

The Use of

Opioid Narcotics

for the

Pediatric
Orthopaedic Patient

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Pediatric Orthopaedic Surgery

● Musculoskeletal conditions

- ✦ Upper extremity
- ✦ Lower extremity
- ✦ Spine (neck to sacrum)

● Conditions

- ✦ Trauma
- ✦ Deformity
 - ✦ Congenital
 - ✦ Acquired
- ✦ Tumors
- ✦ Syndromes



Arthrogryposis



Prader-Willi Syndrome

Pain Is Inherent to Our Specialty

- **Patients present with pain**
 - ⊕ **Fractures/injuries**
 - ⊕ **Infections**
 - ⊕ **Tumors**
- **Corrective surgery includes pain**
- **Relatively few chronically painful conditions**

Pain Is Inherent to Our Specialty

- Patients present

- ✚ Fractures/injuries

- ✚ Infections

- ✚ Tumors

- Corrective surgery

- Relatively few
conditions



pain
painful

Pain Is Inherent to Our Specialty

● Patient

● Fracture

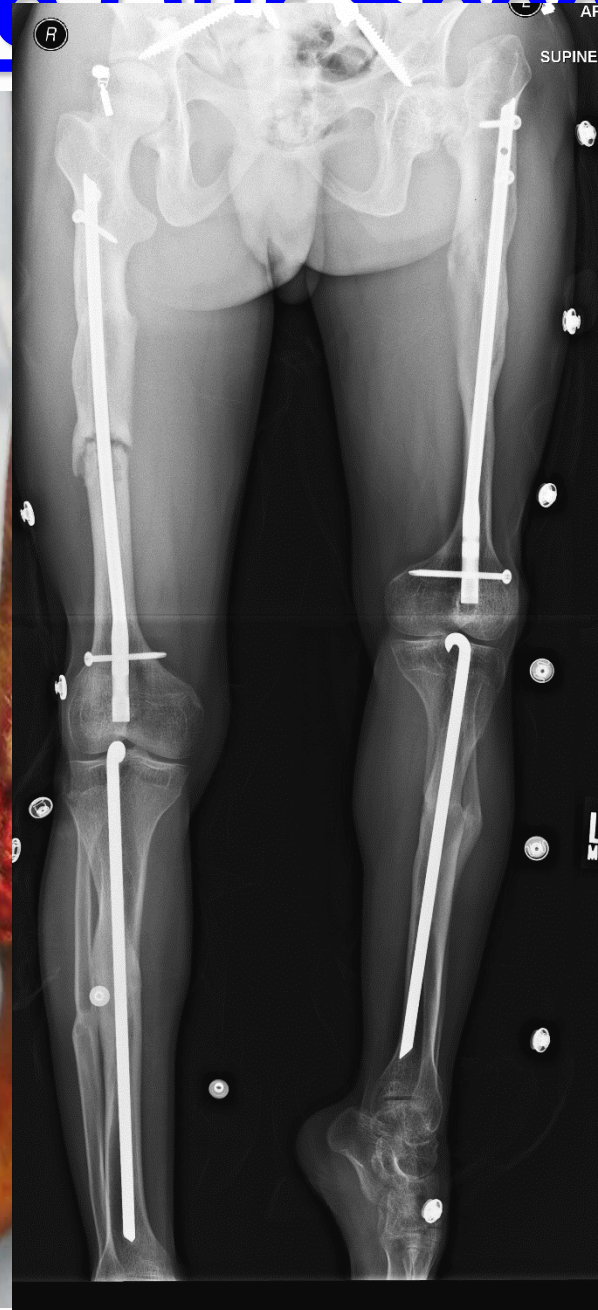
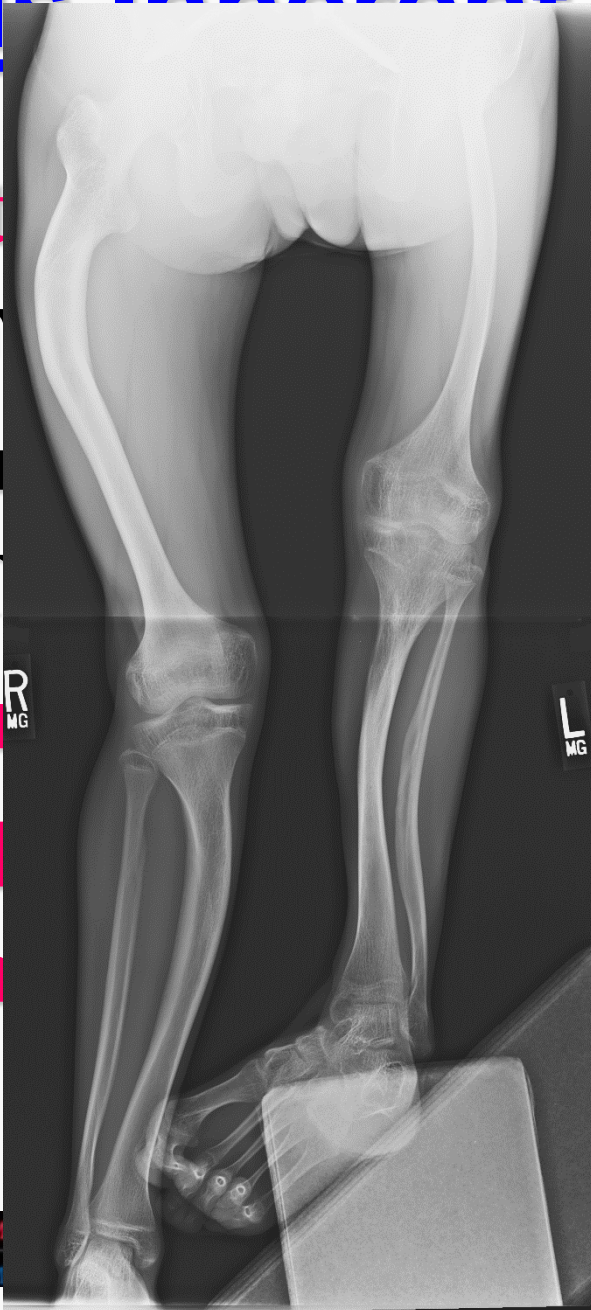
● Injury

● Trauma

● Complications

● Reluctance

com



Pain Management Is Important

- Young patients have keen awareness of pain
- Do not always understand why they are subjected to pain
- Identification of “post-traumatic stress disorder”
 - ⊕ Need for several procedures

Pain Management

● **Non-steroidal anti-inflammatory drugs**

- ⊕ **Ibuprofen**

- ⊕ **Naproxen**

- ⊕ **Ketorolac**

● **Analgesics**

- ⊕ **Acetaminophen**

● **Opioids**

- ⊕ **Intravenous**

- ⊕ **Oral**

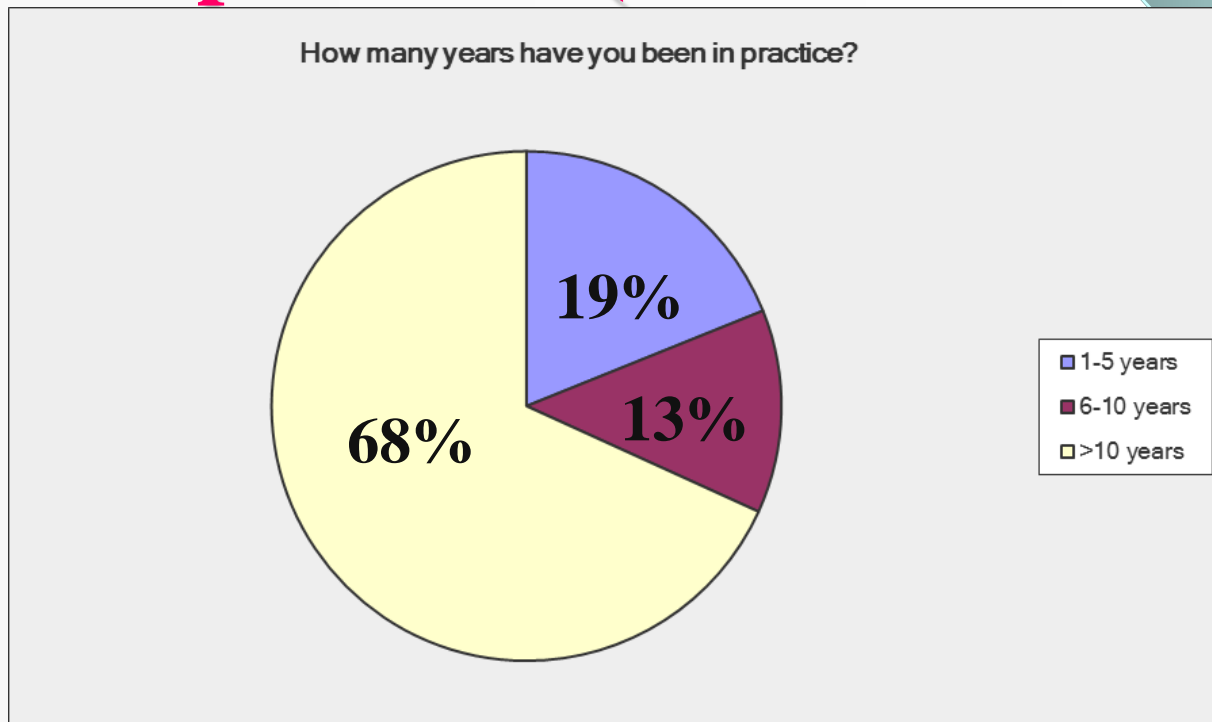
Disadvantages of Opioid Medications

- **Respiratory depression**
- **Gastrointestinal dysfunction (ileus)**
- **Nausea, itching, confusion**
- **Habituation/dependence**
- **Abuse potential**

