With an increasingly complex array of interventions facing healthcare professionals and patients, coupled with a potentially diverse number of professionals operating within the primary care team, the adoption of shared decision making (SDM) — with or without patients' decision aids — in an interprofessional manner is essential to ensure the highest quality of care for patients. In this article, we propose a framework for interprofessional education about SDM targeted to primary care settings. Five areas of knowledge and skills were agreed to be essential for all relevant stakeholders for interprofessional education in SDM to be successful: understanding the concept of SDM; acquiring relevant communication skills to facilitate SDM; understanding interprofessional sensitivities; understanding the roles of different professions within the relevant primary care group; and acquiring relevant skills to implement SDM. We suggest a series of teaching methods for the aforementioned areas, using principles from adult learning.

Keywords: Decision support, interprofessional education, primary care, shared decision making

Introduction

The purpose of this paper is to identify the core knowledge and skills for providing interprofessional shared decision making (SDM) in primary care settings and to present a curriculum model that could be used for teaching that knowledge and skills. One definition of primary care identifies four unique features: first contact care, longitudinal care, comprehensive care and coordinated care (Starfield, 1998).11 First, contact care refers to the first point of access for healthcare services; sometimes entailing “gatekeeper” functions. Longitudinal care refers to being responsible for the patient’s healthcare over time. Comprehensive care refers to the broad spectrum of health issues, including acute and chronic conditions that are dealt with by primary care providers. Finally, coordinated care incorporates mechanisms for the recognizing and managing information and services provided by previous contacts and other current healthcare providers.

The definition of primary care is largely context-specific. The authors of this paper represent diverse health systems from North America and Europe, in nations having differing approaches to primary care — particularly concerning the role as a gatekeeper to the health system. Furthermore, the global shift from solo to group practice has profound implications for primary care. Both of the aforementioned issues will impact approaches to interprofessional education and to the provision of SDM.

Preference-sensitive decisions in primary care

Primary care encompasses decision-making in preventive care (e.g. immunization), urgent care (e.g. pneumonia), chronic disease management (e.g. diabetes), psychiatric care (e.g. depression) and medical emergencies (e.g. strokes). Although some decisions are relatively straightforward, in which benefits outweigh the risks (e.g. antibiotics for bacterial pneumonia) many decisions amount to a “toss-up”, with the benefits and risks being approximately equivalent. In these situations, decisions should be based on the patient’s informed preferences and values, that is, ‘preference-sensitive decisions’ (Wennberg, Fisher, & Skinner, 2002; Whitney, 2003).
To help patients and practitioners with preference-sensitive decisions, much research has been conducted in SDM (O’Connor et al., 2007; 2009) in primary care. SDM is a process that helps patients arrive at an informed, preference-based choice. Ideally, SDM interventions target both the patient and the healthcare provider (Légaré, Elwyn et al., 2008) and can include patient’s decision aids, patient coaching, or communication skills training for health professionals (Coulter & Ellins, 2006).

The use of an interprofessional approach

Central to the challenge of learning and delivering SDM is how to engage different professions working in the same environment to provide consistent patient-centered care that supports patients in making informed, preference-based decisions. There is an increasing evidence to suggest that an interprofessional approach, defined as the “relationship between various professions as they purposely interact to work and learn together to achieve a common goal” (Reeves, Goldman, Sawatzky-Gorling, & Burton, 2008, p. 5), could be a key strategy to achieve this (Bilodeau et al., 2010; Towle et al., 2010).

Primary care is strategically placed to provide SDM. An interprofessional approach is of great importance, given the range of therapeutic options, competing demands to balance resources such as time and money, and difficulties in ensuring coordination and continuity of care. The coordination of care by primary care health professionals to support patient-centered SDM may encompass professionals beyond primary care – such as patients seeking advice on treatments in tertiary care hospitals. An interprofessional approach to learning and practicing SDM would therefore, appear to be a logical step toward integrating consistency in supporting patients in preference-sensitive decisions across people, time and place. However, thus far, few interventions use an interprofessional, collaborative approach to teach and implement SDM in the primary care setting (Légaré, Stacey et al., 2008).

Teaching an interprofessional approach to SDM

Although it is possible that some core concepts and theoretical framework for interprofessional collaboration were taught systematically during pre-licensure or post-licensure education, it is more realistic to expect that most professionals involved in primary care lack such knowledge and acquired some of the relevant skills more haphazardly during training and clinical practice.

