How Primary Care Physicians Elicit Sensitive Health Information From Patients: Describing Access to Psychosocial Information

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Abstract

Multiple communication models describe factors that influence disclosure of sensitive health information. However, these models do not address the receiver's perspective of health-related information, nor do they address how the receiver promotes disclosure. In the primary care chronic disease visit, the patient (sender) must disclose sensitive health-related psychosocial information to the primary care physician (PCP) (receiver) for the PCP to understand potential barriers to care (e.g., financial strain) and make treatment decisions (e.g., referral to social work). A vital gap exists in understanding how PCPs perceive that patients disclose. We conducted individual, semi-structured interviews ($n = 17$) to understand PCPs' perceptions of patient disclosure of sensitive, psychosocial information in the clinical visit. PCPs facilitate patient disclosure by (a) building and maintaining rapport and (b) nurturing the patient–provider relationship. This article describes PCPs' perceptions of how they access psychosocial information which is vital to inform clinical decisions that facilitate personalized care.

Keywords

access to psychosocial information; patient disclosure; physicians perceptions of disclosure; patient engagement; qualitative

Introduction

Enhancing patient–provider communication is a persistent challenge for Type 2 diabetes care. To establish shared goals and select treatment options (Burke et al., 2006; Linmans et al., 2015), patients must disclose sensitive, health-related psychosocial information to practitioners. This disclosure enables awareness and understanding of both facilitators and barriers to recommended self-management (Burke et al., 2006; Linmans et al., 2015; Venetis et al., 2018). Psychosocial information includes the individual (e.g., financial strain, health literacy) and environmental (e.g., social support, community resources, cultural traditions) information physicians use to help them understand patients' specific circumstances which may facilitate or present barriers to following recommended self-management behavior. Access to psychosocial information is imperative to inform personalized clinical decisions (see Supplemental Appendix A; Senteio et al., 2019). Despite its importance to clinical decision making, psychosocial information use is dependent both upon the patient's willingness to disclose it and clinical informatics tools to capture and enable retrieval of it (Institute of Medicine, 2014a, 2014b). In fact, access to this

patient-sourced psychosocial information is necessary to utilize the clinical informatics capabilities which are being incentivized and created to help screen for barriers to care and promote care decisions to address them. For example, considerable research has informed guidelines created by the Office of the National Coordinator for Health Information Technology for psychosocial information collection and use for various screening tools designed to support personalized care decisions (Senteio et al., 2019).

However, comparatively less research has been focused on the physicians' perspectives on how they access this vital information. In the primary care visit, chronic disease *patients* are the main source of psychosocial information that they choose to disclose to physicians. Primary care physicians (PCPs) must have consistent access to psychosocial information during each clinical visit to

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inform individualized, patient-specific clinical decisions, such as referrals to social work and/or chronic disease education programs (Senteio et al., 2018). For instance, PCPs may ask patients to disclose details about their mental and emotional state, current and past drug and/or alcohol use, sexual function, or their history of diseases and treatments (Goldman, 1998). Examining diabetes care in the primary care setting is particularly relevant because disclosure of psychosocial information may illuminate factors known to influence self-management behavior and diabetes outcomes. For example, over the last decade, the literature has established that financial strain is associated with medication behavior, and health literacy is associated with HbA1c control (Piette et al., 2003; Piette & Kerr, 2006; Schillinger et al., 2002).

Multiple communication models describe factors that influence disclosure of sensitive health information. Factors include both the information itself and various motivations for disclosure. They focus almost entirely on romantic or personal relationships; however, these models exclusively address the providers of the health-related information, and no model addresses the receivers' perceptions of how to promote disclosure. Given the importance of physicians' access to psychosocial information, it is imperative to understand how they perceive that patients disclose. Moreover, the quality of the patient–provider relationship influences patients' disclosure of the psychosocial information that can illuminate barriers and facilitators to recommended self-management and enables discussions shared treatment goals, but details regarding the nature of those relationships and how practitioners establish and maintain them is unclear (Peltola et al., 2018). To help address this gap in the literature, we conducted this study to answer the research question: How do physicians perceive patients' disclosure of sensitive information in the context of the primary care visit? In this article, we describe PCPs' perspectives on the circumstances in which patients disclose psychosocial information during the primary care visit for Type 2 diabetes care.

Self-Disclosure

Self-disclosure is well-established within the communication discipline (Greene et al., 2006). Disclosure theories and models help describe an individual's decision to self-disclose, patterns that exist, and how disclosure affects individuals within different contexts. Illness uncertainty, defined as the degree to which an individual has doubts about the treatment options and outcomes for a particular diagnosis, has been conceptualized to describe why individuals will or will not disclose information about their health (Checton et al., 2012). To reduce uncertainty, patients may carry out information seeking practices, or the "purposive pursuit of information," by gathering information from sources through intentional actions such as asking questions, observing others, or using information systems to search for information (Hogan & Brashers, 2015).

Our understanding of how self-disclosure affects interpersonal interactions is informed by social penetration theory (SPT), which describes relationship development as a systematic and predictable process (Altman & Taylor, 1973). Disclosure affects the relationship development process because it results in different levels of intimacy within relationships (Taylor & Altman, 1987). The process of disclosure is indicated by changes in the personal or sensitive nature of the information disclosed (Greene et al., 2006). The disclosure decision-making model (DD-MM; Greene, 2009) is a framework that provides an overarching understanding of the disclosure processes (Chaudoir & Fisher, 2010). The DD-MM simplifies the disclosure decision-making process by describing three components: (a) informational assessment, (b) receiver assessment, and (c) disclosure efficacy (Greene, 2009). The informational assessment encompasses weighing different components—including but not limited to stigma—which may occur concurrently or sequentially. Assessing the potential receiver includes determining the relationship quality and the anticipated response. In the third component, the discloser determines if the disclosure will result in desired outcomes. All three components, Greene (2009) describes, are essential in the decision-making process for disclosure.

