W.). We used a combination of inductive and deductive thematic analysis approaches<sup>21</sup> to develop a structured coding form.

### Coding of visits

We coded 6 aspects of each visit. First, we coded the visit's purpose (ie, checkup or preventive health care, or another medical reason). Second, we coded how many, if any, decisions were made during the visit. Third, we coded structural characteristics of each decision (ie, was the decision about doing nothing; beginning, stopping, or continuing something; postponing a decision; or taking action later). Fourth, we coded clinical characteristics of decisions (eg, deciding about a screening test or a medical treatment). Fifth and sixth, we coded instances of risk communication and values clarification according to established definitions and taxonomies, using relatively easy-to-attain thresholds. Specifically, we determined risk communication to have occurred

during the visit if there was any discussion about potential benefits and harms of health interventions.<sup>22-25</sup> We defined *values clarification* according to a systematic review of values clarification methods,<sup>26,27</sup> which specifies that preferences are inclinations toward or away from a medical option and values are the underlying feelings and emotions that help determine preferences. We accordingly defined *values* broadly as concepts relevant to the decision that matter to patients or families.<sup>28,29</sup> **Table 1** provides examples for each category. We validated our risk communication and values clarification coding structure by comparing it to OPTION5 (observing patient involvement in decision making) scores; OPTION5 is an established 5-item scale used to measure shared decision making.<sup>30,31</sup> We used OPTION5 rather than the original OPTION12 because OPTION5 contains 2 items about values and preferences that were lacking in OPTION12 and because OPTION5 has been shown to be more sensitive.<sup>32,33</sup>

Two team members (P.J., S.M.) entered questionnaire data into a spreadsheet. A senior research associate (S.C.D.) verified and corrected any discrepancies in data. We combined these data with codes from the transcripts to create a complete data set about each visit, including aspects of the visit itself and characteristics of the health professional and patient, categorizing variables as needed according to their distribution.<sup>34,35</sup>

Final coding reflected consensus judgments among 2 (G.D. and R.R. for most codes; R.R. and S.C.D. for OPTION5 scores) or 4 (G.D., R.R., S.C.D., H.O.W.) researchers. We assessed the reliability of coding between each pair of independent analysts with the Cohen  $\kappa$ .<sup>36</sup>

## Statistical analyses

Our main outcome of interest was dichotomous: whether or not risk communication and values clarification both

occurred. Our unit of analysis was the visit as a whole, not individual decisions within it, for 3 reasons. First, a single decision in primary care might be discussed during multiple visits,<sup>1,37</sup> meaning that analyzing the extent of risk communication and values clarification for a given decision within a single visit might underestimate the extent of these practices. Second, primary care visits are complex and move from one topic to another and then back again,<sup>38</sup> meaning that for visits in which multiple topics are addressed, it might be neither possible nor desirable to disentangle values clarification discussions that are relevant to multiple decisions. Third, patient impressions of shared decision making in family medicine visits appear to be formed from the visit as a whole, suggesting that a more global assessment likely better reflects what matters to patients.<sup>39,40</sup> We compared our dichotomous outcome to OPTION5 scores by examining the receiver operating curve and assessed the extent to which OPTION5 scores predicted values of our dichotomous outcome.

We identified factors associated with our primary outcome (both competencies together). We also examined the presence or absence of each competency alone within a visit and identified whether health professionals or patients initiated these discussions.

As our data were hierarchical at 3 levels (visit and patient, health professional, and clinic), we examined intraclass correlation coefficients. To account for potential clustering effects among study sites and health professionals, we performed a bivariate analysis and then a multivariable logistic regression analysis using a generalized linear mixed model to estimate the proportion of the presence of both competencies and to identify factors associated with their presence or absence. We conducted statistical analyses in SAS, version 9.4.

