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The Iatrogenic Injury Pathway: A Narrative Review of Interdisciplinary Mitigation and Management of Surgical Complications in Women's Health

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Abstract

Background: Surgical procedures in gynecology and urogynecology, while often life-enhancing, carry inherent risks of significant complications such as ureteral injury, visceral injury, and fistula formation. The journey from intraoperative misadventure to long-term recovery defines an "iatrogenic injury pathway" that tests the resilience of healthcare systems and the well-being of patients. **Aim:** This narrative review aims to synthesize evidence on the system-level, interdisciplinary response to recognized surgical complications in women's health, from acute intraoperative mitigation to long-term physical and psychological rehabilitation. **Methods:** A comprehensive search of PubMed, CINAHL, PsycINFO, and Scopus (2010-2024) was conducted, integrating literature from gynecologic surgery, perioperative safety, urology, psychology, and rehabilitation sciences. **Results:** Effective management requires seamless transitions between distinct phases of care: intraoperative safety protocols (e.g., universal cystoscopy), acute post-operative rescue involving specialized surgical teams (MFM, Urology), and longitudinal rehabilitation (Physical Therapy, Psychology). Systemic learning via structured morbidity and mortality (M&M) conferences is critical for practice change, yet psychological trauma and fragmentation of care remain significant challenges. **Conclusion:** A deliberate, patient-centered, and integrated interdisciplinary framework is essential to mitigate harm, manage complications holistically, and restore patient trust following surgical adverse events.

Keywords: surgical complications; gynecologic surgery; interdisciplinary care; patient safety; psychological trauma

Introduction

Surgical interventions in gynecology and urogynecology, ranging from hysterectomy and prolapse repair to oncologic resections, are performed with the intent of improving health, relieving suffering, and curing disease. However, the anatomical complexity of the female pelvis, coupled with variables such as pathology, prior surgery, and patient body habitus, creates an inherent risk for significant intraoperative and post-operative complications. Injuries to the urinary tract (ureter, bladder), bowel, and major vasculature, along with sequelae like vesicovaginal fistula (VVF) and debilitating pelvic adhesive disease, represent profound adversities on the surgical journey (Benson et al., 2020; Nayak et al., 2022). For the patient, such an event initiates a disruptive and often traumatic "iatrogenic injury pathway"—a circuitous course from the initial injury through acute management, potential re-intervention, and long-term rehabilitation. This pathway is characterized not only by physical morbidity but also by psychological distress, loss of trust in the healthcare system, and significant alterations in quality of life (Pinto et al., 2016).

The clinical and ethical imperative extends beyond technical error prevention to encompass a robust, compassionate, and systematic response when complications occur. This response is fundamentally interdisciplinary, testing the integration and communication of multiple specialties. It begins in the operating room with the surgical team's immediate recognition and mitigation strategies, extends to acute

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post-operative management potentially involving Emergency Medical Services (EMS) for delayed presentations, and relies on sub-specialists like Gynecologic Oncologists, Maternal-Fetal Medicine (MFM) surgeons, and Urogynecologists for complex repair (Bole et al., 2020; Ade-Ojo & Tijani, 2020). The pathway then progresses into a prolonged phase of recovery managed by primary care, nursing, physical therapy for pelvic floor dysfunction, and clinical psychology to address the attendant trauma, anxiety, and post-traumatic stress disorder (PTSD) (de la Cruz et al., 2016).

This narrative review aims to synthesize the literature from 2010 to 2024 to map this iatrogenic injury pathway in women's health surgery. It will examine the systems and protocols designed for intraoperative prevention and immediate rescue, analyze the roles of various medical and allied health disciplines in acute and long-term management, and evaluate the mechanisms—particularly interdisciplinary morbidity and mortality (M&M) conferences—by which these adverse events lead to systemic learning and improvement in practice. The ultimate goal is to provide a framework for transforming a potentially devastating complication into a managed process that prioritizes both physical and psychological healing for patients and reinforces a culture of safety and transparency.

