

YouTube Videos and Role Play in Attitudes, Ethics and Communication (AETCOM) Module for Interns regarding obtaining Anaesthesia Consent

Divya Gupta

Abstract

Background: Medical education curriculum needs to systemically teach budding physicians how to procure anaesthesia consent appropriately. Different teaching-learning methods can be incorporated for budding physicians to acquire this communication skill effectively. **Materials and Methods:** 30 interns were enrolled during rotations in anaesthesia department over a period of 6 months. They were sensitized through didactic lecture. Each intern was shown YouTube links about anaesthesia information and consent videos as well as Role Play for anaesthesia information and consent as enacted by anaesthesia residents. The provided anaesthesia information during patient education was about general anaesthesia, sedation, or spinal-epidural anaesthesia. Each intern was observed and rated for five consecutive patients who were planned to receive general anaesthesia, sedation, or spinal-epidural anaesthesia. **Results:** As compared to informing and consenting the first patient about anaesthesia, there was up to 80% improvement on a 0-10 points scale in anaesthesia consent-taking score with up to 44% improvement on a 6-60 points scale in overall communication skills rating when interns informed and consented their fifth patient about anaesthesia. **Conclusion:** Regarding obtaining anaesthesia consent, the implementation of YouTube videos and Role Play as teaching-learning methods can be complementary for Attitudes, Ethics, and Communication module among interns.

Keywords: YouTube videos, role plays, AETCOM module, anaesthesia consent

Department of Anaesthesiology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Swami Rama Nagar, Doiwala, Dehradun, Uttarakhand

Correspondence

Dr. Divya Gupta, Professor, Department of Anaesthesiology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Swami Rama Nagar, Doiwala, Dehradun, Uttarakhand
e-mail: dr_divyagupta@rediffmail.com

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Introduction

Effective communication is a crucial skill for healthcare professionals which is essential to establish a good rapport with patients and their families, and to provide them with the best possible care taking in account their varying educational, cultural, and social backgrounds [1]. Consent procurement for procedures including anaesthesia is a key skill for physicians. Medical education curriculum needs to systemically teach budding physicians how to procure anaesthesia consent appropriately. Different teaching-learning (TL) methods can be incorporated for budding physicians to acquire this communication skill effectively [2]. Therefore, this study was designed.

The overall aim was to teach Attitudes, Ethics, and Communication (AETCOM) skills to interns during rotational anaesthesia postings. The broad goal was to see if interns could learn from videos and Role Play about how to take anaesthesia consent from patients. The specific objective was to objectively grade interns on rating scales in terms of effective transmission of information by them to patients and improvement of their information transmission skill with each successive patient consented for anaesthesia by them.

Materials and Methods

After approval and clearance from medical university's ethics committee and medical institute's research committee, 30 interns were enrolled during rotations in anaesthesia department over a period of 6 months. The interns were taken due consent for getting enrolled in the study. Faculty sensitization about module was done in anaesthesia department. The enrolled interns were sensitized about AETCOM through didactic lecture. Each intern was shown YouTube links about anaesthesia information and consent videos developed by Division of Global Health Equity, Department of Anesthesia and Perioperative Care, University of California, San Francisco partnering with Zuckerberg San Francisco General (UCSF-ZSFG [3-5]) as well as Role Play for anaesthesia information and consent as enacted by anaesthesia residents. The provided anaesthesia information during patient education was about general anaesthesia, sedation, or spinal-epidural anaesthesia. After taking due consent from patients for their participation in the study, the educated interns were observed while they were informing and consenting patients about anaesthesia itself in presence of a certified anaesthesiologist who graded them from 0-10 in terms of the points

interns explained to the patients (Appendices 1-3). Each intern was observed and rated for five consecutive patients who were planned to receive general anaesthesia, sedation, or spinal-epidural anaesthesia. Concurrently for each of the five consecutive patients, each intern was graded for skills per adaptation of communication skills rating scale [6-7]. This scale's adaptation has been made available by National Medical Commission (NMC) in AETCOM book's appendix that provides a modified communication skill rating tool adapted from the Kalamazoo consensus (Appendix 4) [8]. The communication skills rating scale composed of six criteria with each criterion graded as 1-10 thus overall rating as 6-60. For comparing consent scoring and communication skills rating among general anaesthesia, sedation, or spinal-epidural anaesthesia information and consenting, one-way analysis of variance was performed with P-value<0.05 considered significant.

Results

As shown in Table 1, there was 0-4 points improvement (0-80%

improvement) on a 0-10 points scale from patient 1 to patient 5 in consent scoring (only one intern had no change in consent scoring). As shown in Table 2, there was 2-16 points improvement (5-44% improvement) on a 6-60 points scale from patient 1 to patient 5 in overall communication skills rating. Subjective perception voiced by interns regarding these TL methods was good but interns' satisfaction was not objectively scored in the light of already available objective changes in consent scoring and communication skills rating from patient 1 to patient 5 for each intern. Averaged consent scoring and communication skills rating are shown in Table 3. One-way analysis of variance comparing general anaesthesia information delivery, sedation information delivery, and spinal-epidural information delivery is shown in Table 4 for consent scoring (P=0.4) and in Table 5 for communication skills rating (P=0.4). The insignificant differences therein suggested that anaesthesia information delivery by interns was not affected by the type of anaesthesia planned for patients consenting to anaesthesia.

