



Editorial

Medical Ethics in the Era of Minimally Invasive Surgery: Preserving Surgical Sovereignty in Bangladesh

The rapid expansion of minimally invasive surgery (MIS) has reshaped surgical practice in Bangladesh. From tertiary academic centers to peripheral hospitals, laparoscopic techniques have improved patient outcomes by reducing postoperative pain, shortening hospital stays, accelerating recovery, and enhancing quality of life.

Transformations and Ethical Challenges

At the same time, technological adoption has often advanced faster than the development of governance structures, standardized training pathways, and ethical safeguards. As a result, the modern operating theatre now presents a range of new ethical challenges.

Ethical Foundations in a Technology-Driven Theatre

Traditional surgical ethics remains grounded in four enduring principles: autonomy, beneficence, non-maleficence, and justice. Although these principles have not changed, their application has become more complex in laparoscopic practice, where care increasingly depends on sophisticated equipment, specialized consumables, technical support personnel, and industry partnerships.

In this environment, preserving professional accountability and clinical authority is not only a practical necessity but also a central ethical obligation.

Surgical Sovereignty and Professional Responsibility

At the core of surgical professionalism is the principle of surgical sovereignty: the surgeon's sole

responsibility for clinical judgment and operative decision-making. Patients give informed consent on the basis of trust in the surgeon's qualifications, expertise, and accountability. For that reason, decisions about operative strategy, anatomical dissection, energy use, management of complications, and conversion to open surgery must remain firmly under the surgeon's authority.

Industry influence

Commercial influence further complicates this landscape. The increasing presence of industry representatives within operating theatres introduces potential conflicts of interest. The promotion of expensive energy devices, stapling systems, meshes, and disposable instruments may subtly influence operative choices. In a healthcare system where most patients bear significant out-of-pocket expenses, unnecessary utilization of costly technologies raises concerns regarding distributive justice and responsible resource stewardship. Clinical decisions must remain guided by evidence, patient welfare, and cost-effectiveness rather than commercial considerations.

Competency and Ethics

Another ethical concern relates to competency. The growing demand for advanced laparoscopic procedures may encourage adoption of complex techniques without adequate training. In such circumstances, excessive dependence on technical personnel may compensate for deficiencies in formal surgical education. However, mastery of minimally invasive surgery requires not only technical dexterity but also cognitive expertise, situational awareness, sound judgment, and comprehensive understanding of surgical technology. Reliance on non-credentialed

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individuals for critical intraoperative guidance undermines professional autonomy and may compromise patient safety.

Addressing the Challenges

Addressing these challenges requires institutional and professional reform. Hospitals should establish clear governance policies defining the scope of technical personnel within the operating theatre. Professional societies should strengthen credentialing standards, simulation-based training, mentorship programs, and competency assessment frameworks. Ethical education must become an integral component of surgical training, emphasizing accountability, conflict-of-interest management, and professional leadership alongside operative skills.

The future of minimally invasive surgery in Bangladesh depends not only on technological advancement but also on ethical stewardship. Non-medical technical personnel remain valuable members of the surgical team, but their role must remain supportive rather than directive. The operating surgeon must remain the final authority in all clinical matters and the ultimate custodian of patient welfare. Preserving this principle is essential to maintaining public trust, professional integrity, and the highest standards of surgical care in an increasingly technology-driven healthcare environment.

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