



Original research article

An in-depth analysis of the use of shared decision making in contraceptive counseling[☆]Margaret Chen^{a,1}, Alexa Lindley^{a,1}, Katrina Kimport^b, Christine Dehlendorf^{a,b,c,*}^a University of California, San Francisco, Department of Family and Community Medicine, 1001 Potrero Ave., San Francisco, CA 94110^b University of California, San Francisco, Advancing New Standards in Reproductive Health, Bixby Center for Global Reproductive Health, 1330 Broadway, Suite 1100, Oakland, CA 94612^c University of California, San Francisco, Department of Epidemiology & Biostatistics, 1001 Potrero Ave., San Francisco, CA 94110

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ABSTRACT

Objective(s): Shared decision making (SDM) has emerged as a useful tool to promote patient-centered communication and is highly applicable to contraceptive decision making. Little is known about how SDM is operationalized in contraceptive counseling. This study aimed to explore and describe how SDM is used in the contraceptive counseling context.

Methods: We analyzed a selection of transcripts from a larger study of 342 audiorecorded visits in which contraceptive counseling occurred in the San Francisco Bay Area. A previous study team had identified 106 transcripts that demonstrated principles of SDM. We randomly selected 40 transcripts from this group for deeper analysis. We coded transcripts using directed content analysis to understand the process of SDM in the context of contraceptive counseling. We focused on how the previously identified phases of SDM (information sharing, deliberation and decision making) occurred in these visits and identified emerging themes.

Results: Rather than consisting of distinct phases, our analysis found that, in contraceptive counseling, the information sharing and deliberation stages of SDM were largely integrated in an iterative back and forth process between patient and provider. The final decision-making phase was directed by the patient, who retained the final choice.

Conclusion: Our analysis found that the use of SDM in the contraceptive counseling context reflected the intimacy and complexity of contraceptive decision making. These findings can be used as a foundation for future work to develop training designed to integrate SDM in a manner appropriate to the context of contraception, including prioritizing patient autonomy and acknowledging preexisting preferences of patients.

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1. Introduction

In the health communication literature, there has been increasing emphasis on engaging with patients as partners in their health care, with shared decision making (SDM) being one tool to empower patients in the health care interaction. In this model of health communication, patients and providers make health care decisions together, with

patients providing expertise on their values and preferences and providers offering their medical knowledge about the range of available options, as well as giving support to patients in considering these options [1]. This approach is motivated by a desire to move away from the dominant paradigm of the provider being the sole and authoritative decision maker, especially in preference-sensitive decisions in which there is no one best option from a medical perspective [1]. Previous studies have found that the SDM approach is often consistent with patient preferences [2], and interventions to promote SDM are associated with better health outcomes [3].

Given the numerous contraceptive options available to most women and the range of women's preferences for different contraceptive features [4], selection of a contraceptive method is a preference-sensitive decision and therefore appropriate for SDM. Qualitative research has suggested that providers engaging with patients through SDM during contraceptive counseling is consistent with patient preferences [5]. In addition, a quantitative study found that women who reported sharing decision making with their provider around contraception were more

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likely to be satisfied in their experience than those who engaged in a patient- or provider-driven decision [6]. However, a qualitative analysis of provider approaches in contraceptive counseling visits found that interactive counseling consistent with SDM were absent in the majority of visits analyzed in the study's sample [7]. Taken together, these findings support the need for increased dissemination of SDM as a patient-centered approach to communication for contraceptive counseling.

Models of SDM have been described that can be used as a starting point for SDM in contraceptive counseling [1,8]. However, contraceptive decision making has unique characteristics that may influence the use of this approach in this context. These characteristics include its personal and intimate nature, which can influence the nature of the interpersonal interaction between providers and patients. In addition, the fact that women have the potential need for contraception over the several decades of their reproductive life and often have repeated contacts with providers for contraceptive counseling over this time [9], as well as the influence of social networks on contraceptive choice [10,11], means that women have preexisting experiences and preferences that can influence their decision. This stands in contrast to the medical decisions discussed in much of the SDM literature, which often focuses on medical decisions that are made on a one-time basis and does not presume preexisting knowledge or preferences [12]. Finally, in the absence of relatively rare contraindications, women have 10 or more contraceptive methods available to them, making this decision more complex than many to which SDM has been applied.