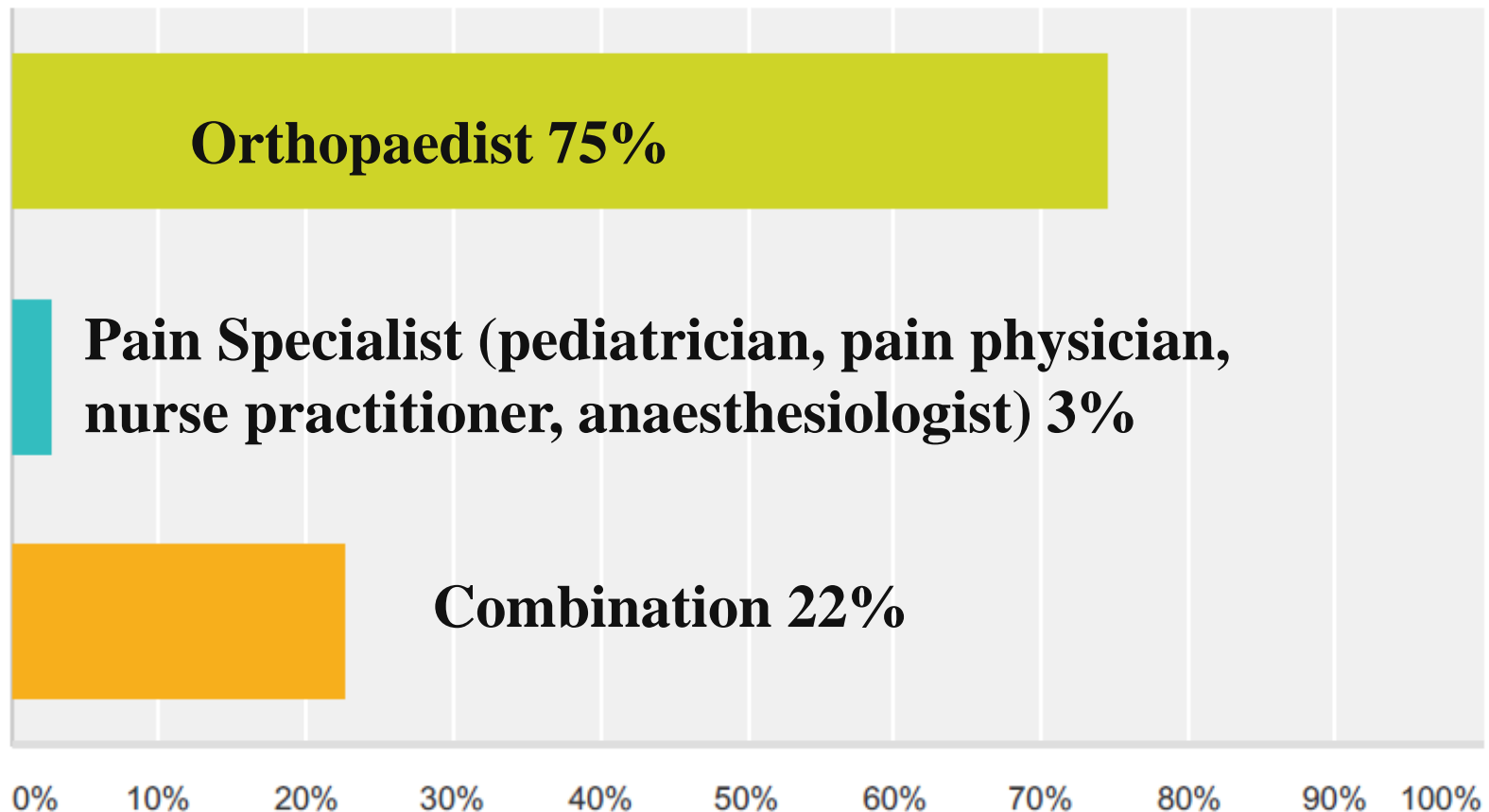
Survey

● Pediatric Orthopaedic Society of North America

● 264 respondents (~25% of membership)



Who Directs Outpatient Pain Management?



Percutaneous Achilles Tenotomy



Percutaneous Achilles Tenotomy



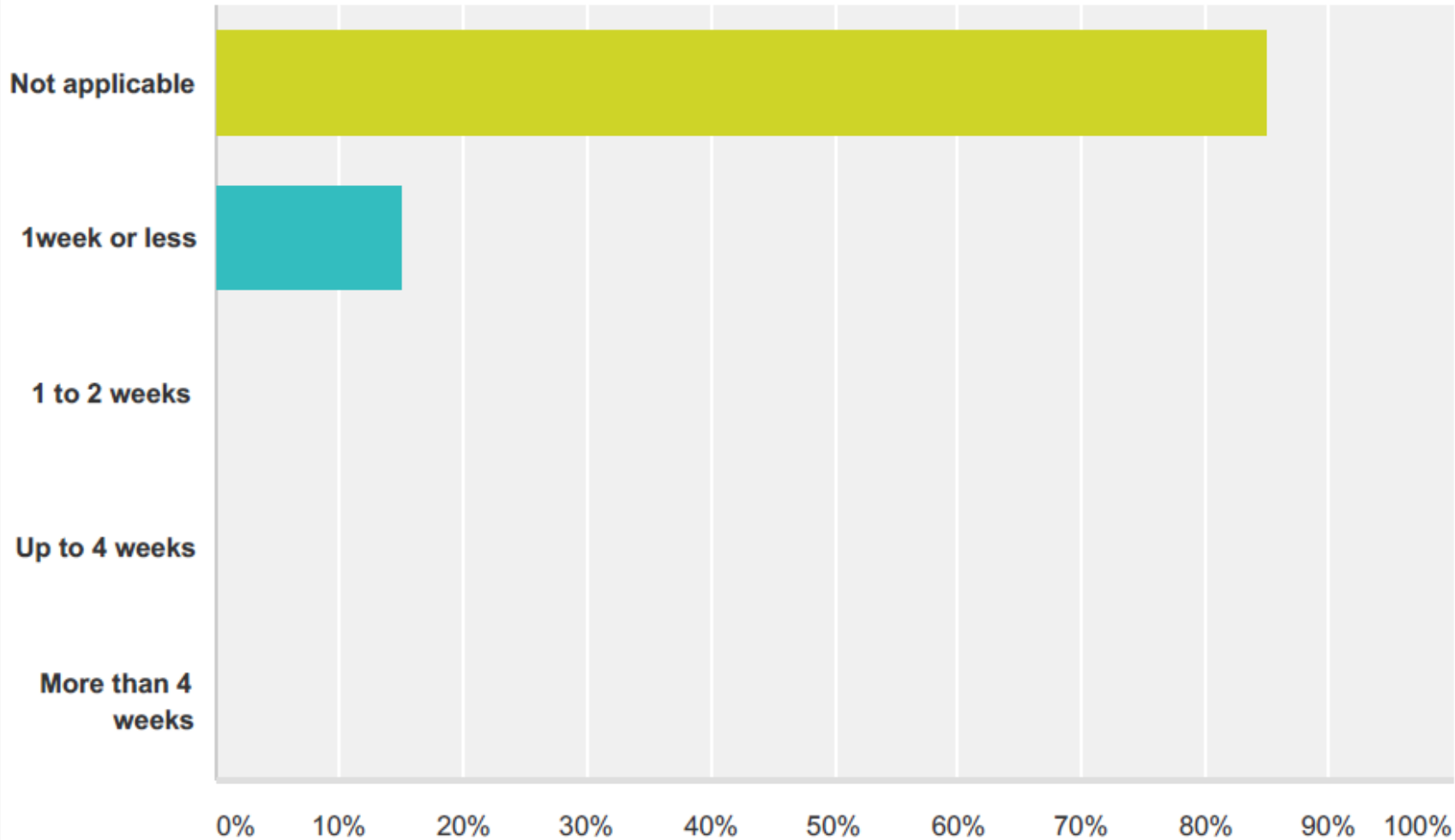
Percutaneous Achilles Tenotomy



Percutaneous Achilles Tenotomy



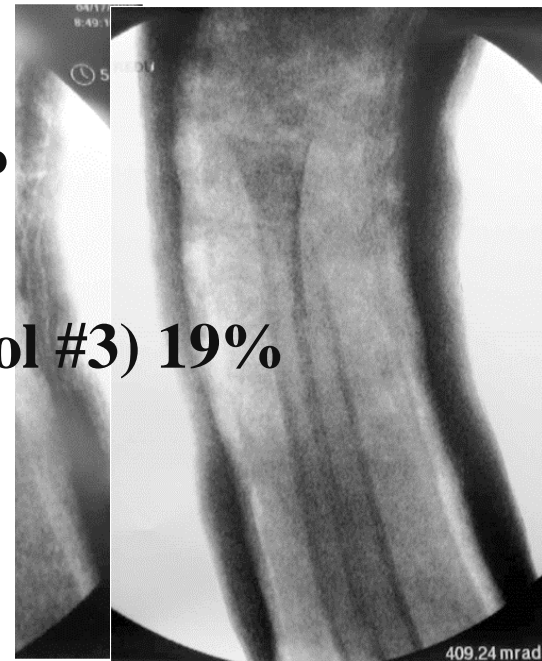
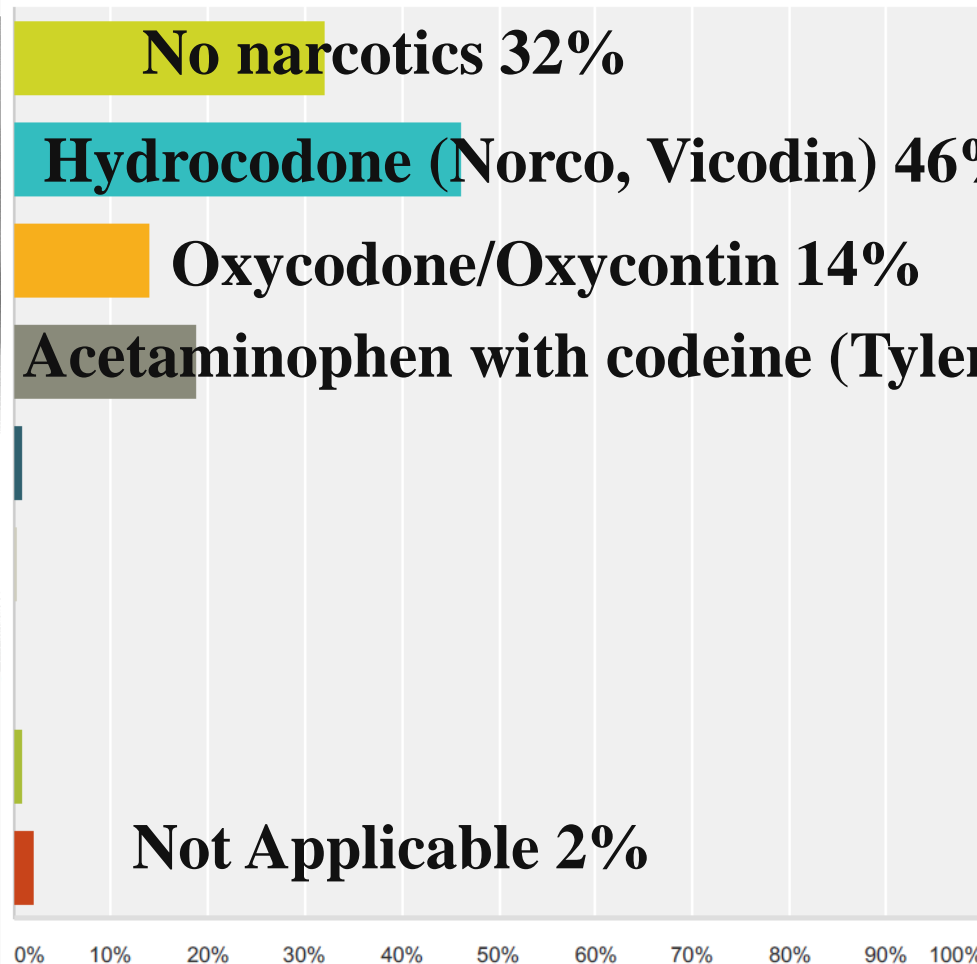
Percutaneous Achilles Tenotomy



