

## The Relationships of Perceived Health Professionals' Communication Traits and Credibility with Perceived Patient Confidentiality

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*Patients at a large medical clinic provided data permitting an analysis of the relationships of perceived communication behaviors (nonverbal immediacy, assertiveness, and responsiveness) and source credibility (competence and caring) with perceptions of the confidentiality of their medical records. Perceptions of physicians, nurses, and support staff were employed. The results indicate that patients' perceptions of the communication behaviors and credibility of physicians, nurses, and support staff are meaningfully related to patients' perceptions of confidentiality. The problems of actual confidentiality and perceived confidentiality are discussed in relation to the role of communication as part of the problem and a potential part of the solution.*

The importance of patients having perceived that their medical records are kept confidential cannot be overstated. Many people believe that any information they disclose to a medical professional about their health should remain private. That is, they believe their medical problems and what they tell their physicians is no one else's business. Although people feel free to discuss their health problems with selected others, they feel that no one else should have that option. While they recognize that their physician may need to discuss their problems with other medical professionals, discussions with people other than medical professionals are considered to be out-of-bounds (Brann & Mattson, 2004).

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It is difficult to imagine a physician, nurse, or support staff member (e.g., administrative assistant) consciously and intentionally disclosing private information about a patient. Nevertheless, confidentiality issues surround the daily interactions of health care professionals, patients, families of patients, and insurance providers (Brann & Mattson, 2004). Confidentiality, as described by Robinson (1991), occurs when someone controls the diffusion of information that another person wants to keep private. Dahm (1999) suggested that "there are hundreds of patient confidentiality statutes, but none are identical, and there is no comprehensive federal law to which hospitals can turn for guidance" (p. 6). Even though a federal law was established since Dahm's publication, the problem keeping information confidential continues to be a significant problem among health care professionals who do not fully understand the law or accidentally disclose information (Brann & Mattson, 2004).

### Review of Literature

Confidentiality breaches can occur on many levels in health care organizations. For example, physicians, nurses, and support staff are among some of the employees in a hospital or medical clinic that have access to patients' medical records and have the potential to disclose information about patients. Brann and Mattson (2004) described a confidentiality breach as a situation in which health care providers do not keep patients' private information confidential. They identified two possible ways in which these breaches occur. *Internal* confidentiality breaches occur when health care professionals openly discuss private information about a patient. These types of breaches can occur when people overhear formal/informal discussions and/or telephone conversations between health care professionals and patients. In some cases, health care professionals have been known to tell one patient about another patient's identity or treatment. *External* confidentiality breaches take place when private information is shared with family, friends, insurance companies, and/or employers without patients' consent. Internal and external confidentiality breaches are serious problems for patients who prefer to have their identity and medical conditions remain private.

With many health care organizations relying more on computerized patient records, new issues of confidentiality arise (Pendrak & Ericson, 1998). The sheer number of individuals with access to patients' records is frightening. For example, physicians, nurses, and support staff who do not interact with a particular patient or know the patient might have access to records simply because they are employed in the health care organization. This problem is even more serious in rural hospitals located in small towns (less than 5,000 people) where patients are known and recognized by employees in a health care organization (Ullom-Minnich & Kallail, 1993). Confidentiality breaches can occur in numerous ways and by multiple health care providers throughout the USA (Brann & Mattson, 2004; Pendrak & Ericson, 1998; Robinson, 1991; Ullom-Minnich & Kallail, 1993).

Despite the fact that the actual confidentiality of medical records has received empirical attention, there is a dearth of research regarding patients' perceptions of confidentiality. In the present study, "perceptions of confidentiality" refer to whether or not a patient believes his/her records are kept confidential. This is an issue that should be of utmost importance in health care organizations, especially if the perceptions function in a similar way as social support. That is, the perception of having a social support network is just as important as actually having a strong support network (House, 1981). In fact, House suggested that perceptions of having social support networks are what make the actual social support networks effective. It is likely that perceptions of confidentiality function in a similar fashion; therefore, perceptions that one's information is kept secret is as critical as the actual confidentiality of the information.

Hoffman (1990) stated that one major problem in terms of perceived confidentiality is that numerous people have access to patients' records and confidentiality might be diminished because health care professionals tend to use patients' records as a form of communication. If patients perceive several members of a health care organization as viewing their records, they may doubt the actual level of confidentiality. Therefore, the purpose of this study is to examine patients' perceptions that physicians, nurses, and support staff are capable of keeping medical records confidential.