A two-part review highlights key elements for consideration in planning and implementing interprofessional educational interventions. The review also highlights success factors in interprofessional education, including many critical micro- (individual), meso- (institutional) and macro- (socio-cultural) level factors. Educators will also benefit from a proposed framework with outcome measures to utilize in planning and implementing interprofessional education programs (Oandasan & Reeves, 2005a; 2005b).

Knowledge, skills and teaching strategies

Through consensus discussion at the Dartmouth Summer Institute on Informed Patient Choice in 2008, we identified five areas of knowledge and skills needed by primary care providers and other team members for SDM in primary care preference-sensitive situations with patients/families: understand the concepts of SDM; acquire communication skills to facilitate SDM; understand professional values/sensitivities; understand the roles of different professions; and acquire the skills to implement SDM (see Table I).

Understanding the concepts of SDM

Prior to implementing SDM in a primary care setting, all relevant participants must have a firm understanding of what constitutes SDM, when it should be provided, the decision support tools that are available and the limitations of these tools.

Content: The SDM process assists patients to: understand their health situation, the relevant healthcare options and the uncertainties inherent in those options; clarify their personal preferences and attitudes towards the potential gains and

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harm inherent in those options; be clear about the social influences affecting their decision; and arrive at an informed, preference-based choice.

Patient decision aids have been defined as tools/interventions to help people make specific, deliberated choices among options (including the status quo) by providing information about the options and outcomes (e.g. benefits, harms) in sufficient detail that an individual could judge their value implicitly (O’Connor et al., 2007; 2009). Patients’ decision aids may also include information about the clinical condition, outcome probabilities tailored to personal risk factors, an explicit values clarification exercise (e.g. a relevance chart, preference-utility-assessments of probable outcome states), descriptions of others’ experiences and guidance in the steps of decision-making and communicating with others. Patient decision aids are intended to support clinician counseling. A Cochrane Collaboration systematic review of over 60 randomized controlled trials of patient decision aids found that, compared to usual care or simple information leaflets, these tools: improved knowledge; produced more realistic expectations; lowered decisional conflict; increased the proportion of people active in decision-making; reduced the proportion of people who remained undecided; and produced greater agreement between values and choice (O’Connor et al., 2003; 2009).

**Teaching methods:** The methods for teaching fundamental principles of SDM should incorporate key elements of adult learning—being practical, interactive and problem-based. When trained experts are present, this may involve the use of case studies and simulation exercises, in addition to focused readings and didactic lectures. The Ottawa Health Decision Center provides an extensive on-line auto-tutorial as well as an inventory of patients’ decision aids, the Cochrane Collaboration’s review of decision aids, a SDM framework and relevant outcome measures (see: www.ohri.ca/decisionaid). These learning resources are ideal in clinical practices lacking access to SDM experts.

**Gaining communication skills in SDM**

Communication skills training for clinicians, including primary care professionals, has been shown to increase patient satisfaction, knowledge and involvement in informed healthcare decision-making (Coulter & Ellins, 2007; Edwards et al., 2004; Hulman, Ros, Winnubst, & Bensing, 1999). However, research and training programs on SDM to date focus mainly on a single healthcare profession (Légaré et al., 2008). In primary care, different models of teaching and practicing communication and consultation skills have been used (Balint, 1955; Neighbour, 2004; Pendleton, Schofield, Tate, & Havelock, 1984). They also have utilized a dyadic approach, involving either a doctor-patient or a nurse-patient dyad. Dyadic models are not sufficient for interprofessional approach to teaching primary care professionals about the communication skills involved in the provision of SDM.

**Content:** Three types of communication skills are needed for interprofessional SDM: (i) basic communication skills; (ii) consultation skills; and (iii) interprofessional communication skills. Basic verbal and nonverbal communication skills are essential in any healthcare encounter, and have become an integral part of pre-/post-licensure medical and nursing curricula. They reflect a potential area for common learning.

Consultation skills are particularly relevant in the primary care context because most primary care encounters occur within a consultation. Established consultation models include steps to support patients in decision-making (Balint 1955; Neighbour, 2004; Pendleton et al., 1984). At the end of the training, the learners should be able to: interview patients in an efficient and sensitive manner (interview technique); explain risks and benefits of their management options accurately and objectively (risk communication skills); communicate effectively with low-literacy patients, elicit patients’ values and preferences; recognize and address decisional conflict; and identify and respond with sensitivity to cultural differences.

The third set of communication skills focus on establishing and enhancing primary healthcare team internal communication, around the common goal of providing SDM to their patients. Interprofessional interventions have been shown to improve the understanding of how communication skills could grow and develop across professions (Reeves et al., 2008). Essential interprofessional communication skills include handling and resolving conflicts (with patients, colleagues, health authorities) and organizing and facilitating meetings (for example, clinical meetings to discuss patient management). Acquiring negotiation skills are particularly important in managing power relationships among professionals in primary care settings. However, there is limited evidence about whether an interprofessional approach in the primary care setting actually leads to improved interprofessional communication.