Methodology

This narrative review employed a systematic search strategy across multiple databases to capture the multidisciplinary scope of the topic. PubMed, CINAHL, PsycINFO, and Scopus were queried for English-language articles published between January 2010 and December 2024. The search strategy utilized a combination of MeSH terms and keywords organized into conceptual clusters: (1) Complications: "Intraoperative Complications," "Iatrogenic Disease," "Urinary Tract/injuries," "Intestinal Perforation/surgery," "Vesicovaginal Fistula," "Postoperative Complications"; (2) Specialties & Disciplines: "Gynecologic Surgical Procedures," "Urologic Surgical Procedures," "Maternal-Fetal Medicine," "Perioperative Care," "Emergency Medical Services," "Physical Therapy Modalities," "Psychology, Medical"; (3) Systems & Safety: "Patient Safety," "Checklist," "Cystoscopy," "Patient Care Team," "Morale," "After-Hours Care," "Continuity of Patient Care." Boolean operators (AND, OR) were used to combine clusters.

Inclusion criteria were: peer-reviewed articles focusing on prevention, recognition, or management of surgical complications in benign and oncologic gynecology/urogynecology; studies involving interdisciplinary care models; research on psychological sequelae of surgical complications; or analyses of safety protocols and M&M conferences. Exclusion criteria included: case reports with fewer than 5 patients, articles not specific to women's health surgery, and non-English publications. Data were extracted thematically, focusing on phases of care (prevention, acute management, rehabilitation) and the roles of specific disciplines.

Intraoperative Prevention and Immediate Rescue

The iatrogenic injury pathway ideally is intercepted at its origin. This phase is governed by system-level protocols and the technical vigilance of the operating team. The universal surgical safety checklist, a cornerstone of operations-led safety culture, is the first procedural defense, ensuring correct patient, procedure, site, and critical preoperative discussions (Ambulkar et al., 2018). In pelvic surgery, specific technical adjuncts have been advocated to minimize risk. The routine or selective use of intraoperative cystoscopy following hysterectomy and pelvic reconstructive surgery is a prime example. Evidence consistently demonstrates that cystoscopy significantly increases the intraoperative detection of lower urinary tract injuries, particularly ureteral patency and unsuspected bladder cystotomy, allowing for immediate repair, which is associated with vastly superior outcomes compared to delayed recognition (Peacock et al., 2018). This act transforms a potential post-operative catastrophe into a managed intraoperative event.

When an injury is recognized, the immediate rescue paradigm activates. The primary surgeon must assess their own capability for repair versus the need for intraoperative consultation. This decision point is critical. For complex ureteral injuries or injuries in irradiated fields, immediate consultation with a Gynecologic Oncologist, Urogynecologist, or Urologist may be warranted (Esparaz et al., 2015). The presence of a structured protocol for such consultations, rather than an ad-hoc process, streamlines care and improves outcomes. Furthermore, clear, empathetic communication with the patient or their proxy about the complication *before leaving the operating room* is an emerging ethical standard, initiating the process of transparency and trust-building that is crucial for the subsequent pathway (Vitous et al., 2022).

Acute Post-Operative Recognition and Sub-Specialist Intervention

For injuries that are not recognized intraoperatively, the pathway enters an acute post-operative phase marked by diagnostic uncertainty and potential emergent presentation (Fontana et al., 2020). Symptoms may be nonspecific: ileus, fever, flank or abdominal pain, or unusual vaginal drainage. The primary team—often the surgeon and inpatient nursing staff—must maintain a high index of suspicion. Laboratory trends (creatinine, leukocytosis) and imaging (CT urogram, cystogram) become essential diagnostic tools (Yanagisawa et al., 2022).

A delayed presentation may precipitate a crisis requiring EMS activation. A patient developing urosepsis from a ureteral leak or peritonitis from a bowel injury may present at home, necessitating transport to an appropriate facility, ideally one with the sub-specialist expertise required for management (Cohen et al., 2022). This transition highlights the importance of system-wide awareness; EMS protocols and emergency department staff benefit from understanding the potential complications of recent pelvic surgery to facilitate rapid triage and specialist notification.

Upon diagnosis, management transitions to sub-specialist care. Complex urologic injuries, such as high ureteral strictures or large VVFs, often require the expertise of fellowship-trained FPMRS (Female Pelvic Medicine and Reconstructive Surgery) specialists or Urologists with pelvic expertise. In cases where the injury occurs during or complicates a pregnancy, or involves complex dissection (placenta percreta), Maternal-Fetal Medicine surgeons become pivotal (Jauniaux et al., 2021). The timing and approach to repair—immediate vs. delayed, minimally invasive vs. open—are nuanced decisions made by these experts, balancing patient physiology, anatomy, and the principles of reconstructive surgery (Bodner-Adler et al., 2017; Zhou et al., 2016).

