Spring 2025

The Sensor

The Growing Role of AI in Anesthesiology: Applications, Innovations, and Challenges

Page 11

IN THIS ISSUE:

asatt

AMERICAN SOCIETY OF ANESTHESIA TECHNOLOGISTS AND TECHNICIANS

Contents

Features

The Growing Role of AI in Anesthesiology: Applications, Innovations, and Challenges

Page 11

Trauma - Motor Vehicle Case Study

Page 16

In This Issue

ASATT Office
414-295-9220
asatt@asatt.org
6737 W Washington St
Suite 4210
Milwaukee, WI 53214
www.asatt.org

Perspective

PRESIDENT'S LETTER

As we step into 2025, I want to take a moment to express my gratitude for your continued dedication and commitment to the advancement of our profession. Your passion and expertise are the foundation of ASATT, and together, we are making significant strides toward strengthening our society and the field of anesthesia technology.

This year, we remain focused on enhancing the value of ASATT membership by continuing improvements in education, professional development, and engagement. One of the most exciting initiatives for 2025 is the return of **limited in-person regional meetings**, with a strong emphasis on **technical workshops and community outreach**. These gatherings will provide a hands-on learning experience and offer opportunities to engage with peers, share best practices, and increase awareness of the vital role anesthesia technologists play in healthcare. Stay tuned for more details as we finalize the locations and schedules for these important events.

Additionally, I encourage each of you to take an active role in shaping the future of ASATT by participating in our **2025 Board of Directors elections**. This year, we will be electing representatives for **Regions 1, 3, 5, and 7**, as well as the **President-Elect**. Serving on the board is an incredible opportunity to make a lasting impact on our profession, advocate for our members, and help guide ASATT's future growth. The nominations process will open soon, and I urge you to consider nominating yourself or a colleague who is passionate about advancing our field.

We have an exciting year ahead, and I am confident that, with your involvement, ASATT will continue to grow and evolve in ways that benefit both our members and the broader healthcare community. Thank you for being a part of this journey. Let's make 2025 a year of learning, collaboration, and progress!

Greg Farmer Cer.A.T.
ASATT Former President
president@asatt.org

From the Executive Director

JENNIFER RZEPKA, CAE

NO ASATT NATIONAL CONFERENCE IN 2025

By now most ASATT members have been made aware through various e-mails, in the Quarter 4 Sensor last year, from announcements at the Annual Meeting in December and online through social media posts, that ASATT will not be conducting its Annual National Conference & Anesthesia Tech Expo in 2025.

The bottom line is that over the past two years ASATT has experienced a loss in revenue from the event of $339,810 due to the declining attendance and increasing expenses. In the past decade, the overall loss is over a quarter million dollars: $274,707.32

2015 = $21,804.33 loss

2016 = $97,246.06 gain

2017 = $156,623.78 loss

2018 = $24,608.74 gain

2019 = $5,403.74 loss

2020 = $78,682.56 gain *(virtual)*

2021 = $ 47,373.81 gain *(virtual)*

2022 = $ 9,784.42 loss

2023 = $172,282.44 loss

2024 = $167,527.26 loss

This is simply unsustainable. The Board members and Educational Committee members of the past have polled members and attendees on what they'd like out of the Conference experience, and have taken extraordinary measures to keep the registration costs low, provide ample food and beverage, meet in places that attendees might bring along families or stay longer for their own personal respite and above all, provide an extraordinary quantity of high-quality educational content and a expo like no other, bringing in companies that provide services and equipment necessary for Technologists and Technicians to excel.

However, with all the modifications that the ASATT leaders have done to meet the desires of future attendees, their efforts did not bring in a higher number of attendees.

What has increased is the number of individuals who are taking the Sensor Quizzes online and attending the Quarterly Educational Webinars conducted by the ASATT Regional Directors. This has increased significantly. It is believed that since quality, online education is affordable and readily available to ASATT members, that there is less budget and available time for members to travel and attend a multi-day event. It is certainly still desired by some, but not enough to continue sustaining the losses to association reserves.

Moving forward there are some exciting new opportunities available for ASATT members and non-member alike. First, the Sensor Quizzes (8 new each year) and Quarterly Educational Webinars (4 CE, 4 times per year) will continue. Those enable members to obtain plenty of credits to fulfill their certification requirements to renew their bi-annual certifications.

In addition to that one of the new benefits that is being introduced in 2025 are Regional Meetings. These events will be hosted by Regional Directors and held at local institutions in their Regions. Attendance is anticipated to be between 30-40 attendees who will receive breakfast and lunch plus two hours of lecture type of training plus two hours of hands-on simulations and experiences for just $10 per CE (Member pricing is $40 for each event, non-member pricing is double.) Exhibitors will be invited to participate as well, and it's expected that 4-12 may be present for each event. There will be a blackout-bingo game played, and after visiting all exhibitors, attendees will be entered into a prize drawing.

Although there won't be an in-person ASATT National Conference this year, ASATT still wants to provide value and networking opportunities to the supportive and important sponsors. A Corporate Sponsorship Program has been developed. The levels of sponsorship range between $2,500 and $10,000 with the ability to also become a Diamond Level Sponsor with a customized in-kind exchange. This new

program enables companies to enjoy year-round visibility with members and stakeholders.

Lastly, as President Greg Farmer, Cer.A.T. explained in his article last issue, the Board of Directors fully expects that this is a hiatus, and that ASATT will return to an in-person Conference in the future. The Board members are taking this time to revamp, revive and reintroduce the event in a way that both meets the needs and expectations of attendees, and doesn't continue to harm ASATT's bottom line.

Feel welcome to reach out to the members of ASATT Leadership with any further questions.

We are extremely grateful to the attendees, exhibitors and sponsors who have supported the past ASATT National Conferences and look forward to bringing that type of experience back in a sustainable way soon.

Jennifer Rzepka, CAE
ASATT Executive Director
j.rzepka@asatt.org

2025 ANESTHESIA TECH WEEK

asatt
AMERICAN SOCIETY OF ANESTHESIA TECHNOLOGISTS AND TECHNICIANS

Monday, March 31 – Friday April 4, 2025

Join The American Society of Anesthesia Technologists and Technicians (ASATT) in celebrating **Anesthesia Tech Week March 31 – April 4, 2025, with Anesthesia Tech Day held on Monday, March 31, 2025.**

Anesthesia technologists and technicians are essential to patient care, ensuring that every anesthesia procedure runs smoothly, safely, and efficiently. Their expertise in equipment management, patient monitoring, and surgical preparation makes them an integral part of the anesthesia care team.

ASATT extends deep appreciation to these professionals for their commitment to patient safety, clinical excellence, and the future of anesthesia technology.

Thank you for all that you do!

LAST CALL TO JOIN!

2025 Q1 EDUCATIONAL WEBINAR

It's not too late to register for ASATT's first Educational Webinar of the year! Earn up to 4 CEUs at this live virtual event, presented in collaboration with Region 6 & Region 7.

DATE & TIME:

Saturday, March 22, 2025
12:00 PM to 4:00 PM CST

REGISTRATION DETAILS:

- $40 for ASATT members
- $80 for non-members
- ASATT members may be eligible to redeem a complimentary webinar credit. To check eligibility and redeem your credit email **asatt@asatt.org**. Members can redeem one webinar credit within a 12-month period; benefits do not carry over.

CLICK HERE TO SECURE YOUR SPOT!

Spotlight

MEMBER SPOTLIGHT

Mohamed Hamza, Cer.A.T.T.

Chief Anesthesia Technician at Zale Lipshy University Hospital

Anesthesia Technology Professional for 21 years

Mohamed Hamza began with UT Southwestern Hospital in 2004 as an uncertified anesthesia technician and obtained Anesthesia Technologist certification soon after.

1998 to 2000 Mohamed was a visiting anesthesiologist researcher from Tanta University of Egypt. He was researching clinical anesthesia, pain management, ambulatory surgery and anesthesia pharmacology. He returned to Cairo, Egypt (Tanta) and practiced as an anesthesiologist from 2000 to 2004. He graduated high school in 1981 and began medical school. He graduated medical school in 1987 as a general practioner until he began anesthesia residency in 1989. Mohammed completed anesthesia residency in 1993 and began his career as an anesthesiologist. He began the process of immigration in 2001, he fell in love with the United States. He especially was attracted to the method of practicing medicine and the different lifestyle and opportunities for his family.

Mohamed was concerned with immigration due to the 9/11 terror attacks but was relieved and encouraged by the US compassion and encouragement to continue his immigration journey. He achieved his naturalized immigration status in 2001. He attributes the quickness of his application process to the researcher position at UT Southwestern Hospital and previous medical experience in Egypt.

- **What do you find the most challenging about your job?**

Initially it was the language barrier and learning the varying cultures in the United States. Mohamed is thankful in the fact that it is a supportive and collaborative environment at UT Southwestern Hospital. He appreciates the fact that doctors, nurses, allied health providers and leadership all provide crucial insight, support and guidance to enhance the patient's experience and positive outcomes.

He has received multiple awards for excellence.

- **How many years have you been an ASATT member?**

21 years. He was encouraged by Patrick Kegley, Cer.A.T. to pursue certification and membership within ASATT.

- **What is your fondest memory of ASATT, if you have one?**

Performing his lecture in Pasadena, California at the national conference and receiving an ASATT award. "It is still the best day of my professional life to have the opportunity to share knowledge with my peers as well as being recognized for my efforts by ASATT," Mohamed stated.

- **What is your favorite food?**

Mediterranean food, of course! Kebabs and falafel especially. As a practicing Muslim there are certain dietary restrictions. He loves the fact that Americans are very receptive about learning about his religion, a little nervous initially, but said you need to take initiative to introduce yourself. He has had numerous interactions where intolerant people misjudged him. He took the initiative and time to build connections and improve relations and it made a difference. These same people are now some of his closest friends and allies.