**Teaching methods:** It is well established that communication skills can be taught (Aspegren, 1999; Hulman et al., 1999; Lewin, Skea, Entwistle, Zwarenstein, & Dick, 2001) and such skills can be retained for several years (Oh, Segal, Gordon, Boal, & Kotkowitz, 2001; Rudner, Bestvater, & Bader, 1990; Smith et al., 1991). Existing literature on communication skills training presents a wide range of teaching methods (instructional versus experiential), delivery formats (individual versus small or large group; textbook versus interactive media), teachers (peers versus medical academics versus standardized or actual patients) and assessment methods (observation of interactions with a checklist versus patient feedback versus objective structured clinical examination; van Nuland, Hannes, Aertgeerts, & Goedhuys, 2005).

Communication skills training in interprofessional SDM will likely require multiple teaching methods. Basic communication and consultation skills can be conveyed using the teaching methods mentioned above. Risk communication training could be supported by the use of SDM technologies, such as patients’ or clinicians’ decision aids. Interprofessional communication training could mirror general interprofessional education teaching approaches, using a combination of interactive learning methods, seminar-based discussion group, problem solving and role-play activities (Reeves et al., 2008). We propose a dual-pronged approach, which is both practice- and skill-oriented: (i) standardized presentations of core knowledge and skills on topics such as conflict resolution,
risk communication and dealing with low-literacy patients. In settings where there is a lack of expertise, the presentation would be replaced by a videotape or DVD; (ii) interactive sessions, including simulation exercises and partner-based (‘pair and share’) exercises. These exercises would involve role-playing of a clinical scenario where different members of the primary care team are required to support patients as they make a healthcare decision. Such an exercise will allow the healthcare professionals to reflect how they communicate and whether that could affect patients’ decision quality and outcomes. The goal would be to allow learners to acquire essential communication skills and to avoid pitfalls when supporting patients in their decision.

**Understanding professional values/sensitivities**

Understanding the roles of the individual professions is important in creating an atmosphere of collaboration (see below). However, understanding professional values/sensitivities and contributions of other participants also are important for creating an effective primary care team.

**Content:** Although professionals involved in providing primary care share a common goal of providing high-quality patient care, each profession has its own contribution to the delivery of primary care services. This third area of preparation targets knowledge needed to eliminate any devaluing of other professions and, instead, to create a collaborative environment in which the capabilities of the variety of professionals involved in the primary care setting can be genuinely acknowledged and used (Billups, 1987; Suter et al., 2009).

We identified three key elements to this understanding: The first is to recognize and genuinely appreciate the contributions of all other participants in the primary care system. This recognition and appreciation extends beyond a simple understanding of the roles of different professionals in the patient workflow. Through appreciating diverse contributions to patient care in the practice of primary care, a richer understanding of the responsibilities of various professionals can be achieved. Appreciation of the social, political and individual practice contexts of the various professions is also necessary for effective understanding (Jacobs, 1987).

The second is to understand the differing professional practice values of other disciplines in the primary care system. As a result of the training and acculturation process, each profession has its own set of values. Understanding these values can provide insight into how the various professions approach patient care and interprofessional interaction. Exploring the similarities and differences in training and values can enable professional identity formation in the context of the team, niche forming and role definition (Billups, 1987).

The third element is appreciating the roles played by these different contributions/practice values in the interprofessional implementation of SDM. After learning about the contributions and values of the professions, teams can translate an appreciation of these roles into the context of providing SDM for patients.

**Teaching methods:** In order to convey effectively an understanding of professional values and sensitivities to learners, a variety of techniques may need to be employed, depending on where the professional is in the learning continuum. For those who are pre-licensure, more time-intensive methods such as cross-professional “shadowing” (e.g. doctors shadowing nurses or vice-versa, pharmacists shadowing nurses, etc.) may be helpful. Additional methods may include regular interaction with other professional students and observing and reporting on interprofessional teams in practice. For those who are post-licensure, methods that are consistent with issues arising in established practice may be used. General training that is not specific to particular primary care practices can be held. The Ohio State University developed interprofessional seminars on clinical practice that have been used as a model of interprofessional education using case studies (Harsh, Fewell, & Casto, 2000). Workshops using role-playing exercises, video-based simulation, on-line modules, or case studies also can be directed to intact primary care practice teams to take advantage of work-based learning among team members who interact with each other on a daily basis. Research has shown that continuing professional development programs can improve the understanding of roles and positive attitudes toward interprofessional collaboration (Curran, Sargent, & Hollet, 2007).

