

From Pain Relief to Perioperative Physicians: How Anesthesiologists Transformed Surgical Care Through Humanism

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ABSTRACT

The evolution of anesthesiology as a medical specialty reflects a continuous humanistic commitment to relieve suffering, preserve dignity, and protect patients from avoidable harm. In the preanesthetic era, surgical care was defined by extreme pain, limited precision, and high mortality. The introduction of ether anesthesia in 1846 made pain preventable and transformed surgery into a more controlled and humane practice. As procedures grew more complex, anesthesiologists' role expanded from inducing unconsciousness to preventing physiologic harm through airway management, monitoring, and balanced anesthesia. That same patient-safety ethic broadened their responsibilities across the surgical journey: from preoperative risk assessment and optimization to postoperative recovery, surveillance, and critical care—thus cementing anesthesiologists today as the perioperative physicians. Beyond surgery, this humanistic mission also shaped the role of anesthesiology in chronic pain medicine and palliative care, where relieving suffering and preserving dignity remain central goals. Together, these developments show that anesthesiology is not merely technical support for surgery, but a humanistic discipline grounded in patient advocacy and safety across the continuum of care

 KEYWORDS

Anesthesiology, Humanism, Perioperative Medicine, Patient-Centered Care

Surgery in the preanesthetic era was a brutal experience. Patients were awake, restrained, and screaming in unimaginable agony. (1) The introduction of ether anesthesia in 1846 changed medicine forever—not just by conquering pain, but by allowing surgery to be a controlled, precise, and humane practice. Since then, anesthesiologists' roles have expanded beyond merely facilitating unconsciousness into preoperative optimization, intraoperative management, and postoperative recovery. They became true perioperative physicians—ensuring that patients not only survived surgery, but also were optimized, protected, and healed.

This evolution was not accidental. Like its origins in pain relief, the development of anesthesiology was driven by its fundamental philosophy that undergoing surgery is a human experience that demands caring for the whole patient. Humanism in medicine, as defined by Dr. George Thibault, is a system “in which human interests, values, and dignity predominate”. (2) In the context of this paper, a humanistic practice of medicine means not only treating disease, but also recognizing suffering, preserving dignity, and protecting vulnerable patients. The role transformation of the anesthesiologist into the comprehensive perioperative physician proves that anesthesiology has never been just a technical specialty, but one deeply rooted in humanism, patient advocacy, and a commitment to patient safety.

0.1 | Anesthesia Eliminated Pain: The First Humanistic Revolution in Surgery

The advent of anesthesia eliminated the excruciating pain that had long defined surgery, reframing it as a patient-centred discipline focused on survival and comfort. Although modern anesthesiology is usually traced through Western figures such as Morton and Snow, ancient Chinese, Indian, and Arabic traditions also made efforts to reduce pain and suffering, reflecting a broader human impulse that long precedes modern anesthesia. (3) Before anesthesia, surgery was considered a last resort. (3) Patients endured illness until they chose between surgery or death. Nineteenth century playwright Frances Burney described her mastectomy: “cutting

through veins, arteries—flesh—nerves ... [My] scream lasted unremittingly ... I almost marvel that it rings not in my Ears still!” (1) Surgeons also suffered, often “[vomiting] after their patients' forced torment.” (4) Moreover, the pain and blood loss limited surgical precision. (5) Surgical success and patient survival depended on speed, as exemplified by Robert Liston, referred to as “the fastest knife in the West End”, who completed amputations in as little as 28 seconds. (1, 5, 6)

In 1846, Dr. William Morton's public demonstration of ether anesthesia at Massachusetts General Hospital marked the birth of modern anesthesia. (7, 8) Morton, a young dentist, sought a safe and effective alternative after seeing the failure of nitrous oxide as an anesthetic. As he witnessed the effectiveness of inhaled ether in tooth extractions, he demonstrated that general surgery, too, could be performed painlessly. While ether was far from a perfect anesthetic, it shattered the belief that pain during surgery was inevitable. Anesthesia transformed surgery from a desperate, crude practice into a more precise and outcome-driven discipline. (4) But Morton's demonstration was more than a scientific breakthrough; for the first time, the patient's experience of undergoing surgery was recognized as a concern to be addressed through medical innovation. Pain was no longer inevitable, but rather something to be prevented during surgery. Anesthesia marked medicine's first step toward humanistic surgery.