- **People would be very surprised to know that...**

He a very good soccer player. "If you see me on the field, be prepared for a challenge even at my age," Mohamed said.

- **What do you enjoy doing with your time?**

Exploring different foods and cultures. He loves traveling. He has been to Europe, Africa, South America and many places in the USA.

- **What is your favorite type of music?**

Jazz music, slow romantic music, and R&B. "I fell in love with jazz during a trip to New Orleans and it has never left me," shared Mohamed.

- **What is your favorite movie?**

Godfather series. Mohamed said, "It opened my mind to a different culture. It was interesting how western culture and criminal culture all have the same struggles from what I learned growing up. We are all more similar than different."

- **What would you like to get around to doing one of these days?**

Mohamed would like to contribute to the education of anesthesia technicians and technologists of the future. Many people leave this life and profession with a vast wealth of knowledge in their minds but cease to fully share this knowledge to improve the future members of society. He would like to contribute to the future.

2025 ASATT CALENDAR

2025 WEBINARS

Quarter 1: Saturday, March 22, 2025
12:00 pm – 4:00 pm CT
Presented jointly by Region 6 & Region 7
Register Today!

Quarter 2: Saturday, June 28, 2025
12:00 pm – 4:00 pm CT
Presented jointly by Region 1 & Region 3
Register Today!

Quarter 3: Saturday, September 13, 2025
12:00 pm – 4:00 pm CT
Presented jointly by Region 2 & Region 4
Register Today!

Quarter 4: Saturday, December 2025
12:00 pm – 4:00 pm CT
Presented by Region 5
(After the Annual Business Meeting)
Register Today!

Annual Business Membership Meeting:
Saturday, December 13, 2025
11:00 am - 12:00 pm CT
Register Today!

2025 ANESTHESIA TECH WEEK

Celebrate Anesthesia Tech Week
Monday, March 31 – Friday April 4, 2025
#AnesthesiaTechWeek2025

2025 IN PERSON REGIONAL MEETINGS

Quarter 1: Region 5 • Saturday, April 12, 2025
245 E. Belknap Fort Worth, TX 76102
Register Today!

More in person Regional Meeting dates & locations coming soon!

2025 SENSOR

Quarter 2
June 2, 2025 – Content Due
June 21, 2025 – Distribution Date

Quarter 3
August 18, 2025 – Content Due
September 6, 2025 – Distribution Date

Quarter 4
November 17, 2025 – Content Due
December 6, 2025 – Distribution Date

Submit Your Content to asatt@asatt.org

Nominations

BETH MCVEIGH

CALL FOR BOARD NOMINATIONS - DUE JUNE 10, 2025

Nominations are NOW OPEN for the 2025 ASATT Election!

This is your opportunity to play a vital role in shaping the future of ASATT.

You are encouraged to nominate individuals you believe can contribute to the growth and development of our organization.

1-Year, 2-Year, and 2-Year Quarterly Active Credential Membership types, as well as Honorary members, have voting rights in elections and the opportunity to run for leadership positions. Take a moment to consider your fellow ASATT members...

- Are they passionate about advancing our profession?
- Have they demonstrated active engagement with ASATT?
- Do they embody qualities such as motivation, collaboration, and dedication to furthering education for anesthesia technologists and technicians?

If so, they could be the perfect candidate!

Positions open for election in 2025 include odd-numbered Regions (1, 3, 5, 7) and President-Elect.

If you or someone you know is eager to make a positive impact and contribute to the advancement of our industry, we invite you to submit a nomination form. The ideal candidate will possess the following qualities:

- Are a Certified member of ASATT in good
- Highly motivated
- Committed to shaping the future of our profession
- A team player who thrives in collaborative environments
- Dedicated to advancing the society for the benefit of its members
- A member shall be eligible to hold office if they have been an active member at least one (1) year prior to their nomination and if they are a Certified Anesthesia Technician (Cer.A.T.).

Nominate Today!

Completed nomination forms must be received by the ASATT management company no later than Tuesday, June 10, 2025.

Nominees will be notified by the chairperson of the nomination committee and are required to submit a letter of acceptance and professional resume by June 25, 2025 (fax copies accepted).

Upload your professional résumé to be included in the election process. These must be received by **June 10th, 2025**.

If you would like to nominate someone else, you must obtain their approval before submitting their name. Candidates who have been nominated by someone other than themselves will be contacted by the chairperson of the Nomination Committee. If the candidate accepts the nomination, the nominee is required to submit a letter of acceptance. A professional résumé must be submitted before June 25, 2025, to appear on the ballot.

Any active member who seeks the office of an ASATT Regional Director must reside in the respective region. If you have served on the Board of Directors in the past, you can nominate yourself for President-Elect, which is a three-year term. ASATT official election ballots will be available through the ASATT "MEMBER ONLY" link. Posting of the election ballots will begin at the beginning of the business day on the 1st Monday of July, running through the end of the business day on the 2nd Friday of August. Newly elected officers and directors will assume their office at the close of the Annual Business Meeting.

Beth McVeigh
ASATT Coordinator
asatt@asatt.org

BOARD POSITION DESCRIPTIONS ON NEXT PAGE!

Board Position Descriptions

HAVE YOU EVER WONDERED exactly what the responsibilities are of the individual Board members? Here is a simple overview of the "position descriptions" of the Board of Directors.

▶SECRETARY

Two-year term

- Responsible for taking minutes at all Board meetings and business meetings and submitting the minutes to the Board of Directors.
- Responsible for co-signing all contracts negotiated.

▶TREASURER

Two-year term

- Responsible for supervising the handling of ASATT funds.
- Responsible for the accounting of ASATT funds to the membership.
- Responsible for assisting ASATT management in the planning of the annual budget.
- Monitoring the profit and loss on a monthly basis.

▶REGIONAL DIRECTORS

Two-year term

- Responsible for organizing at least one yearly meeting and in some situations, two. This includes obtaining speakers, selecting locations, and obtaining sponsors. The Regional Director is financially accountable for operating within the budgeted funds for the regional meeting. They are also responsible for providing an outline of the meeting to ASATT for distribution and sending ASATT a final list of attendees to facilitate awarding of CES.
- Responsible for promoting the Annual Educational Meeting within the Region with both vendors and members.

REGIONAL DIRECTORS *(continued)*

- Responsible for attending the Annual Educational Meeting. Assisting with registration, sales, etc., during the Annual Meeting.
- Assist with the ASA booth, if needed.
- Responsible for participating in all Board activities, to include:
  - » Attending all Board meetings.
  - » Participating in all Board conference calls. (Usually, every other month on a Saturday morning).
  - » Responding to all e-mails when questions/opinions are solicited.
  - » Submitting monthly, quarterly, and yearly reports for your Region and/or committees to the President.
  - » Submitting Sensor and Website updates by the date requested.
  - » Participate in the yearly budget process for the Region's activities.

▶PRESIDENT-ELECT

Three-year term

- Communicating directly with the ASATT President.
- Assuming the responsibilities of the President when necessary.
- Being familiar with the Bylaws, Policy & Procedure manual, and the working of all committees.
- Succeeding the President at the end of his/her term.
- Co-chairing the Annual Educational Meeting, to include taking care of the ASA booth (set-up, staffing and break-down).
- Chairing the Communications Committee.

A Report from the CoA-ATE Chair

Hello Anesthesia technology professionals, with the new year comes new opportunities. I wanted to provide you all in the membership a broad overview of what accreditation, and to encourage you to reach out to the CoA-ATE if you are interested in starting a program in your area.

What Accreditation is and Why It Matters in Anesthesia Technology?

Accreditation is a process that ensures education programs meet high-quality standards. It helps schools and training programs prove they are teaching students the right skills and knowledge for their careers. In healthcare, accreditation is especially important because it ensures that professionals are well-trained and prepared to provide safe and effective patient care.

For anesthesia technologists, accreditation plays a key role in shaping education, professional recognition, and job opportunities. It helps employers know that graduates of accredited programs have received a quality education and are ready to work in the field.

How Does Accreditation Work?

Accreditation is like a seal of approval for an educational program. It is granted by an independent organization that evaluates schools based on set standards. In anesthesia technology, this process is overseen by:

- **The Commission on Accreditation of Allied Health Education Programs (CAAHEP)** – This organization ensures that healthcare training programs meet national standards.
- **The Committee on Accreditation for Anesthesia Technology Education (CoA-ATE)** – This group works with CAAHEP to set specific standards for anesthesia technology programs.
- **The American Society of Anesthesia Technologists and Technicians (ASATT)** – This professional group supports the field and offers the **Certified Anesthesia Technologist (CerATT)** credential, which requires graduation from a **CAAHEP-accredited program** as the primary process.

Together, these organizations make sure that students in accredited programs are learning the right skills, using up-to-date equipment, and being trained by qualified instructors.

Why Is Accreditation Important for Anesthesia Technologists?

1. Ensures a High-Quality Education

Accredited programs must follow strict standards that guarantee students receive the right training for real-world practice. This means learning how to support anesthesia teams, manage equipment, and respond to emergencies in a way that meets national healthcare standards.

2. Standardizes the Profession

Healthcare is becoming more specialized, meaning professionals are expected to have a clear set of skills. Accreditation helps define what an anesthesia technologist should know, making sure everyone in the field is trained to the same high level. This also helps employers feel confident that new hires have the right qualifications.

3. Required for Certification

To become a **Certified Anesthesia Technologist (CerATT)** through ASATT, you must graduate from a **CAAHEP-accredited program**. This certification proves that you have met the national standard for knowledge and skills in anesthesia technology. Many employers prefer or require certification when hiring.

4. Improves Job Opportunities

Employers often look for job candidates who have completed an accredited program. By ensuring that your training is recognized, accreditation helps open doors to employment and career advancement.

