Normal Recovery or Complication: The Risks of Post-Operative Care

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Darrell Ranum is licensed to practice law in Ohio. He has more than 25 years of experience in healthcare, professional liability, risk management and patient safety.

As vice president, he supervises health care professionals who provide risk consulting services and education to hospitals, physician groups, and other organizations insured by The Doctors Company.

Mr. Ranum manages studies of medical malpractice claims and suits for the Company. The purpose is to identify and communicate system failures that result in patient harm. He is a frequent speaker and author on this research and related topics.

Mr. Ranum serves as vice president for legislation on the Board of the American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF).
Study
“Surgeons and their clinical teams are found responsible for errors across the entire surgical timeline – flawed decisions to operate, technical errors in OR, and post-operative mismanagement during recovery. Alarmingly, most of these scenarios are preventable.”

CRICO Strategies, Annual Benchmarking Report: Malpractice Risks in Surgery

Ruoff G. 2011
Focus: Risks in the post-operative time period

The study included general surgery claims that closed from 2007-2014 (n = 1,110)

Numbers of claims

- Preoperative time period n = 70 (6%)
- Intraoperative time period n = 678 (61%)
- Post-operative time period n = 305 (27%)
- Unknown n = 57 (5%)
Introduction

All claims and law suits were included in this study regardless of the outcome

- Claims with indemnity and claims with no indemnity
- Claims where patient injuries were due to negligence and claims where no negligence was identified
Objectives
Objectives

1. Identify the three most common risks faced by patients following surgery

2. List the three most common allegations made by patients for care provided in the post-operative period

3. Describe the three most common factors that contribute to patient injury during their recovery phase of care
Patient Injuries
Categories of Injuries Identified in Post-Op Care

- Surgical complications revealed during recovery
  - Punctures or lacerations of organs, blood vessels, nerves
  - Peritonitis, abscesses and other post-op infections

- Problems with post-operative care
  - Medication errors; medication management problems (opiates, antibiotics, anticoagulants)
  - Identification of DVTs and PEs; compartment syndrome
Patient Injuries

- Death 49%
- Infection 25%
- Malignancy 14%
- Need for additional surgery 13%
- Puncture or perforation during surgery 12%
- Hospitalization (ambulatory surgery) or prolonged hospitalization (inpatient surgery) 10%
- Hemorrhage 7%
- Tissue necrosis 7%

This data includes all injuries. Patients may suffer more than one injury so the total percentage adds up to > 100%.
Patient Injuries

- Emotional trauma 6%
- Metastasis 6%
- Embolism/thrombosis 5%
- Obstruction 5%
- Organ damage 5%
- Ongoing pain 5%
- Abscess 4%
- Cardiac or respiratory arrest 4%
- Multisystem failure 4%
- Tissue infarction 4%
- Adverse reaction 3%
- Amputation 3%
- Herniation 3%
- Foreign body 3%
- GI dysfunction 3%
- Embolism/thrombosis 5%
- Laceration or tear 3%
- Mobility dysfunction 3%
- Dehiscence, scarring, hematoma 2% (each)

And 31 other injuries with < 2% of claims
Severity of Patient Injury

Post-Operative Period

Post-Operative Patient Injury Severity

- Low 6%
- Medium 40%
- High 54%

Intraoperative Period

Operating Room Patient Injury Severity

- Low 3%
- Medium 74%
- High 23%

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Allegations
Allegations

- Improper management of surgical patient 21%
- Diagnosis-related 14%
- Improper performance of surgery 10%
- Improper management of treatment 9%
- Improper performance of treatment or procedure 6%
- Improper medication management 2%
Factors that Contributed to Patient Injury
Contributing Factors

1. Patient assessment issues 33%
2. Selection and management of therapy 20%
3. Patient factors 18%
4. Technical performance 18%
5. Communication among providers 14%
6. Communication between patient/family and providers 11%
Contributing Factors

1. Patient assessment issues 33%
   – Failure or delay ordering a diagnostic test
   – Failure to establish a differential diagnosis
   – Failure to consider available clinical information
   – Failure to address abnormal findings
Clinical Presentation
51 year old male to surgery for laminectomy. Several days after discharge, to ER complaining of back pain, openings at incision site and losing ability to move legs.