Many aspects of health providers' dealings with patients may influence the patients' perceptions of confidentiality. Previous research (Richmond, Smith, Heisel, & McCroskey, 1998, 2001, 2002) indicated that patients' perceptions of their physicians were strongly associated with their perceptions of physicians' use of nonverbal immediacy, assertiveness, and responsiveness. The general perceptions of the physician (and other health care workers) should also be expected to be associated with patients' perceptions of the confidentiality of medical records.

The purpose of this research was to determine the degree to which patients' perceptions of health care providers' communication behaviors (nonverbal immediacy, assertiveness, and responsiveness) and perceptions of health care providers' credibility (competence and caring) are associated with patients' perceptions of confidentiality of their medical records. The health care providers chosen for study were physicians, nurses, and support staff.

### *Immediacy*

Mehrabian (1971) stated that immediacy is present in an interaction "when people are drawn toward persons and things they like, evaluate highly, and prefer" (p. 1). Nonverbal immediacy entails using nonverbal communication such as gestures, eye contact, and appropriate touch as a way to communicate closeness. Richmond and McCroskey (2000) redefined the concept of immediacy by suggesting that it is "the degree of perceived physical or psychological closeness between people" (p. 212). Immediacy has been researched extensively within the instructor-student

relationship. Results suggest that immediacy is related to student learning (Christophel, 1990), affective learning (Comstock, Rowell, & Bowers, 1995), affect for the course and instructor (Gorham, 1988), instructor dress (Gorham, Cohen, & Morris, 1999), assertiveness and responsiveness (Thomas, Richmond, & McCroskey, 1994), and testing consistency (Titsworth, 2001). Immediacy appears to work in a similar manner in health communication to increase perceptions of closeness (Richmond et al., 2001).

To date, at least three studies have been conducted to examine the importance of nonverbal immediacy in the health communication context. First, Larsen and Smith (1981) investigated immediacy use during patient-physician interviews. They found that higher use of immediacy behaviors by physicians led to higher patient satisfaction and understanding. Conlee and Olvera (1993) established that physician immediacy was related to patient satisfaction with the care received. Moreover, Richmond et al. (2001) reported that physician immediacy was related to patient satisfaction and that physician immediacy had a negative relationship with a patients' apprehension about communicating with the physician.

It would appear that the research conducted on instructor's use of immediacy is similar to the physician-patient relationship. Both relationships involve perceptions of individuals in positions of power. This is similar to studies concerning immediacy in organizations. Research has shown immediacy to be related to satisfaction (Richmond & McCroskey, 2000), increased liking (Hinkle, 2001), and subordinate motivation (Kay & Christophel, 1995). The consistent finding of the relationship between immediacy and satisfaction appears to supercede contexts. For this reason, it is likely that immediacy leads to perceptions of confidentiality. If a patient has increased liking and satisfaction for his/her physician, nurse, and/or support staff member, one would expect the patient to be more likely to believe that her/his records are confidential.

#### *Source Credibility*

Source credibility refers to a receiver's perceptions that a source is believable (McCroskey, 1992). Within the concept of credibility are three components: competence, caring (goodwill), and trustworthiness (McCroskey & Teven, 1999). Competence involves having knowledge or expertise in a given area. Caring is the degree to which a person perceives that a source has the person's best interests at heart. Trustworthiness involves the degree of trust a receiver has with the source. In this study, the major concern was with the competence and caring dimensions of credibility in relation to patients' perceptions of confidentiality.

Only a handful of studies have examined physician credibility in the health communication context. For example, Jackson (1994) studied the effects of credibility-enhancing cues in written medical messages on patients' confidence and compliance. Jackson found that patients were most confident in receiving advice when given a written medical message with a credibility-enhancing cue.

Those patients were also more likely to comply with the physician's advice. In other studies, patients reported that they were more satisfied with credible physicians (Richmond et al., 2002) and more likely to comply with the requests of credible physicians (Wrench & Booth-Butterfield, 2003).

