Ethical Decision-Making Frameworks in Intensive Care Medicine

Dr. Jalad Kapoor, Mr. Ghanshyam Singh, Mr. Manish Samyal
Professor, Assistant Professor, Assistant Professor
Department of Anesthesiology
Saraswathi Institute of Medical Sciences, Hapur
research@sims.edu.in

***Abstract*—Making decisions that are ethical is a characteristic aspect of intensive care medicine, in which practitioners constantly face high-stakes decisions involving life-sustaining interventions, resource utilisation, end-of-life care, and patient autonomy. Prognostic uncertainty, the technological ability to extend the lifespan, family suffering, and the ethical strain on care providers help to increase the difficulty of these choices. The article is the critical analysis of the ethical decision-making frameworks in the field of intensive care medicine that has combined theoretical models, empirical evidence and practical ethical guidances in adult, neonatal, paediatric and emergency critical care settings. Basing on the existing bioethical principles, shared decision-making models, communicative ethics, and crisis-based allocation frameworks, the review presents the impact of ethical climates, time pressure, moral distress, and sociocultural factors on the decision process in the intensive care units (ICUs). Ethical issues in the times of population health emergencies, end-of-life decision-making, and incorporation of palliative care principles are given special attention. New forces of digital health, artificial intelligence and psychosocial determinants of ethical decision-making are also addressed. The article indicates that ethically sound ICU practise should have organised structures, interdisciplinary teamwork, effective communication, and institutional resources to facilitate morally sustainable care.**

***Index Terms*—Ethical decision-making, Intensive care medicine, Moral distress, End-of-life care, Shared decision-making, ICU ethics**

I. Introduction

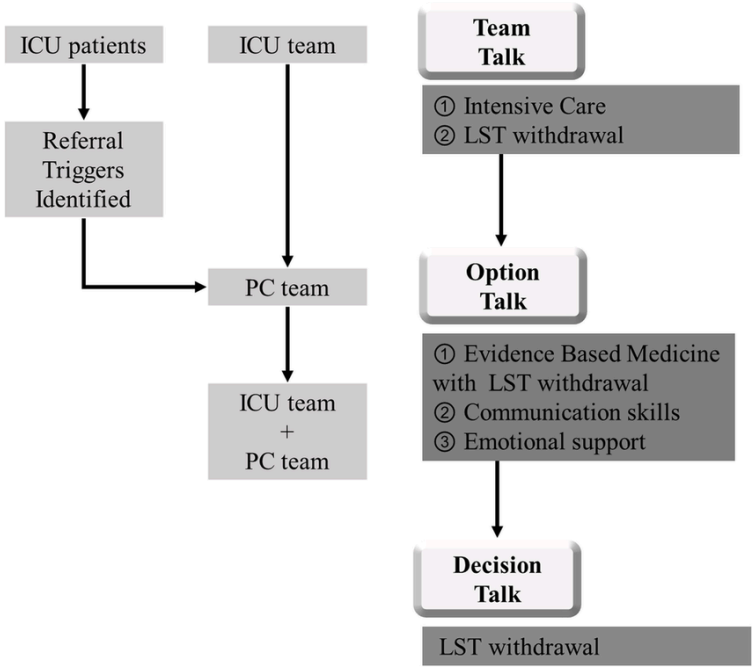
The field of intensive care medicine is in a special moral position in healthcare. The decisions made in the intensive care unit (ICU) are commonly life and death cases, uncertainty about the prognosis, and implementation or removal of advanced life-system technologies. Clinicians have to achieve a balance between conflicting ethical principles under the circumstances of urgency, emotional pressure, and insufficient information, such as beneficence, non-maleficence, respect to autonomy, and justice (James et al., 2018; Ruiz et al., 2019). There are many different situations where ethical issues emerge in the ICU, such as admission selection, life support continuation or discontinuation, end-of-life care, symptom and pain management, and resource prioritisation (Kinsella et al., 2007; Nicoli et al., 2019). They not only impact patients and families but also healthcare professionals with the contribution of moral distress, burnout, and the desire to exit the profession (Silverman et al., 2022). The COVID-19 crisis also revealed ethical weaknesses in the intensive care unit, suggesting explicit, transparent, and reasonable decision-making frameworks in times of crisis (Rubio et al., 2020; Guidolin et al., 2022). It is on this background that the ethical decision making systems have been developed to help clinicians manoeuvre through the thorny moral grounds, and provide patient-centred and socially-responsible care. The article is a synthesis of theoretical, empirical, and applied literature on ethics decision-making models in intensive care medicine focusing on the adult, neonatal, paediatric, and nursing ethics and the public health and psychosocial literature.

