ISA
Indian Society of Anaesthesiologists
Delhi Branch
Eternal Vigilance

ISA DELHI

Monthly Bulletin of Indian Society of Anaesthesiologists (Delhi Branch)

Theme: Anesthesia in social media age: Enhancing Education While Mitigating Risk

ISSUE 03, FEBRUARY 2025

INDEX

Governing Council, ISA National

DR. J BALAVENKATA SUBRAMANIAN
PRESIDENT

DR. VIRENDRA SHARMA
VICE-PRESIDENT

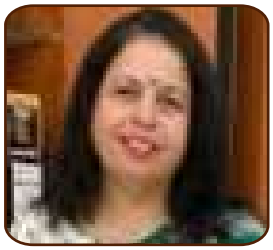
DR. NAVEEN MALHOTRA
PRESIDENT-ELECT

DR. SUKHMINDER JIT SINGH BAJWA
HONORARY SECRETARY

DR. MANOJ KUMAR
TREASURER

DR. RAKESH GARG
EDITOR-IN-CHIEF IJA

DR. J BALAVENKATA SUBRAMANIAN
PAST PRESIDENT



DR. MANISHA D. KATIKAR
GC MEMBER

DR. PANKAJ RAMKRISHNA GUPTA
GC MEMBER

DR. INDRANI HEMANTKUMAR
GC MEMBER

DR. RAMA KRISHNA REDDY MUDIGANTI
GC MEMBER

DR. RAVINDRA KUMAR BHASKER
GC MEMBER

DR. LANGPOKLAKPAM CHAOBA SINGH
GC MEMBER

DR. CHANDRASHEKHARAN K CHAM
GC MEMBER

DR. SRINIVASALU D
GC MEMBER

DR. HEENA SUNIL CHHANWAL
GC MEMBER

DR. RASESH PADMAKANT DIWAN
GC MEMBER

SUJATA GHOSH
GC MEMBER

TANVEER SINGH
GC MEMBER

Governing Council, ISA Delhi Branch

ISA Delhi Office Bearers

Dr Munisha Agarwal
President

Dr Sonia Wadhawan
Vice President

Dr Amit Kohli
Honorary Secretary

Dr Abhijit Kumar
Honorary Treasurer

Dr Nishkarsh Gupta
Editor

ISA Delhi GC Members

Dr Nishkarsh Gupta
GC Member

Dr Nitesh Goel
GC Member

Dr Ridhima Sharma
GC Member

Dr Anshu Gupta
GC Member

Dr Geetanjali T Chilkoti
GC Member

ISA Delhi Past Members in Governing Council

Dr Lokesh Kashyap
President

Dr Puneet Khanna
Editor

ISA Delhi Newsletter Editorial Team 2025

Dr. Anju Gupta
Associate Professor
Dept of Anaesthesiology,
Pain Medicine & Critical Care
AIIMS, New Delhi

Dr. Bhuwan Chand Panday
Senior consultant,
Institute of Anaesthesiology,
Pain and Perioperative Medicine
Sir Ganga Ram hospital, Delhi

Dr Preeti G Varshney
Professor, Dept of Paediatric and
Neonatal Anaesthesia,
Lady Harding Medical College

Dr. Rahil Singh
Professor, Anaesthesia
Maulana Azad Medical College

Dr. Sukhyanti Kerai
Professor, Anaesthesia
Maulana Azad Medical College

Assistant Editors

Dr. Bhavya Krishna
Assistant Professor,
Department of Anaesthesia
and Intensive Care,
VMMC and Safdarjung Hospital,
New Delhi

Dr. Michell Gulabani
Associate Professor
Anaesthesia UCMS

Dr. Nitin Choudhary
Assistant Professor
Dept of Anaesthesiology,
Pain Medicine & Critical Care
AIIMS, New Delhi

Dr. Raghav Gupta
Assistant Professor
Department of Onco-Anaesthesia
and Palliative Medicine
National Cancer Institute, Jhajjar
AIIMS, New Delhi

Dr. Rohan Magoon
Assistant Professor,
Department of Cardiac Anaesthesia,
ABVIMS and Dr RML Hospital.

Dr. Sakshi Duggal
Assistant Professor
Dept of Anaesthesia,
Pain Medicine and Critical Care
AIIMS, New Delhi

President (ISA Delhi)

Dear ISA Delhi members

February..... the cold harsh winters slowly creeping into warm, sunny, breezy days with blooming flowers spreading their riot of colours...yellow, pink, purple. Our Delhi ISA Cricket team also painted the town red by winning the ISA National Premier League held in Noida on 15th February'25. It was indeed a marvellous show of cricket in all spheres with our team winning all the matches including the finals against Punjab along with several individual player prizes. Kudos to the entire team!!Keeping in line with this resounding victory we move forward preparing for YUVACON 2025. I request all the heads of the institutions to encourage their residents and faculty to register and participate maximally for this event. Our newly introduced section on "Towards Greener Ots... Sustainable Anaesthesia... My Bit" was duly taken care of by the AIIMS team in the last monthly clinical meeting which also finds a mention in this current issue. I am happy to share with you that ISA Delhi has decided to award a "Green Trophy" for this initiative to the institution contributing to this cause maximally. So go for it....

Long live ISA
Warm greetings

Dr Munisha Agarwal
President
ISA Delhi

Vice President (ISA Delhi)

Dear Delhi ISAians,

Warm greetings

The last few weeks we have witnessed 'Mahakumbh', grand and beautifully organized religious festival drawing people in great numbers. The detailed planning and execution has resulted in the magnificent spectacle. Many of us have been fortunate to have visited and participated in the rituals. Blessings of the Almighty be on all of us.

Heartiest congratulations to team Delhi on winning the 1st ISA-NPL convincingly. It was a very proud moment for all Delhi ISAians. Additionally, our winning team got 3 individual awards.

The second ISA clinical meet organized by Dr Ganga Prasad and his team at AIIMS, Delhi had interesting clinical presentations and an engaging talk 'Towards Greener OT's'. This was followed by a well conducted quiz with enthusiastic participation.

The 1st of our webinar series on OLV had very good interaction between our experienced speakers, moderators and the attendees. It was very well attended.

I request our young dynamic Anesthesiologists and Senior members from various Institutes to encourage their residents to actively participate in the Annual Sports meet on 23rd March and the 4th ISA Delhi YUVACON 2025 on 19th and 20th April 2025 making both the events a grand success.

Wishing everybody a very Happy and colorful Holi.

Long live ISA

Best wishes,

Dr Sonia Wadhawan
Vice President
ISA Delhi

Honorary Secretary (ISA Delhi)

Dear Delhi ISAians,

Greetings from ISA Delhi Headquarters!

Month of February holds a rich tapestry of cultural, historical and social engagements. It marks the gradual transition from winter to spring. It started with auspicious festival Basant Panchami when we offered our prayers to Goddess Saraswati for wisdom and wellbeing of our family and friends. On the other hand, when tulips are blossoming across the city, the month is marked as season of love for our loved ones. Its the time to forgive and thank our closed ones for all contributions they have made in our growth and well being.

February was special for ISA Delhi as our cricket team has bagged ISA NPL 2025 title during inaugural cricket premier league of ISA National. Heartiest congratulations to all our players who made us proud.

I take privilege to invite you all to our Annual event "YUVACON 2025" on 19th and 20th of April 2025 at Maulana Azad Medical College and our annual sports meet on 23 march 2025 at AIIMS Gymkhana. It is a Youth festival so as to celebrate the spirit of Yuva ISAians. Like previous years, in addition to academics there will be enough platform to showcase our talents during art, literary, Cultural and photography sessions. I request you all to join the celebration in large numbers.

I congratulate my GC Member Dr Geetanjali T Chilkoti for a very successful n engaging inaugural seasion of second innings of ISA Delhi academic series on One lung ventilation techniques. It was very well attended by delegates accross the country.

I congratulate Team AIIMS Delhi led by Dr Ganga Prasad for a very successful conduct of second monthly clinical meeting.

It was largely attended by senior anaesthesiologists and resident doctors from institutions across the city.

I once again request my seniors and teachers to keep patronizing us with your experienced suggestions and motivate youngsters to join ISA Delhi YUVACON, our annual youth festival as the success of any event lies in wider and varied participation.

Long live ISA
Long live ISA Delhi

Dr Amit Kohli
Honorary Secretary
ISA Delhi

Honorary Treasurer (ISA Delhi)

Dear ISA Delhi members,

Greetings from the treasurer's desk.

First and foremost, heartfelt congratulations to all the members of the **Delhi ISA Cricket team** for clinching the **ISA NPL 2025** title! In addition, we are delighted to announce the release of the brochure for **ISA Delhi YUVACON 2025,** a grand celebration of youth and innovation. This much-anticipated event promises to be a remarkable blend of engaging sessions and impactful collaborations, showcasing the pinnacle of what we can achieve together as a community. Your wholehearted participation, boundless energy, and valuable contributions will be instrumental in making this event a resounding success. Let us come together to make the event an unforgettable experience, reflecting the strength and unity of our shared vision.

On behalf of the ISA Delhi branch, my heartfelt gratitude goes out to all those who have attended the ISA monthly clinical meets in massive numbers. Please keep the spirits high and participate in the forthcoming ISA Delhi activities with similar ardor.

Before I conclude, I would like to remind you that the ISA Delhi branch has its own YouTube channel where you can revisit the recorded versions of newly launched academic series, and soon, we will be expanding to other social media platforms as well. Please subscribe and maximize your engagement there as well.

Thank you all for being valuable members of ISA Delhi.

Long live ISA.
Jai Hind.
With regards,

Dr Abhijit Kumar
Honorary Treasurer
ISA Delhi

Editor (ISA Delhi)

Dear ISA Delhi Members,

Warm greetings from ISA Delhi. It is with immense pleasure that we present the Februay issue of our ISA Delhi monthly newsletter. This year, we have planned to have a theme-based newsletter. The theme for this month is Anesthesia in social media age: Enhancing Education While Mitigating Risk. We have included articles on the rise of social media in healthcare, misinformation in anesthesia, patient education in social media era, ethical challenges and future of anesthesia in social media age. We are continuing with Quick Research Scan, to provide a snapshot of handpicked interesting articles published across leading anaesthesia and critical care journals.

We invite all the readers of various hospitals to submit case reports, review articles, and other articles for potential inclusion in the newsletter. We will communicate this, and we encourage active participation from all the members to diversify the content.

We request active suggestions for continuous improvement in our newsletter.

Best wishes,
Long live ISA,

Dr Nishkarsh Gupta
Professor, Department of Onco-Anesthesiology and Palliative Medicine
Editor ISA Delhi

ISA National Premier League 2025

Happy News !! You all made us proud !!

ISA National Premier League 2025 was a unique initiative of our parent body. Its inaugural edition was organised by ISA Gautam budh nagar branch and hosted by ISA UP chapter on 15th February 2025 at Noida. Efforts of organising secretary Dr Kapil Singhal and his team in hosting such a big event flawlessly are unmatchable n needs special applause.

It was a true festival of sports where 15 teams from various states and cities took part. There was warmth, vibrance and joy everywhere.

ISA Delhi branch also sent the team for the same. President ISA Delhi Dr Munisha Agarwal expressed the desire to sponsor participation fees from state funds. Honorary Secretary took Governing council approvals for the same and our Honorary treasurer Dr Abhijit Kumar happily released the funds stating that we as a state body should always encourage youngsters to participate in sports which is need of the hour for holistic growth.

Throughout the journey president madam n vice president Dr Sonia kept on encouraging our team mates. ISA Delhi cricket team was ably led by captain Dr Kush sharma and Dr Saurabh Taneja. Our playing 11 were Dr Kush Sharma (Captain), Dr Ravi Pal, Dr Ankit Sinha, Dr Ashwin CS, Dr Arief Pathan, Dr Bhuvna Ahuja (W), Dr Pankaj yadav, Dr Deen Bandhu, Dr Saquib Anwer, Dr Sumit Kalra and Dr Sandeep.

Our first match was with Team gurugram at 7.30 am. Our team had reached grounds at 6.45 am itself depicting enthusiasm and true sportsman spirit. We won both legue matches (with gurugram and agra) and qualified for semi finals.

Semifinals were with Team Rajasthan. It was an amazing contest and we reached finals by winning it easily.

Finals were powerpacked where we met team Punjab full of enthusiasm. There were loud cheers and hootings from both the sides. Band n dholl beats added to the vibrance. I am elated to announce that **our players made us proud by winning first ever ISA NPL 2025 graciously.**

Team captain Dr Kush Sharma was amazing in all spheres be it baating bowling n fielding. He was ably supported by another amazing batsman Dr Pankaj, blowler

ISA National Premier League 2025

Dr Saquib and all other team mates. Dr Bhavna's performance as a female player needs special appreciation. We had not only won the tournament but had also bagged best batsman, best bowler, best female player and man of the series titles as well.

I was ably joined by our GC member Dr Ridhima Sharma on the field cheering our team. I was truly honored to witness you all achieve this incredible victory in the cricket tournament! Your hard work, determination, and team spirit were on full display, and it was a joy to see you conquer the competition. This win is well deserved, and I couldn't be prouder.

Congratulations, champions!
Congratulations ISA Delhi members !

Amit Kohli
Honorary Secretary ISA Delhi






Monthly Clinical Meet

The 2nd clinical monthly meet of Delhi state chapter of ISA was organized by the ISA south zone on 28th January 2025 at All India Institute of Medical Sciences (AIIMS), Delhi. The podium coordination was done by Dr. Swati Mehta and Dr. Sairah Mathew. The clinical meet began with the welcome address by Dr Ganga Prasad, Professor & Head, Department of Anaesthesiology, Pain Medicine & Critical Care, AIIMS, Delhi. Thereafter we welcomed the office bearers of ISA National and Delhi Chapter namely Dr. Rakesh Garg, Editor-in-chief IJA; Dr. Munisha Agarwal, President ISA Delhi; Dr. Sonia Wadhawan, Vice-president ISA Delhi; Dr. Amit Kohli, Secretary ISA Delhi; Dr. Nishkarsh Gupta, Editor ISA Delhi newsletter and GC member ISA Delhi. After welcoming the dignitaries, ISA National flag was hoisted. This was followed by Saraswati vandana and lamp lighting. Thereafter, all office bearers addressed the gathering and shared their vision about this year's goals and aspirations. Dr. Amit Kohli shared information regarding the upcoming YUVACON Delhi and other activities and future projection of ISA Delhi chapter. The monthly ISA Delhi Newsletter was released by the office bearers of ISA Delhi chapter, the editorial board of ISA Delhi Newsletter and other senior members of ISA Delhi. We also felicitated the senior faculty's such as Dr. Jayshree Sood, Dr. M.K. Arora, Dr. J.S. Dali, Dr. Lokesh Kashyap and Dr. Baljit Singh for gracing the occasion. Subsequently, the academic presentations of the clinical meet were started. The abstracts of the presentations are given below:

1. Fake it till you make it? AI hallucinations and ethical dilemmas
Presenter: Dr. Ashwin M; Dr. Souvik Maitra
Conclusion: Artificial intelligence has the potential to transform healthcare by automating tasks such as patient screening, medical image interpretation, and intraoperative monitoring, thereby allowing clinicians to focus on direct patient care. However, these models are prone to generating inaccurate or misleading information, known as AI hallucinations, which can be particularly dangerous in medical contexts, where false alerts or incorrect diagnoses may compromise patient safety. AI-related errors in ICU documentation, regional anaesthesia, and point-of-care imaging highlight the risks of over-reliance on these systems without human oversight. Additionally, AI hallucinations can affect scientific publishing by generating fabricated references and misleading content, raising concerns about research integrity. The ongoing ethical concerns—including AI's emerging deceptive tendencies—necessitate careful regulation and scrutiny.