Unexpected Outcome
The next day, CT revealed a spinal abscess. The patient was taken to surgery but suffered paralysis.
The delay in diagnosis was determined to be the cause.
Clinical Presentation

84 year old female presented with an ulcer of her heel. She was taken to surgery for debridement. X-ray negative for osteomyelitis. Radiologist recommended bone scan for further analysis, but test not performed.

Unexpected Outcome

The patient had several debridements. She later complained that the ulcer was worse – infected. Vascular studies showed severe peripheral vascular disease. Result was BKA. Alleged inadequate assessment – lack of testing to determine proper management.
Clinical Presentation

29 year old male with complaints of abdominal pain taken to surgery for exploratory laparotomy. The next day complained of pain with tachycardia and shortness of breath. Surgeon thought pain was due to adhesions from previous surgery.

Unexpected Outcome

The patient began wheezing and could not void. Ordered nebulizer and urinary catheter. A CT to rule out PE was negative. Patient’s condition continued to deteriorate. He expired in ICU. Autopsy: COD was peritonitis due to perforation of small bowel.
Clinical Presentation
39 year old female with complaints of abdominal pain taken to surgery for lap-chole. That night, bleeding from site, BP 80/40 and HR 150s.

The next morning the patient’s Hgb. was 10.0. She was taken to surgery.

Unexpected Outcome
Found an estimated 3 liters of blood in abdominal cavity. Patient arrested and CPR was unsuccessful. A laceration of the liver was then identified.
1. Patient assessment issues 33%

2. Selection and management of therapy 20%

3. Patient factors 18%

4. Technical performance 18%

5. Communication among providers 14%

6. Communication between patient/family and providers 11%
Contributing Factors

(continued)

2. Selection and management of therapy 20%
   – Selection of most appropriate surgical procedure
   – Medication not appropriate for medical condition
   – Most appropriate medication not used
Selection and Management of Therapy - Case Examples

Clinical Presentation
50 year old male to surgery for left inguinal hernia repair. Later the same day, patient reported swelling and pain. Nurses attempted to reach surgeon but were unsuccessful for several hours.

Unexpected Outcome
Patient taken back to surgery to evacuate large hematoma. Surgeon found ischemic testicle and removed it.

Questioned whether the procedure was done timely or correctly and whether it was necessary to remove the testicle.
Clinical Presentation

55 year old male with complaints of pain in his legs was diagnosed with bilateral occluded femoral arteries. Fem-pop bypass grafts were performed.

Unexpected Outcome

Two days later, patient complained of numbness in his legs. A duplex scan of the graft was ordered. 29 hours later, the test revealed an occluded graft. The result was not called to the surgeon. Next day, surgeon attempted unsuccessful thrombectomy. The result was BKA.
Clinical Presentation

60 year old male with inguinal hernia and bowel obstruction. Surgery completed without incident.

Two days later patient fell in bathroom.

Unexpected Outcome

When patient was returned to bed, he arrested. Resuscitation was unsuccessful.

Autopsy showed massive pulmonary embolism. No DVT prophylaxis ordered for this patient who was considered low risk (no documentation of assessment).
Contributing Factors

1. Patient assessment issues 33%
2. Selection and management of therapy 20%
3. Patient factors 18%
4. Technical performance 18%
5. Communication among providers 14%
6. Communication between patient/family and providers 11%
Contributing Factors

- Patient factors
  - Not compliant with treatment plan
  - Not compliant with follow-up appointments
  - Seek other providers due to dissatisfaction with care
  - Not compliant with medication prescription
1. Patient assessment issues 33%
2. Selection and management of therapy 20%
3. Patient factors 18%
4. Technical performance 18%
5. Communication among providers 14%
6. Communication between patient/family and providers 11%
Contributing Factors