**Table 1. Coding scheme**

TYPE OF EXPRESSION AND EXPRESSIONS CODED	EXAMPLES
Risk communication	
• Statement about potential benefits or harms	"This medication has some side effects"
• Expression of probability or uncertainty	"The most severe side effects are rare"
• Numbers	"Less than 1 in a thousand"
Values clarification	
• Efficacy and side effects	"I did not try the medication because of the side effects"
• Frequency of administration	"It's really hard to make it to physiotherapy twice a week"
• Mode of administration and cost	"I have no insurance. For all the rest I am covered, but not for that"
• Patient priorities	"I really don't want to have to miss work"
• Life philosophies or identity	"I am not the kind of person who wants to suffer"
• Background	"No one in my family has ever breastfed"
• Life circumstances or context	"My father-in-law is living with us so I plan meals that he likes"

## — Results —

### Study participants

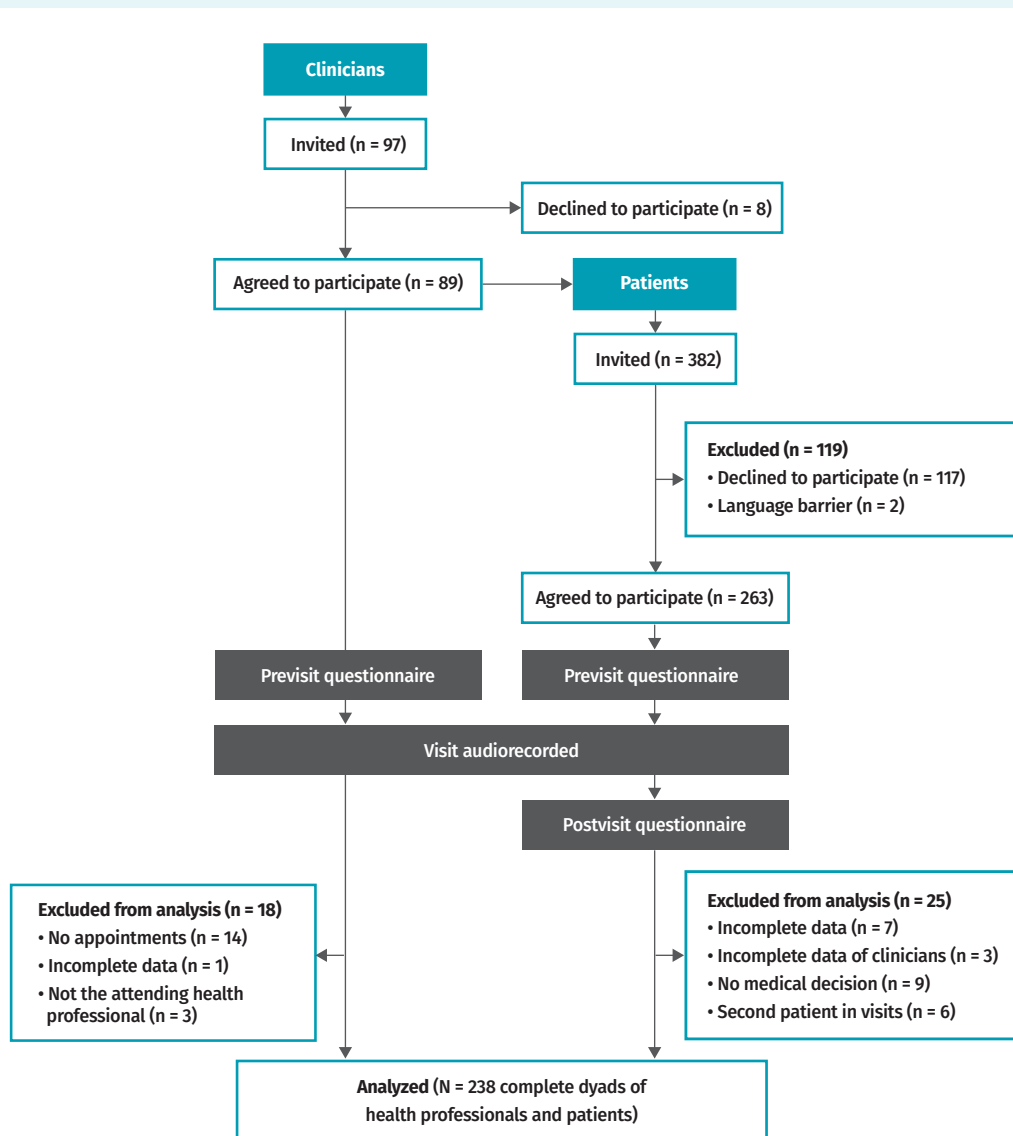
Of the 96 health professionals invited, 89 agreed to participate (93%) and 71 were included in the analysis. We excluded consenting health professionals who had incomplete questionnaire data ( $n=1$ ), who were in the room but were not the attending health professional (eg, a resident observing a preceptor) ( $n=3$ ), or who had no appointments scheduled during data collection ( $n=14$ ). We analyzed 238 complete clinical visits between health professionals and patients. **Figure 1** shows study flow and **Table 2**<sup>41</sup> details participant characteristics.

