

Assessing Residents' Communication Skills: Disclosure of an Adverse Event to a Standardized Patient

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Abstract

Introduction: Disclosing adverse events to patients after a poor outcome is an essential task involving both communication skills and professionalism, but one that is difficult to teach and assess during clinical rotations. Beyond ensuring clinical competency, these skills are essential in minimizing medico-legal risk. An objective structured clinical examination (OSCE) station with a standardized patient allows an opportunity to evaluate these skills. Our objective was to assess residents' communication skills involving the disclosure of a poor outcome to a standardized patient using a standardized patient encounter, and to compare their performance before and after formal teaching on disclosure.

Methods: Fourteen obstetrics and gynaecology residents (PGY-2 to PGY-5) were evaluated in a two-station OSCE. In the first station, they obtained a history and counselled an obstetrical patient, and in the second station they met with the same patient to discuss an adverse outcome that had occurred. The residents were evaluated using guidelines for the disclosure of adverse events developed by the Canadian Patient Safety Institute and published by the Canadian Medical Protective Association. The residents then participated in a workshop on disclosure and were retested.

Results: The mean score in the pre-workshop disclosure OSCE was 59.1% (12.4/21, SD 2.7), while the mean score in the post-workshop OSCE was 80.1% (16.9/21, SD 2.1). Using the paired Student *t* test, the scores differed significantly with $P < 0.01$.

Conclusion: Residents' performance in disclosure improves after formal teaching and the OSCE is an effective technique for testing communication skills.

Key Words: Education, medical, graduate, standardized patient, disclosure, obstetrics

Competing Interests: None declared.

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Résumé

Introduction : La divulgation d'événements indésirables aux patientes à la suite de l'obtention d'une piètre issue constitue une tâche essentielle mettant en jeu tant les aptitudes en communication que le professionnalisme; toutefois, l'exécution de cette tâche est difficile à enseigner et à évaluer dans le cadre des rondes cliniques. En plus d'assurer la compétence clinique, ces aptitudes s'avèrent essentielles pour ce qui est de la minimisation du risque médico-légal. Un poste d'examen clinique objectif structuré (ECOS) comptant une patiente standardisée offre l'occasion d'évaluer ces aptitudes. Notre objectif était d'évaluer les aptitudes en communication des résidents mettant en jeu la divulgation d'une issue indésirable à une patiente standardisée, au moyen d'une consultation de patiente standardisée, et de comparer leur rendement avant et après l'enseignement magistral de la divulgation.

Méthodes : Quatorze résidents en obstétrique-gynécologie (2^e année à 5^e année) ont été évalués au moyen d'un ECOS à deux postes. Dans le premier poste, ils ont consigné les antécédents d'une patiente en obstétrique et l'ont conseillée, et dans le deuxième poste, il ont rencontré la même patiente pour discuter de l'obtention d'une issue indésirable. Les résidents ont été évalués au moyen des lignes directrices pour la divulgation des événements indésirables élaborées par l'Institut canadien pour la sécurité des patients et publiées par l'Association canadienne de protection médicale. Les résidents ont par la suite participé à un atelier sur la divulgation et ont été testés à nouveau.

Résultats : Le score moyen dans le cadre de l'ECOS de divulgation pré-atelier était de 59,1 % (12,4/21, σ 2,7), tandis que le score moyen dans le cadre de l'ECOS de divulgation post-atelier était de 80,1 % (16,9/21, σ 2,1). À la suite de la mise en œuvre du test *t* pour échantillons appariés, les scores ont différé de façon significative ($P < 0,01$).

Conclusion : Le rendement des résidents en matière de divulgation s'améliore à la suite de l'enseignement magistral et l'ECOS constitue une technique efficace pour la mise à l'essai des aptitudes en communication.

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INTRODUCTION

Complications and iatrogenic injury are, regrettably, an unavoidable part of the practice of medicine. The issue of medical error has been well summarized in the Institute of Medicine's publication "To Err Is Human: Building A Safer Health System."¹ Although adverse events do not occur often, medical residents need to be prepared to manage the sequelae of these events, including patient disclosure. This important and often daunting task requires the physician to summon both superlative communication skills and professionalism. When these events inevitably occur, it has been recommended that the physician should have the responsibility of disclosing the facts surrounding the error to the patient.² Especially in the medico-legal environment in which obstetrics is now practised, timely and sincere communication with patients is crucial.

