Background: Communication failure is a risk factor for mishaps and complaints, which can be reduced by effective communication between operating room team members and patients.

Aim: To conduct a survey among anesthesiologists regarding communications skills and related issues like stress in case of communication failure, need for training, music in operation theater, and language barrier at their work place.

Materials and Methods: We conducted a survey among anesthesiologists coming for a neuroanesthesia conference in India ($n = 110$) in February 2011 by questionnaire sent by e-mail to them.

Results: The response rate was 61.8% (68/110). Majority (95.5%) of the respondents agreed that good verbal communication leads to better patient outcome, better handling of crisis and is important between surgeons and anesthesiologists (98.5%). A total of 86% of the anesthesiologists felt that failure of communication caused stress to them. The idea of communication by e-mail or phone text messages instead of verbal communications was discouraged by 65.2%. A total of 82% of respondents felt that training of communication skills should be mandatory for all medical personnel and 77.6% were interested in participating in such course. Language barrier at work place was seen as hurdle by 62.7% of the respondents. A total of 80% of respondents felt that playing music in operating theater is appropriate.

Conclusion: Results of the survey highlight the need for effective communication in the operating room between team members and need for formal training to improve it.

Key words: Anesthesia, communication, communication skills, language barrier, music, operation theater, training

Introduction

Communication is the exchange of information, feedback or response, ideas, and feelings. It provides knowledge, institutes relationships, establishes predictable behavior patterns, maintains attention to the task, and is a management tool. Good communication between doctor and patient is said to improve health outcomes or patient satisfaction and reduce error, misunderstandings, distress, and negligence claims. Joint Commission on Accreditation of Healthcare Organizations reviewed the root causes of the sentinel events reported during 2004 to first quarter of 2012 and found communication errors to be a contributing cause for 51.7% of anesthesia-related adverse events, 54.7% of operative and postoperative complication events, 59.6% of medical equipment-related adverse events, 71.3% of medication error events, and 80% of delay in treatment-related events, all resulting in death or permanent loss of function. Awad et al., and Elks and Riley have emphasized upon the need of good communication between anesthesiologists, surgeons, and paramedical staff.

We conducted a survey among anesthesiologists attending a neuroanesthesia conference in India regarding communication skills and related issues at their work place. The present survey was aimed at seeking opinion from practicing anesthesiologists regarding communication at the surgeon-anesthesiologist interface, traditionally a “volatile” area within the operation theater environment.
Materials and Methods

Online questionnaire (see Appendix) by e-mail was sent to members attending The 2nd Conference of Asian Society for Neuroanesthesia and Critical Care held in February 2011 at New Delhi, India. The questionnaire consisted of questions assessing communication issues within the environment of the operating theater. This was based on the lines of the questionnaire by Elks and Riley. Questions on music in operating room (OR), need for communication skills, training, and language as barrier of communication were also included. Attitudes of the participants were assessed by a validated 5-point Likert scale. Questions were not gender- or age-specific.

Results

The questionnaire was sent to 110 members, of which 68 (61.8% response rate) responded. Details of the respondents are as shown in the Appendix [Table A] question numbers 1-3. Among respondents, 66.2% (45/68) rated themselves as either excellent or very good in verbal communication, while 33.8% (23/68) rated themselves as an average communicator. Most of the respondents (64/67: 95.5%) agreed that good verbal communication leads to better patient outcome. The need for good communication between surgeons and anesthesiologists was considered to be important by 98.5% (67/68) of the respondents. There was less agreement regarding the current state of communication between surgeons and anesthesiologists with 59.7% (40/67) agreeing that this was acceptable, 19.4% (13/68) undecided, and 20.9% (14/68) regarding this as poor. When it came to surgeons’ communication skills, 53.7% (36/67) rated it as good, 19.4% (13/67) as poor, and 26.9% (18/67) were undecided. Anesthesiologists’ communication skills were regarded as good by 59.1% (39/66), poor by 18.2% (12/66), whereas 22.7% (15/66) were undecided.