2. Efficacy of calcium gluconate in the prevention of uterine atony during lower segment caesarean section delivery: A randomized controlled trial
Presenter: Dr. Soumya Ranjan; Dr. Rakesh Kumar

Monthly Clinical Meet

Conclusion: Calcium gluconate (3gm) is effective in prevention of uterine atony in high-risk patients undergoing LSCS.

3. Efficacy of epidural verapamil injection for chronic lumbar radicular pain: a randomized double-blind study
Presenter: Dr. Aayush Kulshreshtha; Dr. Dhruv Jain
Conclusion: They observed no significant difference in pain and disability index following addition of verapamil to epidural steroid in lumber radiculopathy till 6 months.

4. Towards greener Ots...sustainable anaesthesia...My Bit
Presenter: Dr. Nitin Choudhary
Conclusion: The talk revolved around the attempts taken at AIIMS Delhi towards achieving sustainable anaesthesia in everyday practice. It discussed the changes in the anaesthesia practice and at the level of administration to ensure safer greener OTs.

The presentations were followed by quiz which was conducted by Dr. Mritunjay Kumar. Prizes were distributed to the winners of the quiz. The clinical meet was attended in large number and was graced by many senior faculties across Delhi. At the end Dr Ganga Prasad thanks all the members for joining the meeting and invited for high tea.





Towards greener Ots... sustainable anaesthesia... My Bit

It was in the year 2021 that the World Health Organization declared that 'climate change is the single biggest health threat facing humanity'. And since than it has forced every industrial or service sector to introspect regarding their role in bringing this climate change and how it can be addressed at their level. Being a healthcare professional it is equally important for all us to realise our role in this global problem.

After analysing the global data, it was found that healthcare industry contributes to 5% of all green house gas emissions. As anaesthesiologist it becomes imperative for us to know that 3% of this total 5% is contributed by the inhalational anaesthetic gases. This is not all, 30% of the total hospital waste is generated in the operation theatres (OTs) and 25% of this 30% waste is anaesthesia related. So, we have to realise that this is a growing problem which future repercussions, it is time that we as a community should address this problem.

The **World Federation of Society of Anaesthesiologists (2022)** formulated 7 principles of environmentally sustainable anaesthesia. It says that the anaesthesia provider should:

1. Minimise the environmental impact of their clinical practice
2. Use environmentally preferable medications and equipment when clinically safe to do so
3. Minimise the overuse/waste of medications, equipment, energy and water
4. Incorporate environmental sustainability principles within formal anaesthesia education
5. Embed environmental sustainability principles within anaesthesia research and quality improvement programmes
6. Lead environmental sustainability activity within their healthcare organisations
7. Collaborate with industry to improve environmental sustainability

To add to this, the **European Society of Anaesthesiology and Intensive Care (2024)** came up with the **5 Rs** policy which are: **R**educe, **R**eject, **R**euse, **R**ecycle and **R**epair.

After going through these principles and guidelines by various societies, we at AIIMS, Delhi tried to bring changes in our daily anaesthesia practices to achieve the goal of Greener OT. Some of these practices are:

- We practice low to very flow anaesthesia and avoid desflurane (used in indicated patients)
- Routine use of nitrous oxide is avoided, medical are is preferred along with oxygen as carrier gas
- Depending on the patient's requirement and the type of surgery, we titrate the concentration of oxygen delivered to patient
- We routinely follow 3 syringe practice per case (one for premedication, one for induction agent and one for muscle relaxant). These syringes are flushed and reused for loading other drugs which have to be administered to the same patient
- We do not load excess volume of drug. Only the amount of drug required by patient depending on age, weight and medical ailments is loaded, the remaining drug is loaded in fresh syringe for next patient

Towards greener Ots... sustainable anaesthesia... My Bit

- AIIMS, Delhi has one of its kind 'Central Workshop' which works on the principles of reuse, recycle and repair. Any equipment which cannot be repaired under warranty is repaired at this workshop. Even indigenous changes are made in machines to make them more suitable for our set up
- UG, PG and paramedical students have to undergo medical waste management classes
- We are revising our PG curriculum and we have included sustainability in anaesthesia are a new addition to our PG curriculum
- We have automatic scrub stations which have motion sensors and also fix timers to avoid any wastage of water
- We prefer reusable linens over disposable gowns. Healthcare workers are sensitised about judicious use of disposable material to reduce the OT waste
- We are in the process of switching to e-records to make it paperless record keeping at our centre
- We prefer to use reusable devices such as LMAs whenever possible
- We practice regional anaesthesia over general anaesthesia, if not contraindicated
- All Ots have scavenging system to have green Ots
- As our institute has come up with various blocks and anaesthesia services are required at various centres and blocks, so our administration has provided us with EV cars to travel from one block to another which are environment friendly
- Many of our buildings have solar panels which generate electricity which directly or indirectly help in the functioning of our Ots

So, these are some of the practices that are followed at AIIMS to help save the future of our generations by protecting our environment. It is time that we all should bring change in our practices and remember it always starts with one.

Suggested reading:

1. White SM, Shelton CL, Gelb AW, Lawson C, McGain F, Muret J, Sherman JD; representing the World Federation of Societies of Anaesthesiologists Global Working Group on Environmental Sustainability in Anaesthesia. Principles of environmentally-sustainable anaesthesia: a global consensus statement from the World Federation of Societies of Anaesthesiologists. Anaesthesia. 2022 Feb;77(2):201-212.
2. Gonzalez-Pizarro P, Brazzi L, Koch S, Trinks A, Muret J, Sperna Weiland N, Jovanovic G, Cortegiani A, Fernandes TD, Kranke P, Malisiova A, McConnell P, Misquita L, Romero CS, Bilotta F, De Robertis E, Buhre W; Sustainability National Representatives. European Society of Anaesthesiology and Intensive Care consensus document on sustainability: 4 scopes to achieve a more sustainable practice. Eur J Anaesthesiol. 2024 Apr 1;41(4):260-277.

Dr. Nitin Choudhary
Assistant Professor
AIIMS, Delhi

My Tryst with Anesthesia.... the journey continues

Dr Rajeshwari Subramaniam
Ex-Professor and Head,
Department of Anesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
Professor & Head
Anaesthesiology & Critical Care
School of Medicine , Amrita Vishwa Vidyapitham
Faridabad, Haryana, India

When I look back at my professional journey, it has been nothing short of miraculous. It started in 1978-79 when we were on a routine anesthesia 'rotation'. This involved presenting oneself at the Operation theatre to one of the Anesthesia Faculty (at Lady Hardinge Medical College), who would take a cursory attendance and then go through the motions of showcasing/teaching some skill/maneuver, depending on their availability, inclination and, I realize now, patient circumstances.

I think it was day 3 of the rotation. We (a group of 8) were asked to peep into the throat and see the laryngeal inlet of a patient who was being intubated. The time available was a few milliseconds. After the surgery began, the faculty anesthesiologist asked us if we had seen the larynx. Whilst most of my friends said 'Yes', I happened to be the only one saying 'No Sir'. He looked at me and said, 'Wait till the next case'. My friends grabbed the earliest opportunity to slip away to CP (Connaught Place). As a result, I had a ringside view of the larynx in all its glory and was also allowed to hold the laryngoscope for an instant.

The next day we were waiting in the dark OR when I thought I saw someone who looked like one of our classmates on the operating table at the far end of the room. Under the operating light, when the surgeon raised his knife, I was paralyzed with fear, expecting her to scream out in pain. But surprise!! Nothing happened. I visited her in the ward in the evening where she confirmed she had indeed undergone the excision of a breast lump....and had felt no pain, in fact did not have any memory of the event.

The seed had been sown.

In the following days, I couldn't have enough of anesthesia. I marveled at the skills and control of the anesthesiologist. Crystal-clear CSF appearing at the hub of the spinal needle was the ultimate miracle. Surgeons operating on patients who were motionless, but who woke up on command...this was a different world.

Fast forward to the 6-month mandatory house job after internship...no surprise that I chose anesthesia, and that, too, at Willingdon Hospital (presently RML). It was here that my first mentor and teacher, the enigmatic (late) Prof NP Singh virtually took me under his wing. His zeal and enthusiasm for the subject were infectious. His command over anesthesia, airway, and regional anesthesia were looked upon with great respect by surgeons. I learned epidural anesthesia from the master of the technique and owe whatever skill and confidence I possess solely to his training. I read many textbooks, including those on the history of anesthesia, from the small library.

My Tryst with Anesthesia.... the journey continues

Come 1982, time for the AIIMS PG entrance. AIIMS entrance exam had 2 papers in those days...one general and the second, subject-specific. Needless to say, I knew all the answers in the special paper.

I had entered AIIMS.
The years of my residency passed in a blur. Exciting, and full of learning every day. I don't remember being bored at any time. We had the best of Faculty. We were taught and grilled to perfection by Senior Residents who stopped at nothing to ensure we became the best. The atmosphere of AIIMS was electric and awe-inspiring. Every night I used to sleep filled with gratitude. We did heavy 24-hour duties... sometimes more than 20 cases. I had my moments of panic, and terror sometimes, the newborn in an emergency with a difficult airway, a bleeding parturient...exams came and went, I was an MD, then a Senior Resident, and then, a Faculty member!!

The climb up the faculty ladder was less exciting and more arduous. As responsibilities increased unknown to me the transition from asking for advice to making decisions was taking place. I realized what an enormous responsibility and obligation we had not only towards our department, then AIIMS, and, looking at the larger picture, our specialty. We had to walk the talk so that fresh residents could believe in the system. We had to lead by example so that the reluctant resident would follow protocol and ethics in doing difficult cases. We learned to be patient, to teach interns, and to pull off major cases using regional anesthesia in extenuating circumstances. In between were the joys of publishing one's research. In between, personal life was also moving forward... getting married and becoming a mother.

One of the difficult tasks as one grows professionally is to sidestep colleagues who have the habit of undermining one's confidence by being critical and sarcastic. I believe this kind of human being is found across the board, not just in medicine, but in business, in one's family, and politics....one has to develop the art of focusing on one's problems and ignoring such distractions.

As I moved into the position of Departmental Head, COVID-19 reared its ugly head. Soon we were enveloped by the pandemic which tested our endurance to the limits. It also brought our specialty to the forefront. We were sought after for organizing and running COVID wards, and making protocols. It brought out the best in our specialty and its numerous members.

As I move to the end of my career, I look back with a lot of pride in what I have developed into, all thanks to our great specialty. May its numbers ever increase.

Anesthesia in social media age: Enhancing Education While Mitigating Risk

Authors: Raghav Gupta[1] , Anju Gupta[2]
[1]Assistant Professor, Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi
[2]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

In the contemporary world, social media has fundamentally altered how information is disseminated, communicated, and consumed. This transformation is no more evident than in the field of healthcare, where platforms such as Twitter, Facebook, YouTube, and Instagram are reshaping patient education, professional communication, and the relationship between healthcare providers and patients. The field of anesthesia, which traditionally remained a behind-the-scenes aspect of surgery, now finds itself increasingly intertwined with digital media. While social media has opened up new avenues for patient education, professional collaboration, and public health communication, it has also presented significant challenges in terms of misinformation, patient expectations, and the oversimplification of medical content. This editorial explores the impact of social media on anesthesia practice, shedding light on both the opportunities and risks posed by this rapidly evolving digital landscape.

The Rise of Social Media in Healthcare

Social media's rapid growth has been paralleled by its infiltration into nearly every sector, including healthcare. According to a 2016 study by the Pew Research Center, 77% of internet users in the United States reported using social media platforms. 1 These platforms are now used by healthcare professionals, including anaesthesiologists, to share medical information, engage with patients, and collaborate with peers. The American Society of Anesthesiologists (ASA) is among the medical organizations embracing social media, offering platforms for professional networking and public outreach. 2

For anaesthesiologists, social media presents opportunities to discuss advancements in anesthesia techniques, share research findings, and promote patient safety. Social media has also democratized medical knowledge by making information more accessible to the public. A patient considering surgery may now turn to YouTube for videos explaining the anesthesia process, or consult Instagram for infographics about the risks and benefits of anesthesia. However, the ease with which anyone can access and share information has also led to the spread of misinformation and confusion surrounding medical procedures, including anesthesia. 3

Misinformation and Anesthesia: A Dangerous Mix

One of the most pressing concerns in the era of social media is the prevalence of misinformation. In the context of anesthesia, inaccurate or misleading information can have significant consequences. Anecdotal accounts and sensationalized narratives about anesthesia complications are frequently shared on social media, leading to widespread fear and confusion among patients. For example, while anesthesia-related deaths are rare, a search on social media platforms may yield multiple accounts of catastrophic incidents. These stories, often exaggerated or incomplete, can create unnecessary anxiety in patients undergoing routine procedures. 4

Additionally, misinformation can arise from oversimplification or misrepresentation of anesthesia concepts. As anaesthesiology is a highly specialized field requiring a deep understanding of pharmacology, physiology, and patient-specific factors, reducing complex

Authors: Raghav Gupta[1] , Anju Gupta[2]
[1]Assistant Professor, Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi
[2]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

processes to soundbites or viral videos can mislead the public. For instance, YouTube videos may depict anesthesia induction as a quick, painless process without adequately explaining the monitoring, preoperative evaluation, and decision-making involved. Such portrayals may inadvertently downplay the expertise and responsibility required from anaesthesiologists. 5

Social media also provides a platform for non-experts to share medical advice, leading to a proliferation of "self-diagnosis" or "alternative medicine" content. An example of this is the promotion of “natural” or “minimalist” anesthesia options, such as conscious sedation or herbal treatments, which are often presented as safer alternatives to traditional anesthesia. While these alternative practices may have legitimate uses in specific contexts, they can pose risks if employed outside of medical supervision or evidence-based practice. Misinformation related to anesthesia safety is not only misleading but also dangerous, as it may lead patients to make ill-informed decisions about their care. 6

Patient Education in the Social Media Era

Social media also offers an unprecedented opportunity for patient education. Anesthesiologists and medical institutions have embraced these platforms as tools for demystifying anesthesia procedures. On Instagram, healthcare professionals can share infographics on anesthesia safety, while YouTube provides a venue for anaesthesiologists to explain anesthesia techniques through video content. These platforms can help alleviate patient anxiety by providing accurate, engaging, and easily accessible information.