The DD-MM describes the mechanisms in the disclosure of health information (e.g., prognosis and uncertainty) according to its depth, breadth, and frequency. The DD-MM has been used to assess disclosure of physical or mental health conditions, which commonly are ambiguous or easily concealed (Greene et al., 2012). The DD-MM posits that closeness between subjects relates to response, response predicts the outcome, and efficacy predicts the likelihood of disclosure (Greene et al., 2012). Also, the level of uncertainty concerning an individual's specific circumstance (e.g., health prognosis) is associated with disclosure practices (Checton & Greene, 2012). Consistent with other disclosure literature, the DD-MM literature primarily considers disclosure from the perspective of the individual who is disclosing information, specifically the circumstances present when an individual decides whether or not disclose and their motivations for the decision (Greene et al., 2006).

Multiple individual factors influence the disclosure decision-making process. The person's culture or personality plays a role, and the length and quality of the relationship do as well (Greene et al., 2006). Relationship quality is directly associated with the intent to disclose, and individuals disclose when they perceive that it is their duty to do so (Greene, 2009).

Trust

Trust is an important indicator of the quality of the patient-provider relationship. In this context, trust is defined as the

"acceptance of a vulnerable situation in which the truster believes that the trustee will act in the truster's best interests" (Thom et al., 2004). When patients trust their providers, they are more likely to disclose sensitive information (Rowe & Calnan, 2006). Level of trust is also associated with diabetes self-management behavior and consequently outcomes, specifically glycemic control, physical health-related quality of life, and patient satisfaction (Lee & Lin, 2011; Thom et al., 2004). Patients who have access to a continuity of care see the same physician over time; consequently, they are more likely to have an ongoing relationship with their providers, which results in higher trust, increased likelihood of the disclosure of psychosocial information (Hall & Roter, 2002), and improved diabetes outcomes (Mainous et al., 2004).

Relationship-Centered Care

Relationship-centered care is an approach to care delivery which is important to understand what is known about how providers may elicit patient disclosure. Roter (2000) specifically describes the importance of disclosure during the clinical consultation. Patient–provider visits characterized by patient disclosure of health information signify the expression of an active partnership between patient and physician in which they collaborating to determine goals of care, and this shared goal setting is associated with better chronic care outcomes (Roter, 2000). Importantly, collaborative patient–provider visits are characterized by the provider's ability to (a) complete medical management functions such as exams, diagnosis, and treatment; (b) understand and address patient concerns and priorities; and (c) respond to the patient's emotional state and primary concerns (Roter, 2000). Beach and Inui (2006) describe the importance of relationship-centered care in determining the quality of care. They specifically delineate that the quality and nature of the patient–provider relationship is central to quality health care delivery (Beach and Inui, 2006). Relationship-centered care is important in the context of understanding environments in which patients disclose personal, sensitive health information to providers (Nundy & Oswald, 2014). Understanding how providers go about creating the relationships required to deliver relationship-centered care represents a critical gap in the health communication literature for this specific, but vital disclosure context.

There is no self-disclosure theory specific to the context of the patient–provider relationship. Health information disclosure research tends to focus on individuals within romantic or family relationships, for information such as HIV/STI status or genetic risk for cancer. For example, investigations of how HIV-positive individuals share information about their status describe how perceptions and levels of stigma influence health information

disclosure (Chaudoir et al., 2011; Seki et al., 2009). Also, gender is associated with the decision to disclose information concerning hereditary cancer risk (Dean & Rauscher, 2018). Much of the disclosure literature focuses on practices specific to the discloser. It does not describe the perspectives of those who receive the information being disclosed. In the context of the patient–provider relationship, an increased understanding of the recipients' perspectives will provide insight into how disclosure of psychosocial information is elicited.

The health communication disclosure literature is appropriate to examine physician's perceptions of patient disclosure during the clinical visit since patients are routinely asked in the clinical setting to disclose sensitive information about themselves. Providers gather information about their patients that may affect treatment decisions (Lambert & Loiselle, 2007). An important limitation of any direct application of these theories to the patient–provider context is that self-disclosure models depict disclosure as a *reciprocal process* between individuals. However, little research has examined disclosure in the clinical context (Fox et al., 2009). Consequently, no existing explanatory model directly addresses patient disclosure in the context of health care delivery. Therefore, we situate the findings in the health communication literature with a particular emphasis on the circumstance in which individuals disclose sensitive health information (Venetis et al., 2018).

Objectives

The objective of this article is to describe how PCPs perceive how patients disclose sensitive psychosocial information in the context of the Type 2 diabetes primary care visit. Access to this information is essential to inform PCPs of barriers to recommended activities for diabetes self-management (e.g., healthy eating, regular physical activity, medication behavior, and attending follow-up appointments). Patients' disclosure of psychosocial information is necessary to ensure that the receivers (PCPs) can access pertinent psychosocial information, which helps PCPs understand the barriers and facilitators patients may be experiencing in their efforts to follow diabetes self-management recommendations. A review of the health communication literature concerning disclosure revealed an important gap—the *receivers'* (PCPs) perspectives concerning disclosure of sensitive information in the context of the primary care visit, a particular circumstance in which disclosure is essential to help inform care decisions. Insights concerning these perspectives can be used to help understand and improve psychosocial information disclosure, which will result in the opportunity to further personalize clinical care decisions. Consistent access to psychosocial information enables

insight on barriers to following recommended self-management behaviors, which then can inform personalized clinical decisions.