Longitudinal Rehabilitation and Multidisciplinary Management

Following acute stabilization or definitive surgical repair, the patient transitions into a protracted and complex rehabilitation phase. This stage demands the full breadth of interdisciplinary care to address the multifaceted physical, functional, and psychological sequelae of the complication, moving beyond crisis management toward holistic restoration of health and quality of life. The success of this phase hinges on seamless collaboration between specialized and primary care providers to manage both the tangible and intangible wounds left by the surgical adverse event.

Nursing and health assistant-led care form the essential, daily foundation of this longitudinal management. These frontline professionals are responsible for the meticulous execution of wound and incision care, the management of often long-term suprapubic or urethral catheters, and patient education on stoma care if required. Their role extends beyond technical tasks to continuous monitoring for signs of infection, ensuring catheter patency to prevent further renal compromise, and providing consistent, empathetic emotional support that is critical for a patient navigating a difficult recovery (Reid et al., 2021). This sustained, hands-on care relationship positions nurses as key advocates and observers, often being the first to identify setbacks or psychological distress requiring escalation.

Concurrently, pelvic floor physical therapy is instrumental in addressing the specific functional morbidities that arise. Physical therapists specializing in this domain assess and manage resultant voiding dysfunction, whether it manifests as detrusor overactivity causing urgency and frequency following bladder trauma, or underactivity leading to retention. Through techniques such as biofeedback for pelvic floor muscle re-education, manual therapy for scar tissue mobilization, and tailored exercise regimens, they work to restore pelvic organ support, alleviate chronic pelvic pain, and improve core stability compromised by surgical intervention (Lo et al., 2019). This rehabilitation is vital for regaining bodily control and confidence, directly targeting the functional limitations that can severely impact daily life.

The psychological impact of a major surgical complication, however, is frequently profound and under-recognized, necessitating formal clinical psychology intervention. Patients are at high risk for developing surgical complication-related post-traumatic stress disorder (PTSD), characterized by intrusive memories of the event, active avoidance of medical settings, hypervigilance regarding bodily sensations, and significant anxiety (Chauvet et al., 2023). This trauma is often compounded by body image disturbances, grief over lost health, and a fundamental loss of trust in the healthcare system. The integration of health psychologists or structured psychological support programs is therefore not ancillary but crucial for holistic recovery; untreated psychological morbidity can impair physical recovery, reduce adherence to medical advice, and ultimately outweigh the burden of the physical injury itself (Doll et al., 2016). Addressing this dimension is a prerequisite for true healing.

Finally, the patient's primary care physician or gynecologist provides the critical thread of continuity throughout this dispersed rehabilitation journey. This provider manages comorbid conditions that may have been destabilized by the traumatic event and subsequent interventions, serves as the central coordinator for communication between various subspecialists, and offers a longitudinal, trusting relationship that helps reintegrate the patient's overall health management after a disruptive and subspecialty-focused experience (Roberts et al., 2023). By resuming their role as the medical home, the primary care provider helps the patient transition from being a "complication case" back to a whole person, overseeing preventive care and long-term wellness beyond the immediate injury pathway (Table 1). Figure 1 illustrates the iatrogenic injury pathway following gynecologic and urogynecologic surgery, emphasizing the interdisciplinary response required to mitigate harm and restore patient well-being.

Table 1: The Iatrogenic Injury Pathway Phases, Key Actions, and Responsible Disciplines