### Characteristics of visits

**Reliability of qualitative coding.** Interobserver reliability for primary coding as assessed by the Cohen  $\kappa$  was 0.85. For OPTION5 coding, the Cohen  $\kappa$  ranged from 0.82 to 0.89 across the 5 items. Internal reliability for the OPTION5 measure (Cronbach  $\alpha$ ) was 0.76.

**Risk communication and values clarification.** Risk communication occurred in 203 of 238 (85%) visits. Values clarification occurred in 162 of 238 (68%) visits. Risk communication and values clarification both occurred in 150 of 238 (63%) visits (**Table 3**), with a 95% CI of 54% to 70%. The presence of both risk communication and values clarification within a visit was related to OPTION5 scores, with an area

**Figure 1.** Study participant flow diagram



**Table 2. Participant characteristics: We report the mean and SD if the distribution is normal, and median and IQR if the distribution is not normal.**

CHARACTERISTIC	PATIENTS (N = 238)	HEALTH PROFESSIONALS (N = 71)
Site, n (%)		
• 1	48 (20)	14 (20)
• 2	50 (21)	18 (25)
• 3	62 (26)	12 (17)
• 4	40 (17)	12 (17)
• 5	38 (16)	15 (21)
Female sex, n (%)	181 (76)	48 (68)
• Physicians	NA	25 (52)
• Residents	NA	16 (33)
• Nurses and dietitians	NA	7 (15)
Male sex, n (%)	57 (24)	23 (32)
• Physicians	NA	14 (61)
• Residents	NA	9 (39)
• Nurses and dietitians	NA	0 (0)
Median (IQR) age	39 (16 to 82)	33 (23 to 64)
• Physicians	NA	40 (26 to 64)
• Residents	NA	27 (23 to 40)
• Nurses and dietitians	NA	30 (28 to 53)
Level of education, n (% of 238)		
• Low	89 (37)	NA
-None or some elementary school	2 (< 1)	NA
-Elementary school	18 (8)	NA
-Secondary school diploma	42 (18)	NA
-Secondary school vocational diploma	27 (11)	NA
• Medium (ie, cégep*)	47 (20)	NA
• High	98 (41)	NA
-Bachelor degree	65 (27)	NA
-Master's degree	24 (10)	NA
-Doctoral or professional degree	9 (4)	NA
• Missing data	4 (2)	NA
Median (IQR) health literacy score <sup>†</sup>	13 (3 to 18)	NA
Subjective Numeracy Scale score <sup>‡</sup>	36 (8 to 48)	39 (4)
Health professionals, n (%)		
• Physicians	NA	39 (55)
• Residents	NA	25 (35)
• Nurses and dietitians	NA	7 (10)
Place of origin, n (%)		
• Quebec	194 (82)	59 (83)
• Other Canadian province	8 (3)	4 (6)
• Other country	34 (14)	8 (11)
• Missing data	2 (< 1)	0 (0)

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CHARACTERISTIC	PATIENTS (N = 238)	HEALTH PROFESSIONALS (N = 71)
Median (IQR) years in Quebec	33 (1 to 79)	32 (1 to 75)
Median (IQR) years in practice		
• Overall	NA	5 (1 to 40)
• Physicians	NA	12 (1 to 40)
• Residents	NA	1.5 (1 to 8)
• Nurses and dietitians	NA	6.5 (1 to 32)
Median (IQR) years in clinic	NA	3 (1 to 26)
Control Preferences Scale score, <sup>§</sup> n (%)		
• 1	13 (5)	7 (10)
• 2	122 (51)	19 (27)
• 3	69 (29)	39 (55)
• 4	27 (11)	2 (3)
• 5	4 (2)	0 (0)
• Missing data	3 (1)	4 (6)
Languages spoken, <sup>  </sup> n (%)		
• French	231 (97)	71 (100)
• English	212 (89)	70 (99)
Visible minorities, <sup>¶</sup> n (%)	30 (13)	4 (6)
People with disabilities, <sup>#</sup> n (%)	10 (4)	0 (0)

IQR—interquartile range, NA—not applicable.

\*Cégep is a stage of education in Quebec. It typically requires 2 years of study after grade 11. Graduates might then go on to college or university.

<sup>†</sup>Health literacy is defined as the capacity to understand basic health information.

