# **EPIDEMIOLOGY**

### General

### **Prevalence of Acute Pain**

• Lifetime prevalence in general population:

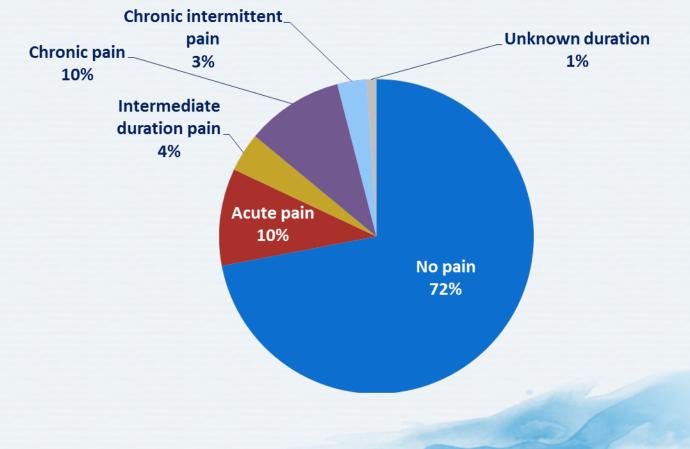
 Approaches 100% for acute pain leading to use of analgesics<sup>1</sup>

- Emergency room patients:
  - Pain accounts for >2/3 of emergency room visits<sup>2</sup>
- Hospitalized patients:
  ->50% report pain<sup>3</sup>

1. Diener HC *et al. J Headache Pain* 2008; 9(4):225-31; 2. Todd KH, Miner JR. In: Fishman SM *et al* (eds). *Bonica's Management of Pain*. 4th ed. Lippincott, Williams and Wilkins; Philadelphia, PA: 2010; 3. Dix P *et al. Br J Anaesth* 2004; 92(2):235-7.

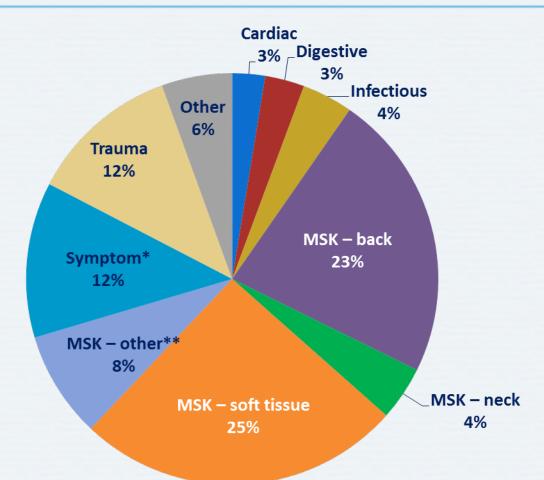
### **Acute Pain in General Practice**

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



Hasselström J et al. Eur J Pain 2002; 6(5):375-85.

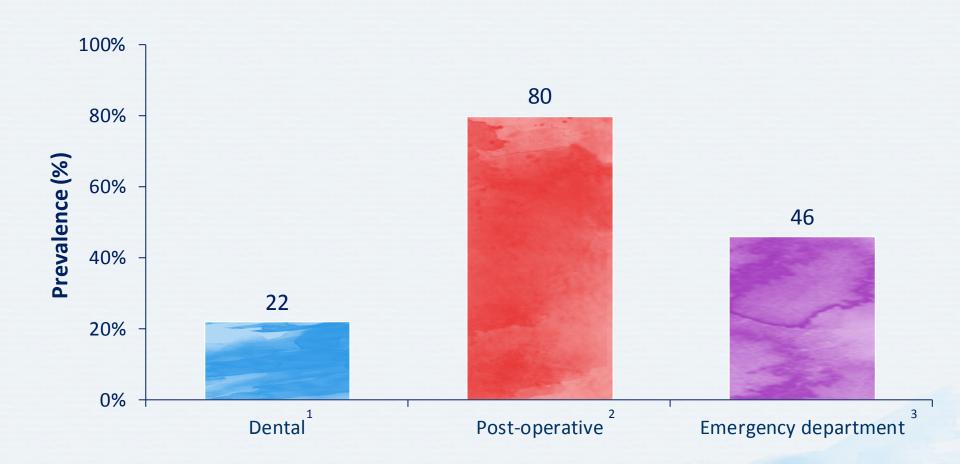
### Most Common Types of Pain in General Practice



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 Hasselström J *et al. Eur J Pain* 2002; 6(5):375-85.

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

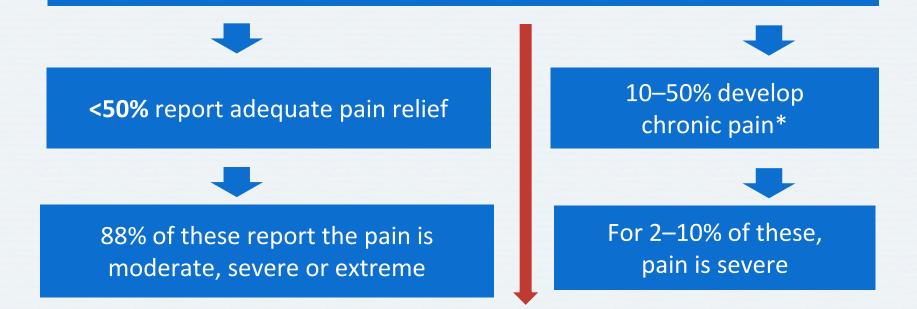


#### US = United States

- 1. Lipton JA et al. J Am Dent Assoc 1993; 124(10):115-21;
- 2. Apfelbaum L et al. Anesth Analg 2003; 97(2):534-40;
- 3. Nawar EW et al. Adv Data 2007; 29(386):1-32.

### **Post-operative Pain**





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

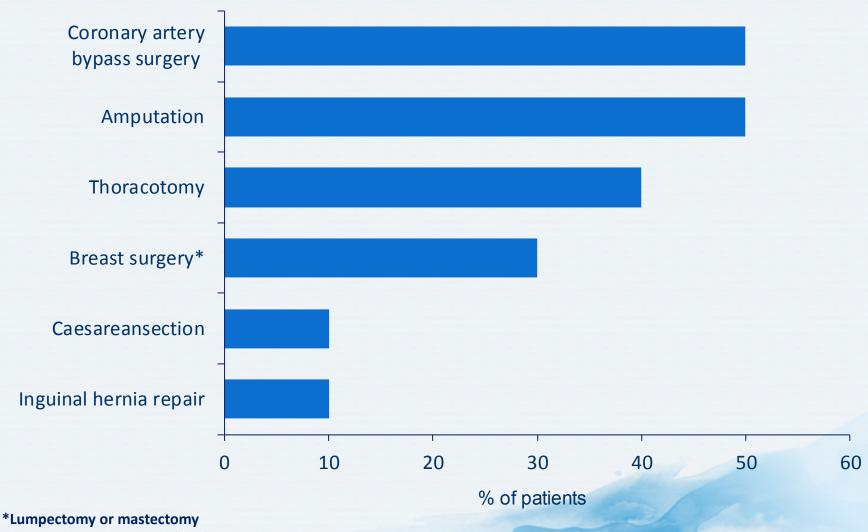
#### \*Depending on type of surgery

Coley KC *et al. J Clin Anesth* 2002; 14(5):349-53; Institute of Medicine. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research.* The National Academies Press; Washington, DC: 2011.

# Chronic Pain as an Outcome of Surgery

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

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



Kehlet H et al. Lancet 2006; 367(9522):1618-25.

### 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