Method

Overall Study Design

Semi-structured interviews were used to investigate PCPs' perspectives on how they access psychosocial information from patients in the context of Type 2 diabetes outpatient clinical visits. Purposive sampling via various professional networks was used to recruit providers with experience in treating adult, Type 2 diabetes patients in the outpatient setting. The University of Michigan Institutional Review Board (IRB) approved the study on February 4, 2014. The study protocol included participant informed consent forms which were reviewed with each participant, who signed and dated the forms.

Data Collection Process and Instruments

The first author conducted individual, in-person interviews with PCPs. The interview guide included open-ended, central questions based on the extant literature and follow-up probes (see Supplemental Appendix B). The semi-structured interview format remained consistent; however, insights gleaned from the initial interviews helped guide probes in subsequent interviews. Each interview was digitally recorded, and the audio recordings of the interviews were transcribed verbatim. The final sample consisted of 17 physicians, approximately half were family medicine physicians; the remaining half consisted of internal medicine physicians and one endocrinologist. The final sample of interviews was determined as an acceptable number when data were determined to have reached saturation.

Data Analysis

The grounded theory approach was used to code, summarize, and condense the data. This approach is well-suited for the analysis of the interview data because it is conducive to understanding how a process works (Creswell, 2006). This approach was applied to understand how physicians access psychosocial information in the course of the primary care visit. The constant comparative method was used to analyze the interview data (Glaser, 1965). NVivo qualitative analysis software (Version 10.0) was used to code the transcripts. Coding is a cyclical process, enabling the refinement and highlighting of patterns to generate categories and concepts. The coding process used was consistent with grounded theory. Line-by-line coding in the initial coding phase was done followed by using in vivo codes to capture the physicians'

Table 1. Demographic Information of Interview Participants.

Demographic Information	Number of Participants
Specialty	
Family medicine	8
Internal medicine	8
Endocrinology	1
Practice setting	
Federally qualified health center	2
Public hospital	4
Teaching hospital	3
VA teaching hospital	4
Private teaching hospital	1
Community clinic	3
Years since completing residency	
0–5	1
6–10	6
11–15	3
16–20	2
21+	5

meanings (Glaser, 1978). The basic topics were summarized in a word or short phrase, using gerunds to help investigate processes (Miles et al., 2014; Saldaña, 2009). In the second coding cycle, axial coding was used to define conditions and actions (Corbin & Strauss, 2007).

Consistent with grounded theory, in this second cycle, categories were developed for the first cycle codes, an approach well-suited to apply meaning to the data (Miles et al., 2014; Saldaña, 2009). Next interrater reliability (IRR) was calculated to determine the extent to which multiple coders agreed. The first author coded all transcripts. A second researcher coded 24% randomly selected transcripts (4 of 17). The IRR between the first and second coder was 98.436% for codes used in the data analysis. This is above the generally recommended 90% threshold (Di Iorio, 2006). During coding, memos captured ongoing reflections. The transcripts were reviewed for key concepts which were labeled using the participants' own words. Both descriptive and explanatory categories emerged from the constant comparative method, and themes were directly observed in the data.

Findings

The 17 interviews with the PCPs took place between February 2014 and January 2015. The sample was drawn from five states across the United States and represented three specialties: family medicine ($N = 8$), internal medicine ($N = 8$), and endocrinology ($N = 1$). The most experienced participant completed residency in 1984, and the least experienced completed residency in 2015 (see Table 1). The interviews generated 16 hours, 29 minutes, and 17
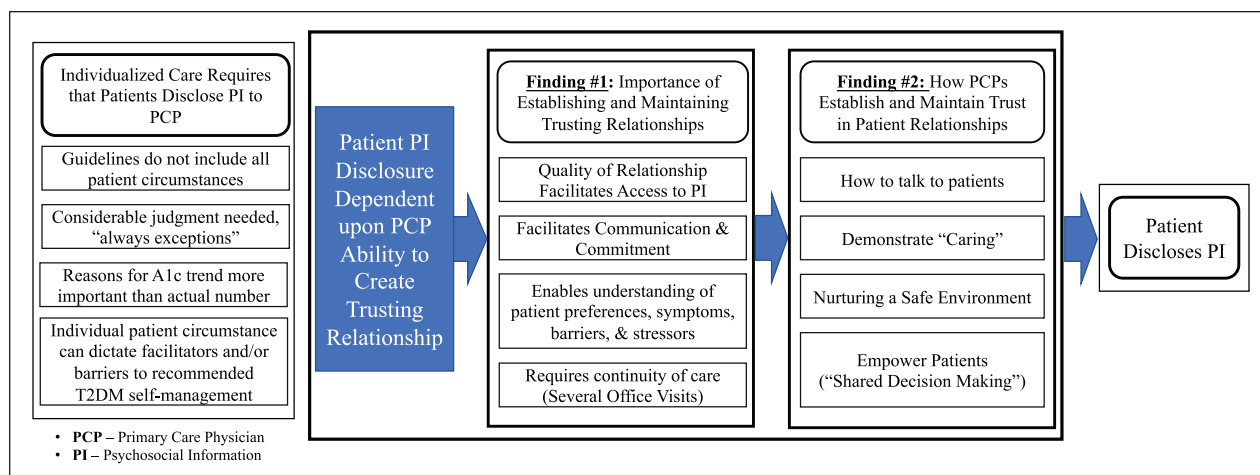
Figure 1. Model depicting results for patient disclosure of psychosocial information.

seconds of recorded data resulting in 419 pages of interview transcripts, which were coded for data analyses (see Supplemental Appendix C—for Codebook). The PCPs confirmed that patients are a crucial source of psychosocial information (e.g., financial strain, level of social support, health literacy) and this information is important to inform care decisions (e.g., prescription assistance, referral to social work, diabetes education). Use of this information depends upon the physician's ability to access it. Psychosocial information is gleaned almost exclusively via the communication (i.e., open-ended questioning and listening) that takes place during the clinical visit.