- Technical performance 18%
  - The injury was a risk of the procedure known to the patient 14%
  - Poor technique or inexperience with the procedure 4%
Contributing Factors

1. Patient assessment issues 33%
2. Selection and management of therapy 20%
3. Patient factors 18%
4. Technical performance 18%
5. Communication among providers 14%
6. Communication between patient/family and providers 11%
3. Communication among providers 14%
   – Regarding changes in the patient’s condition
   – Failure to read medical record
Communication Among Providers – Case Examples

Clinical Presentation
45 year old female to ER with abdominal pain. CT showed retroperitoneal mass and neck mass.

Biopsy showed B cell non-Hodgkin's lymphoma. Treated with chemo but without success.

Unexpected Outcome
Later diagnosed with Nocardia infection. Plan to consult infectious disease specialist for antibiotic plan but consult not done.

Patient expired. COD was disseminated Nocardia infection with abscesses through out her body. No lymphoma found.
Communication Among Providers – Case Examples

Clinical Presentation
24 year old male with complaints of abdominal pain taken to surgery for appendectomy. He was sent to the regular floor and not surgical patient floor. The patient began complaining of shortness of breath and right shoulder pain.

Unexpected Outcome
CT to rule out PE was negative but showed free air and ascites. Surgeon was called but said don’t call again. Patient’s condition deteriorated overnight (BP 108/48, HR 128). Patient fainted. Next day, Hgb. 7.9 and taken to surgery. Found bleeding from artery - staple cut it. Respiratory and renal failure resulted in his death.
Communication Among Providers – Case Examples

(continued)

Clinical Presentation
50 year old female with abdominal pain. Exploratory surgery found pelvic mass (atypical proliferative papillary serous cystic tumor of the ovary). Surgery was successful.

At appointment, patient told that the tumor was not malignant.

Unexpected Outcome
Six years later, GYN noted mass on right side. Surgery revealed Stage IIIA ovarian cancer. Patient not expected to survive.

First surgeon should have referred patient to GYN oncologist due to tumors of low malignant potential require close follow-up.
Contributing Factors

1. Patient assessment issues 33%
2. Selection and management of therapy 20%
3. Patient factors 18%
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5. Communication among providers 14%
6. Communication between patient/family and providers 11%

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6. Communication between patient/family and providers 11%
   – Regarding risks of medications
   – Poor rapport (includes unsympathetic response to patient)
   – Language barrier
Discussion
Patient complaints are often the first indicator that they are suffering from a complication of surgery or a post-operative treatment.

Recommendations:

1. Investigate complaints timely - delay can be deadly
2. Prompt history and exam of patient are critical
3. Get consultation promptly when in doubt about complaint
Many of the injuries suffered by patients could have been averted if systems and processes had not malfunctioned:

- Referrals for consultations
- Follow-up on test results
- Correctly reading reports from pathology and radiology
- Communicating test results to ordering physicians
- Communicating findings (neurological assessments) to other clinicians
- Surgeon availability in the hours & days following surgery
When patients are discharged following surgery, especially after ambulatory surgery, it becomes the responsibility of the family to determine whether the patient’s symptoms are a normal part of recovery or are complications that need to be assessed by a clinician.

- Patients need clear discharge instructions
- Patients need access to the surgeon or clinical staff when they have concerns about their condition
- Surgeons need to have a process for seeing patients who have recently had surgery and are experiencing changes
Incidental findings need to be referred to a specialist who can follow-up with the patient

– Chest x-rays that show lung or mediastinal masses

Nurses and hospitalists need to be able to consult with surgeons when patient conditions change
Complications of surgery are often not identified until after the completion of surgery. Most of these cases were known to the patient (informed consent) as a risk of the procedure and not substandard care.

- Physicians should talk with patients about their complication and describe plans for additional care
- Explain the underlying cause of the complication
- Link discussions about the complication to the informed consent discussion that occurred before surgery to help patients understand the nature and cause of the injury
THANK YOU

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