5. Protects Patient Safety

Accredited programs focus on teaching safe and effective practices. Since anesthesia technologists work closely with patients and anesthesia teams, proper training is critical. Accreditation helps ensure that every graduate understands how to support anesthesia care safely and efficiently.

How Does a Program Become Accredited?

Accreditation is a thorough process that ensures only high-quality programs receive approval. It includes:

1. **Self-Review –** The program evaluates itself to see if it meets national standards.
2. **Peer Review –** Experts visit the program, review materials, and assess training quality.
3. **Accreditation Decision –** CAAHEP decides if the program meets the required standards.
4. **Ongoing Review –** Accredited programs are regularly re-evaluated to ensure they continue meeting standards.

This process ensures that programs stay current with the latest healthcare advancements and best practices.

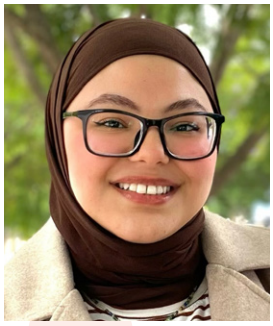
Conclusion

Accreditation is essential for anesthesia technologists because it ensures a strong education, creates professional standards, and leads to better job opportunities. It also helps protect patient safety by making sure all anesthesia technologists are well-trained.

Choosing a CAAHEP-accredited program is the best way to ensure you receive the right education and are prepared for certification and career success in anesthesia technology. Accreditation isn't just about school—it's about building a strong, reliable profession that supports healthcare teams and improves patient care.

Bryan Fulton, M.Ed., Cer.A.T.T.
Chair, CoA-ATE

The Growing Role of AI in Anesthesiology: Applications, Innovations, and Challenges



ALAA AMER
HONOR SENIOR STUDENT IN ANESTHESIA AND RESUSCITATION TECHNOLOGY, AN-NAJAH NATIONAL UNIVERSITY

Keywords: Artificial Intelligence, Anesthesia monitoring, Automated drug administration, risk assessment, Closed-loop systems, machine learning, deep learning, patient safety.

INTRODUCTION

Artificial intelligence (AI) is the study of algorithms that allow machines to reason, and perform tasks that would necessitate human intelligence, such as word and object recognition, problem-solving, perception, and decision-making. Although many people associate AI with computers and robots exclusively, its roots are found across several fields such as psychology, linguistics, statistics and medicine. The implementation of AI in medicine involved in various aspects including diagnostic applications in radiology, pathology, and interventional applications in surgeries and cardiology.[1]

The vital role of anesthesia in patient care and its extensive reliance on data collection, such as vital signs, medical history, and response to anesthesia, make anesthesia suitable for AI applications. AI excels in analyzing large datasets, allowing real-time monitoring, increasing precision in decision-making, and personalizing anesthesia care by evaluating individual data. The prediction of drug doses and assessment of risks by AI models leads to optimal patient care.[2]

AI enhance patient safety through its capabilities to predict potential complications and outcomes, enabling early interventions. Automation models, including closed-loop drug delivery systems which automate drug delivery and monitoring, reducing the workload on anesthesia providers.[2]

Machine learning (ML) and deep learning (DL) are examples of AI subsets used in anesthesia practice. ML focuses on training machines to learn from datasets without being precisely programmed. DL is a subset of ML, and it is used in speech and image recognition and natural language processing.[3] Other subsets of AI include expert systems designed to imitate the decision-making abilities of experts in a specific field, robotics, and computer vision.[3] AI is transforming various aspects of medicine, including anesthesiology. This article explores AI's growing role in anesthesia practice, emphasizing its applications, benefits, and challenges.

1. AI in Patient Monitoring

AI functions as a powerful tool during the intra-operative and post-operative periods, empowering anesthesia providers with informed and timely decision-making abilities. According to Bellini et al., several tasks accomplished with AI showed good results, such as depth of anaesthesia monitoring, sedation management, and vital signs monitoring.[4]

Pushing beyond the constraints of traditional monitoring, AI models offer a personalized assessment of a patient's physiological state. By evaluating fundamental indicators such as vital signs and drug levels. AI algorithms surpass at identifying subtle variations that may signify potential complications. The combination of AI in anesthesia monitoring enhances the precision of real-time assessments while marking a shift towards a more personalized and proactive approach to maintaining patient health during surgeries.[2]

Closed-loop systems use AI algorithms for automated drug delivery, improving the accuracy and efficacy of anesthetic administration. These systems continuously monitor patient vital signs, including heart rate, blood pressure, and bispectral index (BIS) using AI, and modify drug administration rates accordingly to maintain optimal anesthetic depth.[10]

EEG monitoring is an emerging area of interest in anesthesia, EEG can give valuable insights into the effects of anesthestic drugs. However, different anesthetic medications cause distinctive changes in EEG patterns, new EEG monitoring tools need extensive clinical trials to confirm the effectiveness of each particular drug. AI, especially through DL models, has the potential to revolutionize this process. Via training on large datasets of EEG patterns and corresponding drug effects, AI could predict the impact of various anesthetics on the brain without conducting separate clinical trials for each drug.[5]

ML models analyze complex EEG data by integrating both linear and nonlinear features, offering a more comprehensive understanding of drug effects. For example, research conducted by Shalbaf et al. demonstrated that ML algorithms outshine traditional methods like BIS and entropy indices, achieving remarkable accuracy rates of 88.4% and 92.91% in identifying different anesthesia states.[7]

Currently, AI advancements have introduced deep neural networks (DNNs) for real-time depth of anesthesia (DoA) monitoring. A system developed Park et al. predicts anesthesia depth in just 20 milliseconds, outstanding BIS in both speed and accuracy. Other approaches, such as using artificial neural networks (ANNs) to analyze EEG frequency domains and entropy features, have also proven highly accurate in recognizing different anesthesia states.[6]

Early AI algorithm's detection of subtle changes in important indicators such as vital signs and depth of anesthesia, may assist anesthesia providers avoid complications. And its predictive ability allows suitable clinical intervention, promoting a proactive management strategy that highlights patient safety. The combination of AI and anesthesia monitoring not only raises the precision of intraoperative assessments but also represents a transformative shift toward a data-driven, patient-centered approach. This approach anticipates risks before they occur, ensuring personalized care and optimizing outcomes throughout surgeries and invasive interventions.[7]

2. AI in Drug Administration and Delivery

AI in drug delivery can enhance anesthesia administration by using systems that deliver anesthestic agents depending on the patient's characteristics and surgical requirements. These AI systems used in drug administration and delivery include closed-loop anesthesia delivery systems, automated dose adjustment, as well as automated drug delivery. The goal of these systems is to provide personalized anesthetic plans and enhance patient safety.[8]

Automated Closed-Loop Anesthesia Delivery (CLAD) represents a vital step forward in anesthesia delivery, integrating advanced feedback mechanisms to improve precision in analgesia, hypnosis, and muscle relaxation administration. The basis for CLAD is formed by the advances in non-invasive monitoring of cardiac output, EEG processing, cerebral oximetry and nociception evaluation. Currently, intraoperative analgesia-nociception monitors are available and used to titrate opioid use based on changes in autonomic nervous system (ANS) activity.[5]

CLAD has been also used for goal-directed fluid therapy depending on patient parameter such as stroke volume changes, urine output, pulse pressure changes, mean arterial blood pressure, or a combination of these. Other models have been developed to control blood pressure by vasopressor titration such as norepinephrine and phenylephrine using CLAD.[9]

Proportional integral-derivative (PID) is a model employed by

Absalom et al. to stabilize anesthesia. During induction, the PID ensured uniform effect-site drug concentrations, while maintenance phases witnessed decreased fluctuations in the depth of anesthesia and mitigated dosing errors.[9]

Further advancement includes a pharmacodynamics-driven deep neural network developed by Schamberg et al. suggested that the algorithm continuously adjusts propofol dosing by running batch simulations, modifying strategies based on error analysis until it precisely correlates anesthetic states with drug concentrations. This model outstands traditional PID systems in personalizing drug doses according to patient characteristics. Thus, improving delivery and precision in anesthesia administration.[10]

3. AI in Risk Assessment and Prediction

The application of AI in anesthesia extend to predictive analytics and works by processing large amount of patient data to predict outcomes and identify people at higher risk for complications. AI systems that are used in prediction and risk assessment include outcome prediction, real-time risk stratification, and early warning systems.[8]

Researchers have been investigating ML for risk stratification based on analysis of extensive perioperative data and outcomes based on intervention. This type of risk prediction is particularly beneficial for counselling, optimization, and planning the anesthestic management of patients with unusual co-morbidities.[5]

Predicting hypoxemia before it occurs would allow anesthesia providers to take proactive actions to prevent hypoxemia and mitigate patient harm. Lundberg et al. developed an ML model called Prescience (hypoxemia prediction tool), which utilizes standard operating room sensors to predict the risk of hypoxemia during general anesthesia and offers explanations of the risk factors. It explains why predications are made and information on the possible causes which produce it differs from the previous attempts in the same field.[11]

Similarly, AI has been applied to predict postoperative nausea and vomiting (PONV), which occur in 20-30% of cases under general anesthesia. A study by Peng et al. demonstrated that an artificial neural network (ANN) achieved 83.3% accuracy in recognizing high-risk patients using seven key variables, including surgery type, gender, ASA status, anesthesia duration, smoking habits, history of previous PONV and opioid use. Compared to other models, ANN showed the highest predictive abilities, emphasizing AI's potential in guiding preventive interventions and improving patient outcomes.[12]