The analysis resulted in two key findings regarding how PCPs perceive the context in which patients disclose sensitive psychosocial information during the primary care visit (see Figure 1. Model Depicting Interview Results about Patient Psychosocial Information Disclosure). First, PCPs must build and maintain a relationship with the patient, which must be characterized by trust, because access to psychosocial information is dependent upon trust. Second, PCPs described how they build trust with their patients during clinical consultations.

Finding 1: Importance of Establishing and Maintaining Trusting Relationships With Patients

The use of psychosocial information is entirely reliant on the physician's ability to access it, which participants expressed is heavily dependent upon the level of trust in the patient–provider relationship. Establishing trust is fundamental to patient care, as it enables the physician to facilitate communication and commitment from the patient concerning the various diabetes care decisions and recommendations:

with any type of patient, you have to build a rapport and you have to build that communication, and so that they buy in to what you're teaching them or what you're recommending them, and that's just basic patient-doctor rapport and relationship. (Family Medicine)

Participants described how building trust is what facilitates their access to psychosocial information. A family medicine physician believes trust is integral to building relationships with patients, "I think trust plays into things a lot . . . If we have an established relationship, they . . . know . . . that I care about them." Another family medicine physician explained how developing trust is essential to how she delivers care:

The way that I practice medicine . . . I know that I'm doing a lot more than just collecting information. I'm developing a relationship with them, I'm developing trust. I'm trusting them and they're trusting me . . . it's like everything comes together in the right way for this relationship to work, and then all of a sudden it's like they understand that I actually really care about them. Because I actually care and I want them to be better.

Participants placed importance on creating and nurturing trusting relationships. They perceive that when patients understand that they care about them, this results in an environment well-suited to provide the best possible care.

However, participants asserted that trust is rarely established during initial clinical visits. Consequently, psychosocial information may not be disclosed until the relationship is established. An internal medicine physician with over a decade of clinical experience describes how a trusting relationship is necessary to access appropriate psychosocial information, "you have to unlock someone's trust in order to get to the truth about someone's psychosocial factors."

Although physicians stated that they attempt to start building trust at the very first visit, they also recognized that the relationship must be established *before* they expect disclosure of accurate psychosocial information. Building the relationship may require several office visits:

> In that first visit, I think you have to be somewhat skeptical because people will usually try to paint a better picture . . . because they're trying to somehow please you, or put on a good face. There are some pride issues; they're not sure if they can trust you. But I think over time, if you've got a good doctor-patient relationship, wow, you may know things that only their priest or religious advisor know. I mean, it can get to that level. (Internal Medicine)

This physician explained how establishing the patient–provider relationship is necessary to facilitate disclosure of sensitive psychosocial information, in this case, financial barriers: "There are people who, for reasons of pride, will really hide [financial barriers] . . . they'll hide it . . . it may come out down the road. But only if I've established that relationship." A family medicine physician with almost 20 years of experience described her frame of mind during her consultation with a new patient, which includes a keen awareness that patients may not initially disclose pertinent, and very sensitive, psychosocial information:

> [Seeing a] patient for the first time, you have no idea. And, sometimes patients lie and say, "Everything's fine," even when they're getting the crap beat out of them every night. . . . Or they're doing a lot of drugs or they're homeless . . . They'll lie because they're embarrassed.

Despite placing a premium on creating and nurturing a relationship rooted in mutual trust, participants acknowledge that patients may not share personal information before a relationship is established. In fact, they assume that patients may initially offer misleading information because disclosure may come with discomfort.

Other important factors: Quality and continuity. In addition to trust, the quality and continuity of the relationship influence access to sensitive psychosocial information. Participants believe that the quality of the patient–provider relationship is associated with the level and nature of disclosure. Continuity gives the patient–provider dyad a chance to develop a more in-depth relationship, which in turn facilitates disclosure.

The quality of the relationship enhances access to sensitive psychosocial information. An internal medicine physician described a case when the *quality* of the relationship granted access to pertinent psychosocial information: "since I had a relationship [with the patient] she knew that she could say that [she will not change certain dietary habits] to me." Another internal medicine physician described how the quality of the relationship can *grant him access* to the patient's situation, important in understanding the level of social support:

> . . . from [the] relationship comes all sorts of wonderful things, including access to their social world . . . Because they'll start to be real with you after a while. They may not tell you everything, but . . . I don't tell my wife everything, either. You know what I'm saying?