**Understanding different roles in the interprofessional framework**

Although a variety of regulations and certifications define the broad scope of practice of licensed health professionals, the actual roles of all primary care team members are context-specific. Thus, interprofessional role understanding is best captured in specific practice contexts.

**Content:** Understanding different professionals’ roles means that each professional understands fully the logistics of their particular team when it comes to SDM (e.g. who will first contact the patient, who is responsible for follow-up, etc.). Each professional must know his or her own role and the roles of others in the legal, medical and ethical senses within the primary care practice (e.g. knowing when and how patients’ confidential information can be shared with other professionals). An important aspect is to understand who is responsible for what when there are overlapping roles and responsibilities through developing explicit a priori rules and procedures.

**Teaching methods:** Interprofessional education enables practitioners to learn the knowledge and skills necessary for collaborative work, and is therefore a suitable approach to achieve understanding of one’s own role in relation to others (Hammick, Freeth, Koppel, Reeves & Barr, 2007). To clarify the different roles and responsibilities of the team members in SDM, methods of exchange-based learning are appropriate (Barr, 2002). All participants could present their own roles, responsibilities and the challenges they face in their roles. Participants would be encouraged to express views, exchange experiences and discuss cross-professional perceptions, assumptions and attitudes, to avoid breakdowns in communication caused by inaccurate assumptions about the roles and responsibilities of each other.

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Making a patient-centered workflow map for problem-based learning can lend more insight into the different roles of professionals (Smits, Verbeek & de Buisonje, 2002) and lead to role adjustments to improve primary care. In this method, the participants are presented with a particular health scenario from the patient’s perspective. They imagine who would be the first person to meet the patient, who would report the results of a diagnostic test, who will support the patient in making a decision, etc. The results of this discussion can be drawn as a flow chart. A variant of the patient-centered workflow map is the interprofessional communication map. In this approach, each team member maps out lines of communication with whom he or she must communicate when he or she deals with an individual patient issue or a health program issue.

Acquiring implementation skills

These are the skills required to introduce and maintain SDM as an intervention in daily care in an interprofessional manner. These skills are important for the sustainable and continuous practice of interprofessional SDM because professionals who seek to bring about change often meet barriers to that change. Implementation demands effective communication strategies and removal of hindrances to change by using techniques that are effective in practice (Davis & Taylor-Vaisey, 1997). It would be unrealistic to expect that professionals could implement interprofessional SDM as a clinical experience simply by conducting primary research and literature synthesis, followed by planned dissemination and implementation strategies (Kitson, Harvey & McCormack, 1998).

In a recent systematic review of studies of health professionals’ perceptions with regards to barriers to implementing SDM, the most frequently cited barriers were time constraints, lack of applicability due to patient characteristics and lack of applicability due to the clinical situation (Gravel, Legare & Graham, 2006). It is necessary to address these hurdles before beginning to implement SDM in clinical practice effectively. The most important facilitators for achieving successful implementation of SDM were provider motivation, positive impact on the clinical process and positive impact on patient outcomes (Gravel et al., 2006). Clinicians do seem to understand the value of SDM in clinical practice, and perhaps it may take local champions to close these psychological gaps and foster the implementation of interprofessional SDM around the shared goals of improved care processes and patient outcomes (Gravel et al., 2006).

Content: Professionals should have the basic skills to: (i) identify opportunities for SDM in the workflow; (ii) identify resources and capabilities for SDM; (iii) identify barriers to SDM and understand which barriers are modifiable and which are not and (iv) assess the adequacy of SDM provided in a particular setting. Barriers and facilitators can occur within an individual profession, at the patient level, within the social interaction and context, as well as in the organizational and economic context (Grol & Grimshaw, 2003).

Teaching methods: Implementation skills can be acquired through problem-based learning approaches. By means of an example of a healthcare decision, a “needs assessment” can be carried out to identify SDM opportunities, resources and barriers. Identified needs for SDM could be used as arguments for the implementation of SDM and could remove resistance by colleagues to the implementation of SDM. Making an organizational map can help to clarify who is involved in providing SDM and which barriers and facilitators can be identified in each part of the organization. To tailor this to the particular professional, he or she can make an ‘ego-centric’ organizational map, with him or herself in the middle of the map. In addition, case studies of successful and unsuccessful implementation of SDM in primary care settings can be presented as educational opportunities.