Evidence for the importance of disclosure of adverse events by physicians to their patients has been explored in the medical literature since the 1980s.³ However, it is only recently that national organizations such as the CPSI and the CMPA have published guidelines for such conversations.^{2,4} In the United States, the Veteran's Health Administration published a guide to "practical approaches to disclosing adverse events," which is based on their experiences and outlines their rationale for disclosure and some of the situations in which disclosure would be deemed appropriate.⁵ Within the field of obstetrics and gynaecology, the American College of Obstetricians and Gynecologists' Committee on Patient Safety and Quality Improvement issued an opinion in October 2007 supporting the efforts of those seeking "to understand how to best disclose and discuss these adverse events with patients and their families."⁶ The availability of these guidelines from Canada and the United States confirms that disclosure is a skill that is now considered a crucial step in ensuring patient safety; furthermore, in Ontario, where this study took place, disclosure of adverse events is now mandated by the *Public Hospitals Act*.⁷

The CPSI recommends that health care providers receive education and training in how to participate effectively

in a disclosure discussion. They also recommend that specific guidance and instruction in how to communicate effectively and respond to unintended patient outcomes and adverse events should be integrated into the undergraduate and postgraduate curricula for all health care providers. Imparting these skills to trainees is especially challenging, as opportunities for role modelling and practice are necessarily limited. Assessing these skills during actual patient encounters is similarly difficult, as attending physicians may not be present when residents conduct these meetings, and attending physicians may not be consistent in their expectations of what constitutes an adequate disclosure meeting. However, medical educators in Canada are charged with the task of teaching and assessing the skills required by the non-medical expert CanMEDS roles (i.e., communicator, professional, health advocate, scholar, manager). Beyond ensuring clinical competence, these skills are essential in minimizing medico-legal risk.

There is a growing number of publications describing the development of curricula for undergraduate medical education that address medical fallibility.^{8,9} Beyond the development of these curricula that offer our trainees experience in disclosure, assessment tools are needed to ensure competence. To this end, studies have examined the use of standardized patients and simulation scenarios to teach and assess these skills. A group in Australia conducted a qualitative study of pediatric trainees' experiences with giving bad news to a simulated parent.¹⁰ They concluded that early exposure to this type of curriculum was very valuable. However, there is a subtle but important difference between breaking bad news and disclosing an adverse event where medical error and responsibility is involved. Another pediatric group in the United States used quantitative methods to assess nurses' self-efficacy in communication to carry out disclosure before and after a simulated scenario.¹¹ These investigators found positive results in the ability to train nurses to disclose and concluded that "further research on simulation-based disclosure training for health care professionals" is warranted.¹¹ Another group recently published a simulated scenario in which pediatric trainees are required to manage the results of a medication error and disclose the event to the parents.¹² There are no published descriptions of the disclosure of adverse events in an obstetrical population.

Objective structured clinical examinations offer an excellent opportunity to assess these particular skills. The OSCE offers a standardized, repeatable event to which all trainees can be exposed. While OSCEs are often used to assess the physician as medical expert, standardized patients have successfully been used to assess communication skills and

ABBREVIATIONS

| | |
|------|---|
| CMPA | Canadian Medical Protective Association |
| CPSI | Canadian Patient Safety Institute |
| OSCE | objective structured clinical examination |

professionalism.¹³ Standardized patients have also been used to assess the baseline disclosure skills of internal medicine residents, only 51% of whom had reported prior training in disclosure.¹⁴

The purpose of this study was to assess obstetrics and gynaecology residents' communication skills involving the disclosure of an adverse event to a standardized patient, using an OSCE and an evaluation grid adapted from national guidelines. Our hypothesis was that formal training in how to disclose adverse outcomes to patients would significantly improve resident performance in disclosure to the standardized patient.