II. Ethics in Making Decisions in Intensive Care

The principlism approach that considers respect to independence, beneficence, anti-maleficence, and justice is traditionally applied to ethical decision-making in intensive care. Although these principles offer an ethical base, they are not usually unambiguous when applied in the context of ICUs because of conflicting values and uncertain results (Forte et al., 2018). In intensive care, autonomy has been limited in most cases because most patients are unable to make decisions. Surrogate decision-making, best-interest standards and advance directives thus become critical (Kinsella and Booth, 2007). The value of beneficence and non-maleficence should be balanced with the possible medical futility and the excessive burden of treatment, especially in end-of-life cases (Donaldson, 2024). The issue of justice is particularly urgent in resource-constrained environments, in which admission and maintenance of life support to ICU may involve prioritising choices (Guidolin et al., 2022). Ethical theories of intensive care therefore go past the judgement of the individual clinician to institutional policies, societal values and also legal aspects.

III. Organised Ethical Decision-Making Models

Figure 1 ICU Ethical Decision-Making Framework



Instead, the author depicts the interaction between the bioethical principles (autonomy, beneficence, non-maleficence, justice), shared decision-making with families, clinical prognosis, and institutional policies as an integrated ethical decision-making framework in intensive care medicine. This model illustrates the recursive reassessment of the goals of care, especially in life-sustaining care and end-of-life care, to promote the clarity of the morally sustainable care of the ICU.

IV. Moral Climate and Organisational Environment

The decision making process in an ICU also largely depends on the ethical climate of the ICU. Van den Bulcke et al. (2018) have used the conceptualization of an ethical decision-making climate that is a multidimensional construct in terms of leadership support, interdisciplinary interaction and perceived fairness. A positive ethical climate is linked to enhanced team working and less morally distressing. On the contrary, climate situations marked with poor ethics are associated with conflict, lack of consistency in decision-making, and discontent among professionals (Silverman et al., 2022). Such results highlight the significance of institutional accountability in the facilitation of ethical practice, instead of putting the pressure on individual clinicians.

V. Communicative and Shared Decision-Making Models

Shared decision-making is also a popular concept propagated as an ethical ideal in intensive care, especially at the end-of-life. The ethics frameworks are focused on communicative, mutual understanding, and respect to various values among the clinicians, patients, and families (Daboval and Shidler, 2014). Parental authority and consideration of best interests of the child and long-term quality-of-life aspects have to be considered in shared decision-making in neonatal and pediatric ICUs (Baumann-hölzle et al., 2005; Moynihan et al., 2021). These settings place emphasis on clarity and having regular family meetings as the core of making ethically sound decisions.

VI. Ethical Deliberation, Time, and Uncertainty

Intensive care decision-making is characterised by pressure on time. The importance of time in ethics described by Seidlein et al. (2021) includes that haste decision-making can undermine ethical thought processes and that time-consuming decision-making can increase suffering. The necessity to make a decision iteratively is getting recognised in ethical frameworks that provide a chance to shift goals of care as a reaction to clinical course, patient values, and prognostic clarity (James et al., 2018).

VII. Ethical Decision Making During Crisis and Scarcity of Resources

Critical incidents in the health of the population put an unprecedented burden on the ethical standards of intensive care. The ICUs had never experienced such a high number of bed, ventilator, and staff shortages as during the COVID-19 pandemic, which required triage and allocation decisions that were not necessarily patient-centred (Rubio et al., 2020). Ethical frameworks on crisis are concerned with transparency, consistency, proportionality, and accountability. Guidolin et al. (2022) suggested resources allocation tools in the form of a structured tool that could assist in making the ethically defensible decisions and lessen the moral burden on frontline clinicians. These experiences demonstrate why the preparedness, ethical training and institutional guidance is necessary to guide ICU teams in future crises.