Seeing patients over a period of time results in continuity of care that enables the physician to get to know the patient in-depth. Physicians expressed the view that seeing the patient over the course of several visits enables the physician to "get to know" the patient, and to some degree enabled patients to "get to know" the physician. This continuity is important to accessing sensitive psychosocial information: "over time, you get to know the person. And it's a chronic disease, so yeah . . . sometimes when you do see them every month, there's more things you find out and take it to account" (Endocrinology). A family medicine physician described how continuity enhances the relationship which can result in patients' disclosing information, "usually, after a couple of visits, you can build some relationship and trust and you'll start to get more information. So, there's some continuity of care that leads to more disclosure." Another family medicine physician added, "part of it is the longitudinal rapport that I build up with patients. I mean if they've been my patient for years, hopefully, I am that trusted advisor." Seeing the same patient over a period of time helps facilitate disclosure, which occurs as the relationship develops, and trust is established:

> I think trust plays into things a lot . . . If we have an established relationship, so they also know me and they know that I'm not gonna force anything on them . . . they know that I care about them . . . It's gonna be a shared decision making versus someone who doesn't know me at all . . . if I do know them, [if] I do know their family, and we kinda have gone through ups and downs together. (Family Medicine)

Trust becomes an important contextual feature of patient-centered care which is developed over the course of time. Participants believe that as patients trust them more, this increasing trust allows for patients to feel more comfortable disclosing sensitive, psychosocial information which is relevant to inform care decisions.

Finding 2: How PCPs Establish and Maintain Trusting Patient Relationships

Physicians described various techniques they use to help build and nurture trusting relationships with their

patients. They detailed four specific practices: (a) talking to patients, (b) demonstrating caring, (c) nurturing a safe environment, and (d) empowering patients.

Building trust includes *how* physicians talk with patients. They ask both general and specific questions that, for example, may elicit the patient's input on psychosocial information that may illuminate barriers to care that they may be experiencing. Participants indicated that they may direct the conversation toward specific psychosocial information (e.g., financial strain) or guide the consultation toward how their patients' living situations might impact their self-management behavior:

> I am . . . able to bring the attention and the focus . . . on [what is impacting them]. Some of the time . . . they'll volunteer, 'Listen, my [diabetes] control's horrible because right now I'm feeling horrible because of my grandson.' . . . Hopefully, I'll lead them in that direction." (Family Medicine)

Participants assert that patient disclosure is dependent on trust. They build trust by endeavoring to provide an environment that allows patients to feel comfortable—whether as a result of a consistent, long-term relationship or simply attempting to convey in the initial visit that the patient can trust them.

Successfully demonstrating caring for their patients is central to how physicians indicated that they nurture the relationship. An internal medicine physician described how caring is really the essence of what he does with his patients, "I really don't 'cure' very many people. I just kind of care about them. And that caring translates to a relationship." Demonstrating that they care for their patients helps forge connections, which facilitates disclosure of psychosocial information: "they disclose because of the doctor-patient relationship, [which is dependent upon] the ability to make a connection . . . I care about them and I demonstrate that in my behaviors" (Internal Medicine).

Participants expressed that establishing and maintaining a safe environment—which one physician specifically defined as one that is free from judgment, is supportive, and protects privacy—is vital. A safe environment is imperative to establish from the very first encounter with the patient,

> I think the key is, if you're judgmental or blaming in the initial visits, and you say, 'What? You aren't taking care of yourself.' Or, 'I can't help you if you don't take care of yourself,' then, you get nothing. But, if you're supportive and say, 'Wow, it sounds like you're working really hard to manage this,' or, 'You've done a good job of dealing with this problem,' then you get more information." (Family Medicine)

Maintaining this protected space facilitates access to information: "I'll ask one question and then this whole other floodgate opens . . . if you allow that possibility and allow people to feel safe" (Family Medicine). However, participants asserted that they must maintain appropriate boundaries if they happen to have relationships with patients and their family members or friends, whom they may also be treating. Once patients realize that the information they disclose will remain confidential, they may share additional, sensitive information:

> There are two issues. If . . . the doctor knows your family . . . and your friends . . . very well . . . sometimes [patients think] like, "Oh, hopefully that doesn't get disclosed." [The patient needs to have] that confidence in you that, "Okay, my information is going to remain personal." [the patient may] start disclosing . . . As a patient, if I'm improving in my health, and I'm seeing that my doctor is really doing the best to work on my health, and I haven't seen anything getting disclosed anywhere, I'll start disclosing accordingly. (Internal Medicine)

Protecting the patients' privacy is important to maintaining that trusting relationship. Doing so helps to communicate that sensitive information shared, will not be disclosed to others.

Participants also attempt to develop and nurture the patient relationship by acknowledging the autonomy and dominion that patients have over virtually every self-management decision, from medication behavior to dietary choices to physical activity to attendance at follow-up appointments, even the decision to select their doctor. This means that some physicians avoid appearing too directive with their patients. As this physician said,

> I will not necessarily tell a person what to do. Some people want that, and if they do then I'm not a good doctor for them. I'll just tell them straight to their face, 'I'm just not gonna be a good doctor for you. There's lots of other doctors.'" (Family Medicine)

Empowering patients means that clinical visits are characterized by shared decision making. An endocrinologist (P05) described how she empowers patients by allowing them to voice opinions about potential treatment options, "[I give them] some time to talk . . . [I] ask them, 'What do you think?' or 'Can you do this?' Instead of saying, 'Do this. Do this. Do this.'" Similarly, a family medicine physician empowers patients by acknowledging their important role in clinical decision making, "they know that I'm not gonna force anything on them . . . I'm gonna make recommendations, but it's gonna be shared decision making."

