EPIDEMIOLOGY
General
Prevalence of Acute Pain

• **Lifetime** prevalence in general population:
  – Approaches **100%** for acute pain leading to use of analgesics

• **Emergency room** patients:
  – Pain accounts for **>2/3** of emergency room visits

• **Hospitalized** patients:
  – **>50%** report pain

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Acute Pain in General Practice

Pain Duration Among Patients Presenting to Primary Care over 1 Year (n = 6890)

- No pain: 72%
- Acute pain: 10%
- Intermediate duration pain: 4%
- Chronic intermittent pain: 3%
- Chronic pain: 10%
- Unknown duration: 1%
Most Common Types of Pain in General Practice

Note: types of pain are based on ICD-9 codes

*The use of the symptom code suggests clinician could not identify the underlying cause of the pain

**MSK – other refers to musculoskeletal pain at sites other than the neck, back or soft tissue

ICD = International Classification of Disease; MSK = musculoskeletal

Post-operative Acute Pain is the Most Prevalent Type of Pain in the US

US = United States
Post-operative Pain

80% of patients undergoing surgery experience post-operative pain

<50% report adequate pain relief

88% of these report the pain is moderate, severe or extreme

10–50% develop chronic pain*

For 2–10% of these, pain is severe

Pain accounts for 38% of unanticipated admissions and readmissions following ambulatory surgery

*Depending on type of surgery
## Chronic Pain as an Outcome of Surgery

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Incidence</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limb amputation</td>
<td>30–81%</td>
<td>Pre-amputation pain, persistent stump pain</td>
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<tr>
<td>Thoracotomy</td>
<td>47 %</td>
<td>Extent of acute post-operative pain, intercostal nerve dysfunction</td>
</tr>
<tr>
<td>Breast surgery</td>
<td>11–57%</td>
<td>Extent of acute post-operative pain, type of surgery, intercostobrachial nerve injury</td>
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<tr>
<td>Gallbladder surgery</td>
<td>3–56%</td>
<td>Psychologic vulnerability, long-standing pre-operative symptoms</td>
</tr>
<tr>
<td>Inguinal hernia</td>
<td>11%</td>
<td>Intensity of early post-operative pain, nerve dysfunction</td>
</tr>
</tbody>
</table>

Some Surgical Procedures are Associated with a High Estimated Incidence of Chronic Post-operative Pain

*Lumpectomy or mastectomy


![Bar chart showing the percentage of patients experiencing chronic post-operative pain after different procedures.](chart_image)

- Coronary artery bypass surgery
- Amputation
- Thoracotomy
- Breast surgery
- Caesarean section
- Inguinal hernia repair

* Lumpectomy or mastectomy

Summary
Epidemiology of Acute Pain: Summary

• Acute pain is experienced by:
  – 10% of patients presenting to primary care
  – >50% of hospitalized patients
  – 2/3 of patients in ER
  – 80% of patients following surgery

ER = emergency room