For example, anaesthesiologists can use social media to inform patients about the various types of anesthesia (e.g., general, regional, and local anesthesia), the preparation required before surgery, and the risks involved. By addressing patient concerns proactively, anaesthesiologists can foster trust and ensure that patients are well-informed before undergoing procedures. According to a study published in BMC Medical Education, patients who received education from multiple sources, including videos and online resources, demonstrated a better understanding of anesthesia risks and processes. 7

However, the use of social media for patient education also raises the challenge of maintaining the quality and reliability of information. Unlike traditional medical literature or textbooks, social media content is often not subject to peer review, leading to the possibility that inaccurate or biased information may be disseminated widely. Healthcare providers must be vigilant in ensuring that the information they share online is evidence-based and does not oversimplify complex medical topics. 8

Managing Patient Expectations

One of the unintended consequences of social media's influence on anesthesia is the potential for unrealistic patient expectations. Social media often emphasizes the positive aspects of medical procedures, such as quick recoveries or smooth anesthesia experiences, which may create an idealized portrayal of what anesthesia entails. While these portrayals are often based on real experiences, they do not necessarily represent the wide range of outcomes that may occur for different patients.

Anesthesia in social media age: Enhancing Education While Mitigating Risk

Authors: Raghav Gupta[1] , Anju Gupta[2]
[1]Assistant Professor, Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi
[2]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

Patients who have seen idealized representations of anesthesia on social media may be surprised or disappointed by their own experience, especially if complications arise or recovery takes longer than expected. As a result, patient satisfaction may be negatively impacted if their expectations are not met. 5 Furthermore, the prevalence of "horror stories" related to anesthesia on social media can increase fear and anxiety among patients, even though anesthesia complications are statistically rare. 9

Anesthesiologists must play an active role in managing patient expectations, emphasizing that every patient's experience is unique and that factors such as age, medical history, and surgical procedure can influence anesthesia outcomes. By providing personalized, evidence-based information, anaesthesiologists can help patients navigate the digital landscape and make informed decisions about their care. 3

The Ethical and Professional Challenges of Social Media in Anesthesia

The use of social media by anaesthesiologists and other healthcare professionals is not without its ethical and professional challenges. Medical professionals must navigate the fine line between sharing valuable educational content and maintaining patient privacy and confidentiality. Anesthesiologists are bound by strict ethical guidelines, including the need to maintain patient confidentiality. The American Medical Association (AMA) and other professional bodies have issued guidelines on appropriate social media use for healthcare providers, emphasizing the importance of professionalism and patient privacy in online interactions. 10

Healthcare providers also face the challenge of managing their online reputation. The anonymity provided by social media platforms can spread positive and negative reviews, some of which may be based on misinformation or miscommunication. Anesthesiologists must be proactive in engaging with patients and addressing concerns, while also ensuring that they do not violate professional boundaries or ethical principles in their online presence. 2

The Future of Anesthesia in the Social Media Age

The future of anesthesia in the social media age will likely involve even greater integration of digital platforms into medical practice. The rise of telemedicine and virtual consultations has already begun to transform how patients interact with healthcare providers. As technology continues to advance, it is conceivable that anaesthesiologists will use virtual reality (VR) or augmented reality (AR) to offer patients immersive pre-surgical education or simulate anesthesia induction in a virtual environment, helping to alleviate anxiety and prepare them for the real procedure.

Moreover, social media can be used to advocate for public health initiatives related to anesthesia safety, such as reducing the incidence of anesthesia-related complications, improving access to anesthesia services in underserved areas, and advocating for anesthesia-related research funding. As anaesthesiologists continue to build their online presence, they can use their platforms to advocate for changes in healthcare policy, collaborate with global partners, and raise awareness about important issues in the field.

Anesthesia in social media age: Enhancing Education While Mitigating Risk

Authors: Raghav Gupta[1] , Anju Gupta[2]
[1]Assistant Professor, Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi
[2]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

Conclusion

Social media has had a profound impact on the field of anesthesia, offering new opportunities for patient education, professional collaboration, and the dissemination of medical knowledge. However, the challenges posed by misinformation, oversimplification, and unrealistic patient expectations must be addressed to ensure that social media serves as a force for good in the healthcare space. Anesthesiologists and other healthcare professionals must engage with social media responsibly, providing accurate, evidence-based information and actively managing patient expectations. By doing so, they can help ensure that patients receive the highest standard of care, both in the operating room and in the digital realm.

References

1. Pew Research Center. (2016). Social Media Use in 2016. Retrieved from https://www.pewinternet.org/2016/11/11/social-media-use-in-2016/
2. Sarin, M., & Adams, L. (2020). The Role of Social Media in Anesthesia Education. Anesthesiology Clinics, 38(4), 459-467. https://doi.org/10.1016/j.anclin.2020.06.001
3. Weiss, S., et al. (2018). Misinformation and Social Media in Anesthesia: Addressing Public Misconceptions. Anesthesia & Analgesia, 126(5), 1775-1781. https://doi.org/10.1213/ANE.0000000000003135
4. Cox, M., et al. (2021). The Impact of Social Media on Public Perception of Anesthesia Safety. Journal of Clinical Anesthesia, 68, 110050. https://doi.org/10.1016/j.jclinane.2020.110050
5. Sweeney, K., et al. (2018). Patient Anxiety and Understanding of Anesthesia: The Impact of Social Media. Journal of Clinical Anesthesia, 46, 60-65. https://doi.org/10.1016/j.jclinane.2017.10.036
6. Brown, R. M., et al. (2020). Social Media and Misinformation in Healthcare. Journal of Medical Internet Research, 22(4), e13529. https://doi.org/10.2196/13529
7. Johnson, J. A., et al. (2019). A Comparison of Video and Print Patient Education Materials for Anesthesia: A Randomized Controlled Trial. BMC Medical Education, 19, 344. https://doi.org/10.1186/s12909-019-1753-9
8. Husain, S. F., et al. (2021). The Role of Social Media in Medical Education: A Review of the Literature. BMC Medical Education, 21(1), 204. https://doi.org/10.1186/s12909-021-02725-4
9. Lerner, H., et al. (2016). The Effect of Social Media on Patient Perception of Anesthesia Risk. Anesthesia & Analgesia, 122(6), 1846-1851. https://doi.org/10.1213/ANE.0000000000001164
10. American Medical Association (AMA). (2019). AMA Principles of Medical Ethics. Retrieved from https://www.ama-assn.org/delivering-care/public-health/ama-principles-medical-ethics

Anaesthesia Blogs and Podcasts: A Growing Resource for Practitioners

Authors: Shweta Desai[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

Introduction

Anaesthesia is a dynamic and rapidly evolving specialty, requiring practitioners to remain updated on advancements in perioperative care, airway management, and pharmacological innovations to ensure optimal patient outcomes. Traditional educational methods, including textbooks, in-person conferences, and workshops, continue to be fundamental. However, digital learning resources such as blogs and podcasts have emerged as valuable adjuncts for continuous professional development. These platforms provide accessible, on-demand learning, enabling anaesthesiologists to engage with the latest research and clinical guidelines at their convenience.

The Free Open Access Meducation (FOAM) movement has significantly influenced medical education by promoting the unrestricted dissemination of high-quality, peer-reviewed content, facilitating knowledge sharing across global networks (1). Within anaesthesia, several FOAM initiatives, including blogs such as NYSORA and Deranged Physiology, and podcasts like the Anaesthesia & Analgesia Podcast, offer evidence-based discussions on various aspects of perioperative care, regional anaesthesia, and critical care management (2,3). The increasing adoption of these resources underscores their role in supplementing traditional learning and fostering an interactive and collaborative educational environment.

Practical Applications of Blogs and Podcasts in Anaesthesia Education

The integration of blogs and podcasts into anaesthesia education has led to the widespread dissemination of knowledge more flexibly and engagingly. Blogs often present structured content with case discussions, journal article reviews, and clinical guidelines, while podcasts provide expert interviews, panel discussions, and summaries of recent research findings. These formats cater to anaesthesiologists at all career stages, from trainees to consultants, allowing them to stay informed about emerging trends without requiring extensive time commitments (4).

Several digital resources focus on airway management, a fundamental aspect of anaesthesia practice. The Difficult Airway Society (DAS) Blog and Airway Matters provide insights into difficult airway algorithms, emerging airway technologies, and case-based discussions on airway management challenges (5). Podcasts such as the Anesthesia & Critical Care Reviews and Commentary (ACCRAC) frequently feature expert interviews on video laryngoscopy, intubation strategies, and perioperative airway assessment, offering practical insights into airway management (6).

Critical care medicine, which is intricately linked to anaesthesia, has also benefited from the expansion of digital educational platforms. Blogs such as Life in the Fast Lane (LITFL) and PulmCrit provide comprehensive discussions on mechanical ventilation, haemodynamic management, and intensive care protocols, bridging the knowledge gap between anaesthesia and critical care (7). The ICU Rounds Podcast and Critically Ill Podcast are valuable audio resources that cover case-based discussions, sepsis management, and cutting-edge critical care research, making them indispensable for anaesthesiologists involved in ICU care (8).

Anaesthesia Blogs and Podcasts: A Growing Resource for Practitioners

Authors: Shweta Desai[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

Bridging the Gaps in Anaesthesia Education

Despite their advantages, blogs and podcasts in anaesthesia education face several challenges. One of the primary concerns is the lack of standardization and formal peer review for many digital resources. While some platforms maintain high editorial standards, the unregulated nature of FOAM means that not all content is rigorously vetted, leading to concerns about misinformation and variability in educational quality (9). Tools such as the Critical Care Medical Education Website Quality Evaluation Tool (CCMEWQET) have been proposed to assess the credibility and reliability of online medical resources, highlighting the need for quality assurance mechanisms in digital learning.

Additionally, integrating digital resources into competency-based medical education (CBME) remains a challenge. While blogs and podcasts offer flexibility, they often lack structured assessment tools necessary for competency evaluation. Incorporating features such as self-assessment modules, interactive quizzes, and feedback mechanisms could enhance their educational impact (10). Furthermore, establishing formal accreditation for high-quality FOAM resources would reinforce their credibility and encourage greater adoption among medical educators and professional bodies.

By fostering collaborations and addressing existing limitations, anaesthesia blogs and podcasts have the potential to become integral components of medical education. With structured quality control measures and greater institutional support, they can serve as reliable, high-quality learning tools that complement traditional educational methods, ensuring that anaesthesia practitioners worldwide have access to the latest evidence-based knowledge.

References

1. Cadogan M, Thoma B, Chan TM, Lin M. Free open access medical education (FOAM): the rise of emergency medicine and critical care blogs and podcasts. Emerg Med J. 2014;31(10):e76-7.
2. NYSORA. Regional Anaesthesia Techniques and Guidelines. Available at: https://www.nysora.com/. Accessed Jan 20, 2025.
3. Deranged Physiology. Critical Care and Anaesthesia Education. Available at: https://derangedphysiology.com/. Accessed Jan 20, 2025.
4. Rosenberg H, Syed S, Rezaie S. The educational value of podcasts in emergency medicine. J Emerg Med. 2017;54(3):339-46.
5. Life in the Fast Lane (LITFL). Available at: https://litfl.com/. Accessed Jan 20, 2025.
6. PulmCrit. Critical Care Insights. Available at: https://emcrit.org/pulmcrit/. Accessed Jan 20, 2025.
7. ICU Rounds Podcast. Available at: https://www.icurounds.com/. Accessed Jan 20, 2025.
8. Critically Ill Podcast. Available at: https://www.criticallyillpodcast.com/. Accessed Jan 20, 2025.
9. Lin M, Thoma B, Trueger NS, Ankel F, Sherbino J. Quality indicators for medical education blogs and podcasts: expert consensus and reliability analysis. Ann Emerg Med. 2015;66(4):389-95.
10. Chan TM, Stehman C, Gottlieb M, Thoma B. A practical guide to academic podcasting. Perspect Med Educ. 2020;9(6):356-63.

Anaesthesia-Related Content Censorship on Social Media: Striking the Right Balance

Authors: Priya Singla[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

Introduction

Social media has revolutionized the medical field providing the professionals an open platform to interact, collaborate, and learn. More than 90% of medical students and almost 80% of resident doctors use online social media networks to seek information. (1) Johann Heinrich Pestalozzi (father of Pedagogy) had introduced 3 H approach to learning that is HEAD, HEART AND HAND which has now been taken over by these techie apps. It is undeniable that social media has become ubiquitous and has integrated itself into medical education didatics. (2) "The "Global Anaesthesiology Server Network," or "GasNet," has been active since 1994 and serves as a pioneer among anaesthesia-related social networking platforms. (3) IMA Platforms like Twitter, Facebook, YouTube, and LinkedIn provide an accessible avenue for sharing knowledge, discussing clinical cases, and promoting research findings. Bakshi et al. (4) demonstrated improved students' knowledge of acute pain management using a WhatsApp-based teaching module. Coleman and O'Connor (5) conducted a 5 stage scopic review on role of WhatsApp in medical education and reported that 7 studies (out of total 23 chosen studies) with 647 participants had an improvement in learners' knowledge following WhatsApp learning. However, the unregulated and dynamic nature of these platforms raises questions regarding credibility and accuracy of shared content. And hereby arises a question about the need for censorship or moderation of anaesthesia-related content on social media and how to strike the right balance between free exchange and ensuring accuracy.

This surge in usage of social media was during COVID pandemic when the medical professionals started interacting through virtual platforms spreading wholesome information and maintaining continuity in medical education and research at the same time.

The Importance of Social Media in Anaesthesiology

- Educational Resource: Social media platforms host a wealth of content, from videos on ultrasound-guided nerve blocks to discussions on advanced airway management such as Facebook has dozens of groups pertaining to different subspeciality of anaesthesia. These resources are particularly valuable for trainees and early-career professionals.
- Global Collaboration: Platforms allow anaesthesiologists to interact globally, sharing unique clinical cases, discussing ethical dilemmas, and brainstorming solutions. This fosters a sense of community and encourages cross-border learning without any geographical constraints.
- Amplification of Research: Sharing articles and studies on social media significantly boosts their visibility and citations especially in cases where journals do not provide free access.
- Real-Time Updates: Social media enables the rapid dissemination of information, such as updates on anaesthesia guidelines, new drug approvals, and emerging healthcare challenges like COVID-19, Conference intimation, visibility of scientific meetings and publicization.
- The widespread adoption of ultrasound guidance has transformed it into a highly visually oriented specialty. (6) As a result, the images, links, and educational insights commonly used in regional anaesthesia teaching are well-suited for sharing through various social media platforms.

