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Appendix 1. Supplemental material

Supplemental Figure S1: Selection criteria flow chart

- CMPA civil legal action
- Closed between 2013–2017
- Abdominopelvic surgery (eTable S2)
  
  \[ n = 467 \]

Class actions \( n = 9 \)
Obstetrics \( n = 5 \)

Date of occurrence greater than 20 years (1998–2017) \( n = 1 \)

Intraoperative healthcare related injury from the inclusion list (eTable S3) \( n = 196 \)

No healthcare related injury from the inclusion list (eTable S3) \( n = 271 \)

Final legal data set \( n = 181 \)
**Supplemental Table S1: Glossary of medico-legal terms**

<table>
<thead>
<tr>
<th><strong>Term</strong></th>
<th><strong>Definition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil legal action</td>
<td>In civil legal actions, the plaintiff seeks from the court an order of monetary compensation (damages) for harm or injury suffered as a result of the negligence or wrongful conduct of the defendant. Several different defendants, such as individual health professionals, hospitals/institutions, equipment manufacturers, and pharmaceutical companies may be named in a civil legal action. In civil legal actions, these issues are decided on the balance of probability (defendant in a civil action may be found liable if the essential elements of the claim are established on a balance of probability). The “cause of action” or central focus is usually an allegation of negligence, including substandard care and a lack of informed consent. Other allegations in civil legal actions include assault and battery, breach of contract, and breach of fiduciary duty. In civil legal actions, the plaintiff can be awarded monetary compensation as a result of either a successful legal action against the defendant physician(s) or as a negotiated settlement of the claim.</td>
</tr>
</tbody>
</table>
| Harm*          | **Mild harm**: Patient harm is symptomatic, symptoms are mild, loss of function or harm is minimal (permanent or temporary), and minimal or no intervention is required (e.g. extra observation, investigation, review, or minor treatment).  
**Moderate harm**: Patient harm is symptomatic, requiring intervention (e.g. additional operative procedure, additional therapeutic treatment), and increased length of stay, or causing permanent or temporary harm, or loss of function.  
**Severe harm**: Patient harm is symptomatic, requiring life-saving intervention or major medical/surgical intervention, shortening life expectancy, or causing major permanent or temporary harm or loss of function. Includes previous catastrophic disability. |
| Inherent risk  | Based on peer expert opinion, a harmful incident that is a known risk associated with a particular investigation, medication, or treatment. It is the risk from undergoing a procedure in ideal conditions, performed by qualified staff using current research, equipment and techniques. |
| Patient safety incident** | **Harmful incident**: A patient safety incident that resulted in harm to the patient.  
**No harm incident**: A patient safety incident that reached the patient but no discernible harm resulted.  
**Near miss**: A patient safety incident that did not reach the patient. |
| Peer expert    | Physicians retained by parties in the legal actions who interpreted and provided their opinions on clinical, scientific, or technical issues surrounding the healthcare provided and the alleged injuries sustained; typically, of similar training and experience as the physicians whose care they were reviewing. |

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<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement</td>
<td>An agreement, usually monetary, made between opposing parties in a lawsuit to resolve the legal dispute. A lawsuit can be settled at any stage before the trial is concluded.</td>
</tr>
</tbody>
</table>


**Supplemental Table S2: CCI Inclusion codes**

Inclusion codes based on the *Canadian Classification of Health Interventions* (CCI)\(^\text{§}\) used to identify abdominopelvic surgical cases in the CMPA data

<table>
<thead>
<tr>
<th>Description</th>
<th>Section &amp; Group (CCI field 1 &amp; 2)</th>
<th>Approach/ technique (CCI field 4)</th>
</tr>
</thead>
</table>
| **Therapeutic interventions** | Nerves: 1BS  
Lymph: 1MG – MJ, 1MP  
Digestive: 1NE-NV  
Hepatobiliary: 1OA-OZ  
Urinary: 1PB-PZ  
Male: 1QT  
Female: 1RB - RM  
Hernia: 1SY80, 1SY84 | **Laparoscopy**  
AA, AB, BQ, D*, E*, FD, FE, FG, FY, FZ, GB, GC, GD, GW, GX, Gy, GZ, XO  
**Laparotomy**  
**Robotics**  
PP, PQ, PR, PS |
| **Diagnostic interventions** | Nerves: 2BS  
Lymph: 2MG – MJ  
Digestive: 2NF-NT  
Hepatobiliary: 2OA-OZ  
Urinary: 2PB-PV  
Male: 2QT  
Female: 2RB-RM | **Laparoscopic**  
DA, DC  
**Laparotomy**  
LA, LL  
**Robotics**  
PP, PQ, PR, PS |