METHODS

Obstetrics and gynaecology residents (PGY-2 to PGY-5) at our centre participated in an OSCE in October 2008. Two of the eight 10-minute stations constituted Phase 1 of the study. In the first station, the residents were instructed to counsel a standardized patient regarding the management of a fetus in breech presentation at term, which led to a description of the process of external cephalic version. This preliminary station allowed the residents to establish rapport with the standardized patient, take a pertinent history, and discuss the risks and benefits of the procedure. In the second station, the residents were instructed to conduct a disclosure meeting with the patient after the procedure was complicated by fetal bradycardia necessitating emergency Caesarean section. Prior to this examination, all of the residents had received the CMPA disclosure document⁴ but no formal instruction on disclosure. For the sake of continuity, each resident was exposed to the same standardized patient for both parts of the OSCE, but two standardized patients were used in the course of the day. The standardized patients were given a script with the answers to the questions that residents might ask, and were instructed to respond in a consistent way to any extraneous questions that were not anticipated. A two-hour workshop on disclosure was then conducted in March 2009 during the residents' protected teaching time. The session was facilitated by a Physician Risk Manager from the CMPA. The objectives of the CMPA workshop were to review the circumstances when a disclosure discussion is appropriate, who should participate in disclosure discussions, when and where disclosure should take place, what to disclose and how to say it, the role of apology, and what should be documented.¹⁵

In April 2009, Phase 2 of the study was conducted; the same two-station OSCE format was used, changing only the specific clinical scenario. In this case, residents

counselled a standardized patient regarding the risks and benefits of her request for a Caesarean section in the absence of a compelling medical indication. In the second station, the residents conducted a disclosure meeting with the patient after her Caesarean section was complicated by inadvertent cystotomy. A different pair of standardized patients was used in each phase of the study. Fourteen residents participated in both phases of the study and, to avoid prompting the residents about what topics would be examined, it was before the beginning of Phase 2 that the participants consented to the comparison of their pre- and post-workshop scores.

In each history/counselling station, the author of the station developed the evaluation grid. For the disclosure meeting, the residents were evaluated using a checklist extracted from the guidelines for disclosure of adverse events developed by the CPSI and published by the CMPA. The intent of the assessment was to measure whether residents were able to follow the suggested guidelines (as evidenced by a dichotomous 21-point checklist of performed tasks) and incorporate the necessary steps that are considered to be integral parts of the disclosure process. The first station of each examination was scored by a staff obstetrician, but the disclosure meeting was videotaped and then reviewed by both investigators together; these investigators jointly agreed on the score for each resident.

Statistical analysis was performed using SPSS Version 18.0 (SPSS Inc., Chicago IL) and Microsoft Excel 2004 for Mac (Microsoft Corp., Redmond WA). The mean scores on the disclosure station from Phase 1 were compared with the mean scores from Phase 2 using a paired Student *t* test. Descriptive statistics were used to analyze the performance on each individual item, identify correlation between performances on the two stations of each OSCE, and describe performance as a function of resident gender and year of training.

Ethics approval for the study was provided by the Ottawa Hospital Research Ethics Board.

RESULTS

Fifteen of 20 eligible (PGY-2 to PGY-5) obstetrics and gynaecology residents participated in the first OSCE. Eighteen residents participated in the second OSCE, 14 of whom had participated in the first OSCE. The 14 residents who participated in both phases of the study attended the workshop, and these residents constituted the study population. The demographics of the participants are summarized in Table 1.

The mean score in the first disclosure station was 12.4/21 (59.1%) (range 8 to 17; SD 2.7). After the workshop, the mean score on the second disclosure station was 16.9/21 (80.1%) (range 13 to 20; SD 2.1). Analysis using the Student *t* test showed the mean scores differed significantly ($P < 0.01$). The mean scores for the counselling portion of each OSCE were 20.5/35 (58.6%) and 21.5/35 (61.4%) respectively. There was no significant correlation between performance on the first station (the history and counselling station) and performance on the disclosure station ($r = 0.08$; $P = 0.77$, and $r = -0.02$; $P = 0.93$, respectively).

Four items were performed successfully by 14 of 15 residents in Phase 1 of the study: "professionalism," "avoiding barriers," "speaking at a comfortable rate," and "using appropriate body language." The four items that were performed by the lowest number of residents after the workshop were "touching the forearm" (4/15), "summarizing the meeting" (5/15), "determining what the patient knows" (7/15), and "sitting at eye level" (8/15). The most improved items after the intervention were "allow time to express feelings" (+10/15), "introduce the topic" (+9/15), and "introduce oneself" (+8/15).