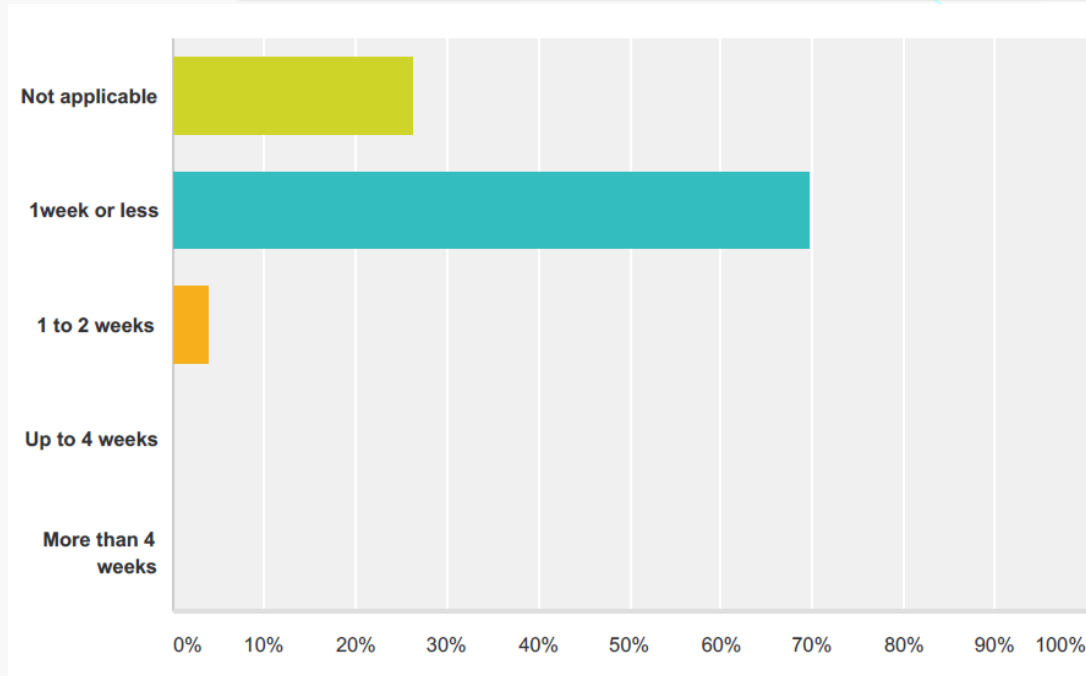
Outpatient Fracture Reduction and Casting



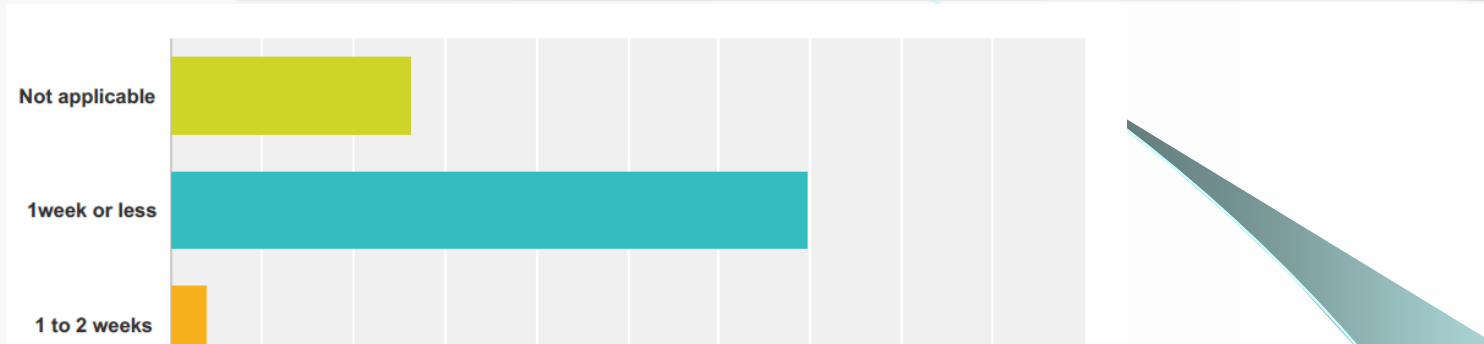
Outpatient Fracture Reduction and Casting



Outpatient Fracture Reduction and Casting

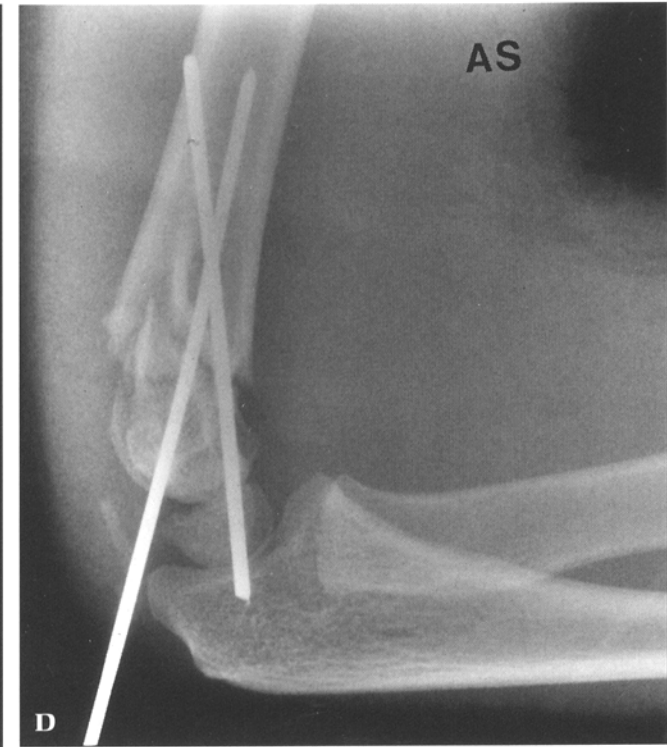


Outpatient Fracture Reduction and Casting

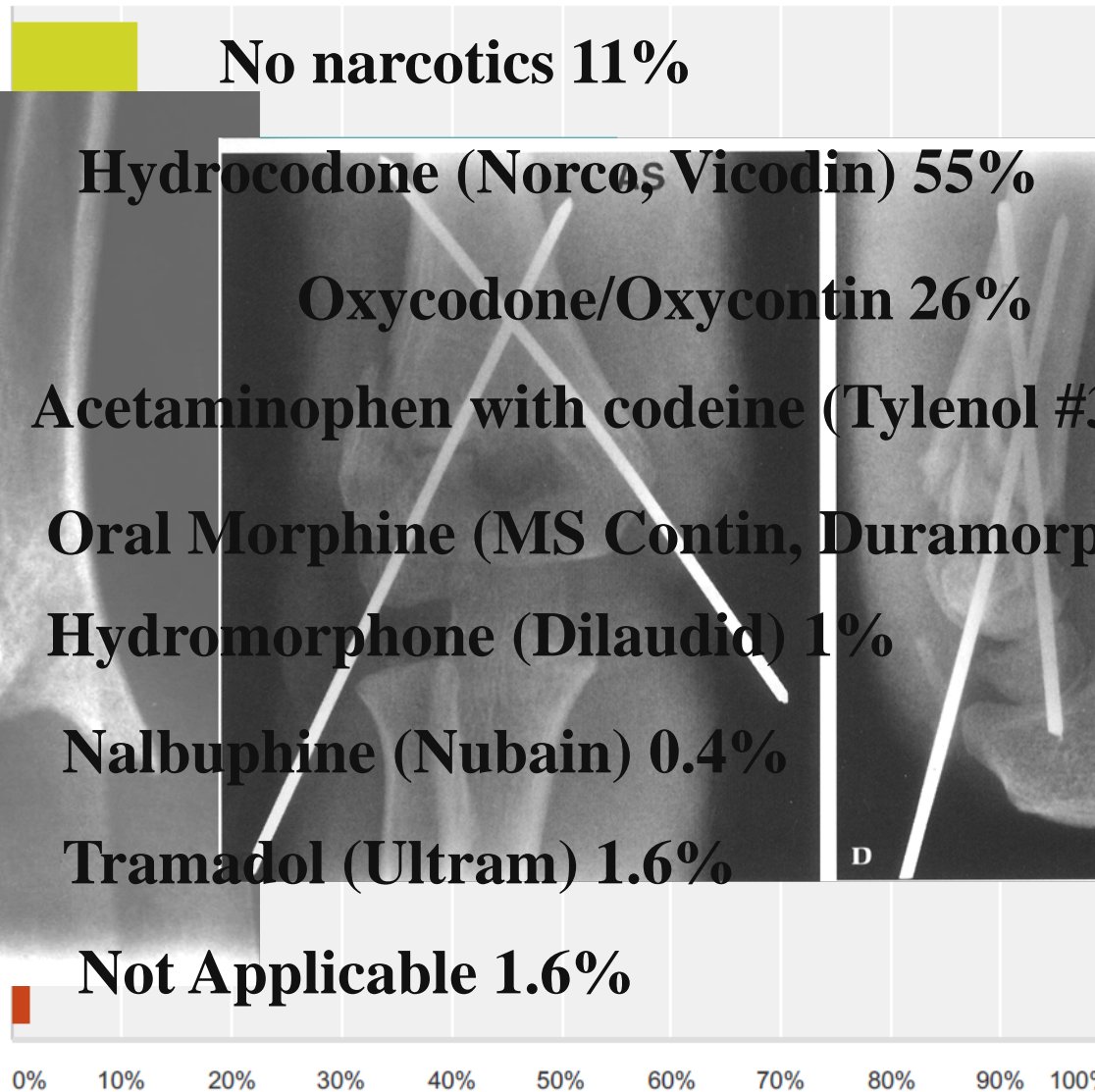


- **Ibuprofen - main alternative**
- **Some preferred instantaneous release oxycodone over Oxycontin (E.R.)**
 - ⊕ **Speed of onset**
 - ⊕ **State pressure to reduce opioid deaths**