As studies have found that women frequently are dissatisfied with the contraceptive counseling they receive [13], exploring the application of SDM to contraceptive counseling provides an opportunity to inform interventions designed to improve communication between patients and family planning providers. Not only is this important from the perspective of optimizing patient experience of health care [14], but it also has relevance to women's ability to use contraception, as women's experience of contraceptive counseling is associated with improved use of contraception [15,16]. Here, we use audio recordings of contraceptive counseling visits in which strategies consistent with SDM were used to explore how providers operationalize the practice of SDM in the unique context of contraceptive counseling.

2. Methods

We selected a sample of transcripts from a larger study (the Patient-Provider Communication about Contraception, or PPCC, study) of 342 audiorecorded visits in which contraceptive counseling occurred in the San Francisco Bay Area between 2009 and 2012. The final author of this paper has described the PPCC study previously [15]. Briefly, women were recruited and consented at the time of their visit to one of six clinics. They completed previsit surveys about their demographics, and their visit was then audiorecorded. All participating providers were consented and completed a one-time demographic survey, which included age, race/ethnicity, gender, professional degree and specialty.

A prior study team analyzed these transcripts using grounded theory in order to define the counseling approach for contraception used and identified three models of counseling: foreclosed, informed choice and interactive counseling consistent with the principles of SDM [7]. Of the 342 transcripts coded in the PPCC study, they determined that 106 demonstrated SDM. These visits were characterized by an interactive process where both the provider and patient participated in information sharing and method selection. However, even when providers use SDM, it may not be a conscious decision, and its implementation can be variable. In order to understand how SDM occurs in contraceptive counseling visits, we randomly selected 40 transcripts from the SDM group for in-depth analysis. In order to select these transcripts, we used the Stata "sample" command to select a random sample of transcripts previously coded as being consistent with SDM. As we hypothesized that counseling may proceed differently in situations where patients expressed a

preference for a specific method, whether on the intake form or at some point during the visit, we conducted the random selection stratified by whether or not the patient indicated such a preference during their visit, which the original study team had determined from the audio recordings as part of the larger study.

3. Analysis

We analyzed transcripts from these visits, with a focus on discussion of contraception, using directed content analysis. In this type of qualitative analysis, the coding structure draws from existing research [17]. In this case, we referred to the general medical literature on the process of SDM to develop the initial coding structure and allowed additional themes to emerge from the data. Two coders conducted the analysis using Nvivo10 and Nvivo11 software. The coders were blinded to demographic information about both providers and patients. The coders met regularly to discuss emergent patterns in the data and to resolve areas of ambiguity. Following the model of Charles et al., this initial coding structure focused on the three phases of SDM that are generally described: information sharing, deliberation and decision making [1]. After coding five visits in which the patient had a preference and five in which they did not, we created a preliminary coding structure consisting of central themes. This structure included subcodes related to the three phases of SDM, including codes related to differences between the application and sequencing of these phases as compared to the previous SDM literature. In addition, we included emerging themes, such as how the process of interactive decision making was initiated, as well as codes related to differences between visits when the patient did or did not have a preference. Through an iterative process during group meetings, we refined the coding structure until consensus was reached, at which point we coded the remaining transcripts. We then created memos that summarized the coding structure, which we used to produce the results.

Table 1
Description of study sample, *n*=40

Patient demographics	
Age categories, years (%):	
<20	8
20–24	28
25–29	18
30–34	10
35+	38
Race/ethnicity (%):	
Black, non-Hispanic	35
Hispanic or Latina	25
White, non-Hispanic	40
Federal poverty level (%):	
<100%	40
101%–200%	15
>200%	45
Highest level education completed by parent/guardian (%):	
High school or less	41
Some college	23
College or higher	36
Birth history (%):	
No births	68
At least one birth	33
Visit and provider characteristics	
Contraceptive method selected at visit (%):	
IUD	48
Injectable (DMPA)	10
Pill	20
POP	8
Condoms	8
Other	8
Type of provider seen at index visit (%):	
Other provider	73
Physician (M.D., D.O.)	28
Have had a previous visit with provider seen at index visit (%):	
Yes	38
No	63

The UCSF Institutional Review Board approved all study procedures.

