BURDEN OF ILLNESS
Overview
Consequences of Unrelieved Pain

Acute pain

- Impaired physical function
  - Reduced mobility
  - Disturbed sleep
  - Immune impairment

- Dependence
  - On medication
  - On family members/other caregivers

- Extended recovery time
  - Hospital readmissions
  - Economic costs

Increased risk of developing chronic pain

Institute of Medicine. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research.*
Is pain important to patients?

• 59% of patients considered pain to be their most significant fear about surgery
• 8% had delayed an operation because of this

Physical Burden
Impact of Acute Pain on Daily Activities

- Limits participation in favourite activity
- Impedes routine tasks
- Prevents enjoyment of family time
- Prevents enjoyment of time with significant other
- Trouble falling and staying asleep

*Patients who responded “Sometimes”, “Often” or “Always”*
# Musculoskeletal Pain Frequently Associated with Disability

## Extent of Pain-Related Disability among Adults with Pain in the United States, 2009

<table>
<thead>
<tr>
<th>Type of pain</th>
<th>Difficulty with basic actions* (%)</th>
<th>Complex activity limitation** (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low back pain</td>
<td>51.6</td>
<td>55.0</td>
</tr>
<tr>
<td>Neck pain</td>
<td>30.2</td>
<td>34.4</td>
</tr>
<tr>
<td>Knee pain</td>
<td>37.3</td>
<td>38.6</td>
</tr>
<tr>
<td>Shoulder pain</td>
<td>17.7</td>
<td>21.4</td>
</tr>
<tr>
<td>Finger pain</td>
<td>14.3</td>
<td>16.3</td>
</tr>
<tr>
<td>Hip pain</td>
<td>15.0</td>
<td>18.4</td>
</tr>
</tbody>
</table>

*Defined as having difficulties in one or more of the following areas: movement, emotional, seeing, hearing or cognition

**Defined as having limitations in one or more of the following areas: self-care, social or work

Postsurgical Pain Interferes with Daily Functioning

% patient who pain interfered importantly (≥4) with:

- Activity level: 73 (24 hours), 61 (48 hours), 50 (7 days)
- Mood: 2223 (24 hours), 15 (48 hours), 15 (7 days)
- Walking activity: 69 (24 hours), 49 (48 hours), 38 (7 days)
- Work: 81 (24 hours), 68 (48 hours), 47 (7 days)
- Relations with others: 2120 (24 hours), 9 (48 hours), 9 (7 days)
- Sleep: 47 (24 hours), 34 (48 hours), 34 (7 days)
- Enjoyment of life: 24 (24 hours), 13 (48 hours), 13 (7 days)
- Appetite: 27 (24 hours), 6 (48 hours), 6 (7 days)
- Concentration: 38 (24 hours), 20 (48 hours), 20 (7 days)
- 3 or more functions: 77 (24 hours), 63 (48 hours), 44 (7 days)

Economic Burden
Pain: Most Common Reason for Return to Hospital Post-surgery

Pain accounted for 38% of unanticipated admissions or readmissions following surgery.

Comorbidities
Greater Acute Pain Intensity May Be Associated with Post-traumatic Stress Disorder Symptoms

Figure displays standardized path coefficients between measures of post-traumatic stress disorder, catastrophizing and pain severity

*Mean = 6.1 days

Post-operative Pain and Other Pain Comorbidities

Mean number of pain conditions: 1.4

Notes: infrequent comorbid conditions were omitted.
Mean number of mental health conditions: 1.5

MDD = major depressive disorder
Summary
Burden of Illness of Acute Pain: Summary

- Acute pain can interfere with daily functioning
- Individuals suffering from acute pain have higher rates of absenteeism
- Unrelieved pain can also lead to higher use of health care resources