Anesthesia also reshaped societal attitudes toward pain relief. (8) While patients perceived early anesthesia to be “the epitome of humanitarianism,” (7) some medical and religious communities regarded it as immoral, arguing that pain during surgery and childbirth was natural and necessary. (4, 7, 8) Dr. John Snow challenged these ingrained beliefs, by successfully administering chloroform during Queen Victoria's childbirth in 1853. (5) Her endorsement inspired others to seek pain relief during procedures, promoting the perception that patient dignity and comfort should be addressed in medicine.

0.2 | From Pain Control to Life-Saving Intraoperative Specialists

As surgeries became longer and more complex, anesthesiologists faced the new challenge of keeping unconscious patients alive and safe through the physiological stresses of surgery. Driven by the same humanistic philosophy, anesthesiologists evolved from pain relievers into intraoperative specialists, managing vital functions of the human body to maximize patients' chances of survival.

A key milestone occurred when Dr. William Macewen pioneered endotracheal intubation in 1879, preventing airway obstruction and suffocation, a major cause of perioperative mortality at the time. (8) This "secure airway" laid the foundation for modern airway management, ensuring safe ventilation for patients under general anesthesia. (9) In 1902, Dr. Harvey Cushing introduced hemodynamic monitoring. (10) He found that stabilizing blood pressure through a regional injection of cocaine before major amputations prevented shock and death, demonstrating the critical role of autonomic stability in patient survival. These innovations made surgery into controlled, predictable procedures with improved survival rates. (11)

A Canadian breakthrough further transformed the field in 1942, when Dr. Harold Griffith of Montréal introduced the first neuromuscular blocker, curare. (8, 12, 13) Before curare, muscle spasms constantly challenged abdominal surgeries and could only be overcome by excessive anesthesia, causing dangerous metabolic disturbances. (14) Muscle relaxation through curare enabled balanced anesthesia, allowing surgeons to safely perform complex procedures like open-heart and neurosurgery while reducing anesthesia-related complications. (11) Griffith's discovery exemplified the humanistic spirit, commitment to patient safety, and compassion that drove innovations in anesthesiology. (13, 15)

With advancements in airway management, hemodynamic stability, and muscle relaxation, many surgical fatalities became preventable. (11) A growing expertise in physiology and pharmacology helped establish anesthesiology as a specialty of its own, defined by its mis-

sion to enable surgical success while ensuring patient safety and survival. Anesthesiologists—once perceived as mere technicians—became the guardians of life during surgery, skillfully balancing unconsciousness, vital organ function, and the demands of surgery. This protective role is itself a uniquely humanistic act: once anesthetized, the patient is completely vulnerable and unable to advocate for themselves. In medicine where patient autonomy is a central ethical principle, anesthesiology is unusual in requiring patients to temporarily give up that autonomy, entrusting their safety and bodily functions to the hands of the anesthesiologist. Few moments in medicine involve such complete surrender of autonomy. This transfer of responsibility gives routine anesthetic care a distinctly humanistic character, rooted in a profound trust between the patient and the physician. Paradoxically, this role often takes place quietly, as some of the anesthesiologist's most important acts of advocacy occur while the patient is unconscious and unable to witness them.

0.3 | The Birth of the Perioperative Physician: Caring for the Whole Patient

With these life-saving advancements in the theatre, anesthesiology made surgery tolerable to patients of all ages and conditions, including the weak and elderly. (8) Yet, this humanistic mission did not stop within the theatre; anesthesiologists expanded their responsibility to encompass the entire surgical experience. They introduced proactive preparation and effective recovery methods to further improve patient outcomes, guiding patients through every stage of surgery to heal from illness. (16)