ML has shown potential in the anticipation and prevention of hypotension during anesthesia. Kang et al. developed models using clinical records and intraoperative monitoring data to predict the last post-induction hypotension (PIH). The random forest model achieved the utmost accuracy.[13] In the same way, a neural network model outperformed senior anesthesiologists in identifying patients at high risk of hypotension during spinal anesthesia. In a randomized controlled trial, Wijnberg et al. evaluated a machine learning early warning system that analyzed 23 parameters from arterial pressure waveforms to detect cardiovascular deterioration. The system decreased median hypotension duration from 32.7 minutes (standard care) to 8.0 minutes (ML-based care), demonstrating AI's potential to improve intraoperative hemodynamic stability.[14]

4. Challenges and limitations

AI integration in anesthesia poses a set of challenges, the main concerns focus on data security and privacy which require careful attention. Sensitive patient information is the cornerstone of the extensive datasets that AI depend on, making the guarantee of the confidentiality and integrity of this data of utmost significance.[8]

These concerns include data breaches, unauthorised access, and the potential misuse of sensitive patient information which emphasizes the need for implementing ethical principles in AI use within anesthesia. To address these challenges, it becomes essential to establish robust data security measures. This incorporates the implementation of strict access controls, advanced data encryption techniques and the formulation of transparent policies governing data usage. By integrating these precautions, the healthcare industry can create a balance, utilizing the potential of AI for enhanced healthcare outcomes while preserving the principles of patient privacy and data security in the progressing field of AI in medical setting.[9]

The risk of bias in AI algorithms is another major challenge that AI introduces, which can occur from training the AI models on biased or unrepresentative datasets. Such biases may lead to discriminatory outcomes, disproportionately affecting specific demographic groups and creating care inequalities. To ensure justice and equity in AI use in anesthesia, it is essential to evaluate and address biases in datasets continuously. By minimizing these biases, the healthcare sector can foster inclusive and unbiased AI

applications, advancing the goal of equitable healthcare for all.[15]

Moreover, AI presents important implications about the patient-doctor relationship. While AI can boost efficiency and objectivity in decision-making, keeping open communication, empathy, and a human touch in patient care remain vital. The ethical application requires mediating between utilizing AI's capabilities and maintaining the personalized, empathetic characteristics of healthcare. Ensuring that AI complements rather than replaces human judgment is critical to nurturing patient trust. By addressing these dynamics, the healthcare community can employ AI's potential to enhance care delivery while upholding the human connection that is fundamental to a trusting and collaborative patient-doctor relationship.[16]

CONCLUSION

AI is transforming anesthesiology by improving patient monitoring, optimizing drug administration, and enhancing risk assessment. AI enables timely decision-making, predictive analytics, and personalized anesthesia care. This can be done through machine learning, deep learning, and automated systems, Closed-loop drug delivery systems and AI-driven monitoring that improves accuracy and efficiency. Moreover, predictive models help anticipate complications, reducing risks and improving patient outcomes.

Despite its great potential, AI adoption in anesthesiology must be approached thoroughly. Ensuring data privacy, minimizing algorithmic biases, and ensuring human supervision are crucial to incorporating AI ethically and effectively. AI should complement, not replace, the expertise of anesthesia providers, supporting rather than diminishing the patient-doctor relationship.

Collaboration between technologists and clinicians is essential to fully employ AI's benefits. Continuous research, rigorous validation, and transparent implementation will drive AI's safe and effective integration into anesthetic practice. By incorporating innovation while prioritizing patient safety and ethical considerations, the future of AI in anesthesiology holds great promise for advancing precision medicine and improving healthcare outcomes.

References:

1. Hashimoto DA, Witkowski E, Gao L, Meireles O, Rosman G. Artificial Intelligence in Anesthesiology: Current Techniques, Clinical Applications, and Limitations. Anesthesiology. 2020;132(2):379-394. doi:10.1097/ALN.0000000000002960

2. Singam A. Revolutionizing Patient Care: A Comprehensive Review of Artificial Intelligence Applications in Anesthesia. Cureus. 2023;15(12):e49887. Published 2023 Dec 4. doi:10.7759/cureus.49887

3. Cascella M, Tracey MC, Petrucci E, Bignami EG. Exploring Artificial Intelligence in Anesthesia: A Primer on Ethics, and Clinical Applications. Surgeries. 2023;4(2):264-274. https://doi.org/10.3390/surgeries4020027

4. Bellini V, Rafano Carnà E, Russo M, et al. Artificial intelligence and anesthesia: a narrative review. Ann Transl Med. 2022;10(9):528. doi:10.21037/atm-21-7031

5. Singh M, Nath G. Artificial intelligence and anesthesia: A narrative review. Saudi J Anaesth. 2022;16(1):86-93. doi:10.4103/sja.sja_669_21

6. Shalbaf A, Saffar M, Sleigh JW, Shalbaf R. Monitoring the Depth of Anesthesia Using a New Adaptive Neurofuzzy System. IEEE J Biomed Health Inform. 2018;22(3):671-677. doi:10.1109/JBHI.2017.2709841

7. Connor CW. Artificial Intelligence and Machine Learning in Anesthesiology. Anesthesiology. 2019;131(6):1346-1359. doi:10.1097/ALN.0000000000002694

8. Kambale M, Jadhav S. Applications of artificial intelligence in anesthesia: A systematic review. Saudi J Anaesth. 2024;18(2):249-256. doi:10.4103/sja.sja_955_23

9. Song B, Zhou M, Zhu J. Necessity and Importance of Developing AI in Anesthesia from the Perspective of Clinical Safety and Information Security. Med Sci Monit. 2023;29:e938835. Published 2023 Feb 22. doi:10.12659/MSM.938835

10. Singhal M, Gupta L, Hirani K. A Comprehensive Analysis and Review of Artificial Intelligence in Anaesthesia. Cureus. 2023;15(9):e45038. Published 2023 Sep 11. doi:10.7759/cureus.45038

11. Lundberg SM, Nair B, Vavilala MS, et al. Explainable machine-learning predictions for the prevention of hypoxaemia during surgery. Nat Biomed Eng. 2018;2(10):749-760. doi:10.1038/s41551-018-0304-0

12. Peng SY, Wu KC, Wang JJ, Chuang JH, Peng SK, Lai YH. Predicting postoperative nausea and vomiting with the application of an artificial neural network. Br J Anaesth. 2007;98(1):60-65. doi:10.1093/bja/ael282

13. Kang AR, Lee J, Jung W, et al. Development of a prediction model for hypotension after induction of anesthesia using machine learning. PLoS One. 2020;15(4):e0231172. Published 2020 Apr 16. doi:10.1371/journal.pone.0231172

14. Wijnberge M, Geerts BF, Hol L, et al. Effect of a Machine Learning-Derived Early Warning System for Intraoperative Hypotension vs Standard Care on Depth and Duration of Intraoperative Hypotension During Elective Noncardiac Surgery: The HYPE Randomized Clinical Trial. JAMA. 2020;323(11):1052-1060. doi:10.1001/jama.2020.0592

15. Gianfrancesco MA, Tamang S, Yazdany J, Schmajuk G. Potential Biases in Machine Learning Algorithms Using Electronic Health Record Data. JAMA Intern Med. 2018;178(11):1544-1547. doi:10.1001/jamainternmed.2018.3763

16. Sauerbrei A, Kerasidou A, Lucivero F, Hallowell N. The impact of artificial intelligence on the person-centred, doctor-patient relationship: some problems and solutions. BMC Med Inform Decis Mak. 2023;23(1):73. Published 2023 Apr 20. doi:10.1186/s12911-023-02162-y

Take the QUIZ

Click here for a copy of the quiz.

Trauma - Motor Vehicle Case Study

DIANA V. LAM

Abstract: The Anesthesia Care Team involves a blend of medical expertise and meticulous coordination. Every case is a display of the preparation and the communication that is necessary between the various professionals. We will address the relation between anesthesia provider and anesthesia technologist. Each person works independently, but also as a team with a common goal to take care of our patients with the intent to save their lives. Nonetheless, in a surgical emergency with dynamic conditions, it is difficult to maintain control of the patient and their vital sign stability efficiently. This paper details a possible anesthetic plan, consideration of some complications, and the role and responsibility of the Anesthesia Technologist when a motor vehicle accident trauma case presents.

INTRODUCTION

Time is of the essence when it comes to Trauma. The commonly mentioned "Golden Hour" is an important guideline which refers to the first hour after traumatic injury. It is considered the most critical time in which treatments or interventions are most likely to be successful and effective (Sharma, 2008). Therefore, efficient trauma response is needed. Most county governments setup a rapid response system which is utilized for quick transport by the local firefighters and paramedics from the scene of the incident to the best equipped hospital with an Emergency Department Trauma response team. The patient is received by a multidisciplinary team composed of various specialist which may include members from anesthesia services, emergency services, and surgical services, among others.

Trauma is the leading cause of death for patients up to the age of forty-five (45) and is the third leading cause of death in every age group in the United States (Sharma, 2008). It is a complex environment with special considerations where decisions are made in rapid fashion. Trauma cases require consideration of truncal and appendicular body injuries, disruption of physiologic systems, often substantial amounts of blood loss, and at times undetected internal injuries. The complexity of a trauma cases is entirely dependent on the mechanism of injury, and the type of injury sustained or suspected. Close attention and fidelity of the patient's vital signs is needed during perioperative care. This case highlights the overall treatment and anesthetic care of a trauma patient injured through mechanism of motor vehicle.

CASE INTRODUCTION

A 42-year-old female, named Jane Doe, engaged in a motor vehicle accident (MVA), as a restrained driver. The offending car hit the driver's side-door at 40 mph causing a significant impact on the left side of our patient's body. The collision resulted in deployment of the front and side air bags. The field report is that Jane Doe had a brief loss of consciousness. She regained consciousness when she arrived in the emergency department. Jane's chief complaints are neck pain, back pain, dull abdominal pain, left shoulder and sharp left chest pain. Her pain score is eight (8) out of ten (10). She is having trouble breathing. Every breath requires major effort and results in considerable pain. Emergency paramedics fully immobilized Jane upon extraction from the vehicle. They placed a cervical collar and moved her on a backboard. A peripheral twenty-gage (20ga) intravenous line was inserted en route to the hospital by the paramedics. A 500ml bolus of Ringer's lactate was given.