A clinical example

Below we describe a common primary care clinical scenario where interprofessional training in SDM could improve patient care. A 49-year-old woman experiencing menopausal symptoms (hot flashes, night sweats, vaginal dryness) is concerned about whether or not to begin menopausal hormone therapy (HT). The benefits of HT treatment (symptom relief) are tempered by the associated risks of treatment (breast cancer, deep venous thrombosis, stroke and possibly heart disease). Like many women, she has a primary care provider (PCP), as well as a gynecologist whom she has been seeing for evaluation of abnormal Pap smears. During a recent visit, her gynecologist casually recommended HT for her menopausal symptoms and wrote her a prescription. The gynecologist minimized the potential risks of HT, citing the short duration of treatment and the low dose recommended. Because of the limited time available and the hurriedness of the gynecologist, the patient did not have time to formulate or ask questions about this treatment. She subsequently discussed this treatment with her friends and searched on-line for information. Uncomfortable with the potential side effects of HT and puzzled by the lack of information on the specific product she was prescribed; she did not fill the prescription, but instead scheduled an appointment with her PCP. Her PCP who also had very little time to spend with her, informed her of the risks of HT treatment and reminded her that she was at elevated risk of breast cancer (her 71-year-old mother had been recently diagnosed with early stage breast cancer). To help answer her many questions about HT, her PCP referred her to a pharmacist educator affiliated with the practice. The pharmacist informed the patient of the many risks and benefits of HT but made no treatment recommendation.

The patient remained uncertain about treatment and did more searching on-line, where she learned about relevant herbal products. She opted to try an herbal treatment for symptom relief, which seemed to be a safer alternative. She did not inform any of the professionals involved with her care that she was taking herbal products because she felt that they would not approve of nontraditional treatments. Had each of these professionals been trained in patient-centered, interprofessional SDM, they might have been able to understand each of their roles with the patient, the conflicting messages they sent the patient and be better able together to guide the patient into making a good decision. The patient would have been
made aware of all her treatment options early on, their risks and benefits and how to make a choice that was most consistent with her personal values and preferences. She would also have been guided to an unbiased decision aid to assist her choice. This approach would counter the apparently conflicting information given her by different professionals, reflecting their personal and professional biases. It would make it more likely that she would receive the treatment most appropriate for her and receive more support for her decision.

Discussion

We believe that this article outlines essential knowledge and skills that must be addressed as part of competency development if a team is to adequately implement patient-centered SDM in primary care. To summarize, we propose preparation in five areas. These include understanding the concept of SDM; acquiring relevant communication skills to facilitate SDM; understanding professional values/sensitivities; understanding the roles of different professions within the relevant primary care group; and acquiring relevant skills to implement SDM. We have outlined a framework for educators to construct their own teaching models, which are largely context-specific and employ elements from adult learning such as problem-based learning and role-playing exercises. The knowledge and skills proposed here could serve as preliminary evaluative criteria; future educational curricula could be evaluated in terms of how closely and how well they address each of the areas of learning proposed here. The next step would be to design robust outcome measures to evaluate achievement of the proposed knowledge and skills and whether a learner can then successfully demonstrate competency in interprofessional SDM. Future researchers should also focus on the duration of behavior change associated with these educational interventions. For the above framework to be effective, it must produce long-term attitudinal and behavioral changes in healthcare professionals clearly demonstrating that they consider the interprofessional provision of SDM as a high-priority aspect of primary care. Future researchers also could study whether and how the introduction of evidence-based (and equitably enforced) policies and regulations endorsing the provision of patients’ SDM support impact clinicians, patients and interprofessional teams, including attitudes and practices about providing interprofessional SDM.

There are several limitations associated with this work. The process used for identifying core knowledge and skills and for developing our framework was neither extensive nor systematic. It was based on the collective expertise of participants (the coauthors), supplemented by a nonsystematic review of the published literature on the subject. Although many clinicians were included in this process, representing a number of different countries, they were all primary care physicians. Our group did include two nonclinicians (public health), but no specialists or nonphysician healthcare professionals were included. The approach outlined has not been validated either among primary care providers or among multiple health professions. We acknowledge gaps in knowledge as to how team members will handle psychological obstacles that may prevent them from taking the first steps towards implementing SDM in practice.

Acknowledgements

A report entitled ‘Interprofessional education about patient decision support in primary care’ was presented at The Dartmouth Institute for Health Policy and Clinical Practice’s 2008 Summer Institute on Informed Patient Choice. Funding for the conference was made possible in part by 1R13HS017378-01 from the Agency for Healthcare Research and Quality (AHRQ) and in part by the Foundation for Informed Medical Decision Making (FIMDM).

Declaration of interest

The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

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