The lack of research on this topic is somewhat surprising given what is known about source credibility in other areas of communication, such as organizational and instructional contexts. When an instructor demonstrates a lack of knowledge of the material, or is unable to communicate the content of the course effectively, that instructor is viewed as not being competent (McCroskey, 1992). In the classroom, instructors are in a position of power much like a physician interacting with a patient. The physician, nurse, and/or support staff all have access to information that patients want and need. It would seem that the findings from McCroskey's study could parallel with communication between a physician, nurse, or support staff member and a patient

Source credibility has been correlated with several classroom variables such as students' perceptions of understanding (Schrodt, 2003), instructor immediacy (Thweatt & McCroskey, 1997), affinity seeking (Frymier & Thompson, 1992), and higher ratings of the instructor, the course, and the intention to take the instructor again (Beatty & Zahn, 1990). Instructors who appear to know their topic area are perceived as being more credible and are more influential (Booth-Butterfield, 1992). Wheelless (1973) found that a low credible source can increase her/his credibility by saying credible things. Sources with high credibility have a greater positive impact on their receivers (Infante, 1980). Speakers who can handle questions from the audience are perceived as being more credible (Ragsdale & Mikels, 1975). Again, from these findings it would appear that the source credibility of a physician, nurse, and/or support staff could work similarly to past research results involving perceptions of credibility. As McCroskey and Young (1981) stated, "source credibility is a very important element in the communication process, whether the goal of the communication effort be persuasion or the generation of understanding" (p. 24).

#### *Socio-communicative Style*

Socio-communicative style consists of two factors: assertiveness and responsiveness (Richmond & McCroskey, 1990). With assertiveness, individuals stand up for themselves and do not let others take advantage of them. Likewise, they do not take advantage of others. With responsiveness, an individual considers other people's feelings, listens to what others have to say, and recognizes the needs of others (McCroskey & Richmond, 1996).

Assertive people are able to start, maintain, and end conversations based on their goals (Bem, 1974). Also, people tend to like responsive individuals initially but expect them to stand up for their rights and beliefs as the relationship progresses (McCroskey & Richmond, 1996). Wooten and McCroskey (1996) found that

interpersonal trust was positively related to an individual's responsive and assertive behaviors. If a patient is more trusting of a physician, nurse, and/or support staff member when he/she uses responsive and assertive behaviors, perceived confidentiality may also increase with these behaviors. Perhaps a health care professional can use responsive and assertive behaviors to increase liking and, consequently, increase perceptions of confidentiality. The patient may have increased affect for the physician, nurse, or support staff member and believe that he/she would not disclose private information (breach confidentiality).

### **Rationale**

Patients' perceptions of the confidentiality of their medical records may be even more important than the actual confidentiality itself. In many cases this information could potentially cause major problems for the patient if divulged to the wrong person(s). For example, diffusion of information about such things as mental health history, sexual diseases, and genetic issues is likely to have a negative impact on patients' lives. These can lead to possible unemployment, loss of insurance, and/or divorce as well as many other potential problems. If people do not believe the information they provide health professionals will remain confidential, they may be less willing to be honest with health care professionals, or even refuse to visit a health care organization at all. In addition, it is possible that people who feel their confidentiality has been breached may be more likely to sue health professionals and health care institutions.

Actual breakdowns of confidentiality are, at their core, communication problems: someone communicates something they should not communicate. Perceptions of a lack of confidentiality, however, are more complex than that. Health care professionals may be perceived as violating confidentiality even when they are not doing so. Similarly, health professionals may not be perceived as violating confidentiality even when they do so. Although actual breakdowns in confidentiality must occur before many of the negative aspects of such breaches will occur (e.g. loss of job, loss of insurance, marital problems), perceptions of breakdowns, which do not occur, may lead to negative aspects, such as refusal to see the physician, go to the health care organization, or be honest with the health care professionals.

Unfortunately, research that links perceptions of confidentiality to the variables of immediacy, credibility, and socio-communicative style is very limited in the health communication context. It may be that the relationships found within other contexts (such as instructional and organizational communication) can be applied in the health communication context. The purpose of this study is to determine if the communication variables of immediacy, credibility, and socio-communicative style are related to patients' perceptions of confidentiality. Since patients are likely to develop separate working relationships with physicians, nurses, and support staff members, three different hypotheses were advanced:

*H1: Patients' perceptions of physician immediacy, assertiveness, responsiveness, competence, and caring are positively correlated with patients' perceptions of the confidentiality of their medical records.*

*H2: Patients' perceptions of nurse immediacy, assertiveness, responsiveness, competence, and caring are positively correlated with patients' perceptions of the confidentiality of their medical records.*

*H3: Patients' perceptions of support staff immediacy, assertiveness, responsiveness, competence, and caring are positively correlated with patients' perceptions of the confidentiality of their medical records.*

Because we expected one or more of these three hypotheses to be confirmed, we also posed the following research question:

*RQ1: To what extent are patients' perceptions of physician, nurse, and support staff immediacy, assertiveness, responsiveness, competence, and caring collectively predictive of the patients' perceptions of the confidentiality of their medical records?*

## **Method**

### *Participants*

Participants were 358 individuals (142 males, 207 females, and 9 no-reports) who were patients in a medical clinic in a large city in Texas. The clinic requested the assistance of the authors to analyze its patients' perceptions. Approximately 31 participants were 18–45 (patients under 18 were not surveyed), 59 participants were 46–55 years old, 83 participants were 56–65 years old, 180 participants were 66 or older, and five did not report their age. Participants reported that 88.5% were white/non-Hispanic, 3.6% were African-American, 3.6% were Native American, 1.7% were Hispanic, 0.6% were Asian-American, and 0.6% indicated "other."

### *Procedure [1]*

Questionnaires were mailed to 1,600 patients predominately residing in Texas. Participants were randomly selected by the clinic from a pool of patients that had visited the clinic within six months prior to the mailing. Each questionnaire contained a cover letter, survey, and postage-paid return envelope. The cover letter asked participants to voluntarily complete and return the enclosed survey. It assured participants that their responses were anonymous (no coding appeared on any questionnaire).

The questionnaire contained measures of immediacy (Richmond, McCroskey & Johnson, 2003), source credibility (McCroskey & Teven, 1999), socio-communicative style (Richmond & McCroskey, 1990), and a generalized belief scale (McCroskey & Richmond, 1996). Participants were asked to complete the questionnaire based on the physician, nurse, and support staff member (administrative assistant) who cared for

them during their most recent visit to the clinic. Approximately 396 questionnaires were returned (a 25% return rate). Of these, 38 were excluded from analysis due to not being completed correctly. The distribution of questionnaires was conducted by the staff of the medical clinic in the same manner previously employed by that institution to obtain feedback from patients on a routine basis. The return rate (although lower than was hoped for) was comparable to survey responses conducted previously.

### Measures

Nonverbal immediacy was measured using the nonverbal immediacy scale (Richmond et al., 2003). The original instrument is a 26-item, unidimensional, Likert-type scale ranging from (0) *never* to (4) *very often*. However, in this study, a shortened form was used for physicians (10 items), nurses (10 items), and support staff members (4 items) [2]. The measure for the support staff members instrument was shortened because many of the nonverbal behaviors were unlikely to have been observed by some respondents (only contact being a phone call, for example). In a previous study, the reliability estimate was 0.81 for physicians' nonverbal immediacy (Richmond et al., 2001). The coefficient alphas, means, and standard deviations in this study were: physicians ( $\alpha = 0.80$ ,  $M = 33.80$ ,  $SD = 4.70$ , potential range = 0–40), nurses ( $\alpha = 0.88$ ,  $M = 31.88$ ,  $SD = 6.23$ , potential range 0–40), and support staff members ( $\alpha = 0.80$ ,  $M = 12.11$ ,  $SD = 3.34$ , potential range 0–16).

Source credibility was measured using an instrument designed by McCroskey and Teven (1999). This instrument is an 18-item, bipolar scale with three dimensions: competence, caring, and trustworthiness. In this study, only the dimensions of competence and caring were used. In a previous study, the reliability estimate was 0.87 for competence and 0.94 for caring of physicians (Richmond et al., 2002). The coefficient alphas, means, and standard deviations attained in this study were: physicians' competence ( $\alpha = 0.79$ ,  $M = 40.17$ ,  $SD = 3.56$ ), nurses' competence ( $\alpha = 0.91$ ,  $M = 37.07$ ,  $SD = 5.77$ ), support staff members' competence ( $\alpha = 0.93$ ,  $M = 35.59$ ,  $SD = 7.13$ ), physicians' caring ( $\alpha = 0.89$ ,  $M = 39.32$ ,  $SD = 5.08$ ), nurses' caring ( $\alpha = 0.92$ ,  $M = 36.56$ ,  $SD = 6.58$ ), and support staff members' caring ( $\alpha = 0.95$ ,  $M = 33.86$ ,  $SD = 8.53$ ).