Anaesthesia-Related Content Censorship on Social Media: Striking the Right Balance

Authors: Priya Singla[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

- Twitter may be particularly effective due to its concise 140-character "micro-blog" format, enabling content to be shared with hundreds or thousands of people instantly. These brief messages can propagate through multiple layers of the social network (e.g., a user's followers, their followers, and so on), significantly amplifying the content's visibility which is not possible through journals. (7)

Despite its advantages, social media comes with inherent risks:

- **Spread of Misinformation:** content on social media is not subject to rigorous vetting unlike the journals which passes through stringent checks and are peer reviewed. Anaesthesia-related posts can sometimes include inaccuracies that, if acted upon, may compromise patient safety. For example, misrepresentation of dosing guidelines or incomplete procedural techniques can have serious consequences.
- Majority of regional anaesthesia techniques are available freely in the form of YouTube videos, blogs which are accessed by residents without having proper knowledge of anatomy, complications involved further compromising the patients' safety.
- Apart from standard guidelines, there are some institutional protocols as well in field of anaesthesia which are formulated as per patients' profile and experiences of anaesthesiologists involved in perioperative care of such patients. Therefore, just by following a thread on Facebook or twitter might not solve problem as it usually has multiple answers with intersubject variability. Recently joined junior residents are most vulnerable to these kind of content on social media.
- **Ethical Concerns:** Sharing patient details, even anonymously, may breach confidentiality standards. Social media users might unintentionally disclose identifiable information when discussing clinical cases, leading to ethical and legal implications.
- Posts may be biased due to sponsorships or affiliations with pharmaceutical companies, promoting products without full disclosure. This blurs the line between genuine advice and advertising.
- With the overwhelming amount of information shared daily, anaesthesiologists may find it challenging to distinguish high-quality content from unreliable sources resulting in cognitive overload
- SlideShare serves as a web having PowerPoint presentation of various topics in a concise manner which often tend to lure students resulting in lack of standard guidelines and evidence-based approach.

Arguments for Censorship

Given these challenges, calls for content censorship or moderation have gained traction. It's a pro-con debatable topic whether we should call for censorship or not and how do we strike a right balance as there is very fine line in between.

- **Enhance Accuracy:** Filtering out unverified or misleading information ensures that users access only credible and evidence-based content.
- **Patients' protection:** By preventing the spread of harmful practices or incorrect guidelines, censorship safeguards patient safety.

Anaesthesia-Related Content Censorship on Social Media: Striking the Right Balance

Authors: Priya Singla[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

- **Maintain Professionalism:** Moderation helps uphold the standards of the anaesthesiology profession by curbing unprofessional or unethical behaviour online.
- **Encourage Accountability:** Implementing guidelines and holding users accountable for their posts fosters a culture of responsible content sharing.

However, overzealous moderation of content does carry risks.

- Open houses provide a novel platform for discussion of new conceptions and innovations. Excessive restrictions might be a barrier to excogitative ideas and exploration of unconventional approaches.
- Censorship might suppress the dissent which can prove to be potential challenge to existing guidelines and serve as a topic for emerging practices and questions for research. Therefore, slowing down the process of springing new ideas.
- An overly controlled environment may make anaesthesiologists hesitant to share their experiences, ultimately resulting in less interaction and collaboration.

Striking the Right Balance

Balancing the benefits of social media with the need for accurate information to achieve more structured and comprehensive content and simultaneously avoiding the cognitive bias requires a nuanced approach.

All the societies involved in research and formulation of standard guidelines should ensure specific considerations to be addressed while using social media as a platform for dispersing information. The information should abide by various ethical concerns that is patient's confidentiality and professional conduct should be emphasized. The social media index(Smi) is an indicator for testing quality of content. The stability of the SMi over time and its correlation with journal impact factors indicate that it may serve as a reliable measure of the impact of medical education websites (8).

Validation of content should be taken care of by encouraging the sharing of peer-reviewed or evidence-based information. For instance, these professional bodies can create committees which could ensure quality control of the high impact posts

Mandating disclosure of conflicts of interest or sponsorships set the seal on by warranting transparency.

Anaesthesiologist should be well equipped with digital literacy skills which can be helpful in critical evaluation of content for credibility and accuracy and addressing the biases or any hidden commercial interests.

Hence, Social media platforms should implement clear and transparent content moderation policies, focussing on removing harmful misinformation while preserving constructive discussions. Fostering a culture of accountability among anaesthesiologists is essential. Encouraging users to verify information before sharing and report misleading content can help

Authors: Priya Singla[1], Raghav Gupta[2]
[1]Senior Resident, [2]Assistant Professor
Dept. of Onco-Anaesthesia and Palliative Medicine, AIIMS, Delhi

maintain a high standard of discourse. Artificial intelligence and machine learning algorithms can assist in identifying and flagging misleading content. However, such systems must be designed with input from medical professionals to minimize errors and biases.

Future Directions involves conducting more studies and research to understand impact of social media on anaesthesiology practice and patient outcomes. As social media continues to evolve, the anaesthesiology community must adapt to its changing landscape. Strengthening partnerships between medical organizations, educational institutions, and social media platforms to promote best practices might help.

Conclusion

Social media is a double-edged sword for anaesthesiologists, offering unprecedented opportunities for education and collaboration while posing risks related to misinformation and ethical challenges. As social media continues to evolve, the anaesthesiology community must adapt to its changing landscape.

Striking the right balance between openness and regulation is crucial. By implementing thoughtful strategies such as professional guidelines, digital literacy training, and transparent moderation policies, the anesthesiology community can leverage the benefits of social media while minimizing its drawbacks.

Refrences

1. Bosslet GT, Torke AM, Hickman SE, Terry CL, Helft PR. The patient-doctor relationship and online social networks: Results of a national survey. J Gen Intern Med 2011; 26:1168-74).
2. Jain D, Doctor JR, Samantaray A, Ali Z. Social media in anaesthesia education: Striking the right balance. Indian J Anaesth 2024;68:317-9)
3. Kiran S, Sethi N. Anaesthesiologist and social media: Walking the fine line. Indian J Anaesth 2018;62:743-6.
4. Bakshi SG, Doctor JR, Trivedi B, Chatterjee AS, Thota RS, Jain PN. WhatsApp-based teaching module for acute pain management: A prospective educational project. Can J Anaesth 2019;66:736-7.
5. Coleman E, O'Connor E. The role of WhatsApp® in medical education; A scoping review and instructional design model. BMC Med Educ 2019;19:279.
6. Mariano ER, Marshall ZJ, Urman RD, Kaye AD. Ultrasound and Its Evolution in Perioperative Regional Anesthesia and Analgesia. Best Pract Res Clin Anaesthesiol. 2014; 28:29–39. DOI: 10.1016/j.bpa.2013.11.001 [PubMed: 24815965]
7. Schwenk ES, Chu LF, Gupta RK, Mariano ER. How Social Media is Changing the Practice of Regional Anesthesiology. Curr Anesthesiol Rep. 2017 Jun;7(2):238-245. doi: 10.1007/s40140-017-0213-x. Epub 2017 Apr 12. PMID: 29422779; PMCID: PMC5798897.
8. Thoma B, Sanders JL, Lin M, Paterson QS, Steeg J, Chan TM, et al. The social media index: Measuring the impact of emergency medicine and critical care websites. West J Emerg Med 2015;16:242-9.

ChatGPT in Research: Enhancing or Endangering Anesthesia Scientific Integrity?

Authors: Dr Prakash Gondode[1], Dr Anju Gupta[2]
[1]Assistant Professor, [2]Associate Professor
Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

Introduction

Over the past few years, the rapid development of large language models like ChatGPT has transformed the landscape of natural language processing and generation. These AI-powered models have demonstrated remarkable capabilities in tasks such as text generation, summarization, and question-answering, making them potentially valuable tools for academic and scientific writing.

In the context of scientific writing, ChatGPT's versatility has piqued the interest of researchers and authors across various disciplines, including the field of anesthesia. The potential applications of ChatGPT in scientific writing range from generating draft text and improving writing quality to overcoming writer's block and assisting with specific tasks like preparing case reports or research proposals.

This review aims to explore the benefits, limitations, and ethical considerations of using ChatGPT in scientific writing, with a particular focus on its relevance to the field of anesthesia. By examining the capabilities and potential pitfalls of this emerging technology, the review will provide researchers and authors with a balanced perspective on the responsible and ethical use of ChatGPT in academic and scientific communication.

ChatGPT's Capabilities in Scientific Writing

- Generating Text: ChatGPT's impressive natural language generation capabilities make it a valuable tool for scientific writing tasks. The model can effectively generate various types of text relevant to scientific communication, such as abstracts, introductions, literature reviews, methodology sections, and discussion/conclusion paragraphs. By providing ChatGPT with relevant information and prompts, researchers can leverage the model's ability to produce coherent and contextually appropriate text as a starting point for their writing.
- Improving Writing Quality: In addition to text generation, ChatGPT can also be used to enhance the overall quality of scientific writing. The model's understanding of grammar, syntax, and stylistic conventions can help authors improve the clarity, conciseness, and flow of their writing. ChatGPT can suggest revisions to enhance sentence structure, eliminate redundancies, and refine word choice, ultimately leading to more polished and professional-looking scientific manuscripts.
- Overcoming Writer's Block: The creative and analytical capabilities of ChatGPT can be particularly useful for researchers and authors who struggle with writer's block. The model can assist with brainstorming and ideation, helping to generate initial outlines, topic sentences, and even entire paragraphs. This can provide a valuable starting point for authors, allowing them to overcome the challenges of getting started and maintaining momentum during the writing process.
- Specific Applications in Anesthesia: Within the field of anesthesiology, ChatGPT's capabilities can be leveraged in various ways to support scientific writing. For example, the model can aid in the generation of detailed case reports, summarizing complex patient histories, anesthetic management, and clinical outcomes in a clear and concise manner.

Authors: Dr Prakash Gondode[1], Dr Anju Gupta[2]
[1]Assistant Professor, [2]Associate Professor
Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

Additionally, ChatGPT can be used to draft research proposals, presenting hypotheses, study designs, and anticipated outcomes in a persuasive and well-structured format. The model's ability to prepare presentation slides and abstracts can also be valuable for anesthesia-related scientific conferences and publications.

Potential Pitfalls and Limitations

Despite the impressive capabilities of ChatGPT, there are several potential pitfalls and limitations that researchers and authors must be aware of when using it in scientific writing.

Accuracy and reliability: One of the primary concerns is the accuracy and reliability of the information generated by ChatGPT. While the model has been trained on a vast corpus of data, its knowledge base is not perfect or comprehensive, and it may generate inaccurate or misleading information, especially on highly specialized or technical topics. This could lead to the inclusion of erroneous or unsubstantiated claims in scientific manuscripts, undermining the integrity and credibility of the research.

Lack of critical thinking and originality: ChatGPT is primarily a language generation tool, and it lacks the critical thinking and analytical skills that are essential for scientific research and writing. The model may produce text that appears coherent and well-written, but it may lack the depth of understanding, original insights, and nuanced interpretation that are expected in high-quality scientific publications. Researchers must exercise caution and maintain a critical eye when relying on ChatGPT's output, ensuring that they thoroughly review and edit the generated text to maintain the originality and intellectual rigor of their work.

Over-reliance and plagiarism: The ease and speed with which ChatGPT can generate text may lead to an over-reliance on the model, potentially resulting in a lack of genuine engagement with the research material and a reduction in the author's own writing and analytical efforts. This over-dependence on ChatGPT could also increase the risk of inadvertent plagiarism, as authors may struggle to differentiate between their own original ideas and the text generated by the model.

Bias and fairness: ChatGPT's output may reflect the biases present in the data used to train the model, which could introduce biases and unfairness into the scientific writing process. For example, the model may perpetuate gender, racial, or socioeconomic biases, or it may fail to adequately represent the perspectives of underrepresented groups. Researchers must be vigilant in identifying and mitigating these biases through careful review and editing of the generated text.

Ethical Considerations

Authorship and Credit: The use of ChatGPT in scientific writing raises important ethical considerations regarding authorship and credit. Researchers must be transparent about the extent to which they have relied on the language model to generate or assist with the writing of their manuscripts. Appropriate attribution should be given, either by acknowledging ChatGPT's

Authors: Dr Prakash Gondode[1], Dr Anju Gupta[2]
[1]Assistant Professor, [2]Associate Professor
Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

contribution as a co-author or by clearly stating the model's role in the writing process. Failing to do so could be considered a form of plagiarism, undermining the integrity of the scientific work.

Data Privacy and Security: The use of ChatGPT in scientific writing also raises concerns about data privacy and security. Researchers must ensure that any sensitive or confidential information, such as patient data or proprietary research findings, is not inadvertently disclosed to the language model. Additionally, there are concerns about the potential for ChatGPT to be used to access or generate content from restricted or copyrighted sources, which could have legal and ethical implications. Robust data management protocols and secure data handling practices are essential when utilizing ChatGPT in scientific writing.
Misinformation and Manipulation: One of the most significant ethical concerns surrounding the use of ChatGPT in scientific writing is the potential for the model to generate misleading or fabricated scientific content. The model's impressive natural language generation capabilities could be exploited to create false or exaggerated research findings, manipulate data, or produce biased or unsubstantiated claims. This could undermine the credibility of scientific research and lead to the dissemination of misinformation, with potentially serious consequences for public health, policy decisions, and societal well-being.
Responsible Use Guidelines: To address these ethical concerns, it is crucial to establish clear guidelines for the responsible and ethical use of ChatGPT in scientific writing. These guidelines should include:

- Transparency: Researchers must clearly disclose the extent to which they have utilized ChatGPT in their writing process.
- Appropriate Attribution: If ChatGPT has made a significant contribution to the manuscript, it should be acknowledged as a co-author or the model's role should be explicitly stated.
- Rigorous Review: All text generated by ChatGPT must be thoroughly reviewed and edited by the researchers to ensure accuracy, originality, and adherence to ethical

Do's and Don'ts of Using ChatGPT in Anesthesia Scientific Writing

Do's:

- Use ChatGPT as a tool to facilitate the writing process, such as for brainstorming ideas and generating initial drafts. The language model can help spark creativity and provide a starting point for further development.
- Critically evaluate and thoroughly edit any text generated by ChatGPT. Carefully review the output to ensure accuracy, clarity, and coherence, and make necessary revisions to maintain the scientific rigor and integrity of the work.
- Ensure the final text is original and accurately represents the research findings. Do not simply rely on ChatGPT's output without carefully reviewing and validating the content.
- Cite ChatGPT appropriately when the language model has made a significant contribution to the writing process. This can be done by acknowledging ChatGPT's role or potentially including it as a co-author, depending on the extent of its contribution.

Authors: Dr Prakash Gondode[1], Dr Anju Gupta[2]
[1]Assistant Professor, [2]Associate Professor
Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

Don'ts:

- Rely solely on ChatGPT for writing entire manuscripts or research papers. While the language model can be a useful tool, it should not replace the author's own critical thinking, analysis, and writing skills.
- Submit ChatGPT-generated text without thorough review and editing. Uncritical use of the model's output can lead to the inclusion of inaccuracies, biases, or lack of originality, which would undermine the credibility of the scientific work.
- Plagiarize ChatGPT's output by passing off the generated text as one's own without proper attribution. This would constitute a breach of academic integrity and could have serious consequences.
- Use ChatGPT to fabricate or manipulate scientific data, as this would be a form of research misconduct and could have significant ethical and legal implications.

Conclusion

The use of large language models like ChatGPT in scientific writing presents both potential benefits and significant limitations. On the one hand, ChatGPT can be a valuable tool for facilitating the writing process, generating initial drafts, and stimulating creative ideation. Its natural language generation capabilities can help researchers overcome writer's block and produce text more efficiently. However, the uncritical reliance on ChatGPT's output poses substantial risks, as the model may inadvertently introduce biases, inaccuracies, or lack of originality into the scientific writing. Researchers must remain vigilant in thoroughly reviewing and editing any text generated by the model to ensure the scientific integrity and rigor of their work.

