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Review article

Training health professionals in shared decision making: Update of an international environmental scan

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ABSTRACT

Objective: To update an environmental scan of training programs in SDM for health professionals.
Methods: We searched two systematic reviews for SDM training programs targeting health professionals produced from 2011 to 2015, and also in Google and social networks. With a standardized data extraction sheet, one reviewer extracted program characteristics. All completed extraction forms were validated by a second reviewer.
Results: We found 94 new eligible programs in four new countries and two new languages, for a total of 148 programs produced from 1996 to 2015—an increase of 174% in four years. The largest percentage appeared since 2012 (45.27%). Of the 94 newprograms, 42.55% targeted licensed health professionals (n = 40), 8.51% targeted pre-licensure (n = 8), 28.72% targeted both (n = 27), 20.21% did not specify (n = 19), and 5.32% targeted also patients (n = 5). Only 23.40% of the new programs were reported as evaluated, and 21.28% had published evaluations.
Conclusions: Production of SDM training programs is growing fast worldwide. Like the original scan, this update indicates that SDM training programs still vary widely. Most still focus on the single provider/patient dyad and few are evaluated.
Practice implications: This update highlights the need to adapt training programs to interprofessional practice and to evaluate them.
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1. Introduction

With increased emphasis on engagement of patients as partners in their care [1], there is a rapidly growing body of knowledge regarding new decision-making models. One such model, shared decision making (SDM), defined as a decision-making process jointly shared by patients and their health care providers [2,3], is attracting particular interest.

Some national healthcare systems have explicitly integrated SDM into their policies, and even invested and legislated in its favor [4–6]. Yet there is broad agreement that few healthcare professionals are adopting it [6–9]. Several studies have shown that interventions targeting healthcare professionals can improve their adoption of SDM [10], and a Cochrane review suggests that any kind of intervention is more likely to improve their adoption of SDM than none [11]. Previous work by our team suggest that modifying health professionals' attitudes through SDM training may significantly affect patients' willingness to engage in sharing decisions [12]. But without a global inventory of SDM training programs in the field of health, published and unpublished, formal and informal, these lessons remain incomplete.

Environmental scanning is a method of external analysis used to collect and organize information on the contexts and trends in an organization's external environment that may impact its strategic planning and decision making. The method originated in the world of business but is increasingly used in healthcare organizations and in health research, and is recognized as a valuable tool in health decision making [13]. Between 2009 and 2011, our team conducted the first ever environmental scan to identify training programs around the world that aim to enhance health professionals' knowledge and skills in SDM, and to analyze the programs [14,15]. We concluded that while SDM training was garnering significant attention in many countries, there was no consensus on the best approaches to help healthcare professionals build their SDM knowledge and skills. Another key finding was the dramatic increase in the number of programs created in the last three years of our scan, i.e. from 2008 to 2011 (27 out of 54). It was clear from the continuing interest in implementing SDM among policy makers [16], the mixed evidence about what works [11], as well as a growing demand for the programs themselves, that the rapid production of new programs should be monitored and that an update of the scan would eventually be warranted. We thus began to regularly monitor program development in 2011 and made an inventory of SDM training programs available online as of June 2011. We therefore updated our environmental scan of SDM training programs for health professionals to maintain the online inventory and inform curriculum developers and policy makers about what is new or different in the field of SDM training programs.

2. Methods

Our initial environmental scan has been published and is available online [14,15]. The following is a summary of our methods for this update.

2.1. Data sources and searches

We identified SDM training programs in all fields of healthcare through three main sources: (i) systematic reviews in the field of SDM, (ii) structured Google™ searches, and (iii) requests and periodic searches of social media networks (Facebook and Twitter). Briefly, we reviewed the reference lists of the two recently published systematic reviews on SDM and its implementation in clinical practice [11,17]. Our team is also currently updating the Cochrane review of SDM interventions in healthcare [11], which allowed us to identify training programs included in studies published since 2012. From November 2011 to November 2015, trained research assistants performed a weekly search in Google™ using the following keywords: ("shared decision making" OR "patient engagement" OR "patient involvement") AND (embedding OR training OR education). These searches were monitored regularly for quality by one of the authors (HR). Finally, we posted on the Shared@EACH Decision Making Group on Facebook, asking members to (i) tell us about any training activities or SDM programs targeting health professionals, (ii) provide us with the names of organizations and individuals likely to know about such activities or programs, and (iii) inform us as to whether their organization offered an SDM training program or activity (and if so, to provide us with the material used for the activity or the name of the person in charge). We also searched Twitter for new programs. These search strategies were used in a sequential order and duplicates were then not considered. We did not limit our searches by language; only training programs containing at least a title or abstract in English have been retrieved.