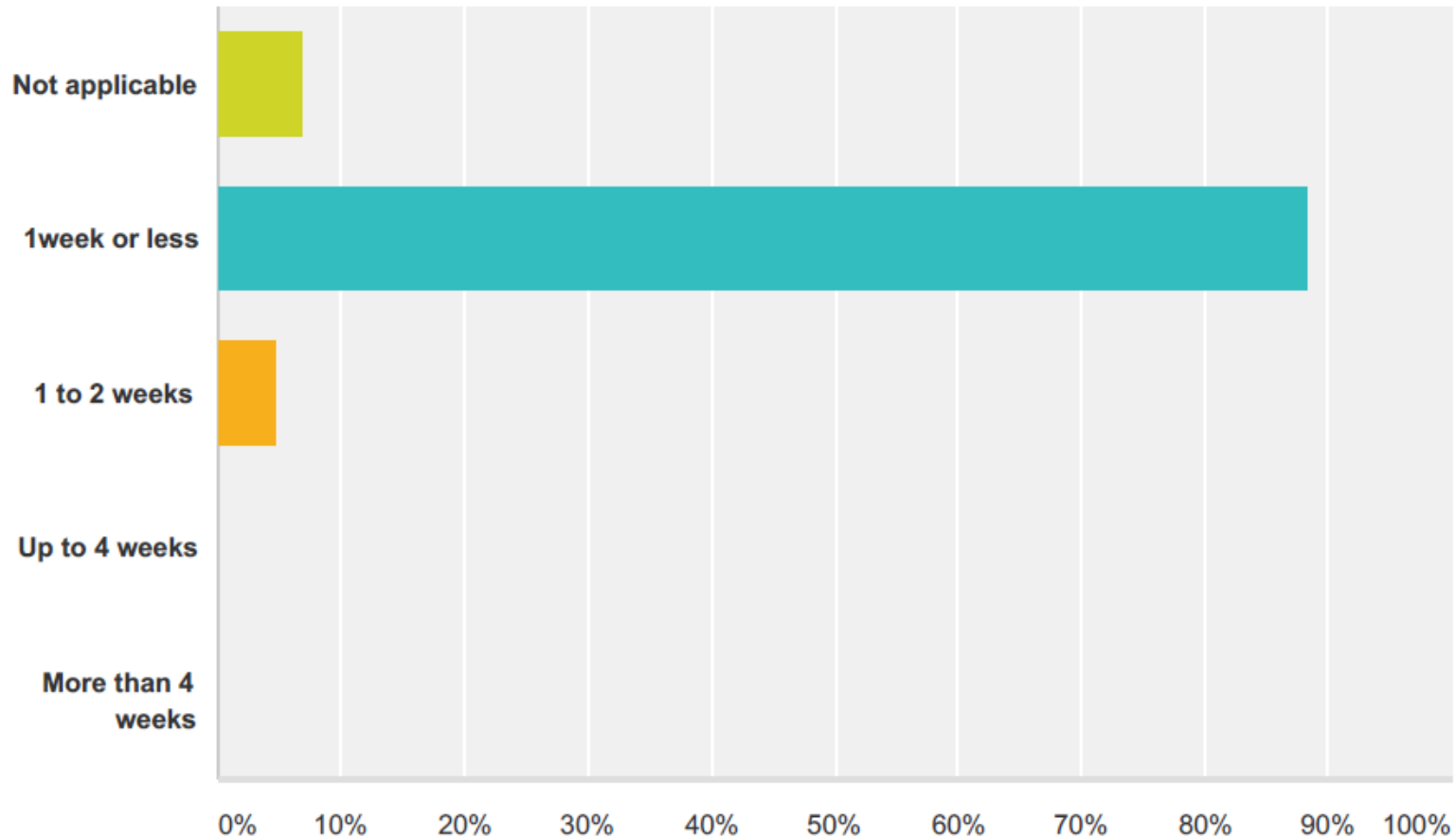
Simple Operative Fracture



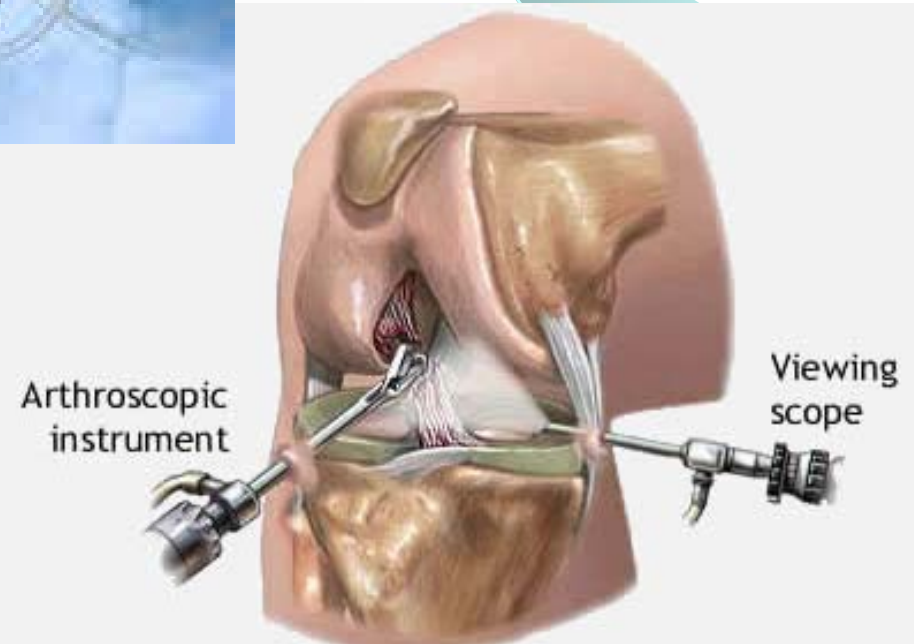
Simple Operative Fracture



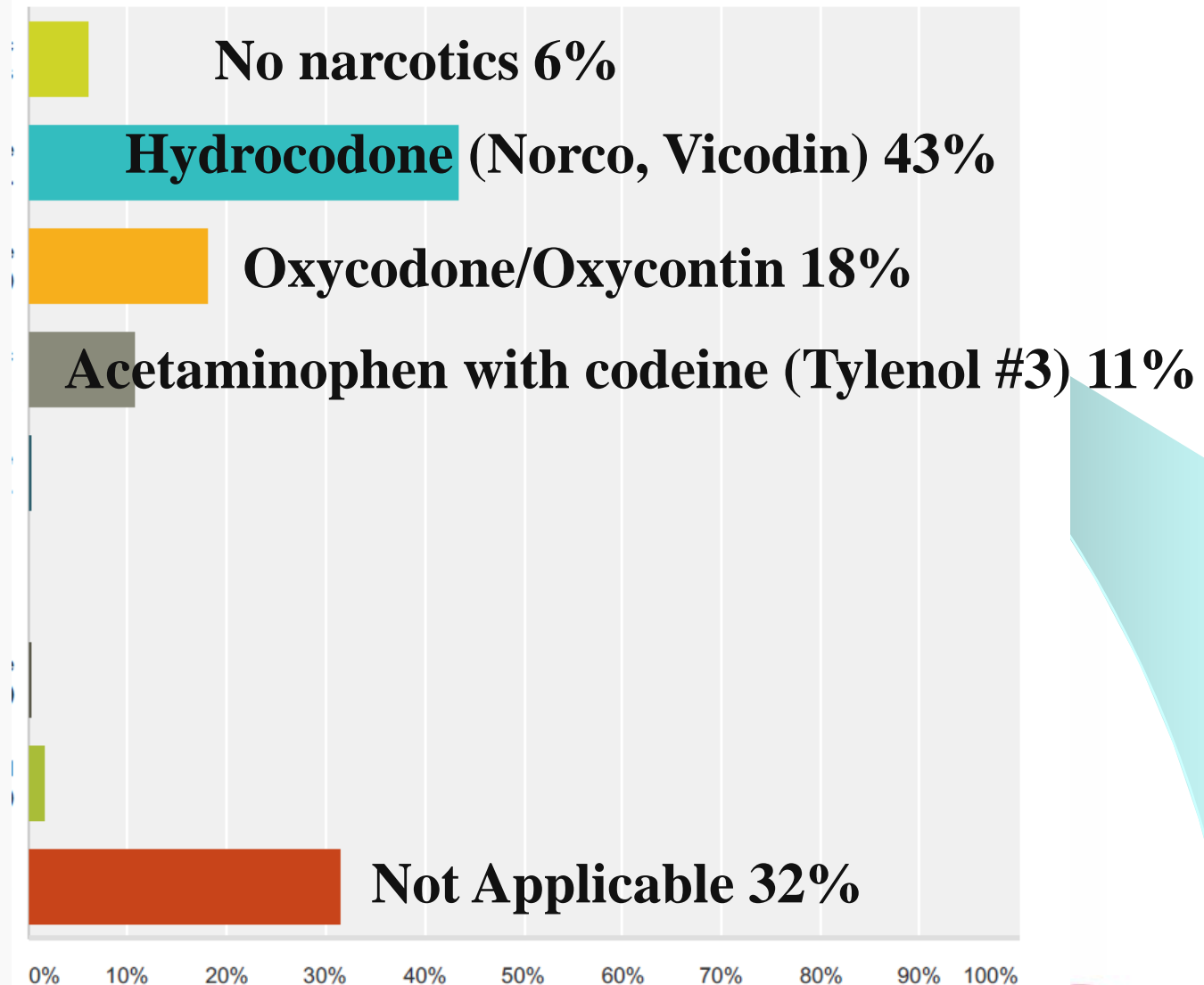