<sup>‡</sup>This scale rates confidence in working with numbers and preferences for numerical information. Scores are reported as median (IQR) for patients and as mean (SD) for health professionals.

<sup>§</sup>The Control Preference Scale rates preferences as follows: 1 = prefers that the patient makes the final decision alone, 2 = prefers that the patient makes the decision after seriously considering the health professional's opinion, 3 = prefers that the patient and the health professional share responsibility for the decision, 4 = prefers that the health professional makes the decision after he or she seriously considers the patient's opinion, and 5 = prefers that the health professional makes the decision alone.

<sup>||</sup>Not mutually exclusive.

<sup>¶</sup>Visible minorities are defined as "persons, other than aboriginal peoples, who are non-Caucasian in race or non-white in color."<sup>41</sup>

<sup>#</sup>Disability is defined as physical, cognitive, intellectual, mental, sensory, or developmental impairment.

**Table 3. Frequencies of risk communication and values clarification in primary care visits: N = 238. We analyzed both objectives with GLMM to account for the potential clustering effect of health professionals, but assumed observations within each clinic to be similar owing to the low ICC at the clinic level.**

VISITS IN WHICH DECISIONS WERE MADE	ABSENCE OF RISK COMMUNICATION, N (%)	PRESENCE OF RISK COMMUNICATION, N (%)	TOTAL, N (%)
Absence of values clarification	23 (10)	53 (22)	76 (32)
Presence of values clarification	12 (5)	150 (63)*	162 (68) <sup>†</sup>
Total	35 (15)	203 (85) <sup>‡</sup>	238 (100)

GLMM—generalized linear mixed model, ICC—intraclass correlation coefficient.

\*The ICCs for risk communication and values clarification together were 0.15 at the level of health professionals and 0.0001 at the clinic level.

<sup>†</sup>The ICCs for values clarification alone were 0.07 at the level of health professionals and 0.0001 at the clinic level.

<sup>‡</sup>The ICCs for risk communication alone were 0.43 at the level of health professionals and 0.05 at the clinic level.

under the curve of 0.80 (95% CI 0.75 to 0.86,  $P < .001$ ). Using a cutoff of 5, sensitivity was 0.72 and specificity was 0.76.

Health professionals initiated risk communication discussions 96% of the time (194 of 203 visits containing risk communication) and values clarification discussions 60% of the time (98 of 162 of visits containing values clarification).

**Factors associated with risk communication and values clarification.** Among the diversity of visits (Table 4),

we observed 6 factors associated with the presence of risk communication and values clarification together. The visit was more likely to contain both core competencies of shared decision making when health professionals and patients discussed beginning something new (odds ratio [OR] of 3.54, 95% CI 1.32 to 9.48); discussed a treatment option (OR = 3.56, 95% CI 1.52 to 8.36); discussed more than 5 health decisions (OR = 5.00, 95% CI 1.50 to 16.90); discussed postponing a decision

**Table 4. Visit characteristics: N = 238. Median (IQR) visit length in minutes was 29.2 (5.2 to 97.3).**

CHARACTERISTIC	N (%)
No. of decisions per visit*	
• 1-2	88 (37)
• 3-4	81 (34)
• 5-10	69 (29)
Reason for visit	
• Checkup or regular preventive care	163 (69)
• Medical reasons	75 (32)
-1	49 (65)
-Several	26 (35)
Visit included $\geq 1$ decisions to ... <sup>†</sup>	
• Begin something	187 (79)
• Continue something	174 (73)
• Do nothing	45 (19)
• Postpone the decision	41 (17)
• Take action later <sup>‡</sup>	23 (10)
• Stop something	21 (9)
Visit included $\geq 1$ decisions about ... <sup>†</sup>	
• Treatment options (medical or surgical)	169 (71)
• Screening tests	93 (39)
• Diagnostic tests	87 (37)
• Follow-up of tests or treatment given or prescribed	87 (37)
• Following and watching something	69 (29)
• Treatment plan (discussion of lifestyle changes)	49 (21)
• Referral to another specialist	36 (15)
• Referral to an allied health professional	31 (13)
Patient knows health professional	
• Yes, the patient recalled having seen this professional before	179 (75)
• No, the patient did not recall having seen this professional before	59 (25)
Risk communication	
• No	35 (15)
• Yes	203 (85)
-Yes, in words without numbers	165 (81)
-Yes, in numbers	38 (19)
—Numbers were probabilities	23 (61)
—Other type of numbers	15 (39)
Values clarification	
• No	76 (32)
• Yes	162 (68)
-Yes, clinician asks a question	97 (60)
-Yes, clinician makes a statement that invites a response	1 (1)
-Yes, patient initiates the discussion	64 (40)

IQR—interquartile range.