VIII. Both Moral Distress and Professional Well-Being

Intensive care is an area that has far reaching ethical implications to health care practitioners. Moral distress occurs when a given action is ethically right in the eyes of clinicians, and a barrier prevents them from taking the action (institutional, legal, or hierarchical) (Silverman et al., 2022). Specifically, nurses are exposed to repetitive ethical conflicts that involve perceived futility, violent treatment, and end-of-life care (Suryadi and Patandean, 2025; Afenigus and Sinshaw, 2025). Prolonged moral distress is a factor that causes burnout, emotional fatigue, and labour turnover. Ethical frameworks need to go beyond patient outcomes, to include the professional well-being that involves ethics consultation services, debriefing systems as well as supportive leadership (Grech & Hewitt, 2023).

IX. Decision-Making at the end of life in the Intensive Care

The end of life care is one of the most ethically challenging areas in intensive care medicine. Withdrawal or withholding of life-sustaining treatment should be well discussed considering the wishes of the patients, their prognosis, proportionality of treatment, and dignity (Kinsella and Booth, 2007). The end-of-life care ethical frameworks focus on advance care planning, surrogate decision-making, and the introduction of palliative care principles into the ICU practise (Donaldson, 2024). The decisions are further complicated by the developmental factors and parental roles, in paediatric and neonatal ICUs (Baumann-hölzle et al., 2005; Moynihan et al., 2021). Ethical care in end-of-life care is that of pain and symptom management. Carvalho et al. (2018) suggested the conceptual framework with the focus on relieving suffering, proportionality, and keeping patient values in the decision to manage pain.

X. Social cultural, Psychosocial and Public Health Approaches

There is no such thing as ethical decision-making in intensive care in a social vacuum. Patient and family preferences are determined by sociocultural values, health literacy, mental health, and social support, which affect ethical deliberations (Ashifa, 2022; Rasi and Ashifa, 2019). Both the families and clinicians are influenced by psychological stress and emotional resilience. The studies on stress, mental health literacy, and coping indicate that there is a necessity to use empathetic communication and psychosocial support in the ethical framework (Elkin et al., 2025; Zahoor et al., 2025; Ranganathan et al., 2024). Equity and justice are also highlighted in the public health lens, especially in the marginalised groups where access to intensive care and decision-making could be restricted (Ashifa, 2021; Vettriselvan, and Anto, 2018).

XI. Artificial Intelligence, Emerging Ethical Is in Digital Health

The use of digital technologies and artificial intelligence is becoming important in the decision-making process in intensive care. Potentially beneficial predictive analytics, decision-support systems, and data-driven triage tools have ethical issues associated with transparency, bias, accountability, and patient autonomy (Devi et al., 2025; Shanthi et al., 2025). To overcome these challenges, ethical frameworks will have to develop and make sure that technology aids and does not overrule human judgement and ethical deliberation. Digital communication technology and patient engagement applications can be used to improve shared decision-making, provided it is applied ethically (Catherine et al., 2025).

XII. Towards Coherent Ethical Decision-Making Systems

Modern literature is becoming more supportive of combined ethical decision-making approaches, which integrate principlism, shared decision-making, organisational ethics, and perspectives to treating the issue of public health (Forte et al., 2018; Nicoli et al., 2019).

Such frameworks emphasize:

- Organised moral reasoning.
- Interdisciplinary team work.
- Transparent communication
- Accountability in institutions.
- Moral resiliency support.

These factors are necessary to ethically sustainable intensive care practice.

XIII. Future Directions

Future studies must aim at empirically assessing ethical principles and practices in various ICU environments, incorporate patient-reported outcomes, and are expected to treat the ethical nature of emerging technologies. Clinical ethic education and training must be incorporated into the critical care training programmes to increase moral competence and resilience.

XIV. Conclusion

The concept of making ethical decisions lies at the core of intensive care medicine and defines patient outcomes, the well-being of professionals, and the perception of healthcare systems by the population. The difficulties of the ICU ethics require clear, transparent, and context-sensitive models that combine the clinical experience, moral values, and psychosocial consciousness.

Through the creation of conducive ethical environments, the support of shared decision making, and the support of ethical distress, the intensive care units can strive towards ethical and humane practices even within the conditions of the most difficult situation.