Simple Operative Fracture



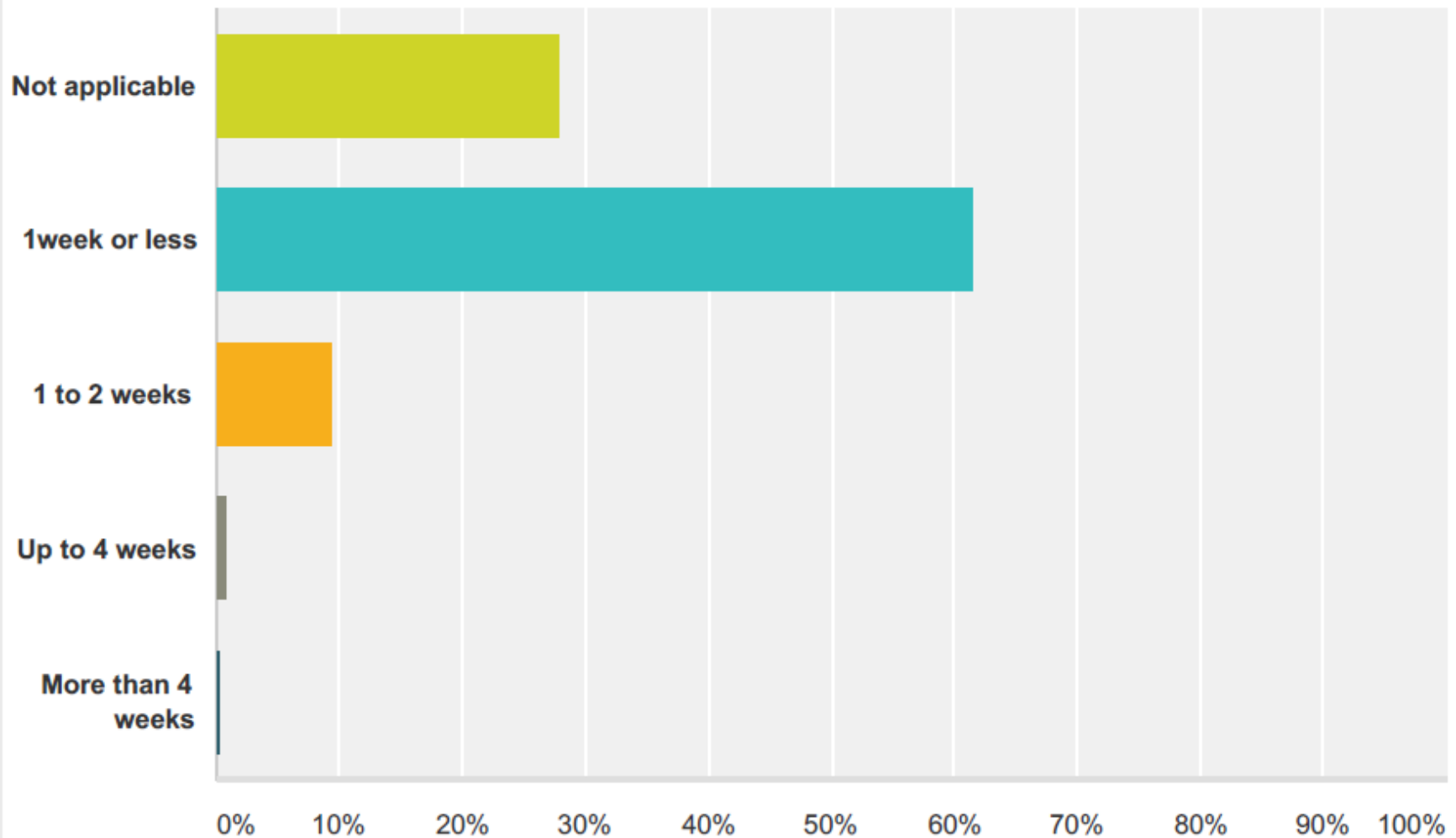
Knee Arthroscopy



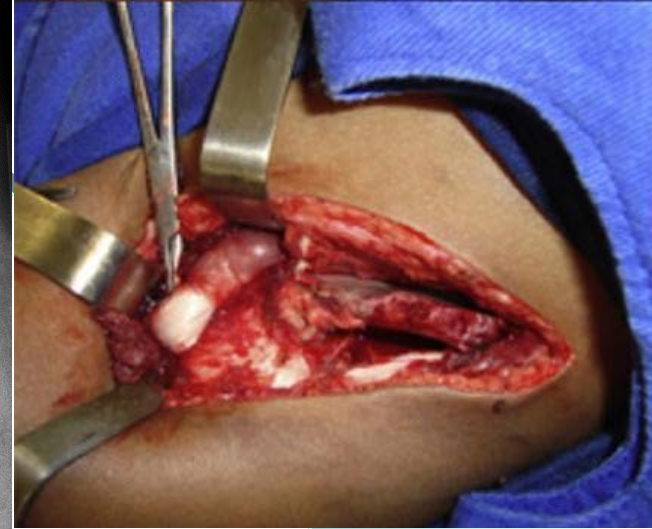
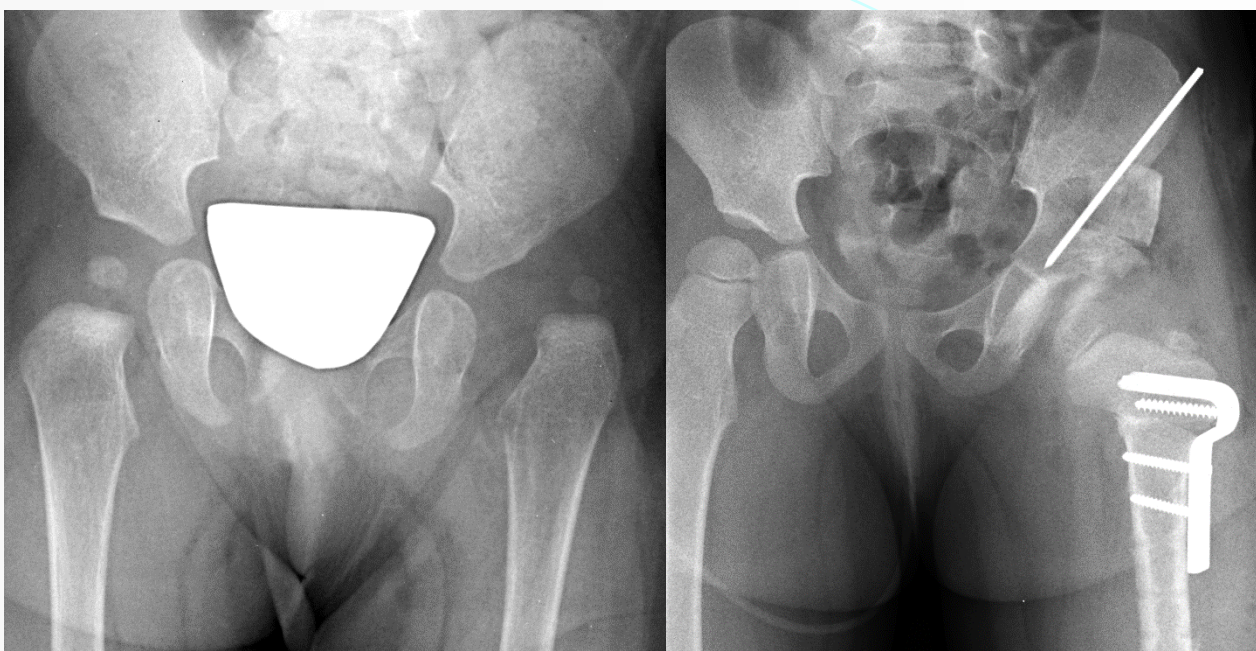
Knee Arthroscopy