\*Categories reflect distribution within our study and clinician team members' assessments of meaningful differences.

<sup>†</sup>These categories are not mutually exclusive.<sup>‡</sup>A decision was made to take action at a subsequent visit (eg, a decision to have a Papanicolaou test at the next visit).



(OR=4.92, 95% CI 1.35 to 17.87); and when visits were with health professionals who indicated that they preferred a collaborative decision-making style (OR=8.78, 95% CI 1.62 to 47.71). Longer visits were also more likely to contain both competencies (OR=1.03, 95% CI 1.00 to 1.07) (Table 5). Sensitivity analyses demonstrated that our results were robust.

## — Discussion —

Our study aimed to assess how often 2 core competencies of shared decision making occur in routine family

medicine practice together or alone and to explore factors associated with their occurrence. We found that risk communication and values clarification occurred together in nearly two-thirds of visits in routine daily family practice but that risk communication occurs more frequently than values clarification. In addition, clinicians had some commonalities regarding their use of both competencies.<sup>42</sup> These results led us to make 3 main observations.

First, our findings show that the core elements of shared decision making occurred together in nearly two-thirds of visits without any active intervention. This might be a more positive outcome than in other studies,<sup>10</sup> a

**Table 5. Factors associated with risk communication and values clarification (multivariable analysis)**

FACTOR*	BOTH RISK COMMUNICATION AND VALUES CLARIFICATION PRESENT	1 OR BOTH OF RISK COMMUNICATION AND VALUES CLARIFICATION MISSING	OR (95% CI)	P VALUE
<b>Factors associated with the visit</b>				
No. of decisions per visit, n (%)				
• 1-2	34 (39)	54 (61)	1	
• 3-4	54 (67)	27 (33)	1.40 (0.59 to 3.16)	
• ≥5	62 (90)	7 (10)	5.00 (1.50 to 16.90)	.03
Median (IQR) length of visit, min	30.3 (9.8 to 97.3)	25.8 (5.2 to 58.5)	1.03 (1.00 to 1.07)	.03
Decisions to postpone the decision, <sup>†</sup> n (%)				
• No	115 (58)	82 (42)	1	
• Yes	35 (85)	6 (15)	4.92 (1.35 to 17.87)	.02
Decisions to begin something, <sup>†</sup> n (%)				
• No	19 (37)	32 (63)	1	
• Yes	131 (70)	56 (30)	3.54 (1.32 to 9.48)	.01
Decisions about referral to an allied health professional, <sup>†</sup> n (%)				
• No	124 (60)	83 (40)	1	
• Yes	26 (84)	5 (16)	5.09 (0.96 to 27.04)	.06
Decisions about treatment, <sup>†</sup> n (%)				
• No	24 (35)	45 (65)	1	
• Yes	126 (75)	43 (25)	3.56 (1.52 to 8.36)	.004
<b>Factors associated with health professionals</b>				
Control Preferences Scale score, <sup>‡</sup> n (%)				
• No collaboration	1 (14)	6 (86)	1	
• Collaboration	36 (60)	24 (40)	8.78 (1.62 to 47.71)	.01

IQR—interquartile range, OR—odds ratio.

\*Factors for analysis selected based on bivariate analysis.

<sup>†</sup>Not mutually exclusive.

<sup>‡</sup>No collaboration includes the 2 extreme items on the scale (ie, “prefers that the patient makes the final decision alone” and “prefers that the health professional makes the decision alone”). Collaboration includes the 3 middle items on the scale (ie, “prefers that the patient makes the decision after seriously considering the health professional’s opinion,” “prefers that the patient and the health professional share responsibility for the decision,” and “prefers that the health professional makes the decision after he or she seriously considers the patient’s opinion”).

difference that might be explained by the nature of our clinical sites as teaching clinics,<sup>43</sup> the fact that clinicians knew they were being observed, or that our outcome measure was more encompassing than other measures. However, our findings also suggest some room for improvement, particularly in the context of a health decision in primary care, where discussion of risks, benefits, and patients' values should be a relatively easy threshold to attain.<sup>42</sup> Other studies have similarly concluded that shared decision making competencies could be improved in primary care.<sup>11,40,43-49</sup>