Phase of Pathway	Primary Goals	Key Actions & Protocols	Primary Disciplines Involved	Potential System Failures
Intraoperative Prevention & Rescue	Prevent injury; recognize and repair injury immediately if it occurs.	Universal protocol/time-out; routine or indicated cystoscopy; surgical technique (sharp dissection, clear visualization); intraoperative consultation protocol; immediate disclosure to patient/proxy.	Primary Surgeon, Anesthesiology, OR Nursing, Urology/Gyn Oncology (consult).	Inconsistent use of checklists; failure to perform indicated cystoscopy; delay in seeking consultation; lack of disclosure protocol.
Acute Post-Operative Recognition	Diagnose delayed-presentation injury promptly; prevent sepsis/organ failure.	High clinical suspicion; appropriate lab work (creatinine, CBC); diagnostic imaging (CT urogram); rapid triage in ED; efficient specialist consultation.	Primary Surgical Team, Inpatient Nursing, Emergency Medicine, Radiology, EMS (for transport).	Attribution of symptoms to "normal" post-op course; diagnostic delay; poor ED-to-specialist communication.
Sub-Specialist Intervention	Execute definitive, expert repair; optimize timing and approach.	Decision on timing (immediate vs. delayed 6-12 weeks); surgical planning (open, laparoscopic, robotic); complex reconstruction.	Gynecologic Oncology, Urogynecology/FPMRS, Urology, Maternal-Fetal Medicine, Colorectal Surgery.	Lack of local expertise leading to transfer delays; suboptimal repair technique; poor coordination between services.
Longitudinal Rehabilitation	Restore physical function; manage psychological trauma; provide continuity of care.	Catheter/wound/stoma care; pelvic floor physical therapy; psychological assessment & therapy (CBT, trauma-focused); care coordination; long-term follow-up.	Nursing/Health Assistants, Physical Therapy, Clinical Psychology, Primary Care/Family Medicine, Pharmacy (for pain/psychotropics).	Fragmented care; lack of access to pelvic PT or psychology; untreated PTSD; poor communication back to primary care.

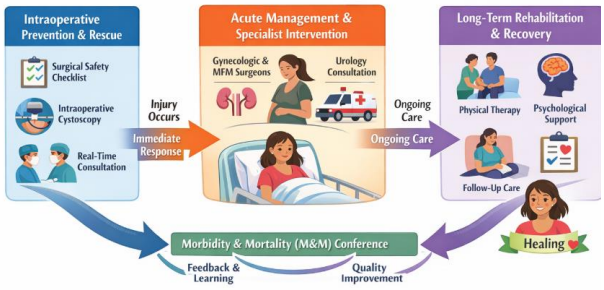

Figure 1: The Iatrogenic Injury Pathway in Women's Health Surgery

The Morbidity and Mortality Conference as an Engine for System Learning

The formal mechanism for closing the loop on the iatrogenic injury pathway is the interdisciplinary Morbidity and Mortality (M&M) conference. When conducted effectively, this forum transforms individual adverse events into collective learning opportunities (Table 2). A modern, blame-free M&M conference for a surgical complication should involve not only surgeons, but also representatives from anesthesiology, perioperative nursing, urology (if involved), radiology (to review imaging interpretation), and sometimes even ethics or risk management (Wasser et al., 2016).

The discussion should follow a structured format: case presentation, identification of system and human factor contributors (using models like the Swiss Cheese Model), review of the literature on prevention/management, and formulation of specific, actionable recommendations for practice change (Gaba et al., 2023). These recommendations might include mandating cystoscopy for all hysterectomies, creating a rapid-response pager for intraoperative urology consult, or developing a patient education sheet on warning signs of complications (Kohut et al., 2018). Tracking the implementation and impact of these recommendations is essential for the conference to have tangible effects on future patient safety (Lazzara et al., 2022).

Psychological Trauma and Ethical Imperatives

A review of the iatrogenic injury pathway is incomplete without confronting its profound psychological and ethical dimensions. The patient's experience is one of profound betrayal—a trust placed in the surgeon and system has been violated. Feelings of anger, fear, and vulnerability are pervasive (Casarin et al., 2020). The ethical duty of candor requires full, empathetic disclosure of the complication, an apology, and a clear management plan. This communication must be ongoing and is a shared responsibility of the entire team. Furthermore, the psychological fallout extends to the surgeon ("second victim" syndrome), who may experience guilt, shame, anxiety, and professional isolation (Wu & Pham, 2023). Institutional support programs for second victims are an essential component of a just safety culture, recognizing that supporting caregivers is integral to supporting patients (Scott et al., 2009; Nydoo et al., 2020).

Table 2: Interdisciplinary Roles in Managing the Sequelae of a Major Surgical Complication