When the role of good or poor communication between surgeons and anesthesiologists in a crisis situation was explored, all except 4.5% (3/67) of the respondents were of the opinion that good communication plays a role in improved outcome in such situations. A total of 23.9% (16/67) had encountered it on more than 30 occasions, 43.3% (29/67) on 10 or more occasions, 25.4% (17/67) on two or more occasions, and 3.0% (2/67) had experienced it once. As for poor communication, 52.2% (35/68) had experienced a situation where poor surgeon anesthesiologist communication affected the outcome on two or more occasions (4.5% on more than 30 occasions, 10.4% on 10 or more occasions, 37.3% on 2 or more occasions), 9.0% (6/67) experienced it once, while 38.8% (26/67) had never been in such a situation. Majority (98.5%: 66/67) of the respondents felt that anesthesiologists and surgeons should be good communicators and good communication in theater decreases work stress among surgeons, anesthesiologists, nurses, and technicians. A total of 63% (42/67) of our respondents disagreed that silence is the best for good working conditions. A total of 86% (56/65) of the respondents felt that failure of communication cause stress to them. A total of 80% (47/67) felt that playing music in operating theater is appropriate. The idea of communication by e-mail or phone text messages instead of verbal communications was discouraged by 65.2% (43/66) of the respondents.

In our survey, 94% (63/67) felt poor communication is a factor in surgical or procedural delay. Formal lectures/sessions on communication skills were never conducted for 88% (59/67) of the respondents during their undergraduate or postgraduate training in the medical college. A total of 82% of respondents felt that a communications course should be mandatory for all medical personnel and 77.6% (42/67) were interested in participating in a course in communication issues. Language barrier at work place was found to be a contributing factor for communication problems by 62.7% of the respondents, 24% of them encountering it often.

The survey questions and distribution of responses are being included in the Appendix [Table A].

Discussion

Our survey was based on the previous survey done by Elks and Riley on anesthesiologists working in Western Australia. We aimed to find the attitudes and awareness of anesthesiologists in our region with relation to importance of communication. The response rate of our survey was 61.8%, (68/110) which seems acceptable.

Most respondents felt that good communication skill is vital to improve patient care and outcome and can prevent potentially avoidable medical errors. Poor communication between team members in OR is regarded as risk factors for mishaps and complaints. Gawande et al. conducted confidential interviews with surgeons on reported surgical adverse events resulting from errors of care. They found that 43% of adverse events were a direct result of communication failures between two or more clinicians. Analysis by Lingard et al. of 421 procedurally related communication events in the OR over a 3-month time period showed that communication failures in the OR occurred in 129 cases (30%) of communication events.
Though most respondents believed that good communication skill reduces the stress among the OR team members, only 60% judged themselves to be a good communicator.

The need for course/training on communication skills was also felt. Harms et al.,[10] in their study designed a program based on videotaped reviews of actual preoperative visits and role playing to teach communication skills to anesthesiologists at their hospital. They found that training to increase patient satisfaction with the preoperative anesthetic visit, decreased patient’s anxiety, and improved interpersonal relationships. Similar audio-visual training program, use of simulators, role playing, structured feedback, situational awareness, “leading by example” are some of the ways that can be used to improve the communication skills of clinicians. These skills should be taught early and repeatedly throughout medical education and subsequent clinical practice. Anesthesia residency review committees in many developed countries[11] now demand documentation of training in communication skills, which needs to be applied universally.

Regarding playing music in OR, 80% believed it to be appropriate, which was comparable to results of Elks and Riley,[5] where 71% preferred background music. Hawksworth et al.,[12] surveyed 200 anesthesiologists to determine the prevalence of music playing in the operating theater and anesthesiologists’ attitudes to it. Among 104 respondents, who worked in a theater where music was played regularly, 26% felt that music reduced their vigilance and impaired their communication with other staff, 11.5% felt that music might distract their attention from alarms and 51% felt that music was distracting when a problem was encountered during the anesthetic. There is evidence that music can reduce autonomic reactivity and enhance performance.[13] George et al.,[14] also observed that music can aid in improving the work efficiency of medical personnel in the OR. Familiar and self-chosen music have favorable effect than the music which people didn’t like or were indifferent to.[15] So, one has to be sure that music, if used should be of right kind and should not be a distraction to any member of the theater team.

Language barrier was found to be a hurdle of effective communication in our survey. Dorgan et al.[16] in their analysis also found language issues and cultural differences as a limiting factor for the progression of international medical graduates to their full potential. For example, our country, India is a country of diversity. The Eighth Schedule to the Indian Constitution contains a list of 22 scheduled languages and 1652 languages are being spoken here.[17] With 42% of the population knowing the official language Hindi and only 13% knowing English, communication between medical and paramedical staff can at times be difficult. Failure to ensure effective communication raises risks of misdiagnosis and inappropriate treatment. A common official language for learning and communication, frequent interactions between staffs, language, and consultation skills training,[18] and good interpreter services can be used to overcome this problem.