Second, we observed that risk communication was more prevalent than values clarification during primary care visits. This is consistent with previous work in the past 10 to 15 years showing that as evidence-based medicine has moved into practice, it might not always be bringing its intended discussions of values and preferences along to complement the evidence.<sup>50</sup> More work is needed to correct the misdiagnosis of patient values and preferences.<sup>26,51</sup>

Third, we observed that certain factors were associated with the occurrence of both competencies. Visits that included discussions about beginning something new, treatment options, or postponing a decision were more likely to demonstrate both elements. We suggest that other decisions might benefit from an increased focus on discussions of harms, benefits, values, and preferences. For example, given the increased focus on overdiagnosis<sup>52</sup> and evidence that patients might overestimate the benefits of screening,<sup>53</sup> screening discussions might offer room for meaningful improvement. Visits that were longer were also more likely to contain both competencies, even when controlling for the number of decisions made. These findings align with those of previous studies showing that perceived time constraints are a barrier to shared decision making<sup>54</sup> and longer visits are associated with higher scores of communication skills.<sup>10,55</sup> When health professionals preferred a less collaborative decision-making style, the core competencies of shared decision making were less likely to occur. Although this finding is not surprising, when combined with our findings of a substantial cluster effect at the level of health professionals and few patients initiating values clarification or risk communication discussions, it emphasizes that a health professional's individual communication style is a key factor in whether or not a patient will experience shared decision making.

## Limitations

Our study has 4 main limitations. First, the generalizability of our study is limited by the fact that we collected data in family medicine teaching clinics, meaning that our results might be less applicable to other primary care settings. Specifically, a relatively high proportion of patients had postsecondary degrees (41% compared with the provincial statistic of 31%<sup>56</sup>) and, as expected

for teaching settings, physicians were younger on average and the median (interquartile range) visit length (29.2 [5.2 to 97.3] minutes) might reflect longer visits compared with previously published mean visit lengths (21 minutes).<sup>57</sup> Second, although we used rigorous dual independent analysis to code transcripts and validated our coding strategy with an established, validated measure, our analyses used a newly created outcome measure. Third, we assessed medical decision-making style preferences at different times for patients and physicians. Specifically, for health professionals, we asked for their preferences at recruitment, which was typically days or weeks in advance of the recorded consultations. For patients, we asked immediately after the visit. This was because we believed that the greater threat to data quality for physicians would be missing data owing to difficulty in ensuring they completed a questionnaire after their last participating patient, whereas for patients, we believed that the greater threat to data quality would be that they might change their behaviour owing to answering the question immediately before their visit. It is possible that answering this question reminded physicians about the desirability of shared decision making in advance of recording visits and thus increased the occurrence of both competencies. Finally, this study simply addressed whether risk communication and values clarification occurred, and did not assess the quality of each discussion nor delve deeply into how discussions occurred. Further research will explore these questions to better unpack the intricacies of supporting shared decision making in family medicine.

## Conclusion

Health professionals in family medicine teaching clinics demonstrated a minimum level of the 2 core competencies of shared decision making in routine daily practice; progress remains to be made. The greatest area for improvement might have to do with clarifying patients' values and preferences rather than expecting patients to bring these into the discussion. Providing training in this competency, supportive tools, and time for discussion might facilitate progress. 🌱

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#### Contributors

**Dr Diendéré**, **Dr Chipenda Dansokho**, **Ms Rocque**, **Ms Julien**, and **Drs Légaré**, **Côté**, **Pilote**, **Grad**, **Giguère**, and **Witteman** designed the study. **Dr Diendéré**, **Ms Mahmoudi**, **Dr Jacob**, **Dr Casais**, and **Dr Chipenda Dansokho** collected data. **Dr Diendéré**, **Dr Chipenda Dansokho**, **Ms Julien**, **Ms Rocque**, and **Dr Witteman** conducted data analysis. **Drs Diendéré** and **Witteman** drafted the first version of the article. **Dr Diendéré**, **Dr Chipenda Dansokho**, **Ms Rocque**, **Ms Julien**, **Dr Légaré**, **Dr Côté**, **Ms Mahmoudi**, and **Drs Jacob**, **Casais**, **Pilote**, **Grad**, **Giguère**, and **Witteman** critically revised the article and approved the final version for submission for publication.

#### Competing interests

None declared

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