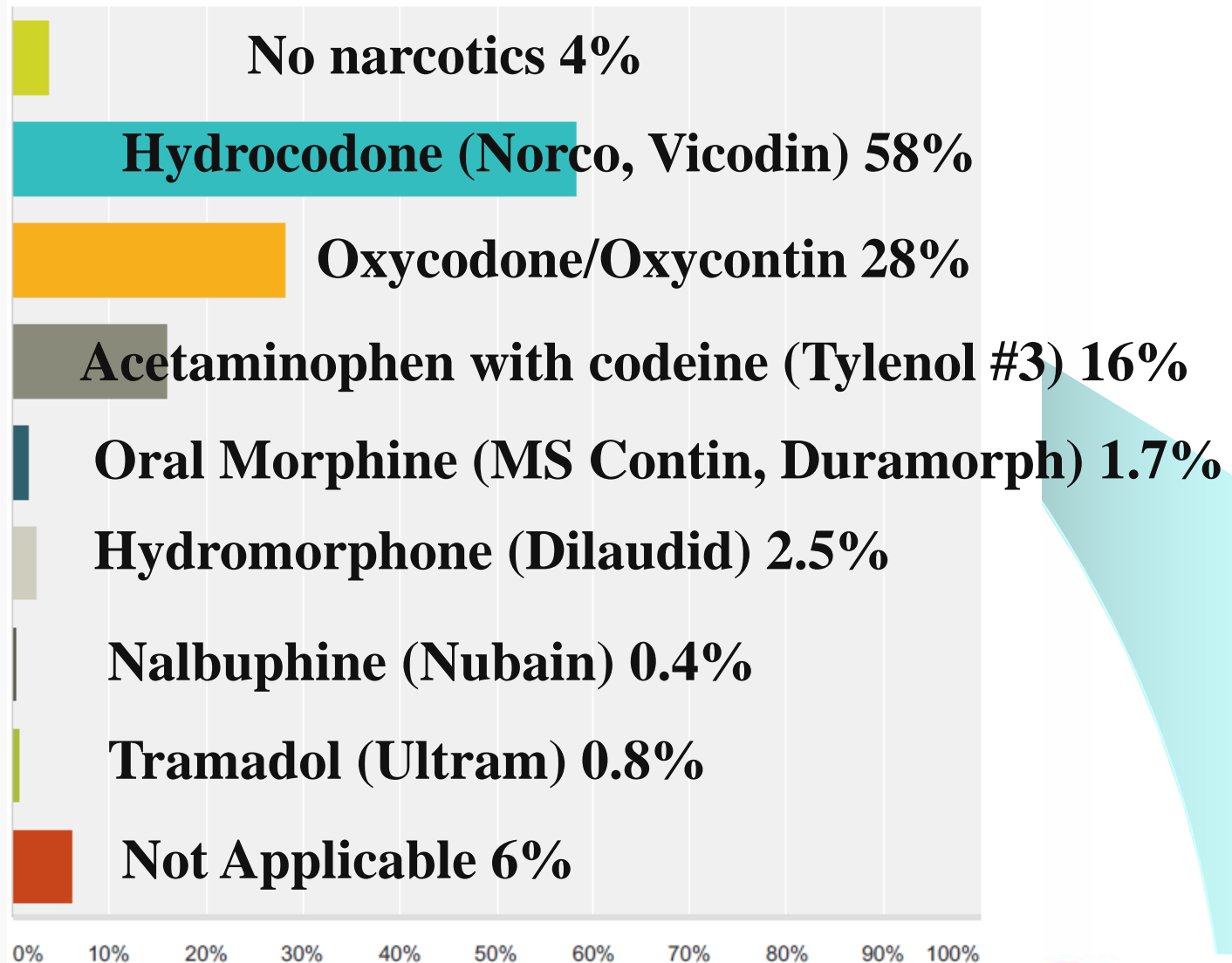
Knee Arthroscopy



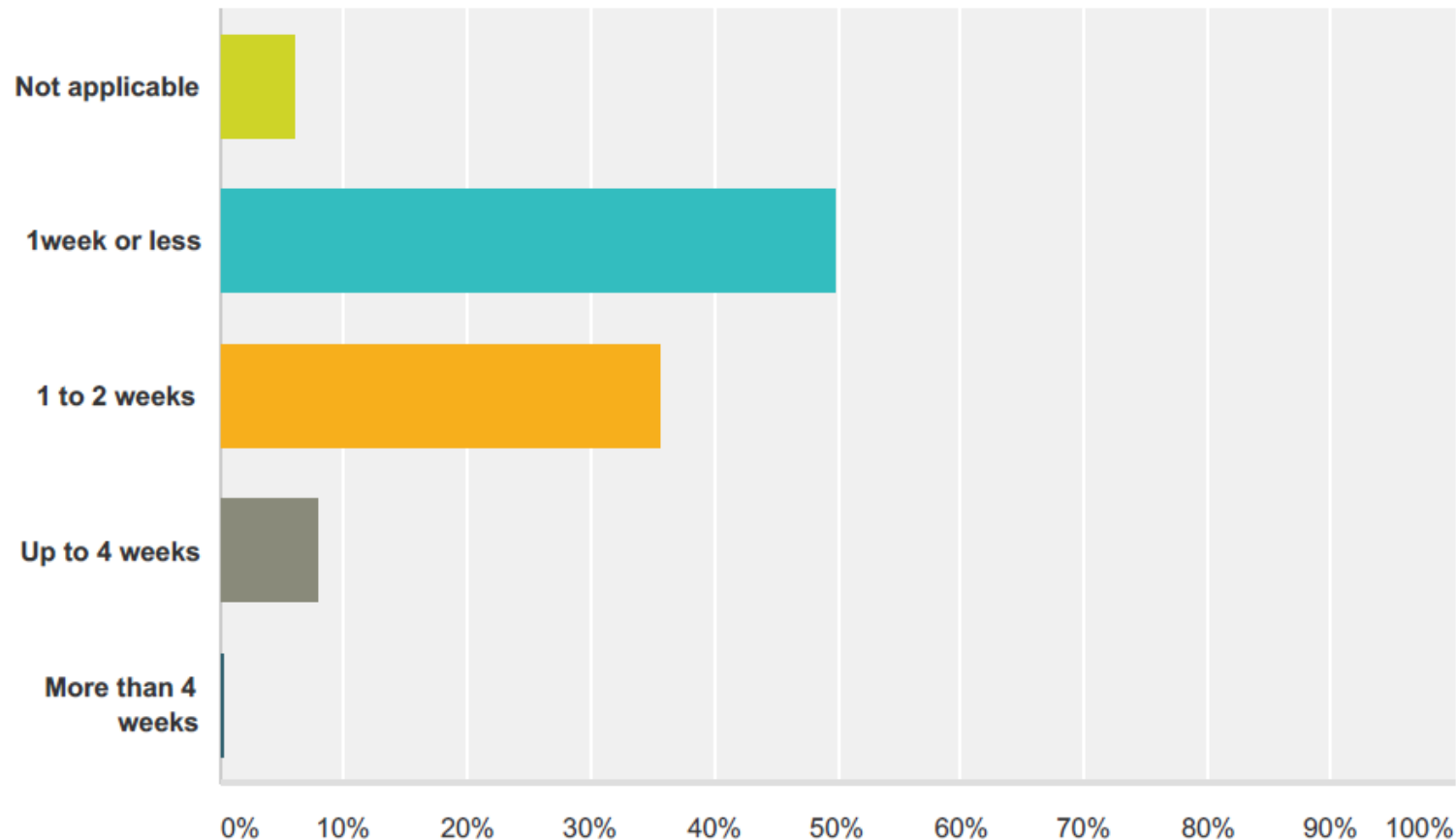
Hip Procedure Young Child



Hip Procedure Young Child

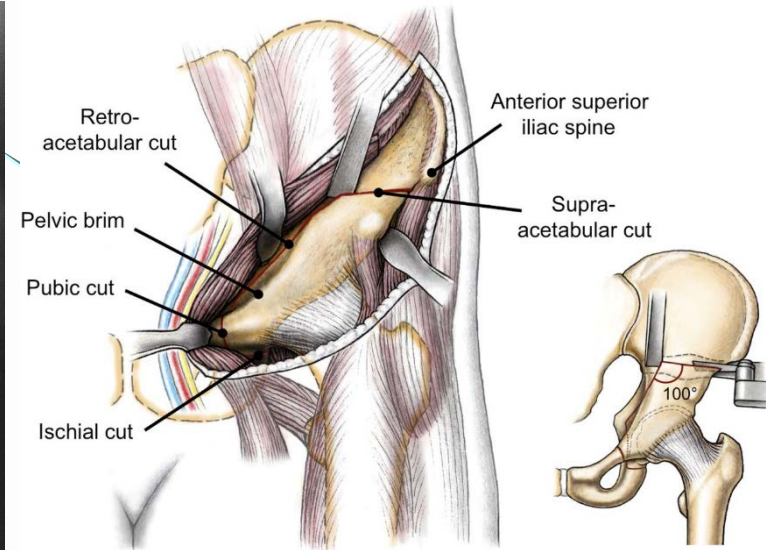
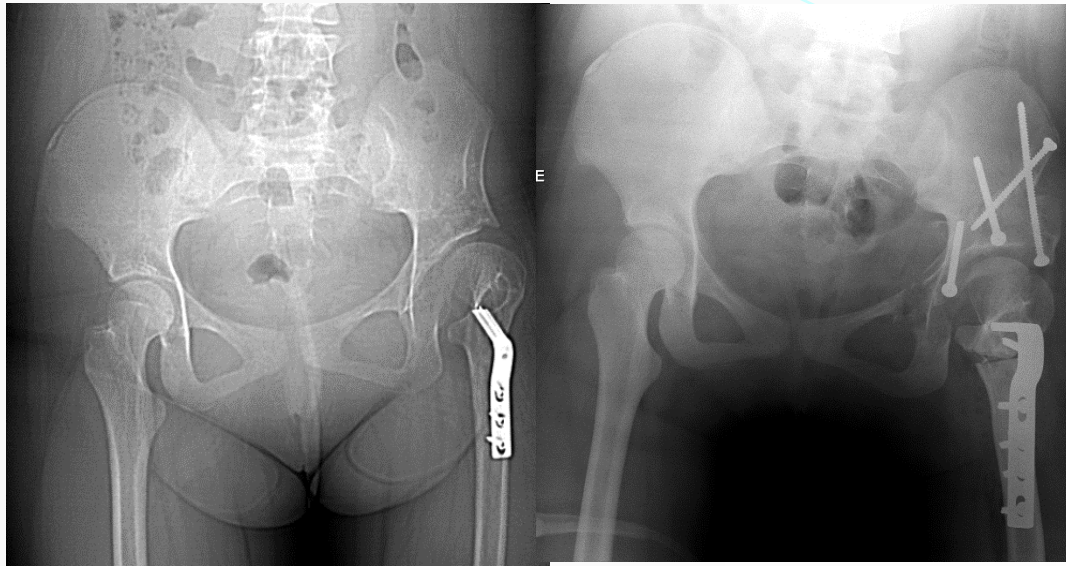