Table 1: Individual intern's consent scoring when consenting each patient

Intern Number	Patient No. 1	Patient No. 2	Patient No. 3	Patient No. 4	Patient No. 5	Score Change Patient 1 To Patient 5	Percent Change Patient 1 To Patient 5
1	6	7	7	8	9	3	50%
2	5	6	6	8	8	3	60%
3	7	7	8	8	7	0	0%
4	5	5	6	6	7	2	40%
5	6	5	6	6	8	2	33%
6	8	7	7	8	9	1	13%
7	6	6	6	7	7	1	17%
8	7	8	8	9	9	2	29%
9	5	6	7	7	8	3	60%
10	6	8	8	9	9	3	50%
11	7	6	7	8	8	1	14%
12	7	7	8	8	9	2	29%
13	5	6	6	7	7	2	40%
14	7	8	8	9	9	2	29%
15	6	6	7	7	8	2	33%
16	5	6	7	8	9	4	80%
17	6	6	7	7	8	2	33%
18	7	7	7	8	8	1	14%
19	6	7	7	8	8	2	33%
20	5	5	6	6	7	2	40%
21	6	6	7	7	7	1	17%
22	5	6	7	7	8	3	60%
23	6	6	7	7	8	2	33%
24	7	7	8	8	9	2	29%
25	6	6	8	7	9	3	50%
26	5	5	6	7	7	2	40%
27	6	6	7	7	8	2	33%
28	5	5	6	6	7	2	40%
29	6	6	7	7	8	2	33%
30	5	6	7	7	7	2	40%

Table 2: Individual intern's overall communication skills rating when consenting each patient

Intern Number	Patient No. 1	Patient No. 2	Patient No. 3	Patient No. 4	Patient No. 5	Score Change Patient 1 To Patient 5	Percent Change Patient 1 To Patient 5
1	40	42	44	48	52	12	30%
2	32	38	37	40	42	10	31%
3	38	38	42	42	40	2	5%
4	35	36	40	41	45	10	29%
5	40	34	41	42	50	10	25%
6	48	45	46	49	52	4	8%
7	38	37	35	41	44	6	16%
8	42	48	49	52	54	12	29%
9	34	38	40	42	49	15	44%
10	39	45	48	52	55	16	41%
11	41	39	42	48	54	13	32%
12	43	44	50	51	55	12	28%
13	37	39	41	44	47	10	27%
14	46	49	51	53	56	10	22%
15	39	42	47	49	51	12	31%
16	38	40	42	48	52	14	37%
17	36	39	43	47	50	14	39%
18	42	43	45	51	53	11	26%
19	36	38	41	46	49	13	36%
20	33	34	37	41	43	10	30%
21	41	42	47	49	49	8	20%
22	36	38	40	42	46	10	28%
23	37	37	41	41	44	7	19%
24	39	42	48	48	52	13	33%
25	38	40	45	42	51	13	34%
26	34	37	40	43	47	13	38%
27	36	37	42	44	50	14	39%
28	34	37	40	43	48	14	41%
29	39	40	43	47	52	13	33%
30	35	39	43	47	49	14	40%

Table 3: Individual interns' scores averaged over five patients

Intern Number	Anaesthesia Information About	Averaged Scoring	Consent	Averaged Communication Skills Rating	
1		7.4		45.2	
2		6.6		37.8	
3		7.4		40	
4		5.8		39.4	
5	General Anaesthesia (n=10)	6.2		41.4	
6		7.8		48	
7		6.4		39	
8		8.2		49	
9		6.6		40.6	
10		8		47.8	
11			7.2		44.8
12			7.8		48.6
13			6.2		41.6
14			8.2		51
15	Sedation (n=10)	6.8		45.6	
16		7		44	
17		6.8		43	
18		7.4		46.8	
19		7.2		42	
20		5.8		37.6	
21		6.6		45.6	
22		6.6		40.4	
23		6.8		40	
24		7.8		45.8	
25	Spinal-Epidural (n=10)	7.2		43.2	
26		6		40.2	
27		6.8		41.8	
28		5.8		40.4	
29		6.8		44.2	
30		6.4		42.6	

Table 4: One-way Analysis of Variance (ANOVA) for consent scoring averaged over N-number of interns

	N	Mean	Standard Deviation	Standard Error	95% Interval for Lower Bound	Confidence Interval for Mean Upper Bound	P value
General Anaesthesia	10	7.040	0.8262	0.2613	6.449	7.631	0.4329
Sedation	10	7.040	0.7043	0.2227	6.536	7.544	
Spinal Epidural	10	6.680	0.5673	0.1794	6.274	7.086	
Total	30	6.920	0.7039	0.1285	6.657	7.183	