Socio-communicative style was measured using the socio-communicative style scale (SCS). The SCS is a 20-item (10 items for assertiveness, 10 items for responsiveness), Likert-type scale (Richmond & McCroskey, 1990). Participants reported perceptions of their physician, nurse, and support staff member on the communication characteristics using a scale ranging from 1 (strongly disagree that the item applies) to 5 (strongly agree that the item applies). In a previous study, the reliability estimate was 0.84 for assertiveness and 0.94 for responsiveness of physicians (Richmond et al., 2002). The coefficient alphas, means, and standard deviations attained in this study were: physicians' assertiveness ( $\alpha = 0.88$ ,  $M = 36.73$ ,  $SD = 7.54$ ), nurses' assertiveness ( $\alpha = 0.92$ ,  $M = 32.23$ ,  $SD = 7.72$ ), support staff members'

assertiveness ( $\alpha = 0.94$ ,  $M = 32.60$ ,  $SD = 7.84$ ), physicians' responsiveness ( $\alpha = 0.96$ ,  $M = 46.06$ ,  $SD = 6.10$ ), nurses' responsiveness ( $\alpha = 0.96$ ,  $M = 43.17$ ,  $SD = 7.35$ ), and support staff members' responsiveness ( $\alpha = 0.97$ ,  $M = 38.92$ ,  $SD = 8.84$ ).

Perceptions of confidentiality were measured using the generalized belief scale (McCroskey & Richmond, 1996). This scale is a five-item, bipolar, seven-step scaling instrument that was preceded by the statement "My medical records are kept confidential." The coefficient alpha, mean, and standard deviation attained in this study were  $\alpha = 0.95$ ,  $M = 32.51$ ,  $SD = 4.86$ .

## Results

The first hypothesis predicted that patients' perceptions of physician immediacy, assertiveness, responsiveness, competence, and caring would be positively correlated with patients' perceptions of the confidentiality of their medical records. Table 1 provides a correlation matrix for the measures relating to physicians. As noted in that table, the first hypothesis was supported ( $p < 0.01$ ) on all of the patient perceptions variables except assertiveness. Responsiveness and caring produced the highest correlations with perceived confidentiality.

The second hypothesis predicted that patients' perceptions of nurse immediacy, assertiveness, responsiveness, competence, and caring would be positively correlated with patients' perceptions of the confidentiality of their medical records. Table 2 provides a correlation matrix for the measures relating to nurses. As noted in that table, the second hypothesis was supported ( $p < 0.01$ ) on all of the patient perceptions variables except assertiveness. Competence and caring produced the highest correlations with perceived confidentiality.

The third hypothesis predicted that patients' perceptions of support staff immediacy, assertiveness, responsiveness, competence, and caring would be positively correlated with patients' perceptions of the confidentiality of their medical records. Table 3 provides a correlation matrix of the measures relating to support staff. As noted in that table, the third hypothesis was supported ( $p < 0.01$ ) on all of the patient perceptions variables except assertiveness. As was the case with nurses, competence and caring produced the highest correlations with perceived confidentiality.

**Table 1** Correlations Among Physician Variables

Variable	2	3	4	5	6
Assertiveness	0.18**	0.14*	0.19**	0.12*	0.03
Responsiveness		0.63**	0.48**	0.76**	0.29**
Immediacy			0.39**	0.56**	0.15**
Competence				0.67**	0.16**
Caring					0.30**
Confidentiality					

Notes: \* Significant at the 0.05 level. \*\*Significant at the 0.01 level.

**Table 2** Correlations Among Nurse Variables

Variable	2	3	4	5	6
Assertiveness	0.44**	0.30**	0.34**	0.34**	0.01
Responsiveness		0.74**	0.75**	0.78**	0.23**
Immediacy			0.70**	0.73**	0.20**
Competence				0.84**	0.32**
Caring					0.41**
Confidentiality					

Note: \*\*Significant at the 0.01 level.

The research question posed for this study asked to what extent patients' perceptions of physician, nurse, and support staff immediacy, assertiveness, responsiveness, competence, and caring are collectively predictive of the patients' perceptions of the confidentiality of their medical records. Multiple correlational analyses indicate that the variables for all three groups of health professionals were able to significantly ( $p < 0.001$ ) predict the patients' perceptions of confidentiality of their medical records. For the physician group the multiple correlation was  $R = 0.31$  ( $F [5,224] = 4.61$ ,  $p < 0.001$ ), for the nurse group it was  $R = 0.41$  ( $F [5,201] = 7.75$ ,  $p < 0.001$ ) and for the support staff group it was  $R = 0.32$  ( $F [5,177] = 3.90$ ,  $p < 0.001$ ). Employing the predictors from all three health professional groups, the multiple correlation was  $R = 0.44$  [ $F [9,167] = 4.54$ ,  $p < 0.0001$ ].