Hip Procedure Young Child

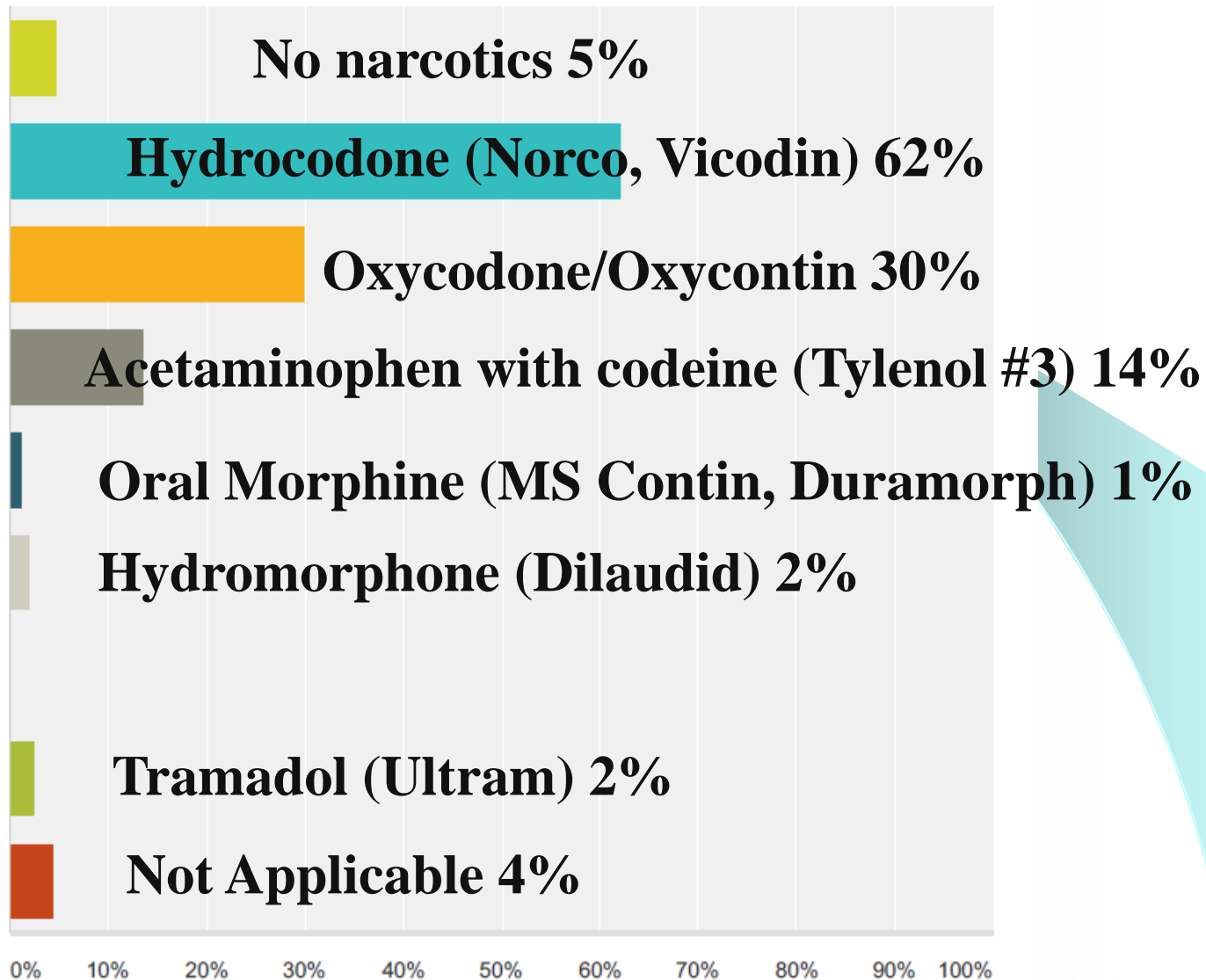


● **Hycet – acetaminophen/hydrocodone**

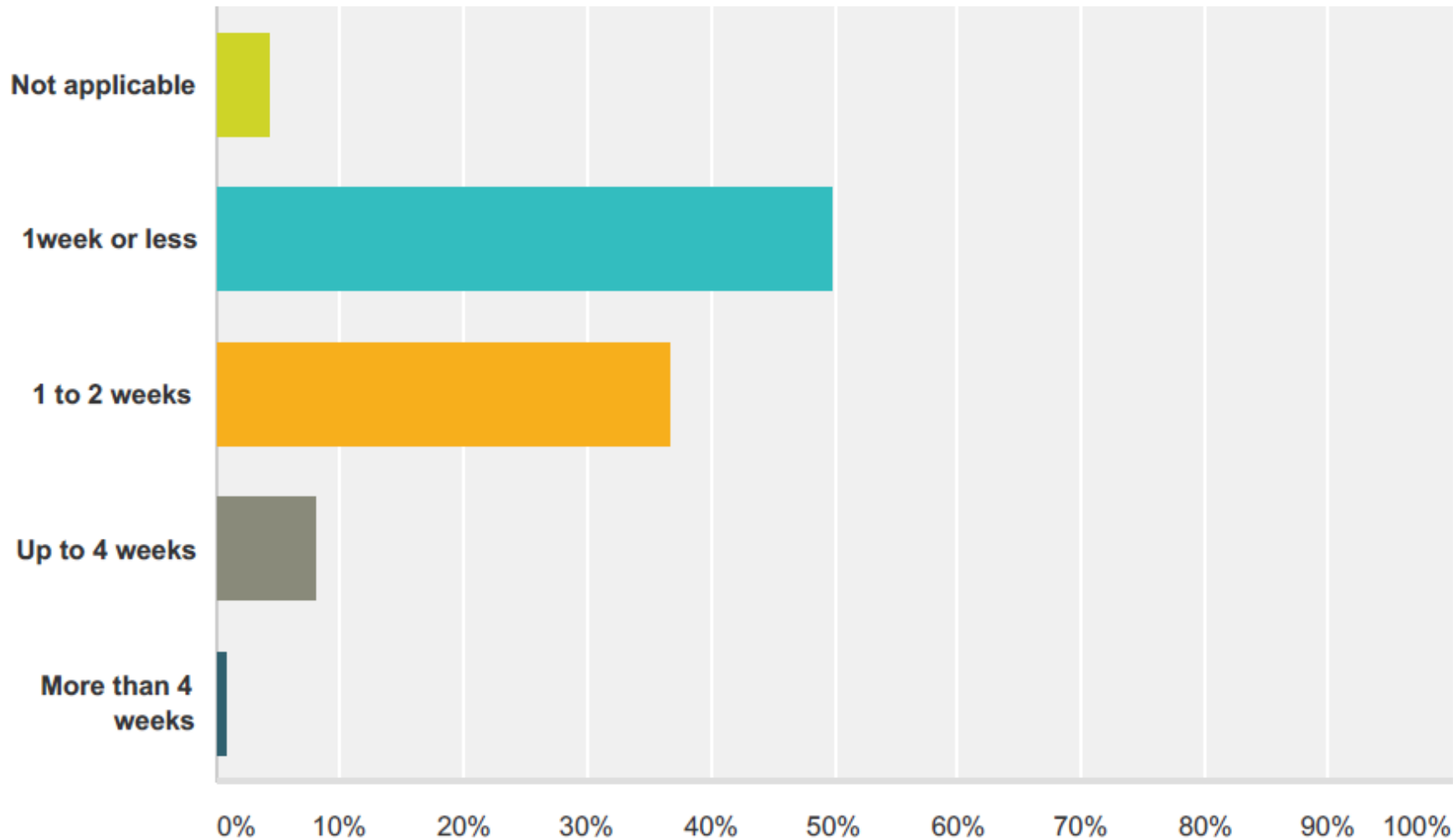
Hip Procedure Older Child/Teen



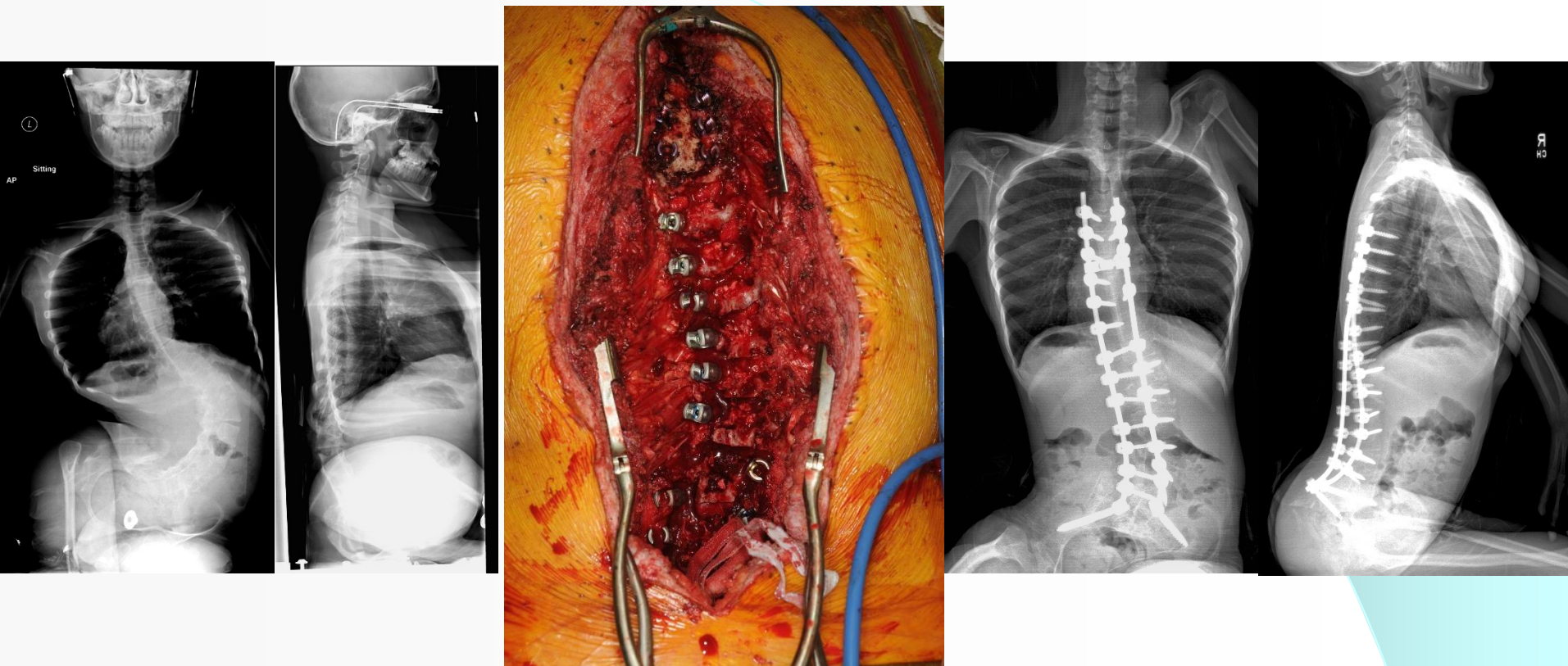
Hip Procedure Older Child/Teen



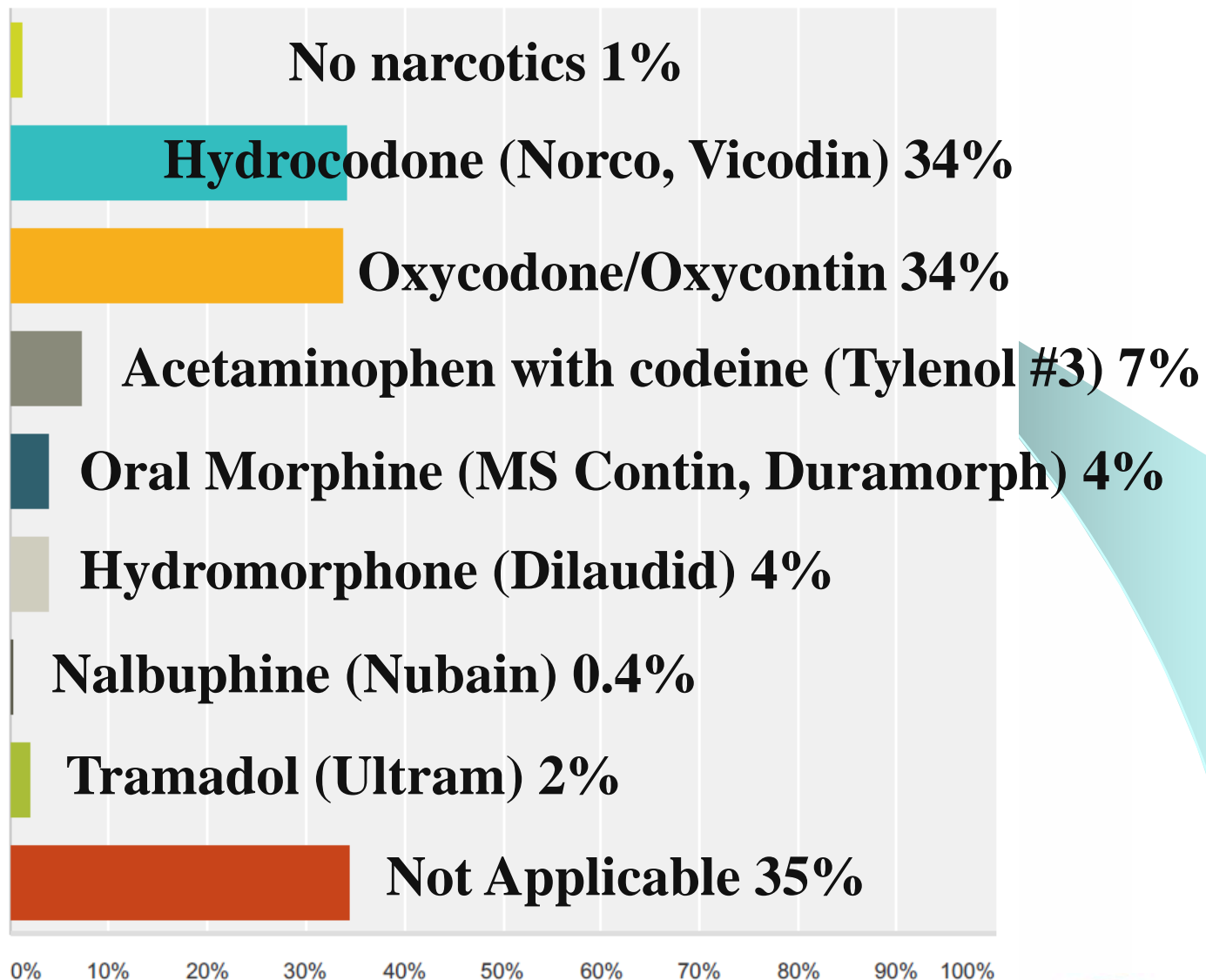
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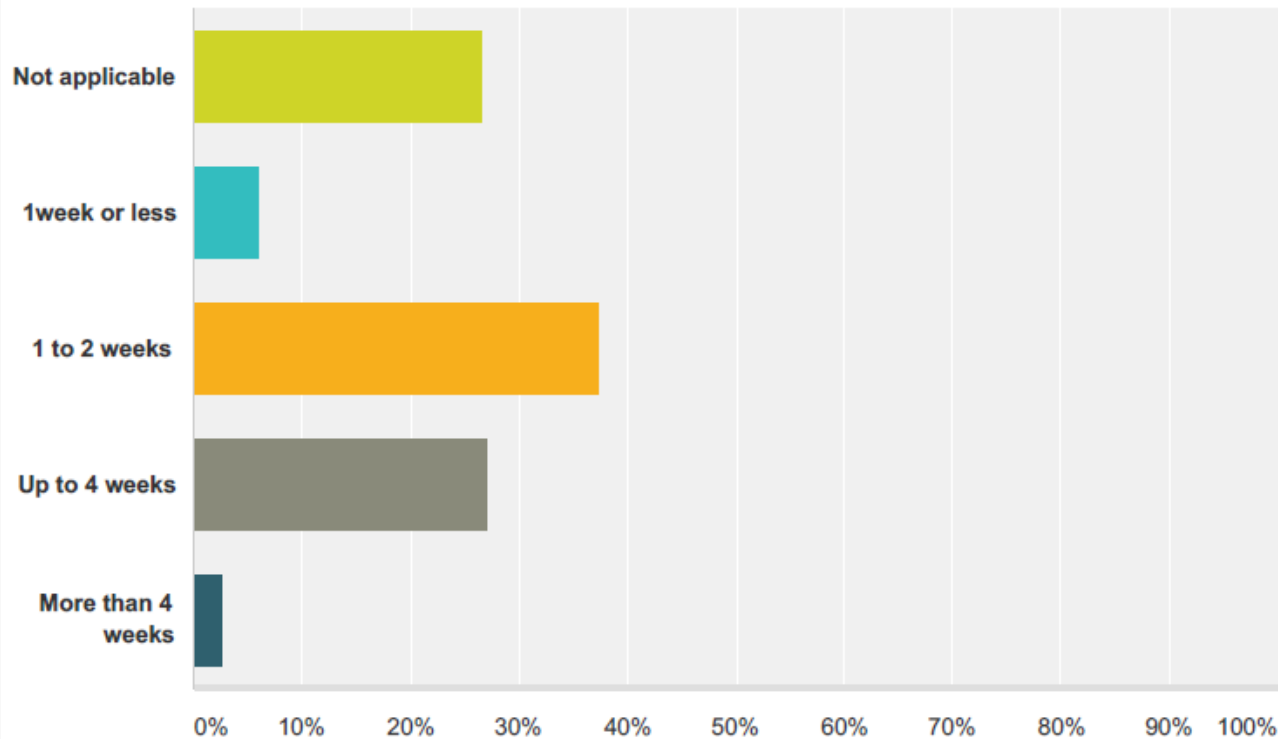
Spinal Fusion



Spinal Fusion



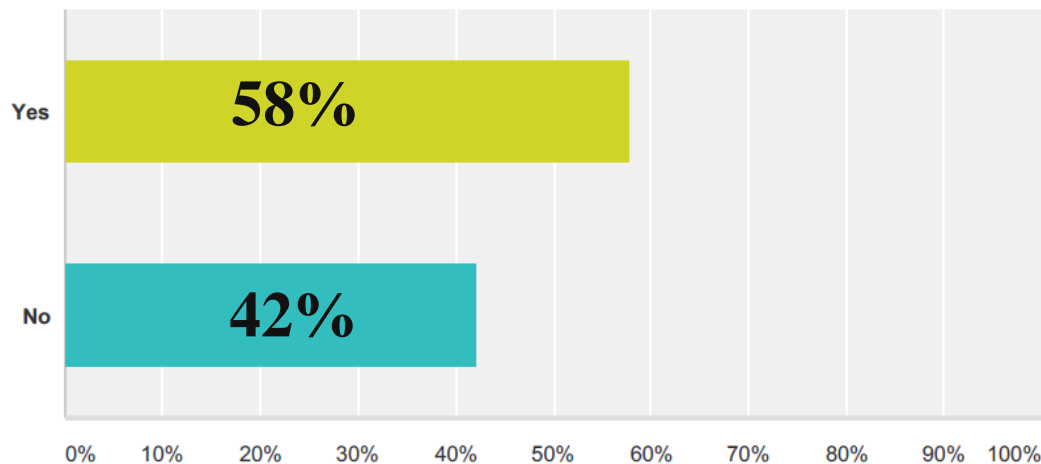
Spinal Fusion



- Movement is important
- Oral medications less constipating than IV