The number of residents who addressed each of the topics of conversation before and after the disclosure workshop is summarized in Table 2. Findings beyond the primary outcome of interest in the study related to performance according to gender and level of training, and are shown in Figures 1 and 2.

DISCUSSION

This study describes the use of a novel OSCE aimed at assessing disclosure, demonstrating that the OSCE is an effective way of evaluating residents' communication skills and identifying specific deficits. Moreover, residents exhibited a significant improvement in performance on a disclosure OSCE after formal teaching in how to conduct a disclosure interview. It is impossible to determine the magnitude of the improvement that is attributable to the teaching session compared with the effect of practice alone. However, our residents would not expect to be tested on the same CanMEDS role twice in the same year, and opportunities to rehearse this skill in daily practice are limited.

Observing that performance has improved soon after an educational session is not unexpected, but this study demonstrated that an important subset of communication skills can be both taught and assessed. Another novel feature of this project was the use of a two-station OSCE,

Table 1. Resident demographics

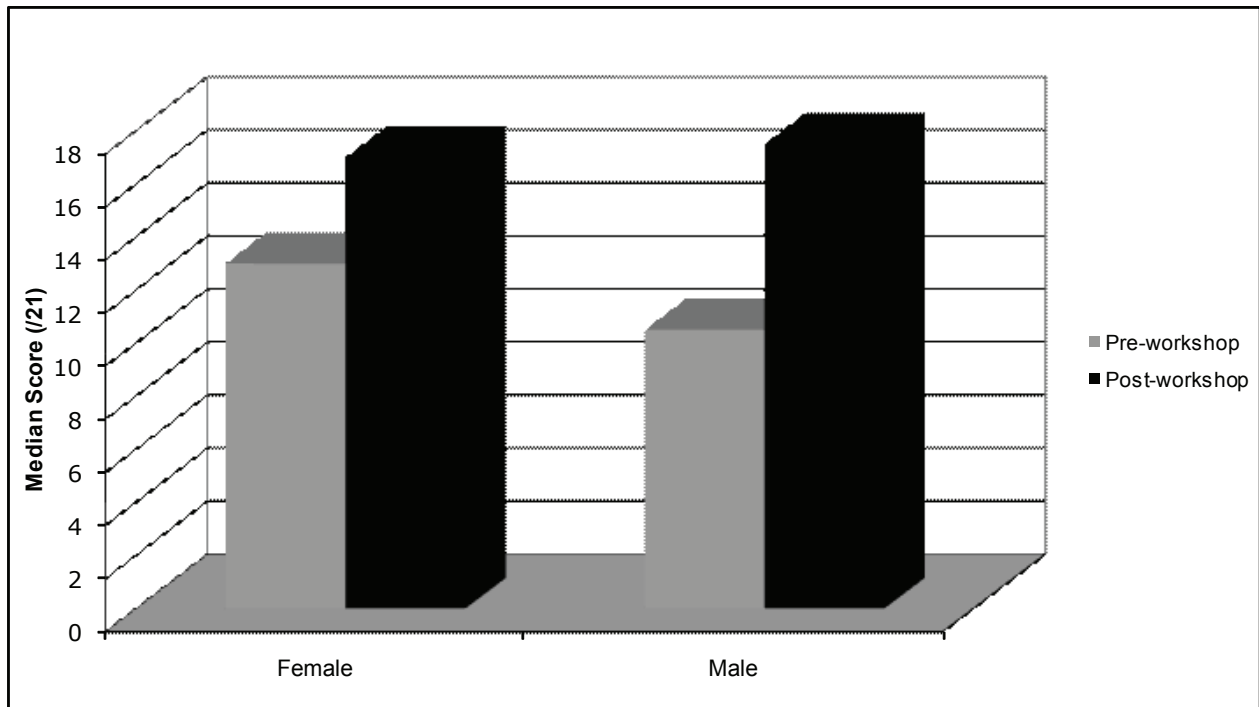
| Year of training | n = 14 |
|------------------|--------|
| PGY-2 | 4 |
| PGY-3 | 2 |
| PGY-4 | 2 |
| PGY-5 | 6 |
| Gender | |
| Female | 8 |
| Male | 6 |

