

Hundreds of Surgeries or Hundreds of Citations? Rethinking Surgical Excellence

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INTRODUCTION

The field of surgery stands at a critical juncture. While scientific productivity has reached unprecedented levels, concerns are growing that the core foundation of surgical expertise, practical experience in the operating room, is being increasingly marginalized. Academic success, often measured by the quantity of publications and citation metrics, is now frequently prioritized over technical mastery and clinical judgment. This shift demands urgent reflection from the surgical profession.

The Rise of Publication Metrics in Surgical Careers

In recent decades, academic medicine has embraced a culture where quantitative research metrics, including h-indices, impact factors, and citation counts, serve as major indicators of professional success.^{1,2} While these metrics offer standardized ways to assess scholarly influence, their dominance in promotion criteria risks overshadowing clinical competence. For surgeons, whose primary duty lies in the precise and skilled care of patients, this imbalance is particularly concerning. Today, young surgical trainees are often encouraged to author multiple papers early in their careers, sometimes even on procedures they have performed only rarely or not at all.³ Authorship, even without significant clinical experience, is increasingly seen as a prerequisite for fellowship acceptance, academic appointments, and career advancement. This trend may foster a generation of surgeons whose resumes are rich with publications but less reflective of hands-on surgical proficiency. While the emphasis on academic publishing has grown, it is important to acknowledge that research involvement can offer real benefits to surgical trainees. Participation in research activities can enhance critical thinking, promote evidence-based practice, and provide exposure to innovation.

Studies have shown that research experience is increasingly valued in surgical residency and fellowship applications, and that many projects, such as case series, quality improvement initiatives, and surgical audits, are directly rooted in patient care.^{4,5}

Surgical mastery is inherently experiential. It is cultivated through repetition, mentorship, management of complications, and the disciplined refinement of technique. No number of publications can substitute for the judgment honed under real operative conditions or the tacit knowledge acquired through tactile engagement with human anatomy. Research from Ericsson et al.⁶ on deliberate practice underscores that true expertise in any field, including surgery, requires sustained, focused, and feedback-driven experience over years, not merely theoretical knowledge. In surgery, the consequences of inadequate technical proficiency are profound, potentially impacting patient safety and outcomes.

The Influence of Artificial Intelligence

The emergence of artificial intelligence (AI) has further influenced academic productivity by streamlining data analysis, generating draft manuscripts, and aiding in literature synthesis.⁷ While AI offers significant efficiency gains, it may also contribute to a surge of publications that are detached from operative experience, amplifying the existing disconnect between research output and clinical skill development.

Recalibrating Surgical Values

The profession must urgently recall what it values most in its members. Scientific contributions remain vital. Advances in surgical techniques, patient safety protocols, and healthcare policy depend on rigorous academic inquiry. However,



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research excellence must complement, not replace, technical mastery (Figure 1). Current efforts to reform surgical education, such as competency-based training models, underscore the importance of real-world skill acquisition over time-based or publication-based advancement.⁸ Accreditation bodies and academic institutions must continue to prioritize operative experience, technical assessment, and clinical outcomes when evaluating surgical trainees and faculty. Moreover, career advancement criteria should recognize and reward excellence in teaching, mentorship, surgical innovation, and clinical leadership alongside traditional research productivity.

The Patient Perspective

At the critical moment when a patient is entrusted to a surgeon's care, it is the surgeon's clinical judgment, technical precision, and prior hands-on experience, rather than their publication record, that most directly influence outcomes.



Figure 1. Balancing surgical excellence: scientific publications vs. surgical experience. A conceptual illustration depicting a balance scale, with one side representing scientific publications (symbolized by a stack of academic papers) and the other side representing surgical experience (symbolized by a hand holding a scalpel). The image underscores the need for balance between academic productivity and operative skill in defining modern surgical excellence.

CONCLUSION

The dichotomy between hundreds of surgeries and hundreds of citations is a false one: both scholarship and skill are essential to the future of surgery. Yet, in the current academic climate, it is imperative to restore balance. Surgical excellence cannot be measured by bibliometric indices alone. It must be reflected in a surgeon's ability to heal, to act decisively in critical moments, and to deliver safe, compassionate care. As a profession, we must ensure that the next generation of surgeons is celebrated not only for their contributions to literature but, more importantly, for the lives they save or transform through their surgical craft.

Footnotes

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