\(^\text{§}\) *Canadian Classification of Health Interventions. International Statistical Classification of Disease and Related Health Problems.* Ottawa, ON: Canadian Institute for Health Information; 2015.
**Supplemental Table S3: ICD-10 CA Inclusion codes**

Inclusion codes based on the *International Statistical Classification of Disease and Related Health Problems* (ICD-10-CA)† used to identify intra-operative injuries in the CMPA abdominopelvic surgical cases.

<table>
<thead>
<tr>
<th>Description</th>
<th>ICD-10 CA code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Injury codes</strong></td>
<td>S34* nerves &amp; spinal cord</td>
</tr>
<tr>
<td></td>
<td>S35* blood vessels</td>
</tr>
<tr>
<td></td>
<td>S36* abdominal organs</td>
</tr>
<tr>
<td></td>
<td>S37* urinary and pelvic organs (S371* ureter)</td>
</tr>
<tr>
<td><strong>CMPA in-house codes</strong></td>
<td>0997.5100 – accidental ligation of ureter</td>
</tr>
<tr>
<td></td>
<td>0998.9100 – accidental ligation of blood vessel</td>
</tr>
<tr>
<td><strong>Complications of medical and surgical care (T &amp; Y codes)</strong></td>
<td>T810 - hemorrhage</td>
</tr>
<tr>
<td></td>
<td>T812 – laceration or puncture</td>
</tr>
<tr>
<td></td>
<td>T815* - foreign body</td>
</tr>
<tr>
<td></td>
<td>T817 – vascular</td>
</tr>
<tr>
<td></td>
<td>Y600 – laceration with surgery</td>
</tr>
<tr>
<td></td>
<td>Y610 – foreign body</td>
</tr>
<tr>
<td></td>
<td>Y732, Y733, Y738 – gastrology and urology devices</td>
</tr>
</tbody>
</table>

Supplemental Table S4: CMPA contributing factor terminology

<table>
<thead>
<tr>
<th>Contributing factor</th>
<th>Description</th>
</tr>
</thead>
</table>
| Clinical evaluation and decision-making | Deficient histories and general evaluation. Issue involving a provider's decision-making related to selection and management of patient care.  
- Delay or failure in the performance of a diagnostic test or therapeutic intervention (e.g. pharmacotherapy, surgery).  
- Contraindicated procedure or pharmacotherapy  
- Delay or failure to refer a patient or consult another physician  
- Delay, failure or inappropriate transfer of a patient  |
| Deficient knowledge, skills or technique | Issue involving a provider's clinical knowledge, skill, technique, training or education.  
- Failure to protect a structure  
- Inadequate surgical field (Calot's triangle)  |
| Procedural Violations | Issue or violation involving:  
- administrative policies and procedures of a physician’s office, clinic, institution, or regional health authority that are designed to prevent or mitigate error  
- clinical practice guidelines specified by a regulatory authority (College or Government) or specialty  
- common clinical tasks as per a standard checklist, protocol, care map, clinical pathway, and decision tree; specified by institution, department or care team  
- wrong application or improper use of healthcare equipment  |
| Misidentification of anatomy | Intervention inadvertently performed on incorrect anatomical structure or organ. Includes mistaking one structure for another.  |
| Delayed recognition of injury | Misdiagnosis, missed diagnosis or delay in diagnosis  |
| Informed consent | Issue involving the discussion or documentation of the risks, limitations, side effects or alternative options of a diagnostic test or therapeutic intervention (e.g. pharmacotherapy, surgery).  |
| Documentation | Inadequate, delay or failure to complete documentation (written or electronic). Including ambiguous, deficient or illegible medical records.  |
| Equipment or resource issue | Faulty or malfunctioning healthcare equipment  
Insufficient or unavailable health care resources; including beds, staff, equipment.  |

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| System administrative protocols | Issue involving an institutions administrative policies and procedures designed to prevent or mitigate error. |