Table 2. Number of residents addressing each topic of conversation in either phase of the study

| Element to be included in initial disclosure meeting | Number of residents performing each element, n = 14 | |
|--|---|---------------|
| | Pre-workshop | Post-workshop |
| Introduce oneself | 6 | 14 |
| Introduce the topic | 4 | 13 |
| Use plain language | 11 | 10 |
| Describe clinical condition | 13 | 14 |
| Express regret | 4 | 10 |
| Determine what they know | 9 | 7 |
| Present the facts | 13 | 14 |
| Avoid placing blame | 13 | 14 |
| Allow time to express feelings | 3 | 13 |
| Be professional | 14 | 13 |
| Sit at eye level, don't dominate | 4 | 8 |
| Avoid barriers | 14 | 14 |
| Speak at a comfortable rate | 14 | 14 |
| Use appropriate body language | 14 | 14 |
| Focus on the patient's needs | 6 | 13 |
| Touch the patient's forearm | 3 | 4 |
| Be attentive | 9 | 10 |
| Allow time for reflection | 2 | 9 |
| Check for understanding | 8 | 10 |
| Summarize the meeting | 1 | 5 |
| Arrange follow-up | 8 | 14 |

which offers improved context for the trainee and allows for the establishment of rapport before the adverse event occurs.

The limitations of this study are its small numbers, the lack of a control group, and the proximity of the teaching session to the evaluation. This was a sample of convenience, and increased numbers could be achieved by performing the same OSCE in more departments of obstetrics and gynaecology across Canada, or by altering

Figure 1. Performance on disclosure OSCE according to gender

the subject matter to a more generic complication that could be disclosed by residents from different disciplines within one university. Within a single teaching institution, it would have been inappropriate not to expose a group of residents to the CMPA workshop in order to establish a control group, and retesting our residents to demonstrate retention of skills is challenging because of the inevitable turnover of residents in the program.

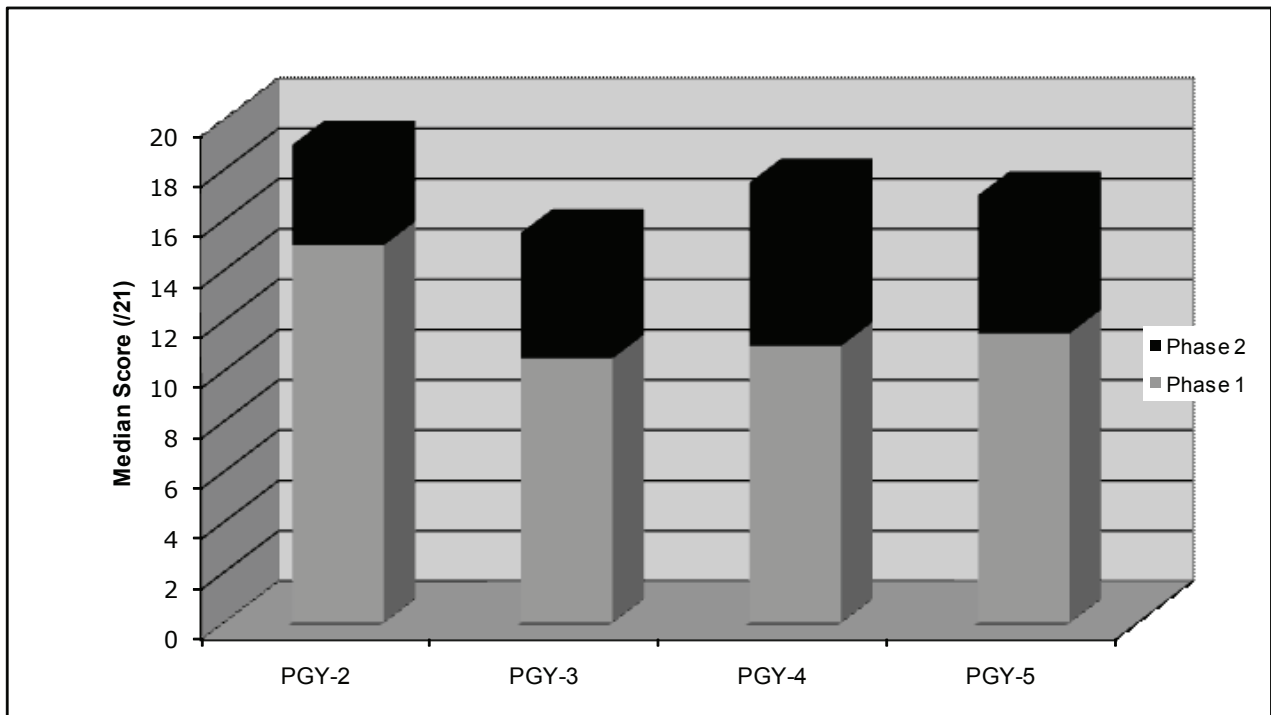
It is reassuring that four items were performed very well prior to formal teaching on the subject (“professionalism,” “avoiding barriers,” “speaking at a comfortable rate,” and “using appropriate body language”), the implication being that some of these skills are taught or learned in other ways, either through an innate “bedside manner” or through role-modelling or transfer from other communication skills. We can postulate that the items that were most improved after the educational intervention (“allow time to express feelings,” “introduce the topic,” and “introduce oneself”) are items that can be taught but are not being taught elsewhere, and are behaviours that are not being modelled. However, an alternative interpretation is that the residents did not demonstrate these skills in an examination setting until they learned that these items were important.