Recognizing that conditions like anemia and cardiopulmonary disease led to poorer surgical outcomes, anesthesiologists developed the preoperative evaluation to assess whether patients had sufficient physiological reserve to withstand anesthesia and surgical stress. (17) In 1941, the American Society of Anesthesiologists (ASA) introduced the ASA Physical Status Classification System, the first risk stratification tool in medicine. (17, 18) This system evaluated a patient's health before

surgery, helping anesthesiologists predict complications and tailor perioperative management to each patient. This preoperative evaluation placed a strong emphasis on patient safety, and had a profound impact on the organization and efficiency of the surgical system. (17) Building on this foundation, anesthesiologists then introduced prehabilitation—a proactive approach that empowers high-risk patients to improve their physical fitness, nutrition, and emotional resilience before surgery begins. (19) Beyond medical optimization, prehabilitation recognizes the connection between daily lifestyle and physical and mental health, helping patients enter surgery stronger and better prepared. Prehabilitation teams often consider patients' social barriers to surgical recovery in their care plans, such as limited transportation, inadequate caregiving support, or unstable housing, further demonstrating the broader role of an anesthesiologist as a health advocate. This holistic approach reflects the patient-centered philosophy of perioperative medicine—that patients are individuals with physical and emotional needs to be addressed to maximize recovery. (20)

Post-operatively, patients initially faced pain, respiratory failure, and life-threatening complications. (11) Committed to reducing suffering and improving safety, anesthesiologists developed dedicated recovery units equipped with resuscitation tools and staffed by trained nurses under their supervision. (21, 22) A major JAMA study in 1947 revealed that nearly half of post-operative deaths were preventable, highlighting the need for vigilant monitoring and early interventions. (22, 23) These recovery areas evolved into modern-day Post-Anesthesia Care Units (PACUs), where patients are now continuously monitored during the critical recovery period immediately after surgery, significantly reducing postoperative mortality. (22)

Early recovery areas were also the origins of modern Intensive Care Units (ICUs). The concept of critical care emerged during the 1952 polio epidemic in Copenhagen. Seeing polio patients suffer from respiratory failure, anesthesiologist Dr. Bjorn Ibsen applied techniques used for his critically ill post-operative patients, such as intubation and mechanical ventilation, to

the care of polio patients. (24) His innovative approach reduced the poliomyelitis mortality rate from 80 percent to 40 percent. (25) Inspired by this success, Ibsen transformed a recovery room into the first ICU, where any patient needing ventilation and hemodynamic monitoring would receive appropriate care in a dedicated area. (25) With their expertise in airway management and organ support, anesthesiologists naturally became leaders in critical care, improving survival rates of their patients perioperatively and beyond. (24)

These perioperative developments laid the foundations for Enhanced Recovery After Surgery (ERAS) guidelines in the 2000s, a holistic approach designed to optimize the entire surgical experience, from preoperative prehabilitation to postoperative strategies. (26) Aimed for smoother and faster recovery, implementation of ERAS guidelines has been shown to reduce hospital length of stay and perioperative morbidity while increasing patient satisfaction. (26) ERAS represents the culmination of decades of advancements in perioperative medicine, reinforcing that surgery is no longer solely about survival, but about safety, positive patient outcomes, and a smooth recovery. As architects of perioperative medicine, anesthesiologists have consistently combined expertise and compassion to push the boundaries in surgical care, shaping the patient-centred approach that defines modern surgery today.

0.4 | Anesthesiologists Beyond Surgery: Continuing the Humanistic Mission

Beginning with pain control and intraoperative care, the innate humanistic approach of anesthesiologists naturally cemented their unique role as perioperative physicians. Yet, anesthesiology did not evolve around the needs of surgery alone. With their broad expertise and skillset in relieving suffering, managing complex symptoms, and caring for vulnerable patients, the same humanistic philosophy led anesthesiologists into adjacent fields, such as chronic pain and palliative care.