Discussion

This work signifies an important contribution to the health communication literature because it is the first study we

are aware of that investigates disclosure in a health care delivery context from the perspective of the physician, the *receiver* of sensitive health information. This article contributes to the existing literature by describing disclosure in the context of the primary care chronic disease visit. Understanding physicians' perspectives concerning patient disclosure is imperative because the literature has focused on the person disclosing sensitive information. The patient is the primary source of psychosocial information which is critical to understanding circumstances that may present barriers to following the recommendations for self-management. For example, life events, such as employment change, divorce, and changes in caregiver responsibilities, can impact level and types of stressors known to interfere with recommended diabetes self-management (Fritz, 2014; Harris et al., 2019; Osborn et al., 2014). Awareness of these circumstances influences clinical care decisions. In fact, access to and subsequent use of psychosocial information is important to inform chronic disease clinical decisions that facilitate personalized care (Senteio et al., 2018). Participants believe that access to pertinent psychosocial information is contingent upon establishing and maintaining trusting relationships with the patient, and physicians describe how they develop and maintain these types of relationships.

The PCPs' (receiver) perspectives on disclosure are consistent with current health communication literature, which describes that disclosure is, at least in part, informed by the perceived closeness of the relationship between the sender and the receiver of personal health information (Venetis et al., 2018). Participants' assertion that the ability to build trust depends upon their ability to establish and nurture a relationship with patients is consistent with literature which describes that patients who indicate unsatisfactory relationships with health care practitioners leads to lack of trust, which can lead to disregard of recommendations for self-management (Gomersall et al., 2011). The PCPs believe that trust is what facilitates the disclosure of psychosocial information. As they emphasize that trust is developed over time (i.e., over several office visits), building a trusting relationship requires continuity of care. Interestingly, participants did not specify that clinical practice time constraints present barriers to building trust. Once the relationship is established, participants asserted that patients may disclose particular information about their living situations and/or self-management capabilities that influence their chronic disease treatment decisions.

Participants indicated that empowering patients and encouraging shared decision making are important practices to establish and maintain trusting relationships with patients. This is consistent with literature which describes that shared decision making is a vital aspect of empowering patients, for doing so establishes relationships effective for engaging patients in clinical decisions which help to resolve life circumstances which present barriers to recommended self-care (Fox et al., 2009; Zoffmann & Kirkevold, 2011).

Limitations and Future Directions

This study focused exclusively on the receiver, the PCPs. It does not address how the discloser, in this context the patient, perceives the circumstances that facilitate their disclosure. Future work should include patients' perceptions of circumstances in which they disclose sensitive psychosocial information and their motivations for doing so in the context of the primary care visit. For example, Greene (2009) describes that once individuals make the decision to disclose health information, they then consider how to actually disclose, which includes factors like timing, location, and channel (Greene, 2009). Future work should also investigate how the quality of the patient–provider relationship influences disclosure given that the DD-MM indicates that the quality of the relationship affects disclosure. We only investigated the receiver's perceptions of disclosure in the course of the in-person primary care clinical visit. It is timely and imperative to understand the patient's perspectives for psychosocial information disclosure given the proliferation of technology-enabled tools designed for consumers to capture, use, and share personal health information due to rapid advancements in mobile computing capabilities (e.g., smartphones, smartwatches, tablets) and communications (e.g., broadband, cellular networks) (Subhi et al., 2015). Also, only PCPs were included in the sample. Other clinical roles (e.g., specialty physicians, nurse practitioners, registered nurses, pharmacists, diabetes educators, and social workers) have input into care decisions in the primary care setting and may solicit psychosocial information from patients. Also, the time to establish and build trust in the context of primary care delivery is an important area of further investigation. The literature describes time constraints, and specifically inadequate reimbursement for time required to assess and provide diabetes patients' self-management support, as a key barrier (Jortberg et al., 2019). Last, future work should include how patients' belonging to specific cultural groups may influence disclosure as the literature describes how culture and identity influence disclosure decisions (Pistulka et al., 2012).

Understanding access to psychosocial information is particularly important given the emphasis on enhancements to current health information technology capabilities, which include recommendations to more effectively capture and enable the use of psychosocial information. For example, the Institute of Medicine has detailed extensively the imperative to enhance the collection and use of

psychosocial information (Institute of Medicine, 2014a, 2014b). Study findings can be used by clinicians, health educators, health researchers, and developers of health informatics capabilities (e.g., clinical decision support systems, electronic health records) focused on improving chronic disease outcomes through the enhanced access to, and use of, psychosocial information.

We note that none of the participants discussed HIPAA (Health Insurance Portability and Accountability Act of 1996) when discussing access to personal health information. Privacy may be relevant to the context of sharing sensitive information, especially sharing it across clinical care teams. Future work should investigate if HIPAA may affect the amount of information being elicited by the physicians in the context of chronic care to determine (a) if HIPAA may play a role in the disclosure processes and (b) what the receivers do with that information (e.g., input in the shared medical record). In addition, the patients' perspectives on privacy should be explored in situations where they are elicited to disclose sensitive health information. Exploring both perspectives will provide a fuller understanding of how privacy may impact particular disclosure conversations between patients and physicians. Finally, future research should explore if DD-MM can explain the disclosure process of when physicians are seeking psychosocial information from patients. The importance of access to patient psychosocial information in providing patient-centered care is especially relevant in chronic illness management.

Conclusion

PCPs build, establish, and nurture patient relationships to gain access to sensitive psychosocial information. The principal technique providers use to access pertinent psychosocial information lies in how they communicate with their patients. There are specific techniques that help build trust. Participants assert that they must create a safe environment and demonstrate caring which helps create connections to their patients. To nurture these patient relationships, PCPs believe that is vital to empower patients to share in the clinical decisions that comprise various aspects of their treatment plans.

Declaration of Conflicting Interests

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Supplemental Material

References

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. Holt, Rinehart and Winston.