Not surprisingly, one item that was virtually unaffected by teaching was “touching a hand or forearm.” Touching the

patient is something that comes naturally to some people and not to others, and is an action heavily affected by both culture and rapport. Although we chose to include it in our checklist, the actual point in the CPSI/CMPA disclosure document states: “Touching a hand or forearm may be therapeutic for some patients, but may not be welcomed by others depending on the extent of your previous patient-doctor relationship, what has happened, or the patient’s cultural background.”

Therefore, we acknowledge that touching a forearm is not something that we can teach our trainees to do, and it is not something that should be evaluated negatively if trainees choose not to do it.

Of the other items that resisted improvement, “summarizing the meeting” and “determining what the patient knows” are more challenging to explain, as it seems they should not be any more difficult to teach than other skills. “Sitting at eye level” was done by just over half of our residents; this seems to be similar to “touching a hand or forearm,” in that some residents are comfortable doing it and others are not. The rationale is that sitting at eye level removes the possible sense of a power differential and puts patients more at ease. Sitting gives the impression that more time has been spent and that a clinician is less rushed.¹⁶ Therefore, as part of an initial disclosure meeting, the importance of this manoeuvre needs to be impressed upon trainees.

Figure 2. Performance on disclosure OSCE according to year of training

Female residents outperformed male residents in the pre-test, but this effect was mitigated by the teaching session (Figure 1). Could it be that female residents come by these communication skills naturally while male residents require formal training? There is already evidence that women are more empathic communicators,¹⁷⁻¹⁹ but perhaps men can overcome this shortcoming with formal teaching. Notably, junior residents (PGY-2) outperformed senior residents (Figure 2). This observation raises two possibilities: that having less medical knowledge may allow juniors to focus on the task at hand and thus be more empathetic, and that communication skills may deteriorate as knowledge and experience increase.

The results of the study are focused on checklist items, but review of the videos may provide a stimulus for future research. Firstly, residents were asked to conduct an initial disclosure meeting, but spent a great deal of time conducting “ward rounds” (asking about pain, assessing urine output, and explaining length of hospital stay). This observation suggests either that residents were uncomfortable with the topic of conversation and resorted to neutral clinical activities, or that they did not understand what was expected of them. Further qualitative research could involve conducting focus groups with the residents to answer this question.

Secondly, resident empathy seemed to vary inversely with the amount of counselling they had provided for the patient

in advance. If the residents counselled the patient about potential complications, they expressed minimal feelings of regret when the complication occurred, and seemed to adopt an attitude of “I told you so.” Moreover, we learned that our trainees do not consider emergency Caesarean sections and cystotomies major life-altering complications. In an attempt to increase empathy and to better simulate real-life conditions, we suggest that future scenarios involve more serious complications where the trainee is personally responsible for the outcome in question.