References

[1] Afenigus, A. D., & Sinshaw, M. A. (2025). Ethical dilemmas and decision-making in emergency and critical care nursing in Western Amhara region, Northwest Ethiopia: a multi-method qualitative study. BMC nursing, 24(1), 295.

[2] Ashifa, K. M. (2019). Developmental initiatives for persons with disabilities: Appraisal on village-based rehabilitation of Amar Seva Sangam. Indian Journal of Public Health Research & Development, 10(12), 1257–1261.

[3] Ashifa, K. M. (2020). Effect of substance abuse on physical health of adolescents. European Journal of Molecular & Clinical Medicine, 7(2), 3155–3160.

[4] Ashifa, K. M. (2020). Effect of sustenance abuse on physical health of adolescents. European Journal of Molecular & Clinical Medicine, 7(2).

[5] Ashifa, K. M. (2020). Physical health hazards of schizophrenia patients. Systematic Reviews in Pharmacy, 11(12), 1848–1850.

[6] Ashifa, K. M. (2021). Analysis on the determinants of health status among tribal communities. Journal of Cardiovascular Disease Research, 12(3), 531–534.

[7] Ashifa, K. M. (2021). Health status of primitive tribal women in India. Journal of Cardiovascular Disease Research, 12(5), 772.

[8] Ashifa, K. M. (2022). A situation analysis of the social well-being of elderly during the COVID-19 pandemic. International Journal of Health Sciences, 6(3), 10156–10163.

[9] Ashifa, K. M., & Ramya, P. (2019). Health afflictions and quality of work life among women working in fireworks industry. International Journal of Engineering and Advanced Technology, 8(6S3), 1723–1725.

[10] Baumann‐hölzle, R., Maffezzoni, M., & Ulrich Bucher, H. (2005). A framework for ethical decision making in neonatal intensive care. Acta paediatrica, 94(12), 1777-1783.

[11] Carvalho, A. S., Martins Pereira, S., Jacomo, A., Magalhaes, S., Araújo, J., Hernández-Marrero, P., & Schatman, M. E. (2018). Ethical decision making in pain management: a conceptual framework. Journal of pain research, 967-976.

[12] Catherine, S., Gupta, N., Gopi, E., & Swadhi, R. (2025). Enhancing Patient Engagement and Outcomes Through Digital Transformation: Machine Learning in Medical Marketing. In Impact of Digital Transformation on Business Growth and Performance (pp. 285-312). IGI Global.

[13] Daboval, T., & Shidler, S. (2014). Ethical framework for shared decision making in the neonatal intensive care unit: communicative ethics. Paediatrics & child health, 19(6), 302-304.

[14] Devi, M., Manokaran, D., Sehgal, R. K., Shariff, S. A., & Vettriselvan, R. (2025). Precision Medicine, Personalized Treatment, and Network-Driven Innovations: Transforming Healthcare With AI. In AI for Large Scale Communication Networks (pp. 303-322). IGI Global.

[15] Donaldson, T. (2024). Human flourishing, the goals of medicine and integration of palliative care considerations into intensive care decision-making. Journal of medical ethics, 50(8), 539-543.

[16] Elkin, N., Mohammed, A. K., Kılınçel, Ş., Soydan, A. M., Tanrıver, S. Ç., Çelik, Ş., & Ranganathan, M. (2025). Mental health literacy and happiness among university students: A social work perspective to promoting well-being. Frontiers in Psychiatry, 16, 1541316.

[17] Forte, D. N., Kawai, F., & Cohen, C. (2018). A bioethical framework to guide the decision-making process in the care of seriously ill patients. BMC Medical Ethics, 19(1), 78.

[18] Frize, M., Yang, L., Walker, R. C., & O'Connor, A. M. (2005). Conceptual framework of knowledge management for ethical decision-making support in neonatal intensive care. IEEE Transactions on Information Technology in Biomedicine, 9(2), 205-215.

[19] Gayathri, R. K., Vettriselvan, R., Rajesh, D., Balakrishnan, R., Kumar, R., & Kavitha, J. (2025). Striking a Balance: Mental Health Challenges and Work-Life Integration among Women Faculty in Indian B-Schools. Texila International Journal of Public Health, 13(2).