Beach, M. C., & Inui, T. (2006). Relationship-centered care. *Journal of General Internal Medicine*, *21*(S1), S3–S8. https://doi.org/10.1111/j.1525-1497.2006.00302.x

Burke, J. A., Earley, M., Dixon, L. D., Wilke, A., & Puczynski, S. (2006). Patients with diabetes speak: Exploring the implications of patients' perspectives for their diabetes appointments. *Health Communication*, *19*(2), 103–114. https://doi.org/10.1207/s15327027hc1902_2

Chaudoir, S. R., & Fisher, J. D. (2010). The disclosure processes model: Understanding disclosure decision-making and post-disclosure outcomes among people living with a concealable stigmatized identity. *Psychological Bulletin*, *136*(2), 236–256. https://doi.org/10.1037/a0018193

Chaudoir, S. R., Fisher, J. D., & Simoni, J. M. (2011). Understanding HIV disclosure: A review and application of the Disclosure Processes Model. *Social Science & Medicine*, *72*(10), 1618–1629. https://doi.org/10.1016/j.socscimed.2011.03.028

Checton, M. G., & Greene, K. (2012). Beyond initial disclosure: The role of prognosis and symptom uncertainty in patterns of disclosure in relationships. *Health Communication*, *27*(2), 145–157. https://doi.org/10.1080/10410236.2011.571755

Checton, M. G., Greene, K., Magsamen-Conrad, K., & Venetis, M. K. (2012). Patients' and partners' perspectives of chronic illness and its management. *Families, Systems & Health*, *30*(2), 114–129. https://doi.org/10.1037/a0028598

Corbin, J., & Strauss, A. (2007). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Sage.

Creswell, J. W. (2006). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Sage.

Dean, M., & Rauscher, E. A. (2018). Men's and women's approaches to disclosure about BRCA-related cancer risks and family planning decision-making. *Qualitative Health Research*, *28*(14), 2155–2168. https://doi.org/10.1177/1049732318788377

Di Iorio, C. K. (2006). *Volume 1 of Jossey-Bass public health: Measurement in health behavior: Methods for research and evaluation*. John Wiley.

Fox, F. E., Rodham, K. J., Harris, M. F., Taylor, G. J., Sutton, J., Scott, J., & Robinson, B. (2009). Experiencing "the other side": A study of empathy and empowerment in general practitioners who have been patients. *Qualitative*

Health Research, 19(11), 1580–1588. https://doi.org/10.1177/1049732309350732

Fritz, H. A. (2014). Learning to do better: The transactional model of diabetes self-management Integration. *Qualitative Health Research, 25*(7), 875–886. https://doi.org/10.1177/1049732314552453

Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*(4), 436–445. https://doi.org/10.2307/798843

Glaser, B. G. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Sociology Press.

Goldman, J. (1998). Protecting privacy to improve health care. *Health Affairs, 17*(6), 47–60. https://doi.org/10.1377/hlthaff.17.6.47

Gomersall, T., Madill, A., & Summers, L. K. M. (2011). A metasynthesis of the self-management of type 2 diabetes. *Qualitative Health Research, 21*(6), 853–871. https://doi.org/10.1177/1049732311402096

Greene, K. (2009). An integrated model of health disclosure decision-making. In T. Afifi & W. A. Afifi (Eds.), *Uncertainty, information management, and disclosure decisions: Theories and applications* (pp. 226–253). Routledge/Taylor & Francis.

Greene, K., Derlega, V. J., & Mathews, A. (2006). Self-disclosure in personal relationships. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 409–427). Cambridge University Press.

Greene, K., Magsamen-Conrad, K., Venetis, M. K., Checton, M. G., Bagdasarov, Z., & Banerjee, S. C. (2012). Assessing health diagnosis disclosure decisions in relationships: Testing the disclosure decision-making model. *Health Communication, 27*(4), 356–368. https://doi.org/10.1080/10410236.2011.586988

Hall, J. A., & Roter, D. L. (2002). Do patients talk differently to male and female physicians? A meta-analytic review. *Patient Education and Counseling, 48*(3), 217–224. https://doi.org/10.1016/S0738-3991(02)00174-X

Harris, S., Miller, A., Amiel, S., & Mulnier, H. (2019). Characterization of adults with type 1 diabetes not attending self-management education courses: The barriers to uptake of type 1 diabetes education (BUD1E) Study. *Qualitative Health Research, 29*(8), 1174–1185. https://doi.org/10.1177/1049732318823718

Hogan, T. P., & Brashers, D. E. (2015). The theory of communication and uncertainty management: Implications from the wider realm of information behavior. In T. D. Afifi & W. A. Afifi (Eds.), *Uncertainty, information management, and disclosure decisions: Theories and applications* (pp. 44–66). Taylor & Francis.

Institute of Medicine. (2014a). *Capturing social and behavioral domains and measures in electronic health records: Phase 2*. https://www.nap.edu/resource/18951/EHRreportbrief.pdf

Institute of Medicine. (2014b). *Capturing social and behavioral domains in electronic health records: Phase 1*. http://www.nationalacademies.org/hmd/Reports/2014/Capturing-Social-and-Behavioral-Domains-in-Electronic-Health-Records-Phase-1.aspx

Jortberg, B. T., Fernald, D. H., Hessler, D. M., Dickinson, L. M., Wearner, R., Connelly, L., . . . Dickinson, W. P. (2019). Practice characteristics associated with better implementation of patient self-management support. *The Journal of the American Board of Family Medicine, 32*(3), 329–340. https://doi.org/10.3122/jabfm.2019.03.180124

Lambert, S. D., & Loiselle, C. G. (2007). Health information seeking behavior. *Qualitative Health Research, 17*(8), 1006–1019. https://doi.org/10.1177/1049732307305199