CONCLUSION

Residents' performance in disclosure of adverse events improves after formal teaching. The standardized patient encounter OSCE is an effective technique for testing this important subset of communication skills.

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REFERENCES

1. Kohn LT, Corrigan JM, Donaldson M, eds. *To err is human: building a safer health system*. Washington, DC: National Academy Press; 2000.

2. Disclosure Working Group. Canadian disclosure guidelines. Edmonton, AB: Canadian Patient Safety Institute; 2008.
3. Applegate WB. Physician management of patients with adverse outcomes. *Arch Intern Med* 1986;146:2249–52.
4. The Canadian Medical Protective Agency. Communicating with your patient about harm: disclosure of adverse events. 2008. Available at: http://www.cmpa-acpm.ca/cmpapd04/docs/resource_files/ml_guides/disclosure/pdf/com_disclosure_toolkit-e.pdf. Accessed January 8, 2011.
5. Cantor MD, Barach P, Derse A, Maklan CW, Wlody GS, Fox E. Disclosing adverse events to patients. *Jt Comm J Qual Patient Saf* 2005;31:5–12.
6. ACOG Committee Opinion No. 380: Disclosure and discussion of adverse events. *Obstet Gynecol* 2007;110:957–8.
7. College of Physicians and Surgeons of Ontario. Policy Statement No. 5–10. Dialogue. 2010 May; Issue 2. Available at: <http://www.cpso.on.ca/policies/policies/default.aspx?ID=1578>. Accessed January 8, 2011.
8. Gunderson AJ, Smith KM, Mayer DB, McDonald T, Centomani N. Teaching medical students the art of medical error full disclosure: evaluation of a new curriculum. *Teach Learn Med* 2009;21:229–32.
9. Keller DR, Bell CL, Dottl SK. An effective curriculum for teaching third-year medical students about medical errors and disclosure. *WMJ* 2009;108:27–9.
10. Gough JK, Frydenberg AR, Donath SK, Marks MM. Simulated parents: developing paediatric trainees' skills in giving bad news. *J Paediatr Child Health* 2009;45:133–8.
11. Wayman KI, Yaeger KA, Sharek PJ, Trotter S, Wise L, Flora JA, et al. Simulation-based medical error disclosure training for pediatric healthcare professionals. *J Healthc Qual* 2007;29(4):12–9.
12. Overly FL, Sudikoff SN, Duffy S, Anderson A, Kobayashi L. Three scenarios to teach difficult discussions in pediatric emergency medicine: sudden infant death, child abuse with domestic violence, and medication error. *Simul Healthc* 2009;4:114–30.
13. Yudkowsky R, Downing SM, Sandlow LJ. Developing an institution-based assessment of resident communication and interpersonal skills. *Acad Med* 2006;81:1115–22.
14. Stroud L, McIlroy J, Levinson W. Skills of internal medicine residents in disclosing medical errors: a study using standardized patients. *Acad Med* 2009;84:1803–8.
15. The Canadian Medical Protective Association. Disclosure Training Program: The Canadian Medical Protective Association (CMPA). Available at: <http://www.patientsafetyinstitute.ca/english/toolsresources/disclosure/disclosuretraining/pages/medicalprotectiveassociation.aspx>. Accessed August 27, 2010.
16. Johnson RL, Sadosty AT, Weaver AL, Goyal DG. To sit or not to sit? *Ann Emerg Med* 2008;51(2):188–193.
17. Nicolai J, Demmel R. The impact of gender stereotypes on the evaluation of general practitioners' communication skills: an experimental study using transcripts of physician-patient encounters. *Patient Educ Couns* 2007;69(1–3):200–5.
18. Sandhu H, Adams A, Singleton L, Clark-Carter D, Kidd J. The impact of gender dyads on doctor-patient communication: a systematic review. *Patient Educ Couns* 2009;76:348–55.
19. Firth-Cozens J. Doctors with difficulties: why so few women? *Postgrad Med J* 2008;84(992):318–20.