Initial vital signs were, BP: 142/55, HR: 98 and SpO2: 88%.

An acute Trauma Survey was performed.

A second set of vitals were taken 30 minutes after arrival to the ER.

The most recent vitals are BP: 88/45, HR: 128, SpO2: 90%.

After initial evaluation, the surgical team admit Jane for an exploratory laparotomy. As far we can determine, Jane has an unremarkable medical history. She has been in general good health with no underlying conditions or systemic issues. She weighs 150 pounds and is 5'6" tall.

PRIMARY SURVEY AND CONSIDERATIONS

As anesthesia technologists, we can preliminarily suspect a few potential complications based on the circumstances. Jane's reported symptoms and her vital signs are of importance to the team's response. Working together with the anesthesia providers and surgical trauma team to aid in Janes care is the goal. The primary concern is airway management. In fact, in the initial assessments consideration of airway, breathing, circulation, disability, and exposure (ABCDE) is needed. This method is used as an early systematic approach. The American College of Surgeons developed it to improve survival of acutely injured patients. It achieved this by reducing the incidence of missed injuries. Although the emergency room trauma team typically conducts this type of evaluations and examinations, the anesthesia care team participates in assessing the respiratory system on trauma patients. Of course, this is true prior to any surgical case start. The need for a protected airway depends on the decisions made about the type of surgical intervention and its invasiveness. The anesthesia care team (ACT) offers an advanced airway skill set to patient's care. Quick recognition of physiological conditions by the ACT is complementary to the overall effectiveness of the care rendered to a patient. Indeed, the ACT is often adept at identifying various airway issues quickly due to their training and experience, which leads to swift intervention upon the use of differential diagnosis tools or schemas.

During initial assessments, the airway and cervical spine are of primary concern. The airway needs to be secured as the team aims to stabilize the patient's condition. A rapid inspection of the mouth and larynx is done to check for trauma, bleeding, penetrating injury, or foreign object obstruction. Although disoriented, Jane Doe was able to answer questions, which indicates at least for the moment a patent airway. She is subsequently monitored for signs of respiratory distress. Most often a cervical spine injury is assumed in motor vehicle accidents, hence proper precautions must be taken and maintained until unambiguous evidence proves otherwise. Additionally, Jane expressed the presence of neck pain. Despite an apparent stable airway, a cervical collar will remain in place until an injury is definitively ruled out. Nevertheless, during trauma scenarios a complete evaluation of the airway is often unlikely. This is in part due to time constraints as trauma patients require rapid interventions which may need to be addressed with haste. Indeed, the default method to protect the patient's airway is endotracheal intubation in trauma cases. The ACT will use the ASA Difficult Airway algorithm to treat acutely injured patients and protect the airway (Thim, 2012).

Oxygen exchange, airway control, and perfusion are integral to successful ventilation in critical trauma patients who often have increased oxygen demands (Thim, 2012). Jane is having a tough time breathing; she is experiencing shortness of breath with left-sided chest pain. Oxygenation status was assessed using pulse oximetry which indicated an initial peripheral saturation (SpO2) of 88%. Indeed, thirty minutes later an SpO2 reading of 90% with supplemental oxygen running at five (5) liters per minute administered via blow-by-mask. Inspection of the upper chest revealed intercostal bruising on the left side. Additionally, auscultation of her chest revealed diminished breath sounds on the left. Hyperresonance on percussion assessment was present in the left side. A chest X-ray revealed a left traumatic pneumothorax with rib fractures, consequently the trauma surgeons decided to insert a chest tube (Sharma, 2008).

Adequate circulation is an important part of normal physiology. Hence, keeping Jane's blood pressure within the normal range is necessary. The team has taken Jane's blood pressure multiple times during initial assessments. Concerns of hemorrhage due to blunt trauma needs to be determined. Palpation of central and peripheral pulses was performed to check for any circulation issues. All peripheral pulses were palpable. The patient's blood pressure and heart rate indicate hypotension with tachycardia. Our goal is to prevent any progress towards hemodynamic instability. The current concern is hypovolemic or hemorrhagic shock if the patient's condition progresses. As anesthesia technologists or technicians, we can assist by inserting or helping to insert two large-bore intravenous lines. The best choice for this situation is sixteen (16) gage short length catheters. The catheters will facilitate fluid resuscitation when necessary. An initial type and screen would be advisable. However, if her condition deteriorates a type and cross which would match the best and most compatible units to our patient would be desirable. Additionally, if a type and cross is not immediately available, we can request preemptively that the blood bank prepare type O-negative packed red blood cells (PRBCs) for administration. Eventually, a type and cross will be performed which will allow us to request fresh frozen plasma (FFP), and platelets for transfusion.

Currently, a Focused Assessment with Sonography for Trauma (FAST) exam with point of care ultrasound (POCUS) is performed due to Jane Doe's hemodynamic instability. The FAST exam is meant to identify free intraperitoneal or pericardial fluid in blunt trauma patients (Raja, 2016). Jane's FAST exam is positive. The need for computer aided tomography (CAT) scan with contrast will be a more definitive exam. Depending on the patient's acuity, this type of exam may be performed. In our caser the abdominal CT revealed only some intraperitoneal free fluid. Further blood testing will indicate any abnormalities in endocrine and cellular levels which will further guide the team in its decisions (Thim, 2012).

Continuing with our ABCDE assessments, the team expresses concern for disability due to acute trauma nature of the injuries. Although Jane had a brief loss of consciousness at the scene, she has regained consciousness but remains disoriented upon admission. Determination of neurologic deficits or spinal cord injuries are made. The most common diagnostic tools are the Glasgow-Coma scale (GCS), reflex testing, head CT scans, neurological assessments and close observation are the most common. In Jane's case her GCS score is 13= E4 V4 M5. Each facet of the score grades various systems: eyes, verbal, and motor. (Raja, 2016). A score of thirteen (13) indicates a mild head injury or concussion secondary to her motor vehicle accident. Pupil size, motor and sensory function were normal as confirmed by neurological assessment (Raja, 2016).

A full body examination with the patient undressed is needed to check for exposure and signs of occult injuries, such as cranial, facial, or long bone fractures. Our patient did not suffer exposure per se. Nonetheless, this would be a critical assessment if weather or water ways, or desert environments are part of the accident parameters. In our case, Jane communicated that she was experiencing numbness in her left upper shoulder with limited range of motion due to pain. The team diagnosed it and treated a dislocated left shoulder. The limb was splinted for immobilization and transport (Thim, 2012). On palpation, the patient exhibited tenderness of the abdomen with no guarding or rigidity (Raja, 2016). In addition to bruising in her extremities, she had a horizontal abrasion on her lower abdomen indicating a positive seatbelt sign. According to a study done by Agrawal, the presence of a seat belt sign indicates that "patients are more than twice as likely to sustain intra-abdominal injury" (Agrawal, 2013). As mentioned, the CT scan with contrast of the abdomen revealed intraperitoneal free fluid (Cunningham, 1998).

Just as the assessments are completed, the patient became further hemodynamically unstable necessitating emergency surgery. In emergency trauma cases, the anesthesia care team and surgical trauma team will quickly work through the assessments, which are usually made within an hour or less. Our goal now is to resolve the internal hemorrhage by exploratory laparotomy which address her internal injuries. The usual approach is a large midline incision of the abdomen (Dharap, 2016). The anesthesia care team will take actions to correct fluid and electrolyte imbalances, provide fluid and blood resuscitation during perioperative care to maintain perfusion. Meanwhile, other members of the anesthesia team have already prepared the operating room for use.

SETUP OF THE PROPER EQUIPMENT

Anesthesia technologists and technicians plays a key role in the preparation of necessary equipment prior to case starts. We can use our knowledge of the patient's condition as we set up for the emergency exploratory laparotomy in this case. Our setup should consider the internal bleeding which was noted upon the FAST exam. Importantly, standard monitoring of any patient vitals including electrocardiogram (ECG), non-invasive blood pressure (NIBP), pulse oximetry (SpO2), end-

tidal carbon dioxide (EtCO2), temperature (Temp) and suction are key to maintaining minimal standards of safe care.

Since Jane is hemodynamically unstable, an arterial line and central line are set up for continual monitoring of blood pressure and hemodynamics. Proper and rapid setup of the arterial line is important. Manufacturer recommendations include to flush while the heparinized saline in NOT pressurized. (ICU medical and Edwards Lifesciences manuals). Zeroing of the transducer to the phlebostatic axis is essential in the supine position. In general, the transducer should be at the level the heart, except in some neurosurgical or special scenario. An ultrasound machine has become an integral part of arterial line insertion. As we expect some hemodynamic instability, our anesthesia care practitioner decided to use a large bore central line kit. The large bore lumen will allow for better flows when administering blood or other necessary fluids. Sterile technique and scrubbing to assist for these procedures are necessary to prevent or minimize infection or contamination. As part of the invasive line set up, a fluid warmer should a routine part of our setups. However, a Belmont Rapid Infuser is a better device for massive fluid and blood administration. At minimum, the Belmont should be available in the room prior to case start. A supply of colloids and crystalloids should be maintained throughout the case duration. Fluid resuscitation of the patient and massive transfusion protocols should be followed per each facility's policies.

Furthermore, complete type and cross matching should be completed as soon as possible, and made ready for infusion. Several IV pumps with multiple channels may be needed for drug infusions. A key piece in any blood management protocol is cell salvaging. The autotransfusion machine can process blood by washing and preparing shed blood for reinfusion.