[20] Gayathri, R. K., Vettriselvan, R., Rajesh, D., Balakrishnan, R., Kumar, R., & Kavitha, J. (2025). Strategic Role of Human Resource Management in Enhancing Occupational Health and Safety Practices in Business Schools in India. Texila International Journal of Public Health, 13(2).

[21] Grech, C., & Hewitt, J. (2023). Ethical issues in critical care. Critical Care Nursing, 78.

[22] Guidolin, K., Catton, J., Rubin, B., Bell, J., Marangos, J., Munro-Heesters, A., ... & Quereshy, F. (2022). Ethical decision making during a healthcare crisis: a resource allocation framework and tool. Journal of medical ethics, 48(8), 504-509.

[23] James, F. R., Power, N., & Laha, S. (2018). Decision-making in intensive care medicine–a review. Journal of the Intensive Care Society, 19(3), 247-258.

[24] Jenifer, R. D., Vettriselvan, R., Saxena, D., Velmurugan, P. R., & Balakrishnan, A. (2025). Green Marketing in Healthcare Advertising: A Global Perspective. In AI Impacts on Branded Entertainment and Advertising (pp. 303-326). IGI Global.

[25] Kinsella, J., & Booth, M. G. (2007). Ethical framework for end of life decisions in intensive care in the UK. J Natl Inst Public Health, 56(4), 387-92.

[26] Moynihan, K. M., Dorste, A., Siegel, B. D., Rabinowitz, E. J., McReynolds, A., & October, T. W. (2021). Decision-making, ethics, and end-of-life care in pediatric extracorporeal membrane oxygenation: A comprehensive narrative review. Pediatric Critical Care Medicine, 22(9), 806-812.

[27] Nicoli, F., Cummins, P., Raho, J. A., Porz, R., Minoja, G., & Picozzi, M. (2019). “If an acute event occurs, what should we do?” Diverse ethical approaches to decision-making in the ICU. Medicine, Health Care and Philosophy, 22(3), 475-486.

[28] Ranganathan, M., Jacob, A., Ashifa, K. M., Kumar, G. J., Anthony, M., Vijay, M., Kumari, R. B. (2024). An investigation of the effects of chronic stress on attention in parents of children with neurodevelopmental disorders. Universal Journal of Public Health, 12(1), 37–50.

[29] Rasi, R. A., & Ashifa, K. M. (2019). Role of community-based programmes for active ageing: Elders self-help group in Kerala. Indian Journal of Public Health Research & Development, 10(12).

[30] Rubio, O., Estella, A., Cabre, L., Saralegui-Reta, I., Martin, M. C., Zapata, L., ... & Amblas, J. (2020). Ethical recommendations for a difficult decision-making in intensive care units due to the exceptional situation of crisis by the COVID-19 pandemic: A rapid review & consensus of experts. Medicina Intensiva (English Edition), 44(7), 439-445.

[31] Ruiz, A. A., Wyszyńska, P. K., & Laudanski, K. (2019). Narrative review of decision-making processes in critical care. Anesthesia & Analgesia, 128(5), 962-970.

[32] Seidlein, A. H., Hannich, A., Nowak, A., Gründling, M., & Salloch, S. (2021). Ethical aspects of time in intensive care decision making. Journal of medical ethics, 47(12), e24-e24.

[33] Shanthi, H. J., Gokulakrishnan, A., Sharma, S., Deepika, R., & Swadhi, R. (2025). Leveraging Artificial Intelligence for Enhancing Urban Health: Applications, Challenges, and Innovations. In Nexus of AI, Climatology, and Urbanism for Smart Cities (pp. 275-306). IGI Global.

[34] Silverman, H., Wilson, T., Tisherman, S., Kheirbek, R., Mukherjee, T., Tabatabai, A., ... & Zimmer, M. (2022). Ethical decision-making climate, moral distress, and intention to leave among ICU professionals in a tertiary academic hospital center. BMC medical ethics, 23(1), 45.

[35] Suryadi, S., & Patandean, D. (2025). Ethical Dilemmas in Intensive Care Nursing: A Critical Review. International Journal of Knowledge in Evidence-based Practice for Universal Nursing, 1(1), 40-52.