Discipline	Role in Acute/Repair Phase	Role in Rehabilitation Phase	Critical Contribution to Holistic Care
Urogynecology/FPMRS	Definitive surgical planning and repair; decision on timing (delayed vs. immediate).	Long-term follow-up for continence, voiding function, and recurrence surveillance.	Technical expertise in reconstruction; management of complex lower urinary tract dysfunction.
Nursing & Health Assistants	Post-operative monitoring, catheter management (often prolonged), wound care, patient education on self-care.	Ongoing support, troubleshooting catheter issues, monitoring for UTI, providing empathetic listening.	Frontline, continuous care and patient advocacy; practical skill in managing durable medical equipment.
Clinical Psychology	Early assessment for acute stress reaction; support during hospitalization.	Treatment for PTSD, anxiety, depression; coping strategies for altered body image and medical trauma; couples counseling if sexual function impacted.	Addresses the invisible wounds; essential for restoring psychological well-being and engagement in care.
Pelvic Floor Physical Therapy	Typically begins after surgical healing; may assist with pain management pre-repair.	Rehabilitation of pelvic floor muscles; management of urinary urgency/frequency post-repair; scar tissue mobilization; pain management techniques.	Restores physical function and control; addresses musculoskeletal sequelae often overlooked.
Primary Care / Gynecology	Care coordination; management of comorbidities during acute phase.	Re-integrates patient into routine health maintenance; longitudinal monitoring; management of ongoing medications (e.g., for pain, mood).	Provides continuity and a medical "home" after the subspecialty journey concludes.
Pharmacist	Management of complex antibiotic regimens, pain control, DVT prophylaxis.	Review of polypharmacy; management of medications for neuropathic pain or psychological sequelae.	Optimizes medication safety and efficacy across the continuum of care.

Conclusion and Future Directions

The iatrogenic injury pathway in women's health surgery is a stark reality that demands a systematic, compassionate, and interdisciplinary response. This review has outlined a continuum of care that moves from intraoperative prevention, through acute rescue and sub-specialist repair, to comprehensive rehabilitation addressing both physical and psychological trauma. The pathway underscores that a complication is not a single event but a process that unfolds over time, involving a cast of professionals far beyond the original surgeon.

Future progress hinges on several key areas. First, the integration of psychological care must be standardized, with routine screening for PTSD and automatic referral pathways to health psychology embedded in post-complication care plans. Second, technological adjuncts like near-infrared fluorescence imaging with indocyanine green (ICG) for real-time ureteral visualization show promise in further reducing injury rates and warrant broader implementation study (Doshi et al., 2020). Third, the structure and impact of M&M conferences must be strengthened, with formal tracking of implemented

changes and their effects on patient outcomes. Finally, a culture that supports both the patient (first victim) and the care team (second victim) is non-negotiable. This requires institutional commitment to transparency, apology, and support programs (Raffone et al., 2022).

Ultimately, the measure of a healthcare system's excellence is not solely its complication rate, but how it responds when complications inevitably occur. By designing and adhering to a deliberate, patient-centered, interdisciplinary framework for the iatrogenic injury pathway, the field can better mitigate harm, foster healing, and uphold the trust that is the foundation of the therapeutic relationship.