To conclude, the work environment in the OR can be satisfying and motivating if communication is good. A majority of conflicts can be avoided and even resolved with good communication. Medical and paramedical students should receive formal

### Table A: Appendix

Communication skills of anesthesiologists: A survey

| Country       | India | UK | USA | Australia | Others (specify below) |
|---------------|-------|----|-----|-----------|------------------------|
| Percentage    | 77.9% (53) | 2.9% (2) | 4.4% (3) | 0.0% (0) | 14.7% (10) |

| Position               | Faculty/consultant | Senior resident/registrar | Postgraduate/fellow/trainee |
|------------------------|---------------------|---------------------------|-----------------------------|
| Percentage             | 89.2% (58)          | 3.1% (2)                  | 7.7% (5)                    |

| Primary Role           | General anesthesiologist | Cardiac anesthesiologist | Neuroanesthesiologist |
|------------------------|--------------------------|--------------------------|-----------------------|
| Percentage             | 28.8% (19)               | 7.6% (5)                 | 63.6% (42)            |

| Verbal Communication Skills | Excellent  | Very good | Average | Poor  | Very poor |
|-----------------------------|------------|-----------|---------|-------|-----------|
| Percentage                  | 22.1% (15) | 44.1% (30) | 33.8% (23) | 0.0% (0) | 0.0% (0) |

5. Based on your experience, give your opinion on these key issues:

a. Verbal communication leads to better patient outcome

| Opinion                  | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|--------------------------|----------------|-------|-----------|----------|-------------------|
| Percentage               | 62.7% (42)     | 32.8% (22) | 1.5% (1) | 1.5% (1) | 1.5% (1) |

b. I feel that communication between surgeons and anesthesiologists is important

| Opinion                  | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|--------------------------|----------------|-------|-----------|----------|-------------------|
| Percentage               | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |

Contd...
Table A: Appendix Contd...

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| c. I regard surgeons’ communication skills overall as good | 10.4% (7) | 43.3% (29) | 26.9% (18) | 19.4% (13) | 0.0% (0) |
| d. Communication between surgeons and anesthesiologists is currently acceptable | 3.0% (2) | 56.7% (38) | 19.4% (13) | 20.9% (14) | 0.0% (0) |
| e. I regard anesthesiologists’ communication skills overall as good | 13.6% (9) | 45.5% (30) | 22.7% (15) | 18.2% (12) | 0.0% (0) |

6. Crisis situations: Role of communication skills

a. I have been involved in a crisis situation where good communication between surgeon and anesthesiologist played an important role in outcome

|                         | Never | Once | 2 or more | 10 or more | 30 or more |
|-------------------------|-------|------|-----------|------------|------------|
| 4.5% (3)                | 3.0% (2) | 25.4% (17) | 43.3% (29) | 23.9% (16) |

b. I have been involved in a crisis situation where poor communication between surgeon and anesthesiologist played an important role in outcome

|                         | Never | Once | 2 or more | 10 or more | 30 or more |
|-------------------------|-------|------|-----------|------------|------------|
| 38.8% (26)             | 9.0% (6) | 37.3% (25) | 10.4% (7) | 4.5% (3) |

7. In your opinion:

a. I feel that anesthesiologists should be good communicators

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 83.6% (56)              | 14.9% (10) | 0.0% (0) | 1.5% (1) | 0.0% (0) |

b. I feel that surgeons should be good communicators

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 84.8% (56)              | 12.1% (8) | 1.5% (1) | 1.5% (1) | 0.0% (0) |

c. I feel silence is best for good working conditions

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 4.5% (3)                | 14.9% (10) | 17.9% (12) | 37.3% (25) | 25.4% (17) |

d. I feel music in theater is appropriate

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 16.4% (11)              | 53.7% (36) | 17.9% (12) | 10.4% (7) | 1.5% (1) |

e. Good communication in theater decreases work stress in individuals, for example, surgeons, anesthesiologists, nurses, technicians

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 71.6% (48)              | 26.9% (18) | 1.5% (1) | 0.0% (0) | 0.0% (0) |

f. Failure of communication causes stress to me

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 35.4% (23)              | 50.8% (33) | 6.2% (4) | 6.2% (4) | 1.5% (1) |

g. Communication by e-mail or phone text messages to avoid conversation should be encouraged

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 1.5% (1)                | 6.1% (4) | 27.3% (18) | 39.4% (26) | 25.8% (17) |
h. I feel that a communications course should be mandatory for all medical personnel