4. Results

Of the 40 patients included in this sample, 16 were white, 14 were black, and 10 were Latina, with 33% having had at least one birth (Table 1). Twenty-two women in the sample expressed a method preference; 18 did not. A total of 24 providers were represented in these 40 visits, with 1–5 visits per provider. Eighteen of the providers were white and six were nonwhite. Seventeen were nurse practitioners, certified nurse midwives or physician assistants, while the remaining seven were physicians. The mean provider age was 48, ranging from 35 to 74, and all but 1 were female (Table 2).

Thematic analysis of visits revealed that, while the visits generally followed the sequence described in the literature for SDM, including establishing rapport and proceeding through a process of information exchange, deliberation and decision making [1], the operationalization of SDM reflected the unique context of contraceptive counseling. As discussed in detail below, information sharing and deliberation occurred in an integrated manner through a back and forth process between patient and provider with a focus on patient preferences, with the final decision being made by the patient.

4.1. Initiation of interactive decision making

Providers often initiated the visit by using positive communication techniques in order to establish rapport. For example, early in the visit, they asked questions about the patient's personal life and relationships before moving specifically to contraception topics.

Providers generally engaged in an interactive manner around the contraceptive decision by asking questions. These questions were sometimes open-ended and sometimes more focused on the patient's reason for visiting the clinic, such as, "What brings you in — that you want to change methods, or different pill, or what's happening?" Patients would then share either a preference for a particular method or preferences regarding method characteristics. In other cases, providers initiated the conversation by asking what prior methods a patient had used. In both situations, after obtaining an initial answer to their question, providers did not foreclose the conversation by then focusing only on methods named but rather used this information to explore what method feature the patient liked or disliked, asking, for example, "So the thing that you like about the NuvaRing in particular? Did it make your periods lighter? And/or less painful?" In cases in which the patient initially expressed a clear preference for a specific method, providers initiated interactive decision making in different ways. In some visits, engagement with the provider revealed that the patient was in fact potentially interested in more than one method. For example, a

provider and patient engaged in SDM when a provider inquired about the patient's satisfaction with her current method, the contraceptive ring, and offered to discuss other options. This led to a discussion of patient preferences and information sharing about the intrauterine device (IUD). In a few cases, despite the patient expressing a preference, providers identified contraindications to the method that the patient preferred, which then precipitated a discussion of other methods to identify one that would be safe and best meet the patient's preferences.

4.2. Interactive information sharing and deliberation

Having begun the process of eliciting patient preferences for methods and/or method characteristics, providers used this knowledge to provide information about specific methods in which the patient was interested and others that aligned with their expressed preferences for method characteristics, while probing and reacting to the patient's response to this information. In this process, additional relevant preferences emerged as the patient and provider exchanged more information. This resulted in iterative narrowing of the shared list of possibilities for method options through the interaction between the information about method characteristics shared by the provider and the information about preferences shared by the patient. This iterative and discursive process of information sharing and deliberation is distinct from the sequential model described in the classic model of SDM, in which all information about available options is shared prior to initiating deliberation [1].

An example of a back and forth process in which patients' feelings about different methods and their characteristics were explored occurred in the following exchange, which was initiated by the provider probing about the patient's experience with the pill:

Patient: The good thing about the pill is that it helped me regulate my periods because I always, yeah. I have so many problems with my periods. Provider: Okay. What kind of problems are you having with your period or what goes on with your period? Patient: I usually don't get them. Like, I used to get them every three, four months and I was doing — then bleed every two, three weeks. I was just completely abnormal... Yeah, and with the Depo shot I used to bleed every day.

Having obtained information about the patient's experiences and preferences around menstrual bleeding, the provider then offered information about methods consistent with these preferences. This led to further probing about preferences around this narrower list of possibilities.

Provider: Okay, okay. And that can happen with the Depo....we don't want to put you back on if you had bleeding problems. So, a couple other questions, so the pill's a possibility. Another possibility, especially since you said you did have some problems with the pill is the vaginal ring. Have you ever heard of the vaginal ring? Patient: No — yeah, I have, but it's one of those things that I don't think I would like. Provider: Okay, why wouldn't you like it? What would you not like about it?