2.2. Program selection and data extraction

All training activities whose objectives related to improving knowledge of SDM among health professionals were eligible for inclusion, and henceforth are referred to as 'programs'. To be eligible, the program had to meet the following criteria: (a) contain a SDM component, i.e. have as an objective to involve patients in clinical decision-making, (b) consist of a training activity conducted live for a group, as an online course, or as a traditional course (i.e. a course integrated in an academic program), and (c) use a recognized instructional method (e.g. lectures, workshops, case studies, demonstrations, role play, small group discussions). We purposely established very broad inclusion criteria to identify as many SDM training activities as possible from around the world and to capture the full breadth of methods used. Trained reviewers screened data sources for eligible programs using a standardized form detailing eligibility criteria. PubMed and Google™ were also searched to retrieve published or unpublished evaluations of the identified programs. Any type of evaluation was considered (e.g. satisfaction with the training, knowledge test, self-reported competence, etc.). Programs cited by their developers as evaluated but not published were also included. One reviewer screened and assessed each program retrieved for its eligibility, and two different reviewers (NTD, HR) confirmed eligibility. In case of disagreement a senior team member (FL) reviewed the program. Reviewers then extracted the following characteristics from eligible programs: program name, author information, date of creation or publication, country of origin, language used, level of care (primary or specialty), clinical domain, health profession(s) targeted, interprofessional focus or not, educational format and duration of training sessions. For each program identified by the new scan, we searched for material used in the program and any descriptions or reports published about them in databases or elsewhere.

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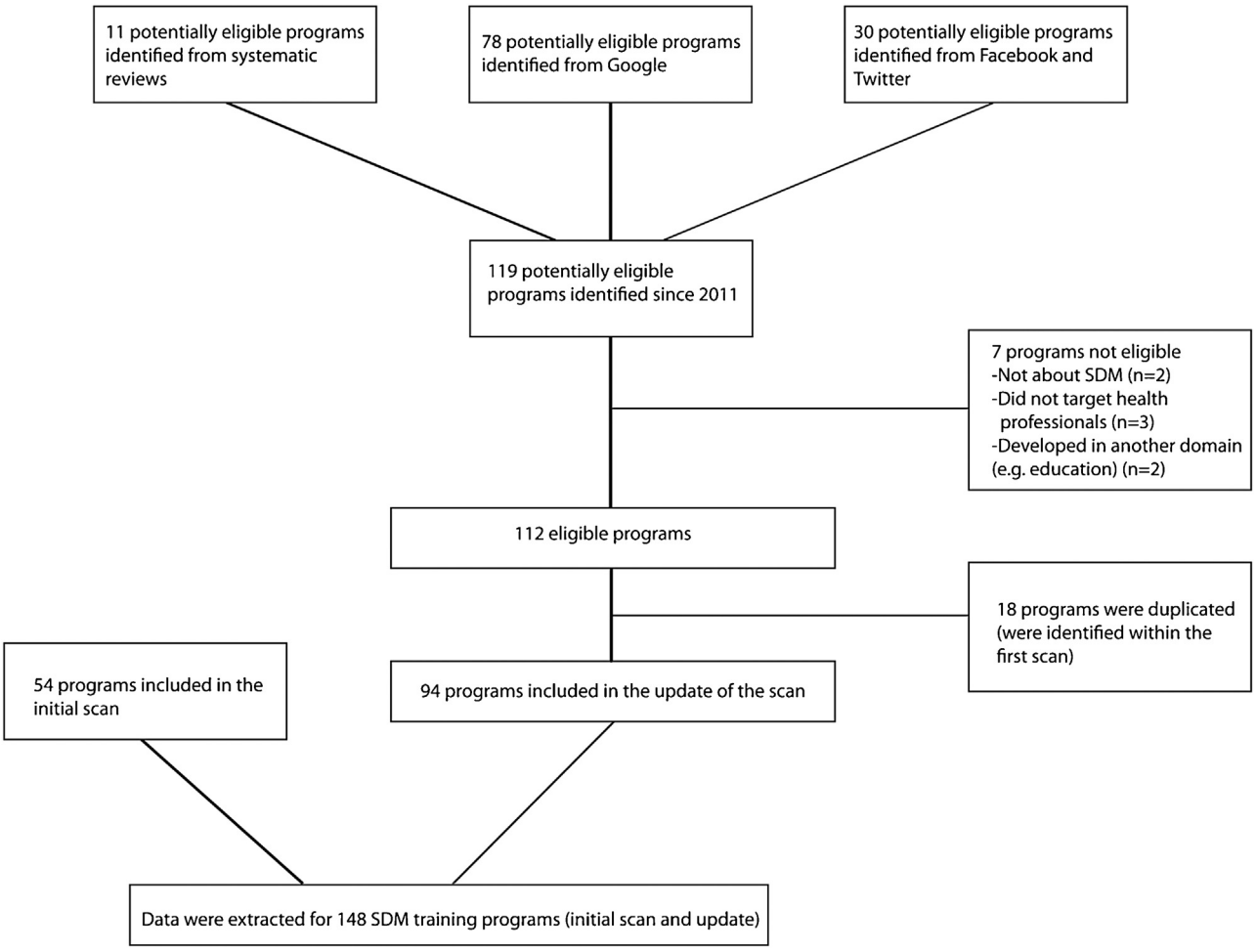