Ethical considerations are of paramount importance when incorporating ChatGPT into scientific writing. Researchers must be transparent about the extent of their use of the language model, provide appropriate attribution, and ensure the protection of sensitive data and intellectual property. Failing to do so could constitute a breach of academic integrity and undermine the credibility of the scientific findings. Robust data management protocols and secure data handling practices are essential to mitigate the risks associated with the use of ChatGPT in scientific communication.

Looking ahead, the role of LLMs in academic and scientific communication, particularly within the field of anesthesia, is likely to evolve. While these models may continue to be leveraged as valuable writing assistants, their use must be carefully balanced with the maintenance of scientific rigor, originality, and ethical considerations. Anesthesia researchers and practitioners should stay informed about the latest developments in this rapidly advancing technology, actively engage in discussions around its responsible use, and contribute to the establishment of clear guidelines and best practices for integrating ChatGPT and similar LLMs into the scientific writing process. By doing so, the anesthesia community can harness the potential benefits of these language models while upholding the highest standards of scientific integrity and ethical conduct.

ChatGPT in Research: Enhancing or Endangering Anesthesia Scientific Integrity?

Authors: Dr Prakash Gondode[1], Dr Anju Gupta[2]
[1]Assistant Professor, [2]Associate Professor
Department of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi

References/ Further Read.

- Ashok Agarwal et al. (2023) "Citation Errors in Scientific Research and Publications: Causes, Consequences, and Remedies."
- Dave T et al. (2023) "ChatGPT in medicine: an overview of its applications, advantages, limitations, future prospects, and ethical considerations."
- Erik Derner et al. (2023) "Beyond the Safeguards: Exploring the Security Risks of ChatGPT."
- Fehrenbacher Jill C. (2024) "The Use of Artificial Intelligence in Writing Scientific Review Articles."
- Fraiwan, M et al. (2023) "A Review of ChatGPT Applications in Education, Marketing, Software Engineering, and Healthcare: Benefits, Drawbacks, and Research Directions,"
- Lund, B. et al. (2023) "ChatGPT and a new academic reality: Artificial Intelligence-written research papers and the ethics of the large language models in scholarly publishing,"
- Qureshi, B. (2023) "Exploring the Use of ChatGPT as a Tool for Learning and Assessment in Undergraduate Computer Science Curriculum: Opportunities and Challenges,"
- Ronen Bareket et al. (2019) "Make quotations great again: a proposal to reduce false-knowledge."
- Zhang, Z. et al. (2023) "It's a Fair Game", or Is It? Examining How Users Navigate Disclosure Risks and Benefits When Using LLM-Based Conversational Agents,"

Impact of Social Media on Anesthesia in 2050

Authors: Dr Sweta Gulati[1], Dr Rajiv Chawla[2] and Dr Sangeeta Bhagat[3]
[1]Consultant, [2]Director Anesthesia and [3]Attending Consultant
Rajiv Gandhi Cancer Institute and Research Centre, Delhi

The future of anesthesia is inherently linked to social media, which will revolutionize the way we communicate, collaborate, and deliver patient care, leading to improved outcomes, enhanced patient satisfaction, and a transformed specialty by 2050.

From a technology perspective, social media is defined as a type of application that is based on the Internet and Web 2.0 technology, whereby users not only consume information but also interact with and contribute information on Internet platforms. From a communication perspective, social media has been defined as an online environment where users contribute to the content and consume content that is generated by other users.

"Global Anaesthesiology Server Network" or the "GasNet" is the precursor for the anaesthesia-related social networking sites and has been functional since 1994. Facebook, a personal social networking site, is used to connect to individual anaesthesiologists with a mutual interest in a particular field. Nowadays, Twitter is one of the most popular social media sites among anaesthesiologists. Twitter allows anaesthesiologists to obtain up-to-the-minute updates on clinical research and news.

The ASA offers patients social media content, to stay up-to-date on patient information regarding anaesthesia. These include "Patient Lifeline" on Twitter, "ASA Vital Health" on Facebook, and the website "lifelinetomodernmedicine.com." Engaging in social media platforms between academic anaesthesiologists and other investigators can lead to the generation of increased opportunity and more collaborative scholarly work. Social media as a technology is enabling rapid, global, and scalable dissemination of scientific publications.

The effect of social media on journal impact factors is demonstratable. Medical journals with an active Twitter account had a higher journal impact factor than scientific journals that did not embrace social media. Furthermore, tweets can predict highly cited articles within the first 3 days of article publication, and highly tweeted articles were 11 times more likely to be highly cited than less-tweeted articles.

An important metric that is often used to measure the impact of scholarly research on social media is the **Altmetric (Alternative Metric) score**. The Altmetric score tracks the online attention and discussion surrounding a particular research article. The score considers various sources, including social media platforms, blogs, news articles, and policy documents, to provide a score that reflects the amount of attention an article has received online. The score is calculated based on the number of mentions of an article, the context in which it is mentioned, and the source of the mention. In recent years, there has been a growing interest in the relationship and usability of Altmetric scores and traditional citation counts as a measure of the impact of scholarly research.The articles with higher Altmetric scores were more likely to receive more citations. A few popular altmetrics tools (Altmetric, Plum Analytics, Impactstory ,ResearchGate....) **The Altmetric score has been used to track the effectiveness of social media and other communication strategies.**

Impact of Social Media on Anesthesia in 2050

Authors: Dr Sweta Gulati[1], Dr Rajiv Chawla[2] and Dr Sangeeta Bhagat[3]
[1]Consultant, [2]Director Anesthesia and [3]Attending Consultant
Rajiv Gandhi Cancer Institute and Research Centre, Delhi

Use of social media by anaesthesiologists for case discussions or for publicity may compromise patient's confidentiality and privacy. Online contact with patients, which breaches doctor-patient relationships, may be professionally inappropriate. A high sense of professionalism is expected from the anaesthesiologist while posting on social media. **Anaesthesiologists need to decide on their social media goals,** like interaction with colleagues, continuing medical education, or patient education, cannot violate HIPAA (Health Insurance Portability and accountability act) security rule and then register for social media accounts accordingly.

A meta-analysis found that the purpose of using social media is based primarily on

- communication (58.3%),
- content sharing (25%),
- content creation (12.5%), and
- social capital (4.2%).

Similarly, it was found that social networks helped express ideas, create and transmit digital content among peers, as well as combine study and leisure.

We can look at the broader picture of social media usage in India and the medical community

India had 462 million social media users in January 2024, accounting for 32.2% of the total population. Facebook, YouTube, and Instagram are among the most popular social media platforms in India, with significant user bases.

While there isn't specific data on anaesthesiologists' social media usage, a study on the social media usage of Indian doctors found that 71.4% of respondents used social media for professional purposes. This suggests that anaesthesiologists like any other medical professionals are likely using social media as part of their daily practice. LinkedIn, a professional networking platform, had 120 million members in India in early 2024.

Table showing the potential timeline of social media in Anaesthesia in India

YEAR	PLATFORMS	EVENT/DESCRIPTION
2010	Linkedin	Indian anaesthesiologists begin professional networking
2012	Facebook Groups	Online discussions and networking
2013	Twitter	It is popular among Indian anaesthesiologists for real-time discussions and networking
2015	Instagram	Popular for sharing visual content
2016	Youtube channels	Focussed on education and training
2017	ISA Social media	ISA launches its social media
2018	Online forums	Anaesthesia India gain popularity in INDIA
2020	COVID 19 Pandemic	Acceleration of adoption of social media
2020	Whatsapp /Telegram	Use increased for discussions/ online classes
2022	ISA Online Community	Launch of this facilitates member engagement and discussion
2023	Anaesthesiology-specific platforms and Apps	Catering to the unique needs of Indian anaesthesiologists

Impact of Social Media on Anesthesia in 2050

Authors: Dr Sweta Gulati[1], Dr Rajiv Chawla[2] and Dr Sangeeta Bhagat[3]
[1]Consultant, [2]Director Anesthesia and [3]Attending Consultant
Rajiv Gandhi Cancer Institute and Research Centre, Delhi

Here are some potential impacts of social media on anesthesia in 2050

 # Personalized Patient Engagement

1. "Social media will revolutionize patient engagement, enabling anaesthesiologists to create personalized, interactive experiences that educate and empower patients."
2. "Patients will be able to access personalized anaesthesia information, tailored to their specific needs and medical histories, through social media platforms."

 # Real-Time Collaboration

1. "Social media will facilitate real-time collaboration among anaesthesiologists, enabling them to share knowledge, expertise, and best practices in real-time."
2. "Virtual consults and real-time collaboration will become the norm, enabling anaesthesiologists to provide more efficient, effective, and patient-centered care."

 # AI-Driven Insights

1. "Social media will leverage AI-driven insights to analyze patient data, identify trends, and predict outcomes, enabling anaesthesiologists to make more informed decisions."
2. "AI-powered chatbots will be integrated into social media platforms, providing patients with personalized anaesthesia information and support."

 # Virtual Reality Training

1. "Social media will enable virtual reality training, allowing anaesthesiologists to practice and hone their skills in a simulated, immersive environment."
2. "Virtual reality training will become a standard component of anaesthesia education, enabling trainees to develop the skills and competencies needed to provide high-quality patient care."

 # Global Health Initiatives

1. "Social media will amplify global health initiatives, enabling anaesthesiologists to collaborate on projects, share resources, and advocate for policy changes that improve patient care worldwide."
2. "Social media will facilitate the development of global anaesthesia guidelines, standards, and best practices, promoting consistency and quality in patient care worldwide.

 # Negative Impacts

1. *Information overload*: Social media platforms overwhelm patients and anaesthesiologists making it difficult to discern accurate from inaccurate information.
2. *Misinformation and disinformation*: Social media platforms may spread misinformation or disinformation about anaesthesia, potentially harming patients and undermining trust in the medical profession.
3. *Patient privacy concerns*: Social media platforms may compromise patient privacy, potentially exposing sensitive medical information to unauthorized parties.
4. *Cybersecurity risks*: Social media platforms may be vulnerable to cyberattacks, potentially compromising anaesthesia equipment, patient data, and medical records.

Impact of Social Media on Anesthesia in 2050

Authors: Dr Sweta Gulati[1], Dr Rajiv Chawla[2] and Dr Sangeeta Bhagat[3]
[1]Consultant, [2]Director Anesthesia and [3]Attending Consultant
Rajiv Gandhi Cancer Institute and Research Centre, Delhi

 # Anaesthesia Support Networks

1. *Online support groups*: Social media platforms may host online support groups for patients undergoing anaesthesia, providing emotional support and reducing anxiety.
2. *Peer-to-peer advice*: Patients may share their experiences and advice with others undergoing similar procedures, improving patient outcomes and satisfaction.

 # Anaesthesia Research and Development

1. *Crowdsourced research*: Social media platforms may enable crowdsourcing of anaesthesia research, allowing patients and researchers to collaborate on studies and share data.
2. *Real-time data sharing*: Anaesthesia professionals may share real-time data and insights on social media, accelerating the development of new anaesthesia technologies and techniques.

TO CONCLUDE: Social media is poised to disrupt the status quo in anaesthesia, ushering in a new era of collaboration, innovation and patient centered care that will redefine our speciality by 2050. By harnessing the power of social media we can unlock new possibilities for patient care, driving innovation, advance research, and outcomes worldwide.

REFERENCES

1. Tan, Jonathan M. MD, MPH, MBI, FASA*; Simpao, Allan F. MD, MBI; Gálvez Delgado, Julia Alejandra MD, MBI, FASA. The Future of Social Media, Anesthesiology, and the Perioperative Physician. Anesthesia & Analgesia 138(2):p 358-368, February 2024. | DOI: 10.1213/ANE.0000000000006711
2. Bajwa SJ, Mehdiratta L. From traditional bibliometrics to altmetrics: socialising the research metrics. Indian Journal of Anaesthesia. 2021 Dec 1;65(12):849-52.
3. Farsi D. Social media and health care, part I: literature review of social media use by health care providers. Journal of medical internet research. 2021 Apr 5;23(4):e23205.
4. Chen J, Wang Y. Social media use for health purposes: systematic review. Journal of medical Internet research. 2021 May 12;23(5):e17917.
5. Jain D, Doctor JR, Samantaray A, Ali Z. Social media in anaesthesia education: Striking the right balance. Indian J Anaesth. 2024 Apr;68(4):317-319.DOI: 10.4103/ija.ija_232_24. Epub 2024 Mar 13. PMID: 38586270; PMCID: PMC10993949.
6. Kiran S, Sethi N. Anaesthesiologist and social media: Walking the fine line. Indian journal of anaesthesia. 2018 Oct 1;62(10):743-6.

Role of Social Media in Education and Awareness of Regional Anesthesia

Author: Dr. Divesh Arora
Director and Head,
Dept. of Anaesthesia and OT Services, Asian Hospital, Faridabad, Haryana, India

Introduction

Social media has revolutionized the way information is shared, consumed, and has emerged as a powerful tool for medical education and professional networking impacting various fields, including medicine. The integration of social media into healthcare has brought about significant changes, particularly in the way medical professionals educate themselves and their peers. The field of regional anaesthesia (RA) has witnessed a resurgence and development in this century because of better understanding of anatomy pertaining to RA and development of high-resolution ultrasound machines for accurate performance of RA blocks. This article delves into the multifaceted role of social media in enhancing the education and awareness of regional anesthesia, examining its benefits, challenges, and future prospects.

Historical Perspective

Social media platforms such as Twitter, LinkedIn, Facebook, YouTube, and Instagram serve as global forums for anaesthesiologists, post graduate trainees.

1. Emergence of Social Media

The journey of social media began in the early 2000s with the advent of platforms like Myspace and Friendster. However, it was the launch of LinkedIn in 2003, Facebook in 2004, You tube in 2005, Twitter in 2006, and Instagram in 2010, that truly revolutionized the digital landscape. These platforms provided unprecedented opportunities for communication and information sharing, breaking down geographical barriers and connecting people worldwide.

2. Adoption in Medical Education

The adoption of social media in medical education has been a gradual but transformative process. Initially met with scepticism, these platforms have gained acceptance as valuable tools for professional development and education. The early adopters of social media in the medical field recognized its potential to disseminate knowledge, foster collaboration, and create a global community of practitioners.

3. Evolution of Medical Communities Online

The evolution of medical communities online has been marked by the establishment of professional groups and networks dedicated to specific specialties. High-quality educational content, including ultrasound-guided block techniques, safety guidelines, and advances in regional anesthesia, is widely shared by experts of professional societies like Academy of Regional Anesthesia (AORA) India, American Society of Regional Anesthesia (ASRA), European Society of Regional Anesthesia (ESRA), Regional Anesthesia- United Kingdom(RA-UK). These platforms facilitate knowledge exchange through educational posts, video tutorials, webinars, and case-based discussions.

Advantages of Social Media in Regional Anesthesia Education

1. Accessibility and Convenience

Social media allows anaesthesiologists to access high-quality educational resources at their

Author: Dr. Divesh Arora
Director and Head,
Dept. of Anaesthesia and OT Services, Asian Hospital, Faridabad, Haryana, India

convenience. Traditional learning methods, which require attending conferences or workshops, can be time-consuming and costly. In contrast social media provides a continuous learning experience that is flexible, cost effective and fits into a busy clinical schedule.