[36] Svantesson, M., Griffiths, F., White, C., Bassford, C., & Slowther, A. (2021). Ethical conflicts during the process of deciding about ICU admission: an empirically driven ethical analysis. Journal of medical ethics, 47(12), e87-e87.

[37] Swadhi, R. (2025). Innovative strategies for widespread adoption in a climate-smart future: Scaling up agroforestry. In Agroforestry for a Climate-Smart Future (pp. 473-496). IGI Global.

[38] Swadhi, R., Gayathri, K., Suresh, N. V., Catherine, S., & Velmurugan, P. R. (2025). Leveraging Machine Learning for Enhanced Patient Engagement and Outcomes: Revolutionizing Healthcare Marketing. In Impact of Digital Transformation on Business Growth and Performance (pp. 313-340). IGI Global.

[39] Swadhi, R., Velmurugan, P. R., Gayathri, K., & Catherine, S. (2026). Evolving critical themes in advanced human resource management: Navigating change in the modern workplace. In Critical aspects in advanced human resource management (pp. 75-102). IGI Global.

[40] Van den Bulcke, B., Piers, R., Jensen, H. I., Malmgren, J., Metaxa, V., Reyners, A. K., ... & Benoit, D. D. (2018). Ethical decision-making climate in the ICU: theoretical framework and validation of a self-assessment tool. BMJ quality & safety, 27(10), 781-789.

[41] Venice, A., Swadhi, R., Gayathri, K., Chandra, P., & Sajana, K. P. (2026). Rehabilitation Robotics and Adaptive Motion Planning for Patient-Centric Care. In Intelligent Motion Control for Human-Centered Systems (pp. 51-76). IGI Global.

[42] Vettriselvan, R. (2025). Harnessing innovation and digital marketing in the era of industry 5.0: resilient healthcare SMEs. In The Future of Small Business in Industry 5.0 (pp. 163-186). IGI Global.

[43] Vettriselvan, R., & Anto, M. R. (2018). Pathetic health status and working condition of Zambian women. Indian Journal of Public Health Research & Development, 9(9), 259-264.

[44] Vettriselvan, R., & Rajan FSA, A. J. (2019). Occupational Health Issues Faced by Women in Spinners. Indian Journal of Public Health Research & Development, 10(1).

[45] Vettriselvan, R., Deepan, A., Jaiswani, G., Balakrishnan, A., & Sakthivel, R. (2025). Health Consequences of Early Marriage: Examining Morbidity and Long-Term Wellbeing. In Social, Political, and Health Implications of Early Marriage (pp. 189-212). IGI Global.

[46] Vettriselvan, R., Ramya, R., Selvalakshmi, V., Jyothi, P., & Velmurugan, P. R. (2026). Empowering Patients through Knowledge: Educational Strategies in Rehabilitation. In Holistic Approaches to Health Recovery (pp. 263-290). IGI Global.

[47] Vettriselvan, R., Velmurugan, P. R., Varshney, K. R., EP, J., & Deepika, R. (2025). Health Impacts of Smartphone and Internet Addictions Across Age Groups: Physical and Mental Health Across Generations. In Impacts of Digital Technologies Across Generations (pp. 187-210). IGI Global.

[48] Vijayalakshmi, M., Subramani, A. K., Vettriselvan, R., Catherin, T. C., & Deepika, R. (2025). Sustainability and Responsibility in the Digital Era: Leveraging Green Marketing in Healthcare. In Digital Citizenship and Building a Responsible Online Presence (pp. 285-306). IGI Global.

[49] Vijayalakshmi, M., Subramani, A. K., Vettriselvan, R., Velmurugan, P. R., & Hasine, J. (2025). Strategic Collaborations in Medical Innovation and AI-Driven Globalization: Advancing Healthcare Startups. In Navigating Strategic Partnerships for Sustainable Startup Growth (pp. 85-110). IGI Global.

[50] Zahoor, H., Mustafa, N., Ashifa, K. M., Safaei, M., & El Gamil, R. (2025). Unlocking resilience: Emotional intelligence and self-leadership shape stress perception among health students. International Journal of Innovation and Learning, 38(4), 395–419.