Fig. 1. Flow scheme of the environmental scan.

2.3. Data analysis

We recorded the main program characteristics in an Excel file and used descriptive analyses to summarize them.

3. Results

3.1. Combined scan

The flow scheme of the environmental scan is presented in Fig. 1. Between November 2011 and November 2015, we identified 119 new potentially eligible programs with our search strategy. Of these, 94 were considered eligible and were thus added to the 54 programs identified by our initial scan, representing a 174% increase over four years. The two research periods together produced a total of 148 programs developed in 18 countries and in 12 different languages. A small majority (54.05%) targeted more than one kind of healthcare professional and nearly three-quarters (71.62%) were generic, i.e. for use in any clinical context. While 43 of the programs have been evaluated, only 37 program evaluations have been published in articles available in a database (e.g. PubMed). Main characteristics of the programs are summarized in Table 1, while full program details are provided in Supplementary file 1.

3.2. Characteristics of new programs found

Among the 94 new programs identified in our update, 67 had been created since 2011. As was the case with the initial scan, most programs were developed in North America or in Europe, though important growth in program development was observed in Australia. The new scan also identified programs in four additional countries (Japan, South Korea, Chile and Israel) and in two more languages (Korean and Japanese). The vast majority (74.47%) of the new programs were designed to be applicable in a broad range of clinical areas (i.e. generic programs) or in the context of chronic diseases (17.02%), especially cancer (8.51%). Nearly half targeted licensed health professionals, while one quarter were designed for both licensed professionals and those in training. Of the 94 new programs, 68.08% were multiprofessional in nature, i.e. they targeted more than one type of professional or any professional, a much higher percentage than in the first scan (29.70%). Like the first scan, only a minority of the new training programs (n = 7, 7.45%) had an explicitly interprofessional focus, i.e. targeted the participation of the whole healthcare team in a decision, taking into account the differing roles of each team member in the same decision. Five new programs (5.32%), however, targeted not only health professionals but also patients. Regarding program evaluations, fewer were found in the second scan (21.28%) than in the first (31.50%), and fewer of these were published in the second (23.40%)

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Table 1
Characteristics of SDM training programs.*