For most intubations, standard intubating methods can be used. However, in certain cases the use of a video laryngoscope could improve success. A video laryngoscope like a Glidescope should be present in the room with the appropriate blade regardless of the case type. Indeed, since a suspicion of cervical spine injury was noted, Jane can be considered a difficult airway. Thus, the Difficult Airway cart needs to be ready for use. A fiberoptic scope may be need since Jane is in immobilized with a cervical collar. The use a bougie can assist the intubation if the provider requests it. For most trauma cases, larger endotracheal tubes are used. The consideration of larger endotracheal tubes is made for better post operative management of ventilation. A 7.5mm ETT or larger may be a good fit for this case. Proper check of the endotracheal tube cuff with a 10-cc syringe is necessary.

Since this is a trauma case, we can count on a rapid sequence induction. A bag-valve-bag should be in the room and within reach besides the anesthesia gas machine for ventilation. Proper use of Sellick's maneuver (cricoid pressure) is recommended. Certainly, depth of anesthesia monitoring is problematic in trauma patients. The use of Bispectral Index (BIS) or SedLine (DSA) monitoring can help monitor this issue; however, its use is optional. Also, neuromuscular blockade monitoring is essential and must be present in the room (Mahmood, 2014).

Furthermore, a thorough setup must include all necessary emergency resuscitation equipment. It should be on easily accessible in case the patient's condition devolves to a life threating arrhythmia or full cardiac arrest. This includes an emergency crash cart with a functional defibrillator, the cart must include emergency medications, preferably in pre-filled syringes. The specific medications will vary between hospitals, but the list should closely follow the accepted American Heart Association or American Red Cross ACLS or ALS guidelines. These emergency medications often include atropine, amiodarone, lidocaine, epinephrine, nitroglycerine, albuterol, adenosine, and ephedrine among others (Becker, 2014). Often these emergency medications are located near the top drawer of the anesthesia drug cart for easy access.

Another important preparation step is the mandatory anesthesia gas machine Food and Drug Administration (FDA) checkouts. These checks MUST be done at the start of each day or every 24-hour period. Moreover, circuit checks between cases validate integrity of a new circuit for the next patient. Manufacturer's user manuals recommend repeating the FDA check before the 24-hour period if the circuit type is changed, i.e., changing from circle to non-circle and changing circuit size (adult vs. pediatric). Proper function of the ventilator includes vaporizer checks. In many facilities it is the anesthesia technologists' or technicians' responsibility to fill vaporizers. Regardless, checking the fill level of vaporizers should be routine, and we should inform the anesthesia care provider of their status. If the task is within the purview of the technologist/technician per hospital policy, then proceeding with refills as necessary using the proper safeguards to minimize exposure to other personnel is necessary.

Remember that there is a maximum exposure limit with volatile and non-volatile anesthetic gases. Volatile gases such as sevoflurane, isoflurane and desflurane have a limit of five (5) part per million (ppm), and Nitrous Oxide (a non-volatile gas) has a limit of twenty-five (25) ppm at all anesthetic locations.

ANESTHETIC PLAN

The goal of an anesthetic plan is to provide the needed care per the patient condition and surgery type. In Jane's case our plan must include control her fluid status and protecting her vitals while aiding the control of any internal hemorrhage. By extension this means that the team must maintain hemodynamic stability. Using the proper medications and proper techniques are part of the predetermined anesthesia care plan. Jane needs to have an exploratory laparotomy. This informs us that a midline incision of the abdomen will be performed. Nonetheless, the anesthesia plan must consider preoperative, intraoperative, and postoperative concerns.

The plan must consider preoperative medications. Often drugs like ondansetron for emesis control, fentanyl for pain control, and midazolam for anxiety are considered by the care providers. However, all medications have secondary effect which will impact the drug's dosing and use. The anesthesia provider carefully decides the drugs they will use for the patient. The primary consideration is prevention of aspiration and achieving intubation by the safest method. Jane's case demands the use of a rapid sequence induction (RSI) since her last meal was less than 6 hours ago. Aspiration prophylaxis will make induction safer but never 100%. The use of drugs like metoclopramide, ondansetron, and omeprazole may be helpful.

Once in the OR, Jane received 100% oxygen by face mask prior to induction for at least five (5) minutes. This is done to increase Jane's oxygen reserve. Simultaneously, the standard monitors are connected. As mentioned earlier these include NIBP, SpO2, ECG, EtCO2, and temperature. Once the first set of vitals are determined, the patient is induced.

In our case, the rapid sequence induction (RSI) is achieved using a combination of ketamine, propofol and succinylcholine administered sequentially. The use of ketamine at induction decreases the dose of subsequent doses of propofol for maintenance. The provider made this choice to avoid any cardiac depression and help manage the patient's hemodynamics. During RSI, the anesthesia technologist applies cricoid pressure. Care must be taken to not release the pressure during the entire intubation attempt to prevent aspiration. Due to the presumed cervical spine instability, the difficult airway protocol will be used. The patient is positioned in supine position with arms abducted 90 degrees. A nasogastric tube and urinary catheter are inserted to drain the stomach and bladder. Removal of stomach contents will significantly reduce the risk of aspiration upon emergence, yet sometimes this is done before induction. The draining of the urinary bladder might help the surgeon to have better visualization of internal structures thereby reducing risks of surgical puncture or unintended injury.

In addition, manual axial in-line traction for intubation will be used in conjunction with a video laryngoscope (Glidescope, McGrath, etc.) in efforts to prevent movement of the neck. This procedure needs more than two (2) people. Usually, one person will hold the patient's head, another intubates, and the team member person assist the person intubating. A bougie might aid intubation. Once the glottis has been accessed, a cuffed endotracheal tube of the proper size will be placed. As mentioned earlier, the correct size will be determined based on postoperative needs and patient anatomy. Once the endotracheal tube is in place, the cuff is inflated, and bilateral breath sounds are confirmed along with clear EtCO2 tracing confirming ventilation of the lungs.

Our next task would be to assist the anesthesia provider with arterial and central line placement using sterile technique, this may or may not be part of your job description. In my current work environment, we participate in these invasive procedures. Certainly, an ultrasound is used to guide both these type of catheters into the correct vessel. The arterial line was inserted into the left radial artery, and the central line into the right internal jugular vein. These invasive lines will help the provider to quickly identify hemodynamic changes.

In our case, Jane's maintenance is achieved with a combination of sevoflurane, and rocuronium as muscle relaxant, and ketamine with the use of some opiates for pain control. However, there are many ways in which maintenance can be achieved. Intravenous fluids (crystalloids or colloids) are given according to the patient's central venous pressure and hemodynamic stability. Homeostasis is desirable but often difficult to maintain in trauma cases. Fluid status is managed via administration or withholding of blood, fluids, and medications. Often lower blood pressures are allowed to reduce intraoperative bleeding, but not at the expense of perfusion. Jane remains hemodynamically stable throughout the surgery by careful management of fluids and administration of vasoactive drugs (Bharati, 2013).

Often during trauma cases, rapid laboratory results are needed. Point of Care Testing (POCT) often addresses this concern. Monitoring acid-base balance, hemoglobin levels, carbon dioxide levels, and bicarbonate are crucial for the anesthesia care provider to make clinical decisions. Specialized test like INRs, coagulation studies (aPTT, PT, clotting times, etc.), electrolyte levels must be trended and treated for any abnormalities. Antiarrhythmic drugs such as

amiodarone, and lidocaine are needed to control labile blood pressures. Vasopressors, vasoconstrictors like epinephrine, dopamine, esmolol, and others are needed. (Bharati, 2013).

Blood transfusions are often necessary. Blood products are administered when needed as mentioned. However, Jane needed this blood due to devascularization of the bowel and shearing of the mesenteric artery resulting in pooling of blood within the peritoneal cavity (Sengar, 2016). The surgical team performed primary repair and resection with anastomosis with a stoma to stop the bleeding. The use of a cell saver was not chosen due to the potential contamination by intestinal contents.

Emergence consists of discontinuation of inhalational gas flow, and administration of muscle relaxant reversal like Sugammadex. Jane will be sedated during transport as she will be transported intubated to the ICU for post-operative monitoring.

POTENTIAL COMPLICATIONS DURING PERI-OPERATIVE ANESTHESIA

The patient had a chest tube inserted prior to surgery due to her left thorax injuries. Caution must be taken to avoid dislodgement of the chest tube which is a problematic possibility. We predicted uncontrolled bleeding and potential hemorrhage leading to hemorrhagic shock. The initial assessments of Jane displayed free fluid in the peritoneal cavity by CT scan. The extent and degree of internal injury correlates with the amount of potential blood loss. In the case of hemorrhagic shock, a call for help from others is necessary. Use of a rapid infuser is required to address this type of situation. The anesthesia care provider will give FiO2 100% and turn down volatile anesthetics as the BP drops. Current guidelines suggest that blood products be given in a one-to-one ratio. One unit of fresh frozen plasma (FFP) to a unit of packed red blood cells (PRBC) to one unit of platelets. Initial availability must be addressed early, and units should be available in the operating room.

Hypothermia is often a hidden problem for trauma patients. They should actively be kept warm. Blood will not clot normally is temperatures are too low or too high. Tranexamic acid, aminocaproic acid, and calcium will help our bleeding patients by limiting fibrinolysis. Electrolyte imbalances need to be treated quickly. Hypocalcemia and hypomagnesemia can be addressed with administration of the proper electrolyte. Yet, hypernatremia and hyponatremia are dangerous to the patient if we administer several liters of normal saline as this may cause hyperchloremia or an anion gap metabolic acidosis if this common crystalloid is overused. On the other hand, hyperkalemia can happen and cause cardiac issues. It can be treated with calcium chloride, insulin, and sodium bicarbonate.