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 34.8% (23)              | 47.0% (31) | 12.1% (8) | 6.1% (4) | 0.0% (0) |
i. Poor communication is a factor in surgical or procedural delay

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 37.3% (25)              | 56.7% (38) | 3.0% (2) | 1.5% (1) | 1.5% (1) |
j. I would be interested in participating in a course in communication issues

|                         | Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|-------------------------|----------------|-------|-----------|----------|-------------------|
| 35.8% (24)              | 41.8% (28) | 19.4% (13) | 3.0% (2) | 0.0% (0) |

8. Formal lectures/sessions on ‘Communication Skills’ were conducted during your training in the medical college: As an undergraduate (MBBS) or postgraduate (DA/MD/DNB) student

Yes: 11.9% (8)  No: 88.1% (59)

9. Have you found communication problems due to language barrier in your workplace?

|                         | Never | Only once | Seldom | Often | Always |
|-------------------------|-------|-----------|--------|-------|--------|
| 37.3% (25)              | 1.5% (1) | 37.3% (25) | 22.4% (15) | 1.5% (1) |
training in communication skills, like the airline industry, in order to improve communication between them and with patients. Simple didactics and workshops can be used to sensitize the target. Not only anesthesiologists, but also all the staff in the OR should be made to understand the importance of proper communication. Various certifying boards, universities and professional societies should also play lead roles.

References

1. Flin R, O’Connor P, Crichton M. Safety at the sharp end: A guide to non-technical skills. Aldershot: Ashgate; 2008. p. 69-91.

2. Levinson W, Chaumeton N. Communication between surgeons and patients in routine office visits. Surgery 1999;125:127-34.

3. Available from: http://www.jointcommission.org/assets/1/18/Root_Causes_by_Event_Type_2004-1Q2012.pdf [Last accessed on 2012 Oct 18].

4. Awad SS, Fagan SE, Bellows C, Albo D, Green-Rashad B, De la Garza M, et al. Bridging the communication gap in the operating room with medical team training. Am J Surg 2005;190:770-4.

5. Elks KN, Riley RH. A survey of anaesthetists’ perspectives of communication in the operating suite. Anaesth Intensive Care 2009;37:108-11.

6. Likert R. A Technique for the measurement of attitudes. Arch Psychol 1932;140:1-55.

7. Fitzgerald YW, Mohammed R. GMC complaints: Causes, consequences and preventions. Glasgow: Medical and Dental Defence Union of Scotland; 2009. Available from: http://www.mddus.com/media/309586/summonsspring09.pdf [Last accessed on 2013 July 29].

8. Gawande AA, Zinner MJ, Studdert DM, Brennan TA. Analysis of errors reported by surgeons at three teaching hospitals. Surgery 2003;133:614-21.

9. Lingard L, Espin S, Whyte S, Regehr G, Baker GR, Reznick R, et al. Communication failures in the operating room: An observational classification of recurrent types and effects. Qual Saf Health Care 2004;13:330-4.

10. Harms C, Young JR, Amsler F, Zettler C, Scheidegger D, Kindler CH. Improving anaesthetists’ communication skills. Anaesthesia 2004;59:166-72.

11. The Royal College of Anaesthetists. The Certificate of Completion of Training (CCT) in Anaesthetics-Advanced Level Training (Annex E), Domain 1: Clinical practice, E-7. Available from: http://www.rcoa.ac.uk/system/files/TRG-CCT-AnnexE_1.pdf [Last accessed on 2012 Oct 18].

12. Hawksworth C, Asbury AJ, Millar K. Music in theater: Not so harmonious. A survey of attitudes to music played in the operating theater. Anaesthesia 1997;52:79-83.

13. Allen K, Blascovich J. Effects of music on cardiovascular reactivity among surgeons. JAMA 1994;272:882-4.

14. George S, Ahmed S, Mammen KJ, John GM. Influence of music on operation theater staff. J Anaesthesiol Clin Pharmacol 2011;27:354-7.

15. Fontaine CW, Schwalm ND. Effects of familiarity of music on vigilant performance. Percept Mot Skills 1979;49:71-4.

16. Dorgan KA, Lang F, Floyd M, Kemp E. International medical graduate-patient communication: A qualitative analysis of perceived barriers. Acad Med 2009;84:1567-75.

17. Available from: http://en.wikipedia.org/wiki/Languages_with_official_status_in_India [Last accessed on 2012 Oct 18].

18. Baker D, Robson J. Communication training for international graduates. Clin Teach 2012;9:325-9.