Characteristics	Initial scan (N = 54) n (%)	Update (N = 94) n (%)	Total (N = 148) n (%)
Year created			
1996–2001	4 (7.41)	2 (2.13)	6 (4.05)
2002–2007	14 (25.93)	4 (4.26)	18 (12.16)
2008–2011	27 (50.00)	20 (21.28)	47 (31.76)
2012–2015	–	67 (71.28)	67 (45.27)
Not specified	9 (16.67)	1 (1.06)	10 (6.76)
Location			
North America	31 (57.41)	52 (55.32)	83 (56.08)
Europe	20 (37.04)	29 (30.85)	49 (33.11)
Australia	3 (5.56)	10 (10.64)	13 (8.78)
Asia	–	2 (2.13)	2 (1.35)
South America	–	1 (1.06)	1 (0.68)
Context of care			
Primary care	34 (62.96)	12 (12.77)	46 (31.08)
Multiple contexts	2 (3.70)	42 (44.68)	44 (29.73)
Specialty care	2 (3.70)	18 (19.15)	20 (13.51)
Both primary and specialty care	7 (12.96)	2 (2.13)	9 (6.08)
N/A	9 (16.67)	8 (8.51)	17 (11.49)
Other	–	12 (12.77)	12 (8.11)
Clinical area			
Generic	36 (66.67)	70 (74.47)	106 (71.62)
Cancer	5 (9.26)	8 (8.51)	13 (8.78)
Other chronic diseases	3 (5.56)	8 (8.51)	11 (7.4)
Palliative care	3 (5.56)	–	3 (2.03)
Pre-natal screening	2 (3.70)	1 (1.06)	3 (2.03)
Rehabilitation	1 (1.85)	2 (2.13)	3 (2.03)
Other	4 (7.41)	5 (5.32)	9 (6.08)
Health professionals targeted			
Physicians/residents	32 (59.26)	23 (24.47)	55 (37.16)
Any professional	7 (12.96)	48 (51.06)	55 (37.16)
Multiple professionals	9 (16.67)	16 (17.02)	25 (16.89)
Nurses	3 (5.56)	3 (3.19)	6 (4.05)
Other	3 (5.56)	1 (1.06)	4 (2.70)
Not specified	–	3 (3.19)	3 (2.03)
Pre or post licensure			
Post-licensure	33 (61.11)	40 (42.55)	73 (49.32)
Both pre- and post-licensure	11 (20.37)	27 (28.72)	38 (25.68)
Pre-licensure	10 (18.52)	8 (8.51)	18 (12.16)
Not specified	–	19 (20.21)	19 (12.84)
Interprofessional focus			
No	51 (94.44)	87 (92.55)	138 (93.24)
Yes	3 (5.56)	7 (7.45)	10 (6.76)
Patients also targeted			
No	54 (100.00)	89 (94.68)	143 (96.62)
Yes	–	5 (5.32)	5 (3.38)
Program evaluation			
Evaluated	21 (38.89)	22 (23.40)	43 (29.05)
Evaluation published	17 (31.48)	20 (21.28)	37 (25.00)

* Totals of each category may not equal 100% because of rounding.

than in the first scan (31.50%). Published evaluation data was found for only 25.00% of all the programs; however, 35.00% of the total programs were produced as of 2014 and thus may be the focus of ongoing or unpublished evaluations.

4. Discussion and conclusion

4.1. Discussion

In this updated international environmental scan of SDM training programs, we identified 94 new programs, for a total of 148 programs developed since 1996 (the selection detail is shown in Fig. 1). The largest number of these programs (67) appeared after 2012, representing a proportion of 45.27% of all identified programs. Our findings lead us to make four main observations.

First, as in the initial environmental scan, most SDM training programs continue to be developed in North America and Europe, led primarily by the United States, Canada, and United Kingdom. Australia has become an important producer of SDM training activities since 2012. However, even in countries where SDM is officially endorsed by the government, such as the United Kingdom and the United States [18–20], there is evidence that SDM is still not widely practiced in routine care [8]. A survey in Japan showed that patients there do want to be more involved in healthcare decision-making [21] and new programs have been created in Japan and South Korea. Other Asian countries are challenged by

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scarce healthcare resources and an overburdened healthcare system [22]. Furthermore, we were still unable to identify any SDM training programs in Africa, India, Russia, South America or China, perhaps an indicator that the approach has not taken hold in these contexts. Training health professionals in SDM with existing western models may not be appropriate in all non-western countries given that healthcare decisions of individuals are strongly affected by different family and community traditions, as well as by diverse concepts of harmony and filial piety linked to different religious or moral codes [23,24]. It might be important to investigate different possible cultural interpretations of SDM in these parts of the world and adapt health care training in this social context.

Second, in the last few years there appears to have been a shift from programs that target specific clinical areas and professional groups, mostly physicians, to programs that are multiprofessional, or open to a broad range of professionals in diverse contexts. While this shift may reflect desires to promote the broad adoption of SDM, making SDM training accessible to a larger number of people and making the process more efficient, the programs still seem largely based on a dyadic model of care where the decision is shared between one healthcare professional and one patient. However, with the demographic changes in many industrialized countries leading to an increase in chronic disease management, decisions in many clinical contexts are now made with the collaboration of many healthcare professionals. In other words, a whole interprofessional team is involved in a single healthcare decision instead of a patient-professional dyad [25]. Training needs to include and be adapted to this new reality. We have identified a total of only 10 programs out of 148 that adopted an interprofessional approach, although there was a slight increase in such programs since 2011 (7 more). However, as two-thirds of programs are generic in terms of clinical context, these programs may more easily accommodate the notion of interprofessional collaboration than the context-specific ones. Finally, there are still very few programs that target pre-licensure healthcare professionals only, and so very few programs are mandatory. Moving SDM implementation into clinical practice beyond the traditional dyad could start with training pre-licensure healthcare professionals in interprofessional SDM, especially as many aspects of collaborative care are already integrated into the academic curricula.