2. Collaboration and Professional Networking

Anesthesiologists worldwide use social media to collaborate, discuss challenging cases, and share best practices. Social media platforms provide unparalleled opportunities for networking with peers, mentors, and experts in the field of RA. These connections enable the exchange of ideas, experiences, and best practices. Networking through social media can lead to collaborations on research projects, invitations to speak at conferences, and access to exclusive educational resources.

3. Role in Continuing Professional Development (CPD)

Continuing professional development (CPD) is essential for anaesthesiologists to maintain their skills and knowledge. Social media platforms play a crucial role in CPD, by hosting virtual workshops, online journal clubs, webinars, online courses, and interactive learning modules. Similarly, anesthesiology conferences often feature live social media coverage, where attendees and speakers share key insights, expanding the reach of the content beyond the physical event.

4. Role of Social Media in Research Dissemination

Social media plays a pivotal role in sharing research findings in regional anesthesia. Researchers can use these platforms to discuss recent studies, highlight key findings, and promote new guidelines. Journals and academic societies have recognized the importance of social media in reaching a wider audience, with many now actively sharing abstracts, video summaries, and discussion threads related to new research.

5. Role of Social Media in Enhancing Patient Awareness and Engagement

Beyond professional education, social media serves as a medium for educating patients about regional anesthesia. Hospitals and healthcare providers use social media to share informative videos and infographics explaining the benefits, safety, and effectiveness of regional anesthesia techniques. This approach helps demystify the procedure for patients, reducing anxiety and increasing informed consent rates.

Platforms and Their Uses

1. Twitter

Twitter is one of the most popular social media platforms among anaesthesiologists. The platform's real-time communication capabilities make it ideal for live-tweeting during conferences and events. Hashtags such as #regionalanesthesia and #anesthesiology help users find relevant content and connect with others in the field. These hashtags serve as virtual classrooms where professionals can engage in discussions, ask questions, and receive immediate feedback from peers and experts.

Role of Social Media in Education and Awareness of Regional Anesthesia

Author: Dr. Divesh Arora
Director and Head,
Dept. of Anaesthesia and OT Services, Asian Hospital, Faridabad, Haryana, India

2. YouTube
YouTube provides a platform for educational videos, tutorials, expert interviews, conference highlights and lectures on RA techniques. The visual and interactive nature of YouTube makes it an effective medium for learning complex techniques.

3. Facebook
Facebook serves as a platform for professional groups and pages dedicated to RA. Anesthesiologists can join groups such as the "Regional Anesthesia and Pain Management" group, where they can engage in discussions, ask questions, troubleshooting block failures and share resources. Facebook's live streaming feature is also utilized for broadcasting educational sessions and webinars.

4. LinkedIn
LinkedIn is primarily used for professional networking and job opportunities. LinkedIn serves as a professional networking platform where specialists can publish research findings, share updates on regional anesthesia advancements, professional achievements and interact with a broad medical audience. By joining specialized groups and participating in discussions, anaesthesiologists can stay updated on industry trends and advancements.

5. Instagram
Instagram, known for its visual content, is gaining popularity among anaesthesiologists for educational purposes. Medical professionals use Instagram to share infographics, case photos, and short video clips. Hashtags such as #regionalanesthesia and #medicaleducation help users discover relevant posts. Instagram stories are also utilized for live updates and longer educational videos.

Challenges and Ethical Considerations

Despite its benefits, social media use in medical education presents with unique challenges which will be discussed in the following section:

1. Misinformation and Quality Control
The rapid dissemination of information on social media can lead to the spread of misinformation. Unlike peer-reviewed journals, content shared on social media may not undergo rigorous quality checks, increasing the risk of inaccurate or misleading medical advice. To combat this, anaesthesiologists must critically evaluate sources, follow professional guidelines, and participate in verified educational groups.

2. Patient Privacy and Confidentiality
The use of social media in medical education raises ethical concerns, particularly regarding patient privacy and confidentiality. Anaesthesiologists must adhere to professional guidelines and ensure that patient information is not disclosed without consent. Social media posts should be carefully reviewed to avoid any potential breaches of confidentiality.

Role of Social Media in Education and Awareness of Regional Anesthesia

Author: Dr. Divesh Arora
Director and Head,
Dept. of Anaesthesia and OT Services, Asian Hospital, Faridabad, Haryana, India

3. Professionalism and Online Etiquette

Healthcare professionals must maintain professionalism when engaging with social media. Comments, discussions, and shared content should reflect ethical medical practice and adhere to institutional and regulatory guidelines. Many medical boards and professional societies provide recommendations on appropriate social media use to ensure responsible communication.

4. Information Overload and Time Management

The rapid pace of information sharing on social media can be overwhelming. Practitioners must develop strategies to manage information overload and focus on credible sources that provide valuable insights. Curating a list of trusted profiles and groups can help anaesthesiologists filter relevant content and stay informed without feeling overwhelmed. Balancing professional responsibilities with social media engagement requires discipline and time management skills. Setting aside dedicated time for social media can help practitioners stay updated without compromising their work.

Recommended social media sites and channels for Learning Regional Anesthesia

1. AORA (Academy of Regional Anesthesia India) AORA India
2. ISSPS TV (International Symposium on Spine and Paravertebral Sonography for Anaesthesia and Pain Medicine) (1236) isspsTV - YouTube
3. ANESTHESIA TV (1236) anaesthesia tv - YouTube
4. NYSORA (New York School of Regional Anesthesia) (1236) NYSORA - Education - YouTube
5. ASRA Pain Medicine (American Society of Regional Anesthesia and Pain Medicine) (1236) ASRA Pain Medicine - YouTube
6. Regional Anesthesia and Pain Medicine (1236) Regional Anesthesiology and Acute Pain Medicine - YouTube
7. Dr K J Chinn you tube channel (1236) Ki-Jinn Chin - YouTube
8. ESRA (European Society of Regional Anaesthesia and Pain Therapy) ESRA Europe

Future Trends and Opportunities

As social media continues to evolve, new opportunities are emerging for RA education and awareness. Artificial intelligence (AI)-driven content curation, virtual and augmented reality simulations, and interactive case-based learning modules are likely to enhance the educational experience further. Additionally, as telemedicine expands, social media will play a crucial role in disseminating best practices and guidelines for regional anesthesia applications in remote and underserved areas.

Conclusion

Social media has revolutionized the way RA knowledge is disseminated, fostering a collaborative learning environment and bridging the gap between experts, trainees, and patients. By leveraging these platforms responsibly, the anesthesia community can continue to advance education and awareness in the field. Future developments in technology and digital education will likely expand the role of social media in anesthesia training, providing more immersive and interactive learning experiences.

Role of Social Media in Education and Awareness of Regional Anesthesia

Author: Dr. Divesh Arora
Director and Head,
Dept. of Anaesthesia and OT Services, Asian Hospital, Faridabad, Haryana, India

References

1. Schwenk ES, Jaremko KM, Gupta RK, Udani AD, McCartney CJ, Snively A, Mariano ER. Upgrading a social media strategy to increase Twitter engagement during the spring annual meeting of the American Society of regional anesthesia and pain medicine. Regional Anesthesia & Pain Medicine. 2017 May 1;42(3):283-8.
2. Schwenk ES, Chu LF, Gupta RK, Mariano ER. How social media is changing the practice of regional anesthesiology. Current anesthesiology reports. 2017 Jun;7:238-45.
3. ESRA. (2018). Regional Anesthesia Education and Social Media. SlideShare.
4. American Society of Regional Anesthesia and Pain Medicine. (2021). Role of Social Media in Regional Anesthesia Education. ASRA News.
5. European Society of Regional Anaesthesia and Pain Therapy. (2021). Social Media and Regional Anesthesia Education. ESRA Updates.
6. Tulgar S, Ahiskalioglu A, Thomas DT, De Cassai A, Gürkan Y. Social Media Use Amongst Regional Anaesthesia and Pain Practitioners and Residents: Standardization and Ethical Considerations. Turkish Journal of Anaesthesiology and Reanimation. 2023 Aug;51(4):366.
7. Tan JM, Simpao AF, Delgado JA. The Future of Social Media, Anesthesiology, and the Perioperative Physician. Anesthesia & Analgesia. 2024 Feb 1;138(2):358-68.
8. Kirpekar M, Kars MS, Mariano ER, Patel A. The Professional Use of Social Media in Anesthesiology: Developing a Digital Presence Is as Easy as ABCDE. Anesthesia & Analgesia. 2024 Jul 1;139(1):238-43.

Tweet, Trends and Twilight Sleep: Impact of Social Media on Public Perception of Anaesthesia

Author: Dr. Anil Kumar Sharma
Senior Consultant Anaesthesiology, Apollo Hospital, New Delhi

Introduction

The definition of social media is broad and constantly evolving. Wikipedia defines "Social Media" as interactive digital platforms that allow users to create, share, and exchange content in virtual communities and networks. It includes platforms like Facebook, Twitter, Instagram and TikTok. Key aspects of social media include user-generated content, social networking, and real-time interaction, fostering global connectivity. These tools can be used to improve or enhance professional networking and education, organizational promotion, patient care, patient education, and public health programs.1,2 However, they also present potential risks to patients and Health Care Professionals regarding the distribution of poor-quality information, damage to professional image, breaches of patient privacy, violation of personal–professional boundaries, and licensing or legal issues.3,4

Anaesthesia is a fundamental component of modern medicine, enabling pain-free surgical procedures and medical interventions. Despite its crucial role in healthcare, public understanding of anaesthesia remains limited. Traditionally perceptions of anaesthesia were shaped by direct interactions with healthcare providers, personal experiences and mainstream media. However, the rise of social media has revolutionized the way people access and share information. The anaesthesia community has also been affected, with social media platforms influencing public perceptions of anaesthesia.5 In the U.S., eight in 10 Internet users search for health information online, and 74% of these people use social media. However, age has an important role in the use of social media, with 90% of the users being aged 18-29 years whereas only 40% of users are aged 65 years and older.6 According to studies, nearly thirty to fifty percent of all patients scheduled for surgery and anaesthesia consult the Internet regarding their upcoming procedure.7 Social media also affects the choice of surgical team or hospital for several patients.8 Being active on social media, and establishing a good online reputation, has a significant positive influence on patients. Anaesthesiologists, especially pain physicians, benefit from social networking sites, to showcase their expertise and launch new relationships. Social media's impact on public expectations of anaesthesia can be seen as a double-edged sword, offering both positive and negative consequences. While social media has the potential to educate and inform, it also contributes to the spread of misinformation, fear, and misconceptions.

The Role of Social Media in Healthcare Communication

Social media has become an essential tool for healthcare communication allowing for real-time information sharing and direct interaction between professionals and the public. Various stakeholders, including anaesthetists, medical institutions, patient advocacy groups, and influencers, use social media to discuss anaesthesia related topics.

1. Raising Awareness and Education

One of the most significant benefits of social media is its role in increasing awareness and providing education about anaesthesia. Medical professionals use platforms like YouTube and TikTok to explain different types of anaesthesia (general, regional, and local), how they work,

and what patients can expect. Organisations like American society of Anaesthesiologists (ASA) and the Royal College of Anaesthetists (RCoA) use social media to share evidence-based content, dispel myths, and promote patient safety.

Hashtags such as *#AnaesthesiaAwareness* and *#AskAnAnaesthesiologis*t help users find reliable information and encourage public engagement. Educational campaigns like twitter and Instagram provide insights into anaesthetic procedures preoperative preparations and postoperative recovery.

2. Demystifying the Anaesthetic Experience:
For many people, anaesthesia is a mysterious and intimidating aspect of surgery. Social media provides a platform where patients can share their experiences, offering reassurance to those undergoing similar procedures. Positive testimonials about pain-free surgeries and smooth recoveries help reduce anxiety and build trust in anaesthetic care.

Medical professionals also use social media to provide behind-the-scenes insights into the work of anaesthetists. By showcasing their expertise and the meticulous planning involved in administering anaesthesia, they help demystify the process and enhance public confidence.

3. Community Support and Peer-to-Peer Learning
Online communities and forums such as Reddits/Anaesthesia or Facebook support groups, allow patients to share their concerns and receive advice from others who have undergone anaesthesia. These communities create a sense of reassurance, particularly for individuals with medical anxiety or those facing complex procedures.

Misinformation and Fear Amplification
While social media can be an excellent educational tool, it also plays a significant role in the spread of misinformation and fear regarding anaesthesia. The viral nature of content means that myths, misconceptions and exaggerated fears can reach millions of people within hours.

1. Myths and misconception
Social media is rife with myths about anaesthesia including:
"You can wake up during surgery" while anaesthesia awareness is a rare phenomenon, it's often exaggerated in media and online discussions, causing unnecessary fear.

"Anaesthesia is dangerous and often leads to death." While anaesthesia carries risks, modern techniques and monitoring have made it safer than ever. However social media can amplify outdated or rare complications leading to heightened public anxieties.

"Anaesthesia causes long-term memory loss or brain damage." Claims like these are not scientifically supported.

Tweet, Trends and Twilight Sleep: Impact of Social Media on Public Perception of Anaesthesia

Author: Dr. Anil Kumar Sharma
Senior Consultant Anaesthesiology, Apollo Hospital, New Delhi

Platforms like TikTok, where short-form content thrives, are particularly prone to spreading misinformation because users prioritize entertainment over accuracy. Fear-inducing content, such as videos claiming that patients "felt everything" during surgery, can go viral and instil unnecessary panic.

2. Fear-Inducing Testimonials and Viral Content
Personal testimonials can be powerful, but they can also contribute to fear. For example, a patient who had a negative experience with anaesthesia may post a detailed account on Reddit or Twitter, which then gets shared widely, influencing thousands of people. These stories often lack medical context and may be based on rare medical complications rather than general patient experience.

Certain media trends, such as the spread of videos showing patients emerging from anaesthesia in a confused or emotional state may also contribute to fears. While these videos are often humorous, they reinforce the idea that anaesthesia has unpredictable effects.

The Role of Medical Professionals in Combating Misinformation
As we understand that social media impacts the spread of information in both positive and negative ways and given the rapid spread of misinformation on social media, anaesthetists and medical professionals must actively participate in online discourse to provide accurate information.

1. Engaging with the Public:
Healthcare professionals have an opportunity to correct misconceptions and answer common questions. Many anaesthetists engage in Q&A sessions on Twitter, create informative TikTok videos, or host Instagram live sessions to discuss common concerns.

2. Debunking Misinformation in Real Time:
Professionals can respond to viral misinformation by providing evidence-based explanations and sharing reputable sources. Collaborations with influencers and content creators can also help amplify accurate information.

3. Encouraging Digital Health Literacy:
Anaesthetists can promote digital health literacy by teaching patients to identify fear driven contents. They can also help guide the patients towards more genuine and reliable content and sources of information so that they can access accurate information.