In chronic pain medicine, pain is recognized as not only a physiological and sensory signal but also an emotional lived experience shaped by biological, psycholog-

ical, and social forces—explaining why chronic pain can be profoundly disabling even when structural findings are subtle or absent. (27) In contrast to acute perioperative care, chronic pain medicine takes a longitudinal approach that prioritizes function, coping, and quality of life alongside symptom reduction. (28) Within multidisciplinary pain programs, anesthesiologists contribute pharmacologic expertise and procedural skill, using multimodal strategies such as rehabilitation, psychological supports, and interventional therapies when appropriate, while balancing symptom relief with the long-term risks of medications and interventions. (28, 29) This work reflects the same humanistic principle that shaped anesthesiology from its beginnings: taking suffering seriously and advocating for patient-centred care. (29)

A similar humanistic philosophy connects anesthesiology to palliative care, where the goal shifts from curative treatment to comfort, dignity, and relief of suffering. Palliative care is defined as an approach that improves quality of life for patients facing life-threatening illnesses by preventing and relieving physical, psychosocial, and spiritual suffering. (30) In this context, anesthesiologists contribute expertise in symptom management, including careful titration of analgesics and other medications to relieve pain, dyspnea, and anxiety while respecting patients' goals and values. (31) By focusing on comfort, communication, and dignity, palliative care reflects the broader role of anesthesiologists as patient advocates in the most vulnerable moments of illness.

0.5 | Conclusion

Today, anesthesiologists are seen across the hospital: in the operating rooms, prehabilitation clinics, ICUs, pain clinics, and even palliative care wards. Their widespread presence and leadership across different settings reflects their commitment not just to understand diseases or master techniques, but to deliver compassionate and patient-centred care throughout the entire patient journey. Anesthesiology stands as a testament to the very essence of medicine—the aim being not just to cure diseases, but to safeguard humanity through every breath, every heartbeat, and every vulnerable moment.

REFERENCES

1. Brown M. Surgery and emotion: the era before anaesthesia. In: Schlich T, ed. *The Palgrave Handbook of the History of Surgery*. Wellcome Trust-Funded Monographs and Book Chapters. London, UK: Palgrave Macmillan; 2017. doi:10.1057/978-1-349-95260-1_6
2. Thibault GE. Humanism in medicine: what does it mean and why is it more important than ever? *Acad Med*. 2019;94(8):1074-7. doi:10.1097/ACM.0000000000002796
3. Paladini A, Penaloza JB, Sanchez RP, Ergönenç T, Varrassi G. Bridging old and new in pain medicine: an historical review. *Cureus*. 2023;15(8):e43639. doi:10.7759/cureus.43639
4. Booser A. The astonishingly slow progress towards surgical anaesthesia: part I. *Mo Med*. 2021;118(6):511-7.
5. Gawande A. Two hundred years of surgery. *N Engl J Med*. 2012;366(18):1716-23. doi:10.1056/NEJMra1202392
6. Wright AS, Maxwell Iv PJ. Robert Liston, MD. (October 28, 1794–December 7, 1847): the fastest knife in the West End. *Am Surg*. 2014;80(1):1–2. Accessed April 6, 2026. Available from: <https://research.ebsco.com/linkprocessor/plink?id=e864f796-5d65-301d-9090-2579fda520ea>
7. Snow SJ. *Blessed Days of Anaesthesia : How Anaesthetics Changed the World*. Oxford, UK: Oxford University Press; 2009. Available from: <https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=1073482>
8. Keys TE, Huston KG, Leake CD, Gillespie NA, Fulton JF. *The History of Surgical Anesthesia*. Reprint ed. Huntington, NY: R.E. Krieger; 1978. (Originally published 1963).
9. Macewen W. Clinical observations on the introduction of tracheal tubes by the mouth instead of performing tracheotomy or laryngotomy. *Br Med J*. 1880;2(1022):163-5. doi:10.1136/bmj.2.1022.163
10. Cushing H. On the avoidance of shock in major amputations by cocainization of large nerve-trunks preliminary to their division, with observations on blood-pressure changes in surgical cases. *Ann Surg*. 1902;36(3):321-45. doi:10.1097/00000658-190209000-00001
11. Abhyankar RS, Jessop KM. From craft to profession: the development of modern anesthesiology: part II. *Mo Med*. 2022;119(1):14-20.
12. Griffith HR. Curare in anesthesia. *Journal of the American Medical Association*. 1945 Mar 17;127(11):642-4. doi:10.1001/jama.1945.02860110022006
13. Sykes K. Harold Griffith memorial lecture. the Griffith legacy. *Can J Anaesth*. 1993;40(4):365-74. doi:10.1007/bf03009637
14. Foldes FF. Anesthesia before and after curare. *Anaesthesiol Reanim*. 1993;18(5):128-31.
15. Dillane D, Chartrand D, Maltby R. Harold Griffith's legacy: a tribute on the 75th anniversary of the introduction of curare into anesthetic practice. *Can J Anesth*. 2017;64(6):559-68.