The provider and patient continued a back and forth process where the provider's questions elicited the patient's preferences and prior experiences with different methods and the provider shared information with the patient about different methods. This deliberation allowed the patient to express that the major factor in her decision about methods was the desire to avoid side effects, so she decided to continue using condoms and consider restarting the pill in the future.

During the information sharing and deliberation process, information requested by patients and offered by providers included that related to efficacy, benefits, side effects and complications, as well as details about the mechanism of action of methods and explanation or demonstration of use. Information communicated by patients was

Table 2
Demographic characteristics of provider study participants, n=24

Provider demographics	
Race (%)	
White	75
Asian/Pacific Islander	13
Hispanic or Latino/a	8
Other	4
Provider degree (%)	
M.D. or D.O.	29
N.P., P.A. or C.N.M.	71
Provider age (%)	
Under 46	42
46–55	42
56 and older	17
Provider gender (%)	
Female	96
Male	4

both spontaneously shared as well as prompted by the provider asking probing questions in order to elicit the patient's preferences. Patients provided information about their preferences and reactions to the information that was being given. For example, in one visit, a patient had a strong preference against a hormonal method, and she and the provider narrowed her options to the diaphragm and copper IUD. To help the patient adjudicate between these options, the provider then assessed how important the effectiveness of her method was, stating "there's always a possibility you can get pregnant with a diaphragm. If you're in a position where you don't — you absolutely don't want to get pregnant, you wouldn't have an abortion, then the diaphragm wouldn't be for you. But most people who use the diaphragm successfully don't get pregnant." This helped the patient to choose the IUD as a method that best met her preferences.

In general, when patients brought up concerns about methods, providers engaged in an SDM process with patients by responding to these concerns in a respectful manner. As an example, one provider responded to a patient who stated that amenorrhea would make her "uncomfortable" by stating:

Provider: There's lots of people who feel that way. From a medical standpoint, there's no reason to bleed. The reason you don't bleed when you have that, is that the progesterone — it keeps your uterus lining from building up. So, it's not like it's just there, building up and going crazy and then not bleeding out. But, I understand. Some people feel weird about that.

Providers also gave examples of other patients' thought processes to help patients consider their options. For example, when describing possible menstrual changes with a Mirena IUD one provider explained, "Some women say, 'That sounds great!' But there are other women who say, 'I'm very uncomfortable with that.' Even though they know there's nothing bad about it, it would not sit well with them. For those people, I would say that probably wouldn't be the IUD for you."

4.3. Method selection

While providers in the analyzed transcripts shared information and opinions and sometimes suggested methods, they ultimately deferred to the patient regarding the method decision. In many cases, the provider explicitly acknowledged the patient's decision-making control in a way that precipitated method selection, as in the following example.

Provider: Ok, well, take time to weigh your options, kind of mull over it. It sounds like no matter what we're going to have to do the exam so why don't I get things moving forward on that and then we can kinda... Patient: So I've gone over the various forms of birth control and none of them really sound good! But I think the IUD is the best. Provider: It's the one that you're most interested in. Patient: It's the one that best fits my lifestyle, for me, you know, the best match for me.

Although in the majority of cases in which a patient had a strong initial method preference they ultimately decided on that method, there were several encounters in which, through the SDM process, the patient selected a different method than that she initially preferred. Most often this was because the provider identified contraindications or introduced information about a potential side effect that led the patient and/or the provider to determine that this method was not the best choice. When the patient chose a method that was not her initial preferred method, it usually shared a characteristic of that method. As discussed in [section 4.2](#), the information sharing and deliberation process focused on preferred characteristics of methods, which facilitated the identification of acceptable methods. For example, a woman who initially stated that she preferred the long-lasting aspect of the contraceptive injection

but was concerned about its side effects decided on an IUD after SDM focused on her preferences.