References

1. Ade-Ojo, I. P., & Tijani, O. (2021). A review on the etiology, prevention, and management of ureteral injuries during obstetric and gynecologic surgeries. *International Journal of Women's Health*, 895-902. https://doi.org/10.2147/IJWH.S330060
2. Ambulkar, R., Ranganathan, P., Salunke, K., & Savarkar, S. (2018). The World Health Organization Surgical Safety Checklist: An audit of quality of implementation at a tertiary care high volume cancer institution. *Journal of Anaesthesiology Clinical Pharmacology*, *34*(3), 392-398. *DOI:* 10.4103/joacp.JOACP_328_17
3. Benson, C. R., Thompson, S., Li, G., Asafu-Adjei, D., & Brandes, S. B. (2020). Bladder and ureteral injuries during benign hysterectomy: an observational cohort analysis in New York State. *World Journal of Urology*, *38*(8), 2049-2054. https://doi.org/10.1007/s00345-018-2541-y
4. Bodner-Adler, B., Hanzal, E., Pablik, E., Koelbl, H., & Bodner, K. (2017). Management of vesicovaginal fistulas (VVFs) in women following benign gynaecologic surgery: a systematic review and meta-analysis. *PloS one*, *12*(2), e0171554. https://doi.org/10.1371/journal.pone.0171554
5. Bole, R., Linder, B. J., Gopalakrishna, A., Kuang, R., Boon, A. L., Habermann, E. B., ... & Viers, B. R. (2020). Malpractice litigation in iatrogenic ureteral injury: a legal database review. *Urology*, *146*, 19-24. https://doi.org/10.1016/j.urology.2020.08.049
6. Casarin, J., Ielmini, M., Cromi, A., Laganà, A. S., Poloni, N., Callegari, C., & Ghezzi, F. (2022). Post-traumatic stress following total hysterectomy for benign disease: an observational prospective study. *Journal of Psychosomatic Obstetrics & Gynecology*, *43*(1), 11-17. https://doi.org/10.1080/0167482X.2020.1752174
7. Chauvet, P., Figuier, C., Lambert, C., Bourdel, N., & Canis, M. (2023). Surgical complications and their impact for gynecological surgeons. *International Journal of Gynecology & Obstetrics*, *160*(3), 1001-1006. https://doi.org/10.1002/ijgo.14451
8. Cohen, A., Shi, D., Keraney, E., Stankard, B., & Nelson, M. (2022). Ultrasound in the Emergency Department Identifies Ectopic Pregnancy Post Hysterectomy: A Case Report. *Clinical Practice and Cases in Emergency Medicine*, *6*(2), 129. https://doi.org/10.5811/cpcem.2022.2.54929
9. de la Cruz, C. Z., Coulter, M., O'Rourke, K., Mbah, A. K., & Salihu, H. M. (2016). Post-traumatic stress disorder following emergency peripartum hysterectomy. *Archives of gynecology and obstetrics*, *294*(4), 681-688. https://doi.org/10.1007/s00404-016-4008-y
10. Doll, K. M., Barber, E. L., Bensen, J. T., Revilla, M. C., Snavely, A. C., Bennett, A. V., ... & Gehrig, P. A. (2016). The impact of surgical complications on health-related quality of life in women undergoing gynecologic and gynecologic oncology procedures: a prospective longitudinal cohort study. *American journal of obstetrics and gynecology*, *215*(4), 457-e1. https://doi.org/10.1016/j.ajog.2016.04.025
11. Doshi, C. P., Wozniak, A., & Quek, M. L. (2020). Near-infrared fluorescence imaging of ureters with intravenous indocyanine green during radical cystectomy to prevent ureteroenteric anastomotic strictures. *Urology*, *144*, 220-224. https://doi.org/10.1016/j.urology.2020.06.026
12. Esparaz, A. M., Pearl, J. A., Herts, B. R., LeBlanc, J., & Kapoor, B. (2015, June). Iatrogenic urinary tract injuries: etiology, diagnosis, and management. In *Seminars in interventional radiology* (Vol. 32, No. 02, pp. 195-208). Thieme Medical Publishers. DOI: 10.1055/s-0035-1549378
13. Fontana, F., Piacentino, F., Ossola, C., Casarin, J., Coppola, A., Cromi, A., ... & Venturini, M. (2021). Diagnostic and interventional radiology management of ureteral iatrogenic leakage after gynecologic surgery. *Diagnostics*, *11*(5), 750. https://doi.org/10.3390/diagnostics11050750
14. Gaba, F., Ash, K., Blyuss, O., Bizzarri, N., Kamfwa, P., Saiz, A., ... & Go Soar Collaborators. (2023). International variations in surgical morbidity and mortality post gynaecological oncology surgery: a Global Gynaecological Oncology Surgical Outcomes Collaborative Led Study (GO SOAR1). *Cancers*, *15*(20), 5001. https://doi.org/10.3390/cancers15205001
15. Jauniaux, E., Kingdom, J. C., & Silver, R. M. (2021). A comparison of recent guidelines in the diagnosis and management of placenta accreta spectrum disorders. *Best Practice & Research Clinical Obstetrics & Gynaecology*, *72*, 102-116. https://doi.org/10.1016/j.bpobgyn.2020.06.007
16. Kohut, A., Orfanelli, T., Poggio, J. L., Gibbon, D., De Meritens, A. B., & Richard, S. (2018).

Morbidity and mortality risk assessment in gynecologic oncology surgery using the American college of surgeons national surgical quality improvement program database. *International journal of gynecological cancer*, *28*(4), 840-847. https://doi.org/10.1097/IGC.0000000000001234