Third, a new trend since our first publication is the participation of patients in programs' sessions, which occurred in five of the training programs produced since 2014. Patient involvement in the management of their health has been shown to improve patient outcomes [26], and is becoming a common strategy by which policy makers strive to improve healthcare in an evidence-based manner. The Canadian Institutes of Health Research's Strategy for Patient-Oriented Research (SPOR) [27], for example, supports patient involvement in designing interventions. In the same vein, patient participation in training sessions can help both them and health professionals to better understand why it is important for them to participate in the decision process about their health. Patients first appeared as educators for healthcare professionals in the 1960s [28] and, in the 1970s, Barrows and Abrahamson proposed the concept of "programmed patients" teaching clinical skills to doctors [29], leading to the development of patient instructor programs [30–32]. Experience has demonstrated the great potential of patient educators to promote patient-centered practice, interprofessional collaboration, community involvement, and SDM [28]. Since the goal of SDM is ultimately to benefit the patient, it is logical for developers of SDM training programs to consider including patients in program development and delivery.

Lastly, it is still difficult to assess the effectiveness of these programs for improving knowledge and practice among healthcare professionals owing to the lack of evaluations. In our new scan, fewer than one quarter of the programs we retrieved had published evaluations. While the hypothesis of this review was that training healthcare professionals may be an important intervention to improve implementation of SDM [11,16], our results cannot confirm this hypothesis. In addition, in keeping with the conclusions of a systematic review on interventions intended to improve SDM [11], we can say little more about which *types* of intervention are more effective than others. In addition to the lack of published evaluations, another difficulty in assessing training programs is the dramatic differences in their duration; the 148 selected programs varied in duration from 30 minutes to 30 hours. In reviewing future evaluations, the impact of program duration will be worth further investigation.

The present findings are limited by several factors. First, it remains possible that we missed some SDM training programs. We searched the reference lists of two Cochrane systematic reviews [11,17] and identified newer programs through an ongoing update of the review on SDM interventions [11]. However, this latter search ended in December 2014 and we may have missed more recent programs. Our searches in Google™ and in social media helped to mitigate the risk of missing programs not captured through the systematic reviews. Still, Google™ search algorithms can produce different results when searches are conducted at different times or places (outputs influenced by users, locations, browsing history, etc.). Our social media strategy also focused solely on Facebook and Twitter and it is possible that additional programs would have been retrieved had we expanded our searches to online communities such as ResearchGate or LinkedIn. We suggest that future environmental scans explore the value of searching websites of this type. Also, our searches in Google™ and social media were conducted in English only and thus training programs providing no information in English may have been missed. Second, the search strategy for the environmental scan update changed because our main goals were to identify SDM training programs from around the world and importantly maintain our online inventory of training programs up-to-date over time [33]. Unlike for the first scan, in this update authors were not contacted in order to collect data that would allow an in-depth analysis of their programs. This limitation is the main reason why some findings in the first scan were not compared with those in the second scan. For example, additional data on teaching methods was not assessed as we did not contact the authors for this information. The large number of programs that have not been evaluated is another limit to our understanding of the effectiveness of these training programs and the factors influencing the implementation of SDM in different contexts.

5. Conclusion

This scan was valuable in helping us identify several trends in training activity development and in providing us with the information needed to update our freely accessible online inventory of SDM training programs [33]. Our results show that interest in SDM training is spreading to new parts of the world and that there is a new interest in opening programs to patient participation. However, although programs are increasingly generic, interprofessional collaboration still seems neglected. As few programs are rigorously evaluated, if at all, it is still difficult to know which kinds of training are most effective.

5.1. Practice implications

Due to demographic changes in many industrialized countries and the related increase in chronic diseases, healthcare is increasingly provided by interprofessional teams, so that several healthcare professionals may be involved in a single healthcare

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decision instead of just one. SDM training programs, which mostly focus on the healthcare provider/patient dyad, need to adapt to this new reality. In addition, as few training programs target pre-licensure healthcare professionals, it would be interesting to integrate SDM training into the mandatory academic curricula of health professionals to ensure a better dissemination of interprofessional SDM. This update also points to a continuing lack of evaluated SDM training programs, making assessment of their effectiveness difficult. Developers and providers of SDM training thus need to a) target interprofessional teams and b) assess their programs.

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Conflict of interest

The Canada Research Chair in Shared Decision Making and Knowledge Translation mission is to provide health professionals and their patients with the necessary skills to promote shared decision-making throughout the healthcare continuum. Therefore, it has produced a number of shared decision making training programs that are included in this scan.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.pec.2016.06.008.

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