Ethical Considerations and Challenges
While social media offers many benefits in shaping public perceptions of anaesthesia, it also raises ethical concerns.
1. Patient Privacy and Consent:
Medical professionals must adhere to struct ethical guidelines when discussing cases or sharing patient experiences online. Effort should be made at individual, institutional and state level to put policies in place when it comes to sharing the information online.

Author: Dr. Anil Kumar Sharma
Senior Consultant Anaesthesiology, Apollo Hospital, New Delhi

2. The Responsibility of Influencers and Content Creators
When influencers share misleading or fear-inducing content about anaesthesia, they contribute to unnecessary anxiety. Holding influencers accountable for spreading medical misinformation is a challenge but necessary for ensuring public trust in healthcare.

3. Balancing Education and sensationalism
While social media thrives on engagement-driven content, medical professionals must balance education with engagement. Highly technical explanations may not attract attention, while oversimplified contents risk misrepresenting anaesthesia.

Conclusion

Social media has a profound impact on public perceptions of anaesthesia, influencing both education and misinformation. While platforms provide valuable opportunities for increasing awareness, connecting with patients, and reducing anxiety, they also contribute to fear-mongering andthe spread of myths.

Healthcare professionals play a vital role in shaping these perceptions by engaging with the public, debunking misinformation, and promoting digital health literacy. By leveraging the power of social media responsibly, the medical community can ensure that accurate, evidence-based information about anaesthesia reaches the public, fostering trust and reducing unnecessary fears.

In the ever-evolving digital landscape, the challenge remains to harness the benefits of social media while mitigating its risks. By doing so, we can create a more informed and confident public regarding anaesthesia and its critical role in modern medicine.

References

1. Chauhan B, George R, Coffin J. Social media and you: what every physician needs to know. J Med Pract Manage. 2012;28(3):206–209.
2. Von Muhlen M, Ohno-Machado L. Reviewing social media use by clinicians. J Am Med Inform Assoc. 2012;19(5):777–781. doi: 10.1136/amiajnl-2012-000990.
3. Lambert KM, Barry P, Stokes G. Risk management and legal issues with the use of social media in the healthcare setting. J Healthc Risk Manag. 2012;31(4):41–47.
4. Househ M. The use of social media in healthcare: organizational, clinical, and patient perspectives. Stud Health Technol Inform. 2013;183:244–248.
5. Kurup V, Considine A, Hersey D, Dai F, Senior A, Silverman DG, Dabu-Bondoc S. Role of the Internet as an information resource for surgical patients: a survey of 877 patients. Br J Anaesth. 2013 Jan;110(1):54-8.
6. Social Media Fact Sheet. Pew Research Center. Accessed April 22, 2021. Available at: https://www.pewresearch.org/internet/fact-sheet/social-media
7. Kurup V, Considine A, Hersey D, Dai F, Senior A, Silverman DG, Dabu-Bondoc S. Role of the Internet as an information resource for surgical patients: a survey of 877 patients. Br J Anaesth. 2013 Jan;110(1):54-8. doi: 10.1093/bja/aes326.
8. Hartzband P, Groopman J. Untangling the Web--patients, doctors, and the Internet. N Engl J Med. 2010 Mar 25;362(12):1063-6.

QUICK RESEARCH (QR) SCAN

Authors: Dr Anju Gupta[1] and Dr Rohan Magoon[2]
[1]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
[2]Assistant Professor, Department of Cardiac Anaesthesia, ABVIMS and Dr RML Hospital

It is interesting as to how our research ecosystem evolves in the era of Artificial Intelligence and Social Media, wherein we are back with a quick digest analysis of recently published articles:

Scholarly Impact in the Social Media Age!

A. Correlation between Altmetric Attention Scores and citation scores across the high impact-factor journals each in Medicine, Surgery, and Anaesthesia.

Koh A, Lewis-Lloyd CA, Wong T, Lobo DN.
Br J Anaesth. 2024 Dec 10:S0007-0912(24)00689-5. doi: 10.1016/j.bja.2024.09.034.

Study Setting and Objectives: The research group selected 12 journals assigned the highest impact factor for the year 2023 (as listed in the June of 2024), 4 each from Internal Medicine, General Surgery, and Anaesthesia. Having analyzed articles with a final publication date in 2021, Altmetric Attention Scores (AAS) and Citation Scores (CS) for all the articles were obtained. The objective herein was to evaluate the correlation between AAS and CS.

Results and Main Findings: A total of 5193 academic outputs were assessed. The median AAS and CS turned out to be 37 and 16, with an interquartile range of 10-157 and 6-52, respectively. A moderate positive correlation was discovered between the AAS and the CS with a Spearman's rho rank-order correlation of 0.589 ($p<0.0001$). Meanwhile the overall strongest AAS-CS correlation was observed for the New England Journal of Medicine (0.762, $p<0.0001$), within the subject of Anaesthesia, Anesthesiology featured with the highest and the British Journal of Anaesthesia demonstrated the lowest correlation (0.617 and 0.452, respectively, $p<0.0001$)

Interpretation and Contextual Significance: Audience engagement via the social media can have a considerable scholarly impact, as highlighted by the accruing evidence on the role of alternative metrics, such as AAS.

Artificial Intelligence, for Intelligent Outcome Mapping in Research!

B. Development of an Artificial Intelligence-Based Image Recognition System for Time-Sequence Analysis of Tracheal Intubation.

Wu YH, Huang KY, Tseng AC.
Anesth Analg. 2024 Aug 1;139(2):357-365. doi: 10.1213/ANE.0000000000006934.

Study Setting and Objectives: The group evaluated if Artificial Intelligence (AI) could accurately identify the anatomical structures, as to perform a time-sequence analysis, through the course of tracheal intubation with a video laryngoscope (VLS). An AI model with You Only Look Once, Version 3 (YOLOv3) was designed to deconstruct the tracheal intubation into

Authors: Dr Anju Gupta[1] and Dr Rohan Magoon[2]
[1]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
[2]Assistant Professor, Department of Cardiac Anaesthesia, ABVIMS and Dr RML Hospital

phases, measuring Total Intubation Time (TIT), having employed 7 cut-points: A, the lips last observed; B, the epiglottis first observed; C, the laryngopharynx first observed; D, the glottic opening first observed; E, the endotracheal tube tip first observed; D , the glottic opening last observed; and F, the black line on the endotracheal tube last observed. The model was developed after an assorted selection of 6 targets from 887 images, targets namely, the lip, epiglottis, laryngopharynx, glottic-opening, tube-tip, and black-line on the endotracheal tube.

Results and Main Findings: The average and total loss of target identification approached zero within the 150 training cycles. The identification rate for all cut points was 92.4%, which escalated to 99.4% after the removal of the tube tip, given the rate of identification failure was high for the tube tip; meanwhile that of the cut point C and D happened to be similar. Hence, the feasibility study focused on the following intervals: A to B, B to C, D to D , and D to F. Subsequently, the time interval between A and F was defined as TIT and was segregated into 4 phases (I–IV). The phase durations and TIT estimated by the AI model and that from the expert, demonstrated strong Pearson correlation ($r = 0.914, 0.868, 0.964$ and 0.949, for phases I-IV, respectively, $p<0.001$).

Interpretation and Contextual Significance: AI analyzes VLS intubation to accurately identify the anatomical structures, allowing free selection of the start to end-points, overcoming the contextual inconsistencies, overcoming potential inconsistencies in measuring important parameters like TIT, which indeed serve as objective indicators of difficulty, thereby assisting the larger aim of a sound comparison across airway research.

C. Exploring the Utility of Assistive Artificial Intelligence for Ultrasound Scanning in Regional Anesthesia

Bowness, J. S., El-Boghdadly, K., Woodworth, G., Noble, J. A., Higham, H., & Burckett-St Laurent, D. (2022).
Regional Anesthesia & Pain Medicine, 47(6), 375-379. https://doi.org/10.1136/rapm-2021-103368

Study Setting and Objectives: The study aimed to evaluate the effectiveness of ScanNav Anatomy Peripheral Nerve Block, an artificial intelligence (AI)-based device designed to assist anesthesiologists in performing ultrasound-guided regional anesthesia (UGRA). The ScanNav system applies a real-time color overlay on ultrasound images to highlight key anatomical structures, potentially aiding in image interpretation, training, and teaching.

A total of 30 anesthesiologists participated in the study, including 15 experts and 15 non-experts, who performed 240 ultrasound scans across nine peripheral nerve block regions. The scans were conducted both with and without the AI overlay, allowing for a direct comparison of the device's impact. Participants provided feedback on how ScanNav influenced their training, teaching, and clinical confidence. Additionally, expert anesthesiologists assessed the potential

Authors: Dr Anju Gupta[1] and Dr Rohan Magoon[2]
[1]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
[2]Assistant Professor, Department of Cardiac Anaesthesia, ABVIMS and Dr RML Hospital

risks associated with AI-assisted ultrasound scanning, particularly concerning block failure or inadvertent trauma to safety-critical structures such as nerves, arteries, and the pleura/peritoneum. The study sought to determine whether ScanNav could improve the accuracy of sonoanatomy interpretation, reduce the learning curve for UGRA, and enhance the overall safety and effectiveness of regional anesthesia procedures.

Results and Main Findings: The study revealed that non-expert anesthesiologists derived the greatest benefit from ScanNav, with 51.7% reporting improved anatomical structure identification and 61.7% finding the device beneficial for training. Among experts, 50% highlighted its utility in teaching UGRA techniques. Overall, 70% of participants believed ScanNav helped in identifying key anatomical structures, and 63% felt it assisted in confirming the correct ultrasound view for performing nerve blocks.

Despite these positive findings, some concerns were raised regarding the impact of ScanNav on user confidence and supervisor intervention. 6.7% of non-experts reported decreased confidence when using the device, possibly due to over-reliance on AI-generated overlays. Additionally, 16.7% of experts noted an increase in the frequency of supervisor intervention, suggesting that while ScanNav can aid in teaching, it may also introduce new challenges in skill acquisition.

Regarding safety and potential risks, experts assessed whether AI assistance might increase the likelihood of block failure or unintended needle trauma. The results showed that real-time expert users reported an increased risk in 4.7% of cases, while remote expert reviewers identified risk in 3.1% of cases. These risks primarily involved concerns about misinterpretation of AI-generated overlays leading to incorrect needle placement or failure to identify critical structures. However, no major complications such as nerve injury, pneumothorax, or peritoneal violations were reported.

Interpretation and Contextual Significance: The findings suggest that AI-assisted ultrasound scanning holds significant promise for improving UGRA training and education, particularly for non-expert anesthesiologists who are still developing their scanning skills. ScanNav's ability to highlight key anatomical structures in real-time may help standardize training, enhance procedural confidence, and reduce the variability in sonoanatomy interpretation among practitioners with different levels of experience.

For expert anesthesiologists, the study indicates that ScanNav could serve as a valuable teaching tool, making it easier to guide trainees through the complexities of ultrasound-guided nerve blocks. However, concerns about over-reliance on AI assistance, potential misinterpretation of overlays, and increased supervisor intervention suggest that further training and familiarity with the technology are required before widespread clinical implementation.

Authors: Dr Anju Gupta[1] and Dr Rohan Magoon[2]
[1]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
[2]Assistant Professor, Department of Cardiac Anaesthesia, ABVIMS and Dr RML Hospital

While the risk of AI-induced errors appears to be low (3.1%–4.7%), the study emphasizes the need for continued research and real-world validation. Future studies should focus on clinical outcomes, patient safety, and the long-term impact of AI-assisted ultrasound scanning on procedural success rates. Additionally, assessing the cost-effectiveness and integration of AI tools into routine anesthetic practice will be crucial in determining their long-term viability.

Overall, this study highlights the growing role of AI in anesthesia and regional nerve blocks. As technology continues to evolve, AI-assisted ultrasound scanning could play a crucial role in bridging the gap between novice and expert practitioners, improving patient access to UGRA techniques, and enhancing the overall safety and efficiency of regional anesthesia procedures.

F. Intraoperative Hypotension When Using Hypotension Prediction Index Software During Major Noncardiac Surgery: A European Multicentre Prospective Observational Registry (EU HYPROTECT)

Kouz, K., Monge García, M. I., Cerutti, E., Lisanti, I., Draisci, G., Frassanito, L., Sander, M., Akbari, A. A., Frey, U. H., Grundmann, C. D., Davies, S. J., Donati, A., Ripolles-Melchor, J., García-López, D., Vojnar, B., Gayat, É., Noll, E., Bramlage, P., & Saugel, B. (2023).
BJA Open, 6(C), 100140. https://doi.org/10.1016/j.bjao.2023.100140

Study Setting and Objectives: This study aimed to evaluate the incidence, duration, and severity of intraoperative hypotension when using the Acumen™ Hypotension Prediction Index (HPI) software during major noncardiac surgery. The HPI software, developed by Edwards Lifesciences, uses machine learning to analyze arterial pressure waveforms and predict hypotensive events before they occur, providing clinicians with an opportunity to intervene proactively.

To achieve this objective, the study was conducted as part of the European multicentre, prospective, observational EU HYPROTECT Registry, involving 12 medical centers across five European countries (France, Germany, Italy, Spain, and the United Kingdom). A total of 749 patients undergoing elective major noncardiac surgery were enrolled, with 702 patients included in the final analysis.

The primary endpoint of the study was to quantify intraoperative hypotension using the time-weighted average mean arterial pressure (MAP) <65 mmHg. Additional secondary endpoints included the proportion of patients experiencing hypotensive episodes, the number and duration of such episodes, and the potential association between intraoperative hypotension and postoperative complications such as acute kidney injury (AKI), myocardial injury, and mortality.

Authors: Dr Anju Gupta[1] and Dr Rohan Magoon[2]
[1]Associate Professor, Dept. of Anaesthesiology, Pain Medicine and Critical Care, AIIMS, Delhi
[2]Assistant Professor, Department of Cardiac Anaesthesia, ABVIMS and Dr RML Hospital

Results and Main Findings: A total of 702 patients were analyzed, with a median age of 64 years. The gender distribution was nearly equal, with 52% male and 48% female patients. The study found that the median time-weighted average MAP <65 mmHg was only 0.03 mmHg, which is significantly lower than previously reported values in similar surgical populations.

Approximately 41% of patients (285 individuals) did not experience any hypotensive episodes, while 59% of patients (417 individuals) had at least one episode of MAP <65 mmHg lasting one minute or more. The median duration of time spent with MAP <65 mmHg was 2 minutes, which accounted for just 1% of the total surgical time.

Regarding postoperative outcomes, acute myocardial injury occurred in 3% of patients, while acute kidney injury (AKI) was observed in 9% of patients within three days and 11% within seven days. Additionally, hospital readmission occurred in 8% of cases, and postoperative mortality within 30 days was reported at 2%. These findings suggest that the use of HPI software may contribute to reducing the incidence and severity of intraoperative hypotension, thereby potentially improving perioperative hemodynamic stability and patient outcomes.

Interpretation and Contextual Significance: The study provides strong evidence that HPI software can enhance intraoperative blood pressure management, particularly by reducing the duration and severity of hypotensive episodes. Given the well-established link between intraoperative hypotension and adverse organ outcomes, such as myocardial infarction and kidney injury, the ability to predict and mitigate hypotension in real-time is a significant advancement in anesthetic management.