doi:10.1007/s12630-017-0864-6

16. Dean HF, Carter F, Francis NK. Modern perioperative medicine - past, present, and future. *Innov Surg Sci*. 2019;4(4):123-31. doi:10.1515/iss-2019-0014

17. Medical Management of the Surgical Patient: A Textbook of Perioperative Medicine. 5th ed. Cambridge, UK: Cambridge University Press; 2013. doi:10.1017/CBO9780511920660

18. Hackett NJ, De Oliveira GS, Jain UK, Kim JYS. ASA class is a reliable independent predictor of medical complications and mortality following surgery. *Int J Surg*. 2015;18:184-90. doi:10.1016/j.ijsu.2015.04.079

19. Shaughness G, Howard R, Englesbe M. Patient-centered surgical prehabilitation. *Am J Surg*. 2018;216(3):636-8. doi:10.1016/j.amjsurg.2017.04.005

20. Wall J, Dhesi J, Snowden C, Swart M. Perioperative medicine. *Future Healthc J*. 2022;9(2):138-43. doi:10.7861/fhj.2022-0051

21. Simpson JC, Moonesinghe SR. Introduction to the postanaesthetic care unit. *Perioper Med (Lond)*. 2013;2(1):5. doi:10.1186/2047-0525-2-5

22. Barone CP, Pablo CS, Barone GW. A history of the PACU. *J PeriAnesth Nurs*. 2003;18(4):237-41. doi:10.1016/S1089-9472(03)00130-8

23. Ruth HS, Haugen FP, Grove DD. Anesthesia study commission: Findings of eleven years' activity. *Journal of the American Medical Association*. 1947 Dec 6;135(14):881-4. doi:10.1001/jama.1947.02890140001001

24. Kelly FE, Fong K, Hirsch N, Nolan JP. Intensive care medicine is 60 years old: the history and future of the intensive care unit. *Clin Med (Lond)*. 2014;14(4):376-9. doi:10.7861/clinmedicine.14-4-376

25. Ángeles-Sistac D, Morán-Chorro I, Morales-Quinteros L, Sistac D, Moran-Chorro I, Morales-Quintero L. Bjørn Ibsen: what made intensive care so critical?. *Cureus*. 2024 Aug 20;16(8)

26. Tippireddy S, Ghatol D. Anesthetic management for enhanced recovery after major surgery (ERAS). In: *StatPearls*. Treasure Island, FL: StatPearls Publishing; 2025.

27. Malik NA. Revised definition of pain by 'International Association for the Study of Pain': concepts, challenges and compromises. *Anaesth Pain Intensive Care*. 2020;24(5). doi:10.35975/apic.v24i5.1352

28. Substance Abuse and Mental Health Services Administration. *Managing Chronic Pain in Adults With or in Recovery from Substance Use Disorders*. Rockville, MD: U.S. Department of Health and Human Services; 2012.

29. de Barros GA, Kraychete DC, Lineburger EB, Módolo NS. Anesthesiology and pain medicine. *Braz J Anesthesiol*. 2022;72(5):549-52. doi:10.1016/j.bjane.2022.07.007

30. World Health Organization. *Palliative care*. Accessed February 6, 2026. Available from: <https://www.who.int/news-room/fact-sheets/detail/palliative-care>

31. Thota RS, Ramkiran S, Iyer S. The crucial and integral role of an anaesthesiologist as a palliative physician: a holistic approach

to patient care and comfort. *J Onco-Anaesthesiol Perioper Med*. 2024;1(3):135-6. doi:10.4103/joapm.joapm; 1;24