Table 5. One-way Analysis of Variance (ANOVA) for scoring on Communication Skills Rating averaged over N number of interns

	N	Mean	Standard Deviation	Standard Error	95% Interval for Mean Lower Bound	Confidence Upper Bound	P value
General Anaesthesia Sedation Spinal Epidural	10	42.820	4.2410	1.3411	39.786	45.854	
	10	44.500	3.8067	1.2038	41.777	47.223	0.3897
	10	42.420	2.2280	0.7046	40.826	44.014	
Total	30	43.247	3.5298	0.6445	41.929	44.565	

Discussion

Taking appropriate consent for anaesthesia is a key skill for actively practicing anaesthesiologists. Medical education curriculum may not systemically teach budding anaesthesiologists how to take anaesthesia consent appropriately. The modern information age may confuse patients with incomplete information about various modes of giving anaesthesia. Therefore, appropriately consenting patients becomes an essential attribute for budding anaesthesiologists to acquire. This acquired attribute may not only answer patients' concerns and allay patients' fears regarding anaesthesia but also protect anaesthesiologists, medico-legally [9]. A logistically good place to start TL methods regarding AETCOM module about obtaining anaesthesia consent is when graduating medical students begin their compulsory rotating medical internships [10]. However, a better place in future would be incorporating these TL methods during third professional year's medical students' three-week anaesthesiology rotations which have been made mandatory per recently updated NMC guidelines for graduate medical education [11-12]. The YouTube videos and Role Plays can be easily incorporated as interesting and impactful TL methods for improvising the perception of AETCOM module when medical students come for mandatory three-week anaesthesiology rotations.

Consent procurement for anaesthesia and other procedures should be conceptualized as a mandatory effective communication skill by learners as budding medical professionals. For example, the didactic lecture on anaesthesia consent can be considered as delivery of "knows" at "knowledge" level of Miller's pyramid while YouTube videos can be considered as delivery of "knows how" at "application of knowledge" level of Miller's pyramid; Role Play enactment by anaesthesia residents can be considered as delivery of "shows how" at "clinical skills competency" level of Miller's pyramid in standardized conditions whereafter real patients giving anaesthesia consent to the enrolled interns can be considered as delivery of "does" at "clinical performance" level of Miller's pyramid in real life [13-15].

Hoffmann et al documented that confidence and knowledge of 210 subjects improved in their shared decision-making skills after taking 2-hour long four-module course freely available online [16]. Therein, perioperative course teaching shared decision-making skills for perioperative scenarios was one of the five versions available to 210 subjects of various specialties [17-18]. This course is currently available in seven versions for global learners to improve their shared decision-making skills [19].

In terms of taking informed anaesthesia consent in simulated scenarios, Bashir et al [20], using 11-point checklist from Tanaka et al [21], assessed pre-intervention status of sixteen subjects in their first-to-fourth year of anaesthesiology training. Following the intervention of PowerPoint plus video-based teaching and practice under simulated scenarios to prepare them with constructive feedback, those sixteen subjects' post-intervention status showed 38% improvement on anaesthesia consent-taking process by those subjects per 11-point checklist from Tanaka et al.

Mehta et al demonstrated among 30 subjects in anaesthesia residency that intervention of lecture and group discussion improved their knowledge about the process of informed anaesthesia consent-taking by more than 100% [22]. Moreover, intervention of Role Play by Mehta et al improved subjects' communication skills by close to 100% as scored on 20-point checklist in taking anaesthesia consent for simulated scenario of planned spinal anaesthesia for caesarean section.

The present study had few limitations. Due to limited number of interns rotating for limited duration in anaesthesiology, the study could not be logistically designed with pre-intervention consent scoring and communication skills rating (a) after didactic lecture but before the introduction of YouTube videos, and (b) thereafter before the introduction of Role Play. In the absence of pre-intervention scoring and rating, post-intervention consent scoring and communication skills rating could not be done (a) after the viewing of YouTube videos but before the introduction of Role Play, and (b) thereafter after the viewing of Role Play. Such designed study would have needed inclusion of more consecutive patients to be informed and consented by the interns enrolled in the study. The number of interns enrolled depended on their motivation to attend their elective anaesthesia postings regularly and sincerely; this limitation can be overcome with future studies based on medical students coming for mandatory three-week rotation at anaesthesiology. Medical students would provide a larger sample size with better authenticated results via better validation of scoring and rating TL methods during pre-test and post-test study design which could define the independent effectiveness of YouTube videos and Role Play in anaesthesia information delivery and anaesthesia consenting process.

Conclusion

The above-mentioned study shows that the implementation of

YouTube videos and Role Play as TL methods can be complementary for AETCOM module among interns. The process of obtaining consent for anaesthesia as a mandatory protocol may get percolated well from anaesthesia teachers to anaesthesia learners when complemented with dual approach of YouTube videos and Role Play.

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