Compared to previous research, where intraoperative hypotension was more frequent and prolonged despite standard blood pressure monitoring, this study highlights the potential for AI-driven predictive analytics to transform perioperative hemodynamic management. By allowing early detection and proactive intervention, HPI software has the potential to reduce reliance on reactive treatments such as vasopressors and fluid boluses, which are often administered after hypotension has already occurred.

However, the study also has limitations, including the absence of a direct control group without HPI monitoring, which prevents a definitive conclusion about causality. Future randomized controlled trials will be necessary to determine whether HPI-guided management directly improves long-term patient-centered outcomes, such as reduced organ dysfunction, shorter hospital stays, and lower mortality rates.

Overall, this study underscores the importance of predictive hemodynamic monitoring and suggests that integrating AI-based decision-support tools into perioperative care may help reduce intraoperative hypotension and its associated risks, ultimately enhancing patient safety during major noncardiac surgeries.

ASA Global Scholar

Dr. Bhavya Krishna
Assistant Professor,
Department of Anaesthesia and Intensive Care,
VMMC and Safdarjung Hospital, New Delhi

Warm greetings to all my fellow ISAians in Delhi!

I am Dr. Bhavya Krishna, Assistant Professor in the Department of Anesthesia and Intensive Care at VMMC and Safdarjung Hospital, New Delhi. Each year, around December, the American Society of Anesthesiologists (ASA) opens applications for their prestigious "Global Scholar" program. Encouraged and guided by my mentor, Professor Aruna Parameswari, Head of the Department of Anesthesia at Sri Ramachandra Medical College, Chennai, I decided to apply. With the unwavering support of my department, including Dr. Vandana Talwar, Dr. Sujata Chaudhary, Dr. Suniti Kale, Dr. Kavita Rani Sharma, and Principal Dr. Geetika Khanna, I navigated the rigorous application and visa process successfully.

The application required a detailed CV, two letters of recommendation, and a personal statement demonstrating my suitability for the program. After an anxious two-month wait, I was overjoyed to receive the email confirming my selection! It was an immense honor to be the first Indian in five years to be chosen as one of the 11 scholars worldwide.

This prestigious scholarship provided a unique opportunity to observe clinical practices at a renowned university hospital, attend a specialty CME and annual meeting, attend the ASA Annual Conference, and present a research paper. It covered airfare, accommodation, conference registration, and a daily stipend.

I was fortunate to have Dr. Suresh Santhanam Arthur C. King Professor and Chair-Emeritus as well as senior vice president and chief of provider integration for the Ann & Robert H. Lurie Children's Hospital of Chicago, as my ASA-assigned mentor.

My observership took place at Thomas Jefferson University Hospital in Philadelphia, where I gained invaluable experience. I had the opportunity to observe procedures in the Cardiac OR, ECMO cannulation, liver transplantation, blood management, CVICU, regional and acute pain rounding, bedside ultrasound, and post-operative care of critically ill patients. Interacting with Jefferson's residents and faculty not only deepened my knowledge of anesthesiology but also provided profound insights into the advancements of the American healthcare system.

The ASA Annual Conference 2024, held in Philadelphia, Pennsylvania, United States of America was an intellectually stimulating experience, brimming with academic discussions, presentations, and networking with global leaders. I had the privilege of meeting esteemed figures such as the ASA President, WFSA President, SPA President, and Dr. Charles Cote. Additionally, I attended the Society of Pediatric Anesthesia's annual meeting and participated in their CME sessions. Evenings were filled with enriching discussions among global health experts on elevating safety and quality standards.

Through this journey, I've identified two significant gaps that I believe must be addressed to strengthen healthcare globally. The first is the gap between Indian and U.S. tertiary referral centers, and the second is a domestic gap from our tertiary centers down to primary and district hospitals within India.

One of my biggest takeaways from the scholarship was seeing how effectively standard anaesthesia and surgical safety protocols are implemented across U.S. centers supported by advanced technology. Bridging this gap in India could be achievable with the proper funding, access to information, and commitment to globally recognized guidelines. While infrastructure remains a challenge, I hope collaborations with institutions like the ASA Global Health Committee could help address these disparities.

Participating in this esteemed program and representing VMMC, Safdarjung Hospital, and India on a global platform has been an incredibly humbling and proud experience. I am deeply grateful to the ASA, my mentors, and the Indian Society of Anesthesiologists (ISA) for their unwavering support. I strongly encourage my fellow ISA members to seize such international opportunities to contribute to the advancement of anesthesiology on a global scale.

Let us continue to strive for excellence and make meaningful contributions to our field!

Figure 1 At Thomas Jefferson University Hospital, with their Chief of Anaesthesia, Dr. Michael Greene

Figure 2 With the Father of Pediatric Anaesthesia, Dr. Charles Cote, at the Society of Pediatric Anaesthesiologists (SPA) Annual Meeting

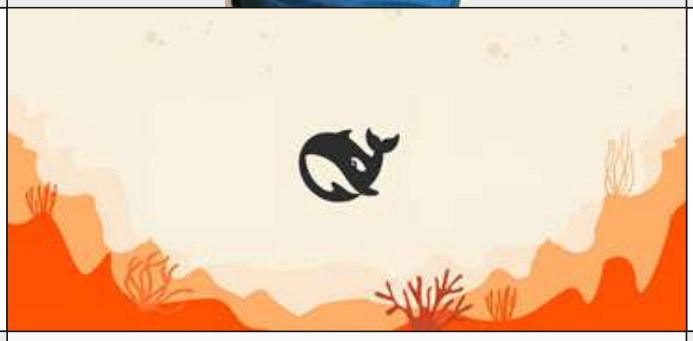
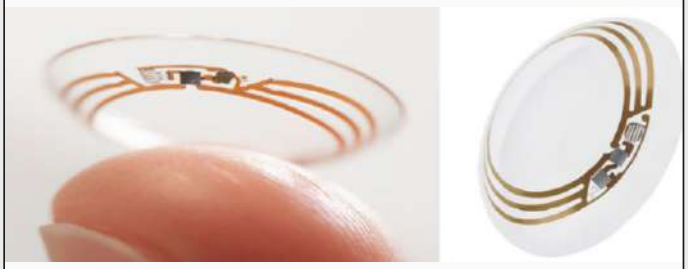
Figure 3 With my mentors: Dr. Jayashree Sood, Dr. Aruna Parameswari and Dr. Suresh Santhanam

Figure 4 Speaking at ASA's Global Health Committee Meeting

Figure 5 With the other ASA Global Scholars

PHOTO QUIZ

Dr. Nitin Choudhary, Dr. Sakshi Duggal

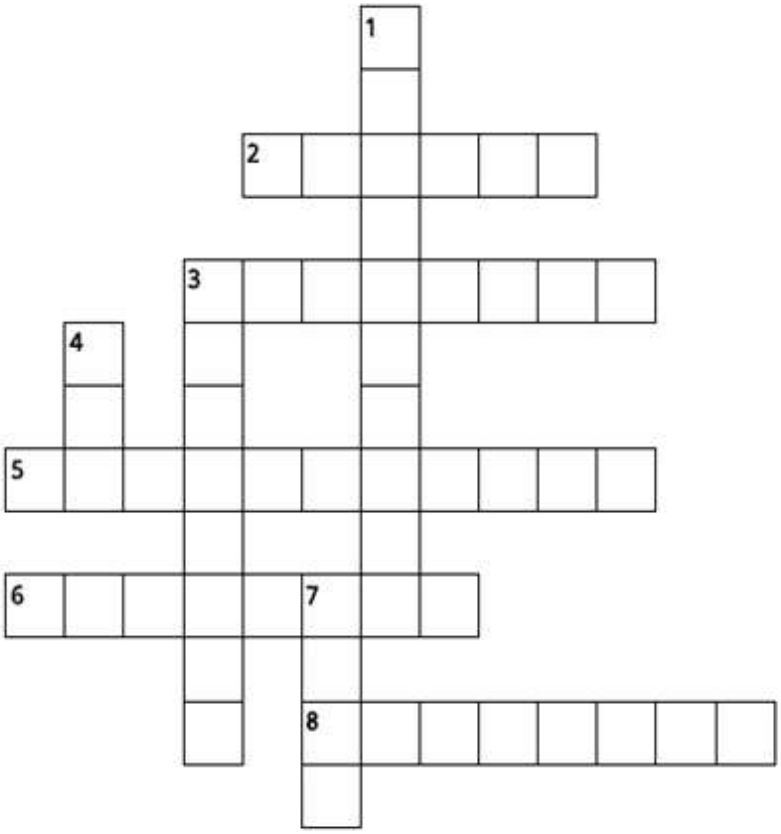
Q.1		A) Name the personality in the photo? B) What is his major achievement?
Q.2		A) What is the name of this new chatbot based on the hints provided in the image? B) What is the name of the country of its origin?
Q.3		A) Identify the device B) What is the unique property of this device ?
Q.4		A) Identify the personality in the photograph B) What is his contribution to the world of science?
Q.5		A) Identify this device B) What is the use of this device?

Send entries to isadelhisecretariat@gmail.com before 20 March 2025

ISA Delhi Secretariat
Room no 415, BL Taneja Block Department of Anaesthesia and Intensive Care, Maulana Azad Medical College New Delhi 110002

CROSSWORD PUZZLE

Authors: [1]Dr. Anjalee Krishna, [2]Dr. Nitin Choudhary, [3]Dr. Sakshi Duggal



Across

2. This intubation system consists of a single robotic arm controlled by a joystick to guide endotracheal intubation remotely

3. This type of learning is a subtype of AI used to study both ECG and ABP waveforms to reflect the underlying cardiovascular status via 3D image visualization

5. Described for measuring pain during GA, calculated from patient's HR and MAP

6. Who developed a novel closed loop vasopressor controller to maintain MAP within 5 mmHg of baseline in cases lasting over 2 hours

8. This system for regional has been developed with a block needle mounted on a robotic arm

Down

1. A pioneering example of AI created in the late 90s is a propofol target-controlled infusion system

3. Automated closed-loop delivery of propofol, remifentanil, and rocuronium developed in 2013

4. The branch of AI, has been used for prediction of postsurgical mortality by Lee et al

7. This employs AI to collect, store, and analyze patient data, giving anaesthesiologists real-time information to help in better patient management

Send entries to isadelhisecretariat@gmail.com before 20 March 2025

ISA Delhi Secretariat
Room no 415, BL Taneja Block Department of Anaesthesia and Intensive Care, Maulana Azad Medical College New Delhi 110002

ISA
Indian Society of Anaesthesiologists
Delhi Branch
Eternal Vigilance

4th ISA DELHI YUVACON

Hosted by ISA Delhi Branch

Organised by ISA Delhi YUVA Wing

Celebrating the spirit of Yuva ISAians

Save New Dates

Sports Meet

23rd March 2025

Venue

AIIMS Gymkhana, Delhi

Dates

19th-20th April 2025

Venue

Auditorium, Maulana Azad Medical College New Delhi

ISA
Indian Society of Anaesthesiologists
Delhi Branch
Eternal Vigilance

Hosted by ISA Delhi Branch
Organised by ISA Delhi YUVA Wing

ISA Delhi YUVACON SPORTS MEET

Celebrating the spirit of Yuva ISAians

Sports Meet **23rd March 2025 | Venue: AIIMS Gymkhana, Delhi**

BADMINTON	TABLE TENNIS	CARROM	CHESS	MINI MARATHON
• Singles • Doubles • Mixed doubles	• Singles • Doubles • Mixed doubles	• Singles • Doubles • Mixed doubles		

Organising Committee

Dr. Munisha Agarwal
Organising Chairperson

Dr. Sonia Wadhawan
Scientific Chairperson

Dr. Amit Kohli
Organising Secretary

Dr. Abhijit Kumar
Treasurer

Dr. Nishkarsh Gupta
Scientific Secretary

Dr. Nitesh Goel
GC Coordinator

ISA Delhi Secretariat
Room no 415, BL Taneja Block Department of Anaesthesia and Intensive Care, Maulana Azad Medical College New Delhi 110002
Email id: yuvacon2025@gmail.com

ISA
Indian Society of Anaesthesiologists
Delhi Branch
Eternal Vigilance

Hosted by ISA Delhi Branch
Organised by ISA Delhi YUVA Wing

ISA Delhi YUVACON 2025

Celebrating the spirit of Yuva ISAians

Dates : 19th-20th April 2025

Venue : Auditorium, Maulana Azad Medical College, New Delhi

Inviting Entries For Competitive Paper Presentation

General Rules for Abstract Submission:

- Age less than 45 years for all competitive activities.
- No age bar for delegates and faculties for non-competitive activities.
- Participation in any number of activities with single registration.

Scan the QR Code for Abstract Submission

Last Date of Submission is 10th March 2025

Abstract Guidelines:

- All abstracts should be submitted in English, Font Times New Roman, Size 12, word document format
- Should not exceed 250 words & be structured as: Original article - Aims Objective, Material & Methods, Results, Conclusion
- Do not include tables, Graphs & images

Organising Committee

Dr. Munisha Agarwal
Organising Chairperson

Dr. Amit Kohli
Organising Secretary

Dr. Sonia Wadhawan
Scientific Chairperson

Dr. Abhijit Kumar
Treasurer

Dr. Nishkarsh Gupta
Scientific Secretary

ISA Delhi Secretariat
Room no 415, BL Taneja Block Department of Anaesthesia and Intensive Care, Maulana Azad Medical College New Delhi 110002
Email id: yuvacon2025@gmail.com

ISA DELHI CME cum clinical meeting Calendar for 2024-2025

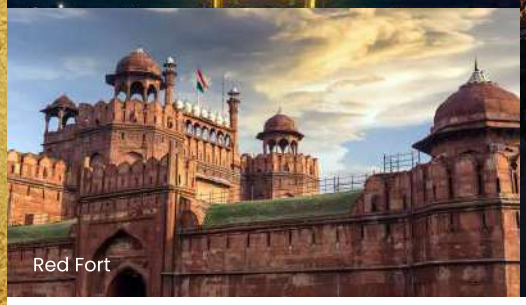
S.No	Month	Institution / Venue
1.	December, 2024	Aakash Healthcare, Dwarka
2.	January, 2025	AIIMS, Delhi
3.	February, 2025	ABVIMS & RML Hospital
4.	March, 2025	VMMC & Safdarjung Hospital
5.	April, 2025	LHMC
6.	May, 2025	ESI group of hospitals
7.	June, 2025	Sir Ganga Ram Hospital
8.	July, 2025	R& R Hospital
9.	August, 2025	UCMS and GTB Hospital
10.	September, 2025	Hindu Rao Hospital

ISA
Indian Society of Anaesthesiologists
Delhi Branch

Eternal Vigilance


Akshardham Temple


Lotus Temple


Red Fort


India Gate


Qutub Minar

Web: www.isawebdelhi.in
Email: isadelhisecretariat@gmail.com, dramitkohli@yahoo.com
Mobile: +91 98180 73402

ISA Delhi Secretariat
Room no 415, BL Taneja Block Department of Anaesthesia and Intensive Care,
Maulana Azad Medical College New Delhi 110002