In addition, complications with the chest tube are possible, including tube kinking or clotting, leakage around the chest tube, unintended tube dislodgement, re-expansion pulmonary edema, or insertion site infection (Kwiatt, 2014).

POST-OPERATIVE CARE

Pain management is of high importance in post-operative care of all patients. Procedures that could help reduce pain, like epidurals and nerve blocks, are sometimes impractical or impossible in trauma patients depending on the injury or speed of surgical intervention. Parenteral opioids are a standard first-line pain control tool. Use of narcotics is often the primary method of pain management (Fabbri, 2023). If the patient is stable pain control procedures can be attempted within a brief period after surgical care. Indeed, multimodal approaches are the most advocated therapies for pain in trauma patients (Klugh, 2024).

According to a study, respiratory complications and surgical site infections account for most post-operative complications. Therefore, wound infections are a common complication associated with exploratory laparotomy, a surgery that involves a large surgical incision. An appropriate antibiotic prophylaxis helps to decrease risk of surgical site infection. Negative pressure wound therapy is also used in healing of the abdominal incision site in the post-operative period (Dharap, 2016).

CONCLUSION

Although seatbelts have significantly reduced injury and mortality of patients in motor vehicle accidents, drivers restrained by seatbelts are prone to blunt trauma injuries of the abdomen and chest. These injuries are often sustained when the driver is subject to rapid deceleration. Abdominal injuries sustained by mechanism of restrained seatbelt in MVA can be life threatening and challenging to diagnose. Thus, the presence of a seatbelt sign should raise suspicion of a significant intra-abdominal injury. Due to proper examination and diagnostic testing, clinicians our team was able to quickly diagnose and treat the patient. It is critical to reduce morbidity and mortality in blunt trauma patients to tend to these injuries efficiently. Studies indicate that delays of 8 to 12 hours in diagnosing abdominal injury could increase morbidity and mortality leading to severe complication and risk for sepsis (Sengar, 2016). Although injuries such as mesenteric sheer injury are rare, prompt diagnosis and surgical treatment are of

paramount importance in preventing further complications as mentioned.

In this case, the Acute Trauma Life Support protocol (ABCDE) allowed clinicians to examine and identify occult injuries related to the blunt trauma. The patient was diagnosed with a left pneumothorax, and a chest tube was placed. Jane also had a left shoulder dislocation, which was splinted and immobilized. The FAST exam was positive, and CT abdomen revealed intraperitoneal free fluids. The physical exam revealed a tender abdomen and a positive seatbelt sign. As Jane became hemodynamically unstable the need for emergent exploratory laparotomy was necessary. Surgical exploration revealed a devascularization of the bowel and mesenteric artery injury. A primary repair and resection with stoma were performed with a re-anastomosis to be performed later (Sengar, 2016).

Trauma cases can be demanding. In these cases, the anesthesia technologist must be able to communicate, anticipate, and be ready to render help during various phases of care. The anesthesia care plan includes procedures and pieces of equipment that must be understood, and the technologist and technician must have knowledge about. Preparation, RSIs, line insertions, hemodynamics and POCT testing all were part of this case among other functions that contributed to a favorable outcome (Vailas, 2015).

References

Agrawal, Amit et al. "Seat belt sign and its significance." *Journal of family medicine and primary care* vol. 2,3 (2013): 288-90. doi:10.4103/2249-4863.120769

Bharati, Saswata, and Dinesh K Singh. "Anesthetic management of emergency laparotomy in a case of ischemic cardiomyopathy with COPD." Anesthesia, essays, and research vol. 7,3 (2013): 399-401. doi:10.4103/0259-1162.123267

Becker, Daniel E. "Emergency drug kits: pharmacological and technical considerations" *Anesthesia progress* vol. 61,4 (2014): 171-9. doi:10.2344/0003-3006-

Cunningham MA et al. Does free fluid on abdominal computed tomographic scan after blunt trauma require laparotomy? *J Trauma* 1998 Apr 44 599603

Dharap, Satish B et al. "Laparotomy for blunt abdominal trauma-some uncommon indications." Journal of emergencies, trauma, and shock vol. 9,1 (2016): 32-6. doi:10.4103/0974-

Edwards Lifescience- https://www.edwards.com/healthcare-professionals/pages/quick-guide

Fabbri A, Voza A, Riccardi A, Serra S, Iaco F; *Study and Research Center of the Italian Society of Emergency Medicine (SIMEU)*. "The Pain Management of Trauma Patients in the Emergency Department." Journal of Clinical Medicine. 2023 May 5; Vol 12 (9):3289. doi:10.3390/jcm12093289.

ICU Medical -https://www.icumed.com/media/ywcdajqs/ifu0000040-rev-01-for-df-4564-rev-01.pdf

Klugh JM, Harvin JA. "Acute pain management after trauma: What you need to know." Journal of Trauma Acute Care Surgery. 2024 Apr 1;96(4):537-541. doi:10.1097/TA.0000000000004193.

Kwiatt, Michael et al. "Thoracostomy tubes: A comprehensive review of complications and related topics." International journal of critical illness and injury science vol. 4,2 (2014): 143-55. doi:10.4103/2229-5151.134182

Mahmood S, Parchani A, El-Menyar A, Zarour A, Al-Thani H, Latifi R. Utility of bispectral

index in the management of multiple trauma patients. Surg Neurol Int 26-Sep-2014; 5:141

Raja A, Zane RD. Initial Management of Trauma in Adults. In: Post TW, ed. UpToDate. Waltham, MA: UpToDate. https://www.uptodate.com/contents/initial-management-of-trauma-in-adults. Last updated September 19, 2016.

Sengar, Shobhit & Rehmani, Babar & Kumar, Navin. (2016). Recognition and management of small bowel and mesenteric injuries in blunt abdominal trauma. International Surgery Journal. 2135-2140. 10.18203/2349-2902.isj20163587.

Sharma, Anita, and Parul Jindal. "Principles of diagnosis and management of traumatic pneumothorax." *Journal of emergencies, trauma, and shock* vol. 1,1 (2008): 34-41. doi:10.4103/0974-2700.41789

Thim, Troels et al. "Initial assessment and treatment with the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) approach." *International journal of general medicine* vol. 5 (2012): 117-21. doi:10.2147/IJGM.S28478

Vailas, Michail G et al. "Seatbelt sign in a case of blunt abdominal trauma; what lies beneath it?" BMC surgery vol. 15 121. 30 Oct. 2015, doi:10.1186/s12893-015-0108-z

Klugh JM, Harvin JA. "Acute pain management after trauma: What you need to know." Journal of Trauma Acute Care Surgery. 2024 Apr 1;96(4):537-541. doi:10.1097/TA.0000000000004193.

Take the QUIZ

Click here for a copy of the quiz.

REGISTRATION FOR ASATT'S Q2 EDUCATIONAL WEBINAR IS OPEN!

Join us on Saturday, June 28, 2025, for a virtual learning experience presented by Region 1 & Region 3! This event offers a fantastic opportunity to **earn up to 4 CEUs**, expand your knowledge in anesthesia technology, and enhance your professional development—all while learning from a panel of expert speakers.

When: Saturday, June 28, 2025 • 12:00 PM - 4:00 PM CST

Location: Zoom (virtual)

Registration is priced at $40 for ASATT members and $80 for non-members.

Did you know that as a valued ASATT member, you have access to exclusive benefits, including a complimentary annual webinar credit?

Email asatt@asatt.org to redeem your credit for this event. Please note that members are eligible to redeem *only one webinar* credit within a 12-month membership period, and membership benefits do not carry over.

REGISTER FOR ASATT'S Q2 WEBINAR BY CLICKING HERE.

NOTES

Important Updates

BETH MCVEIGH

ANESTHESIA TECHNOLOGIST (CER.A.T.T.) CERTIFICATION

ASATT requires that all individuals interested in becoming a Certified Anesthesia Technologist (Cer.A.T.T) achieve eligibility to challenge the board exam via one of three mechanisms: Completion of a **CAAHEP Accredited program**, completion of an advancement program for people already holding the Cer.A.T. credential from ASATT, or completion of the **Practical Experience Pathway**. The National Certification Exam is administered via secure computerized testing at Meazure Learning contracted assessment centers geographically distributed throughout the United States.

The Practical Experience Pathway (PEP) is designed for non-certified Anesthesia Technicians who have experience working in the field of Anesthesia Technology.

To qualify:

- You must have 5 years of experience working as an Anesthesia Tech in the United States at a Level 1 or Level 2 Facility OR 7 years of experience working as an Anesthesia Tech in a Tertiary or Outpatient Facility
- You must obtain 40 Continuing Education credits under several specific topics, as listed in the Practical Experience Pathways Brochure
- You must submit a valid ACLS and BLS credential obtained through the American Heart Association or the American Red Cross at the time of application.

Click Here for the Practical Experience Pathways Brochure and application.

REVISION OF THE BYLAWS

The Bylaws Committee will perform an annual review of the ASATT Bylaws.

Any active member of the Society may propose an amendment, which must be submitted in writing to the Board of Directors no later than 60 days before the ASATT Annual Business Meeting for consideration. The Board will review proposed amendments and present them to the membership at the meeting for discussion.

Within 60 days of the Annual ASATT Annual Business Meeting, an online ballot will be made available to all active members via a link on the ASATT website, allowing them to vote on the proposed changes. A two-thirds (2/3) affirmative vote of active members is required to approve a Bylaw change. The Bylaws Committee Chairperson will compile a report on the vote results.

If the President, Bylaws Committee, or Board of Directors determines that a full Bylaws revision is necessary, the President will appoint a task force to review and update them. A comprehensive revision must be conducted at least once every 10 years to ensure compliance with amended bylaws.

If a revision is required, it will be submitted to the ASATT Board of Directors, and the results will be reported and published in the ASATT Sensor. Amendments approved by the membership take effect immediately upon approval.