### Discussion

The purpose of this study was to determine if, and to what extent, physicians', nurses', and support staff members' immediacy, socio-communicative style, and source credibility could predict patients' perceptions of confidentiality. Results indicated that perceptions of confidentiality are moderately influenced by each level (physician, nurse, and support staff member) of medical professional.

The predictor variables in this study (immediacy, socio-communicative style, and source credibility) were highly intercorrelated. Hence, the observed multiple correlations were very similar to the highest correlations with perceptions of

**Table 3** Correlations Among Support Staff Member Variables

Variable	2	3	4	5	6
Assertiveness	0.33**	0.19**	0.23**	0.21*	0.08
Responsiveness		0.70**	0.76**	0.85**	0.23**
Immediacy			0.66**	0.71**	0.21**
Competence				0.88**	0.32**
Caring					0.30**
Confidentiality					

Notes: \* Significant at the 0.05 level. \*\*Significant at the 0.01 level.

confidentiality found in the observed simple correlations. The variance predictable in perceived confidentiality ranged from about 10% for physicians and support staff to about 17% for nurses and 20% for the combination of all predictors. While these levels of variance accounted for are not extremely high, neither are they trivial. While it is clear that the communication behavior and credibility of all three types of medical personnel do make a difference, it is also clear that other factors may be as important as the ones considered in the current study.

Assertiveness of physicians, nurses, and support staff was not significantly related to patients' perceptions of confidentiality. It does not seem to matter to patients that health care professionals stand up for themselves and do not let others take advantage of them in relation to patients' perceptions of confidentiality. Rather, the other communication variables appear to be more important to patients' perceptions of confidentiality. For physicians, responsiveness and caring provided the highest correlations with patients' perceptions of confidentiality. For nurses and support staff, competence and caring provided the highest correlations with patients' perceptions of confidentiality. These findings are consistent with past research suggesting the importance of responsiveness, competence, and caring in relation to patients' satisfaction (Richmond et al., 2002).

#### *Limitations*

As a limitation of this study, it is very important to note that in this study there was very little variance to account for. Overwhelmingly, the respondents felt that the confidentiality of their records was extremely high—32.5 on scale of 5 to 35. This may indicate that the cooperating agency is unusually successful in maintaining confidentiality of their patients' medical records. Or it may be that these patients, in large part older persons, really do not know how confidential their records are but, when encouraged to respond to our questions, simply indicated their confidence in the system. Future research should try to differentiate health care organizations that excel at maintaining patient confidentiality from patients who are unknowing of the confidentiality of the records.

Another potential limitation of this study concerns the ethical implications of the findings. Results from the current study should not be used to bolster patients' perceptions that records are kept confidential if they are, in fact, being disclosed to others. Health care professionals should not try to hide purposeful or accidental confidentiality breaches through the use of immediacy, credibility, or socio-communicative style. Rather, health care professionals should use such communication behaviors to create a perception that medical records are kept confidential when that is actually the case. This will hopefully allow for more trusting and productive working relationships to develop between patients and the health care professionals who assist them.

### Conclusion

Modern medical practices are open to very severe deviations from the level of confidentiality that patients expect and believe currently exists. From the computerization and electronic transfer of medical records to out-source agencies in other parts of the world to the calling of a patient's name in a cancer unit when it is her/his turn to meet with the physician, the reality is that confidentiality is not secure. While health professionals and researchers are very much aware of this reality, it is likely that many, if not most, patients are not aware of it. While this concern has found some publicity in the media, it has yet to become a widely recognized concern of the general population.

As more people begin to recognize the very real threats to medical record confidentiality, it is likely that more and more patients, and potential patients, will begin to question the confidentiality of their medical records—if not to presume that they have no confidentiality at all. The reality of non-confidentiality is a major problem for the medical establishment to prevent or overcome (Brann & Mattson, 2004). Overcoming a *perception* of non-confidentiality may be even more difficult. While inappropriate communication may be the problem, the research reported here suggests that learning and practicing more appropriate communication with patients by medical care workers may, at least in part, be a solution for improving perceptions of confidentiality.

### Notes

- [1] The cooperating agency provided the researchers with a grant to cover all phases of the data collection process.
- [2] Because the cooperating agency's experience indicated that response rates would go down if the questionnaire employed was longer, shorter forms of the instruments were employed in order to include as many different measures as feasible. As a result, some of the measures were found to be less reliable than the longer forms employed in previous research. It is likely that these lower reliabilities resulted in attenuation of correlations obtained in this study.

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