17. Lazzara, E. H., Salisbury, M., Hughes, A. M., Rogers, J. E., King, H. B., & Salas, E. (2022). The morbidity and mortality conference: opportunities for enhancing patient safety. *Journal of Patient Safety*, *18*(1), e275-e281. *DOI:* 10.1097/PTS.0000000000000765
18. Lo, T. S., Chua, S., Wijaya, T., Kao, C. C., & Uy-Patrimonio, M. C. (2019). Clinical relevance and treatment outcomes of vesicovaginal fistula (VVF) after obstetric and gynecologic surgery. *Taiwanese Journal of Obstetrics and Gynecology*, *58*(1), 111-116. https://doi.org/10.1016/j.tjog.2018.11.021
19. Nayak, A. L., Breau, R., Hickling, D., Pascali, D., Clancy, A., Mallick, R., & Chen, I. (2022). Risk factors for urologic injury in women undergoing hysterectomy for benign indication. *Journal of Obstetrics and Gynaecology Canada*, *44*(3), 247-254. https://doi.org/10.1016/j.jogc.2021.09.020
20. Nydoo, P., Pillay, B. J., Naicker, T., & Moodley, J. (2020). The second victim phenomenon in health care: a literature review. *Scandinavian journal of public health*, *48*(6), 629-637. https://doi.org/10.1177/1403494819855506
21. Peacock, L. M., Young, A., & Rogers, R. G. (2018). Universal cystoscopy at the time of benign hysterectomy: a debate. *American journal of obstetrics and gynecology*, *219*(1), 75-77. https://doi.org/10.1016/j.ajog.2018.04.020
22. Pinto, A., Faiz, O., Davis, R., Almoudaris, A., & Vincent, C. (2016). Surgical complications and their impact on patients' psychosocial well-being: a systematic review and meta-analysis. *BMJ open*, *6*(2), e007224. https://doi.org/10.1136/bmjopen-2014-007224
23. Raffone, A., Raimondo, D., Oliviero, A., Raspollini, A., Travaglino, A., Torella, M., ... & Mollo, A. (2022). The Use of near Infra-Red Radiation Imaging after Injection of Indocyanine Green (NIR–ICG) during Laparoscopic Treatment of Benign Gynecologic Conditions: Towards Minimalized Surgery. A Systematic Review of Literature. *Medicina*, *58*(6), 792. https://doi.org/10.3390/medicina58060792
24. Reid, S., Brocksom, J., Hamid, R., Ali, A., Thiruchelvam, N., Sahai, A., ... & Parkinson, R. (2021). British Association of Urological Surgeons (BAUS) and Nurses (BAUN) consensus document: management of the complications of long-term indwelling catheters. *BJU international*, *128*(6), 667-677. https://doi.org/10.1111/bju.15406
25. Roberts, S. E., Rosen, C. B., Keele, L. J., Kaufman, E. J., Wirtalla, C. J., Finn, C. B., ... & Kelz, R. R. (2023). Association of established primary care use with postoperative mortality following emergency general surgery procedures. *JAMA surgery*, *158*(10), 1023-1030. doi:10.1001/jamasurg.2023.2742
26. Scott, S. D., Hirschinger, L. E., Cox, K. R., McCoig, M., Brandt, J., & Hall, L. W. (2009). The natural history of recovery for the healthcare provider "second victim" after adverse patient events. *BMJ Quality & Safety*, *18*(5), 325-330. https://doi.org/10.1136/qshc.2009.032870
27. Vitous, C. A., Byrnes, M. E., De Roo, A., Jafri, S. M., & Suwanabol, P. A. (2022). Exploring emotional responses after postoperative complications: a qualitative study of practicing surgeons. *Annals of surgery*, *275*(1), e124-e131. *DOI:* 10.1097/SLA.0000000000004041
28. Wasser, T., Grunschel, B. D., Stevens, A., Capurso, N. A., Ralevski, E., Barkil-Oteo, A., & Trevisan, L. (2016). Transforming systems of care through a novel resident-led approach to morbidity and mortality conferences. *Academic Psychiatry*, *40*(6), 893-897. https://doi.org/10.1007/s40596-016-0606-z
29. Wu, A. W., & Pham, J. C. (2023). How does it feel? The system-person paradox of medical error. *Emergency Medicine Journal*, *40*(5), 318-319. https://doi.org/10.1136/emermed-2022-212999
30. Yanagisawa, T., Mori, K., Quhal, F., Kawada, T., Mostafaei, H., Laukhtina, E., ... & Shariat, S. F. (2023). Iatrogenic ureteric injury during abdominal or pelvic surgery: a meta-analysis. *BJU international*, *131*(5), 540-552. https://doi.org/10.1111/bju.15913
31. Zhou, L., Yang, T. X., Luo, D. Y., Chen, S. L., Liao, B. H., Li, H., ... & Shen, H. (2017). Factors influencing repair outcomes of vesicovaginal fistula: a retrospective review of 139 procedures. *Urologia internationalis*, *99*(1), 22-28. https://doi.org/10.1159/000452166