5. Discussion

Contraceptive counseling visits characterized by interactive decision making included the use of core communication strategies consistent with SDM: elicitation of patient preferences, interactive information sharing and deliberation, and decision making. Specifics of how the SDM process was conducted in this context, including how providers engaged in education and decision support, as well as how and in what circumstances SDM was initiated, reflect the specific context of contraceptive counseling, including its complexity, its personal considerations and the longitudinal nature of engagement with family planning over a woman's reproductive life course.

While SDM in general has been conceptualized as consisting of distinct phases that proceed in order — information sharing, deliberation and decision making [1] — our analysis found that in contraceptive counseling, the information sharing and deliberation stages were, to a large extent, integrated. This interactive process may be motivated by the complex nature of contraceptive decision making, in which there are many different options with varying method characteristics, which therefore may make it not feasible to provide all the information in an exhaustive manner given time constraints. This raises the possibility that women may not hear all the information relevant to their choice during the counseling interaction. In addition, the iterative nature of the process, in which not all preferences are identified at the outset, may lead to failure to take into account relevant considerations in the counseling process. These concerns highlight the need for careful attention by providers when engaged in SDM to ensure that preferences are comprehensively elicited and responded to.

An additional influence on this structure of counseling may be the fact that the choice of a contraceptive method is a personal decision about which many women come into the health care encounter with strong preferences. In contrast to many health care decisions, in which patients may be faced with situations about which they have no knowledge or experience and therefore require extensive education at the outset of the health care encounter, most women enter contraceptive counseling already informed by social networks [11,18] and by their own personal experiences with contraception over their reproductive life course [9]. By leading with questions about their preferences, as seen in our sample, rather than the provision of information alone, providers can explicitly acknowledge these preferences, build rapport with the patient and more efficiently move through the decision-making process. Importantly, however, this does not mean that women's preferences were always unchallenged, with providers respectfully providing medically accurate information relevant to women's stated preferences when they suspected possible gaps in knowledge.

The decision-making phase itself also reflected the specific characteristics of the contraceptive visit in that, in all cases, even when the provider expressed an opinion, the final decision was clearly the patient's. This likely reflects the personal nature of the contraceptive decision, as described, with providers who use counseling consistent with SDM being careful to avoid inappropriate influence over the ultimate decision. Given the history in the United States of contraception being used coercively [19], it is important that providers avoid coercion throughout the contraceptive visit, especially during the final selection of the method.

Visits using SDM in which patients expressed a preference for a method were for the most part similar to visits in which patients did not express a preference. However, for patients with an expressed preference, discussion of different methods through SDM was in some cases precipitated by the presence of some obstacle to provision of the desired method, such as a contraindication or some expressed uncertainty. This raises the question of whether SDM may not have occurred if this obstacle had not been present, which is consistent

with a previous analysis that found that patients who expressed a preference for a method were more likely to experience “foreclosed” counseling, in which the counseling process was restricted to limited methods without interactive counseling [7]. These findings could indicate that patients who express preferences are less likely to be provided with the information and support about the range of methods to ensure that they are making an informed decision. As previous qualitative work has found that women value hearing about other methods, even when they have a preference, and do not feel comfortable asking questions of their provider [5], there may be value in providing the opportunity to hear about other methods even among patients who indicate that they have a particular method in mind.

Limitations of our study include the geographic limitation to the San Francisco Bay Area and the fact that study providers were mostly female and that all study providers were licensed health professionals, which may limit generalizability. Additionally, while we identified visits in which communication consistent with SDM occurred, we cannot determine how patients reacted to the observed communication behaviors or how successful they were at supporting decision making.

In conclusion, our study explored how interactive counseling consistent with SDM was operationalized in the contraceptive counseling context. Given the documented benefits of SDM in health care in general and contraceptive counseling specifically, these findings can be used as a foundation for future work to understand the use of this model of communication in contraceptive counseling, as well as how to develop and implement training designed to integrate SDM in a manner appropriate for the specific context of family planning, including prioritizing patient autonomy and acknowledging the likelihood of patients having preexisting preferences. In this work, specific attention should be paid to how to ideally structure the SDM process in a manner that provides personalized information and decision support, taking into account both the intimate nature of the decision and the time-limited nature of contraceptive counseling visits, without sacrificing comprehensive education about the range of options.

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