Lee, Y.-Y., & Lin, J. L. (2011). How much does trust really matter? A study of the longitudinal effects of trust and decision-making preferences on diabetic patient outcomes. *Patient Education and Counseling, 85*(3), 406–412. https://doi.org/10.1016/j.pec.2010.12.005

Linmans, J. J., van Rossem, C., Knottnerus, J. A., & Spigt, M. G. (2015). Exploring the process when developing a lifestyle intervention in primary care for type 2 diabetes: A longitudinal process evaluation. *Public Health, 129*(1), 52–59. https://doi.org/10.1016/j.puhe.2014.11.004

Mainous, A. G., Koopman, R. J., Gill, J. M., Baker, R., & Pearson, W. S. (2004). Relationship between continuity of care and diabetes control: Evidence from the third National Health and Nutrition Examination Survey. *American Journal of Public Health, 94*(1), 66–70. https://doi.org/10.2105/ajph.94.1.66

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage.

Nundy, S., & Oswald, J. (2014). Relationship-centered care: A new paradigm for population health management. *Healthcare, 2*(4), 216–219. https://doi.org/10.1016/j.hjdsi.2014.09.003

Osborn, C. Y., Mayberry, L. S., Wagner, J. A., & Welch, G. W. (2014). Stressors may compromise medication adherence among adults with diabetes and low socioeconomic status. *Western Journal Nursing Research, 36*(9), 1091–1110. https://doi.org/10.1177/0193945914524639

Peltola, M., Isotalus, P., & Astedt-Kurki, P. (2018). Patients' interpersonal communication experiences in the context of type 2 diabetes care. *Qualitative Health Research, 28*(8), 1267–1282. https://doi.org/10.1177/1049732318759934

Piette, J. D., & Kerr, E. A. (2006). The impact of comorbid chronic conditions on diabetes care. *Diabetes Care, 29*(3), 725–731. https://doi.org/10.2337/diacare.29.03.06.dc05-2078

Piette, J. D., Schillinger, D., Potter, M. B., & Heisler, M. (2003). Dimensions of patient-provider communication and diabetes self-care in an ethnically diverse population. *Journal of General Internal Medicine, 18*(8), 624–633. https://doi.org/10.1046/j.1525-1497.2003.31968.x

Pistulka, G. M., Winch, P. J., Park, H., Han, H.-R., & Kim, M. T. (2012). Maintaining an outward image: A Korean immigrant's life with type 2 diabetes mellitus and hypertension. *Qualitative Health Research, 22*(6), 825–834. https://doi.org/10.1177/1049732312438778

Roter, D. L. (2000). The enduring and evolving nature of the patient-physician relationship. *Patient Education and Counseling, 39*(1), 5–15. https://doi.org/10.1016/S0738-3991(99)00086-5

Rowe, R., & Calnan, M. (2006). Trust relations in health care—The new agenda. *European Journal of Public Health*, *16*(1), 4–6. https://doi.org/10.1093/eurpub/ckl004

Saldaña, J. (2009). *The coding manual for qualitative researchers*. Sage.

Schillinger, D., Grumbach, K., Piette, J., Wang, F., Osmond, D., Daher, C., . . . Bindman, A. B. (2002). Association of health literacy with diabetes outcomes. *Journal of the American Medical Association*, *288*(4), 475–482. https://doi.org/10.1001/jama.288.4.475

Seki, Y., Yamazaki, Y., Mizota, Y., & Inoue, Y. (2009). Should we tell the truth? Why families in Japan chose to tell their loved ones they were victims of Iatrogenic HIV infection. *Qualitative Health Research*, *19*(6), 723–731. https://doi.org/10.1177/1049732309334250

Senteio, C. R., Adler-Milstein, J. R., Richardson, C. R., & Veinot, T. C. E. (2019). Psychosocial information use for clinical decisions in diabetes care. *Journal of the American Medical Informatics Association*, *26*(8–9), 813–824. https://doi.org/10.1093/jamia/ocz053

Senteio, C. R., Veinot, T. C. E., Adler-Milstein, J., & Richardson, C. R. (2018). Physicians' perceptions of the impact of the EHR on the collection and retrieval of psychosocial information in outpatient diabetes care. *International Journal of Medical Informatics*, *113*, 9–16. https://doi.org/10.1016/j.ijmedinf.2018.02.003

Subhi, Y., Bube, H. S., Rolskov Bojsen, S., Skou Thomsen, S. A., & Konge, L. (2015). Expert involvement and adherence to medical evidence in medical mobile phone apps: A systematic review. *JMIR mHealth and uHealth*, *3*(3), e79. https://doi.org/10.2196/mhealth.4169

Taylor, D. A., & Altman, I. (1987). Communication in interpersonal relationships: Social penetration theory. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal processes: New directions in communication research* (pp. 257–277). Sage.

Thom, D. H., Hall, M. A., & Pawlson, L. G. (2004). Measuring patients' trust in physicians when assessing quality of care. *Health Affairs*, *23*(4), 124–132. https://doi.org/10.1377/hlthaff.23.4.124

Venetis, M. K., Chernichky-Karcher, S., & Gettings, P. E. (2018). Disclosing mental illness information to a friend: Exploring how the disclosure decision-making model informs strategy selection. *Health Communication*, *33*, 653–663. https://doi.org/10.1080/10410236.2017.1294231

Zoffmann, V., & Kirkevold, M. (2011). Realizing empowerment in difficult diabetes care: A guided self-determination intervention. *Qualitative Health Research*, *22*(1), 103–118. https://doi.org/10.1177/1049732311420735

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