Regional Reports

REGIONAL UPDATE

REGION 1

Before you know it the crocus, tulips, Easter Lily's, hydrangeas, daffodils, and any other spring flower there is, will be peeking out of the snow. Let the beautiful smells of Spring fill your body and give it you a refreshed energy and positivity. With that being said, let's get to business.

As I get older, I am going to start looking for a replacement for the Region 1 Director. It is time for someone else to get to experience and excitement of being the Region 1 Director. Yes, it is a lot of work, no pay for the position, however you learn so much from Board members and gather friends from all over the country. I am also looking for someone that would like to host a Regional Meeting in the fall of 2025. I am not able to hold one here where I work. If you are interested in hosting one, please email me at **region1@asatt.org** I will help however I can, you would need to get speakers, provide a place to have the meeting in be in touch with the Regional Director as much as you can possibly do.

In March there will be another Webinar that will be offered to you for a price that you cannot afford to miss out on. You also have the Sensor Quizzes that you can do.

2025 Webinars are as follows:

- **Q1 -** Regions 6 and 7, Saturday March 22, 2025, from 12 -4 pm CT
- **Q2 -** Regions 1 and 3, Saturday June 28th from 12pm – 4pm CT
- **Q3 –** Regions 2 and 4, Saturday September 13th from 12pm – 4pm CT
- **Q4-** Region 5, Saturday December 13th from 12pm – 4pm CT

To register for the Quarterly Webinars, please visit: **https://www.asatt.org/meetings-events-webinars**. You do not have to live in the Region to attend the meeting. It is open to all Members.

AGAIN, if you are interested in hosting a meeting for this fall, please feel free to reach out to me and I would be more than happy to explain to you how it works.

HAPPY SPRING!!

Respectfully Submitted,
Jonnalee Geddis, Cer.A.T.
region1@asatt.org

REGION 2

Hello again all!

I'm not sure about you, but I know I sure am ready for spring! I will be hosting the Region 2 IN-PERSON conference in August and am excited for you to visit the Three Rivers and take in various sites and activities in the area! More details to follow, so STAY TUNED! I welcome any input regarding topics that you would like to have covered. Please email me your ideas.

I am very excited to interact with so many of you within the region by collaborating ideas and hearing your concerns. Please also connect with others via social media-Facebook group "Region 2-Anesthesia Techs". You may use this platform to post questions, ideas, share info regarding job openings and so much more!

Sincerely,

Respectfully submitted,

Wendi Slusser , Cer.A.T.T.
region2@asatt.org

REGION 3

Happy New Year! We are almost three months into it. I'm still looking for techs to get involved with advocating for Region 3. You can also join one of the many committees we have at ASATT.

I've been receiving emails about the Practical Experience Pathway. Kudos for inquiring. I highly encourage you to follow through with the programs listed on our site. The information you will receive will not only enhance your skills, but you will gain new skills.

Please reach out to the program director or facilitators for more information. Also remember if you have any questions or concerns please reach out to me.

Thank you!
Phillip Hood, Jr., Cer.A.T.
region3@asatt.org

REGION 4

Exciting things are happening in the world of anesthesia technology, and I want to take a moment to remind you of the incredible opportunities available to advance your career. If you or a colleague have years of experience but haven't yet earned certification, the Practical Experience Pathway (PEP) offers a fantastic route to becoming credentialed. For those already holding the Certified Anesthesia Technician (Cer.A.T.) title, the Advancement Program provides a structured way to level up to Certified Anesthesia Technologist (Cer.A.T.T.) status. These programs recognize and reward your hard work, helping to elevate our profession as a whole.

Beyond certification, we continue to offer excellent educational opportunities through our quarterly webinars and regional meetings. These smaller, more focused gatherings are a great way to stay up to date with best practices and network with peers. But I want to hear from YOU—What topics interest you most? What types of networking events or in-person educational gatherings would you like to see in our region?

Feel free to email me anytime with your thoughts, questions, or ideas.

I'm looking forward to warmer temps and sunshine—garden planning season is almost here! I hope you enjoy the arrival of spring as much as I do.

Stay safe and keep learning!

Sincerely,
Samantha Groshek, Cer. A.T.T.
region4@asatt.org

REGION 5

My name is Mohamed Hamza, and I am honored to serve as the Region 5 Director. I was born in Egypt, where I completed my higher education, including medical school and my anesthesia residency at Tanta University Hospital and Clinic. From 1998 to 2000, I traveled to the USA for a research fellowship in clinical and ambulatory anesthesia practice. During this time, I attended multiple ASA meetings and earned several research awards.

I have published extensively in well-known anesthesia journals, including the *Journal of Anesthesia, Anesthesia and Analgesia,* and *JAMA.* In 2004, I was invited to return to the U.S. to further engage in research programs. Alongside my academic work, I began working as an anesthesia technician to support my family and joined UT Southwestern in 2008 as an Anesthesia Technician Supervisor. That same year, I earned my certification as an Anesthesia Technologist from the ASATT.

I have had the privilege of attending multiple ASATT educational meetings and have also presented at these events. My colleagues and I at UT Southwestern are proud to play a vital role, not only in maintaining anesthesia

equipment and supplies, but also in supporting clinical practice, particularly with anesthesia induction, patient transportation, and resident education.

I am excited about the opportunity to join the ASATT Committee and serve as the Region 5 Director. I would also like to extend my sincere thanks to ASATT President Greg Farmer and the entire ASATT administration committee for their unwavering support and guidance.

Upcoming Events and Announcements

I am thrilled to announce our first educational conference for Region 5, scheduled for April 12, 2025, at TCC Fort Worth. The event will feature exciting hands-on educational opportunities and provide exposure to the latest airway management techniques for anesthesia and emergency situations.

Additionally, ASATT nominations will be opening soon. Please visit **ASATT.org** for more information on the nomination process and deadlines.

The ASATT is also working on revitalizing the National Conference, with exciting announcements on the horizon. We are implementing a new five-year strategy to enhance ASATT activities and support for all our members. Be sure to stay updated by checking the ASATT website regularly for upcoming events and opportunities.

Thank you for your continued dedication and support. I look forward to engaging with all of you at future events.

Sincerely,
Mohamed Hamza, MD, Cer.A.T.T.
region5@asatt.org

REGION 6

Happy 2025! I hope you are doing well and have recovered from a busy holiday season. As we plan ahead for the year, I am looking to have a Regional meeting for all to attend later this year. The location has yet to be confirmed, but stay tuned for updates so you can make your travel arrangements. It will be on the west-coast and central to Region 6 as a whole. I look forward to creating meeting opportunities for our members and having more opportunities to get our Region together.

Until we meet again,
Sara Paraspolo, Cer. A.T.T.
region6@asatt.org

REGION 7

We are teaming up with Region 6 for our Q1 Webinar. Hope you all can join us for this educational opportunity capturing the much-needed continuing education credits for our certification. As a reminder the meeting is Saturday, March 22nd 10:00-2:00 PT. Don't forget to RSVP and we will see you all there!

My goal is to offer at least one in person meeting in the beautiful Pacific Northwest region. Stay tuned for more information. Look forward to seeing you all on March 22nd for our Webinar! Take care, stay safe!

Seong Unti, Cer.A.T.T.
region7@asatt.org

ASATT's 2023 Annual Report is ready!

Check it out here

The 2024 Annual General Membership meeting reflected on ASATT's accomplishments in 2023 and highlighted exciting updates for the future. The Board of Directors' impactful initiatives bring visibility of our profession, proving new opportunities for our members and future generations of anesthesia technicians and technologists. Download the 2023 Annual Report here.

Press Release

2025 CONTINUING EDUCATION POLICY UPDATES

MIKE KOSANKE, Cer.A.T.T.

Hello ASATT members!!

I hope 2024 treated you well. This past year the continuing education committee along with the board of directors have been working on a few changes to how we accept CEU's. The first big change I want to tell you about is how we will be accepting CEU's. Starting January 1st 2025 ASATT will no longer be doing CEU's in the increments of 1 hour. Instead, they will be accepted in increments of 15 minutes. This benefits us in a few ways. It allows the members to submit CEU's from lectures, presentations and hands-on skills labs that don't necessarily run for the 50-60 minute range. It also gives us more opportunities to get speakers for conferences and webinars that want to speak but don't necessarily have the 50-60 minutes of content that was needed. This also puts us in line with how other anesthesia related associations do their CEU's. With that being said, starting January 1st 2025 ASATT will be accepting CEU's from AANA as non 3rd party CEU's. This gives the members additional areas to get CEU's from. I think these changes move us in a better direction and keep us in line with how other organizations are accepting their CEU's, giving our members more resources to obtain their CEU's and give ASATT more opportunities to get speakers for our conferences and webinars.

Mike Kosanke, Cer.A.T.T.
Continuing Education Director

Write an article for *The Sensor*

Interested in writing an article for the Sensor? It's a wonderful opportunity for you to gain national recognition and earn CEUs!

To support you, the Editorial Board will be available to answer questions and provide guidance: proofing grammar, reference documentation, etc.

Click here for details outlined on the ASATT website.

DID YOU KNOW?

You can now earn up to **5 CEUs** per year for contributing SENSOR articles!

Keep an eye out for an email with more information.

2025 Diamond Sponsor

SIMVANA

Looking to Volunteer on a Committee?

Join one of our ASATT Committees by visiting our Committee page.

- Bylaws / Policies and Procedures Committee
- Continuing Education Committee
- Ethics Committee
- Financial Committee
- National Certification Examination (NCE) Committee
- Nominations Committee
- Strategic Planning Committee
- Annual Conference Committee

asatt

AMERICAN SOCIETY OF ANESTHESIA TECHNOLOGISTS AND TECHNICIANS

6737 W. Washington St.
Ste 4210
Milwaukee, WI 53214
414.295.9220
asatt.org