- Return to school 4-8 weeks

Narcotics as Backup Plan

- **State specific narcotic prescription rules**
 - ⊕ **No telephone prescriptions, paper only**
 - ⊕ **Situations with lower probability of pain**
 - ✦ **“Prophylactic” narcotic prescription?**
 - ⊕ **Distance and “middle of night”**

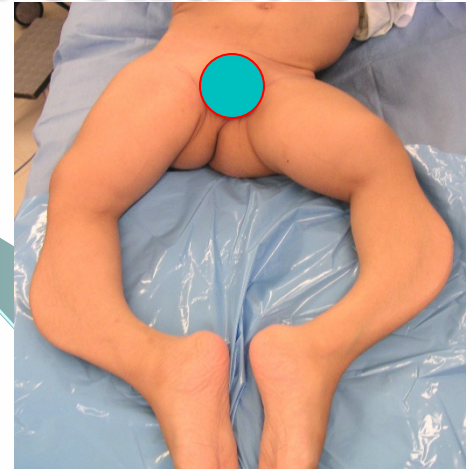


Pre- or Non Surgical Patients

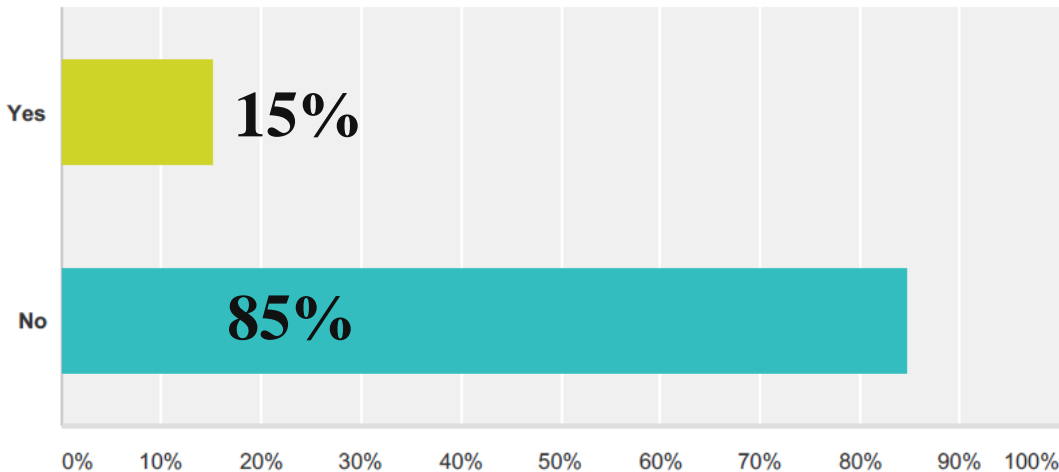
● Prescribed narcotics for painful conditions

⊕ Prior to any surgical treatment

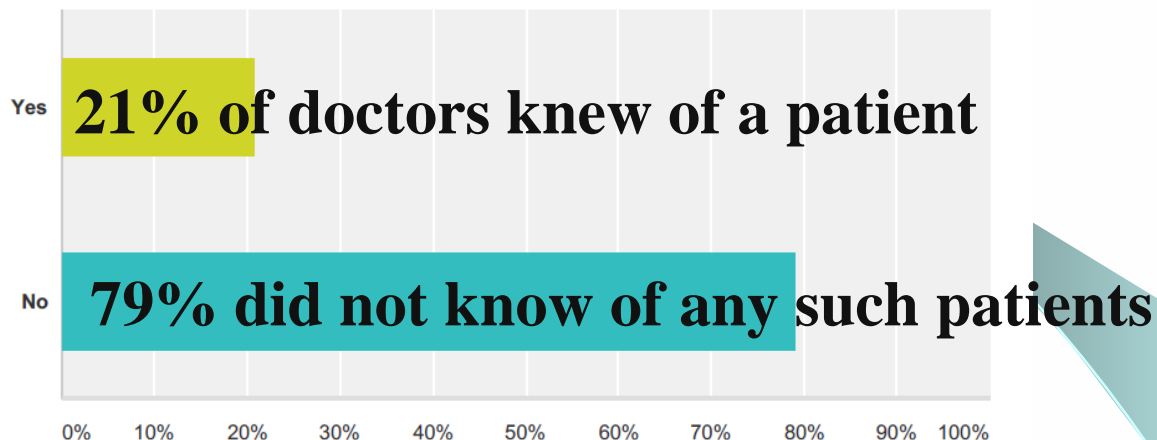
⊕ No fracture



Osteogenesis Imperfecta

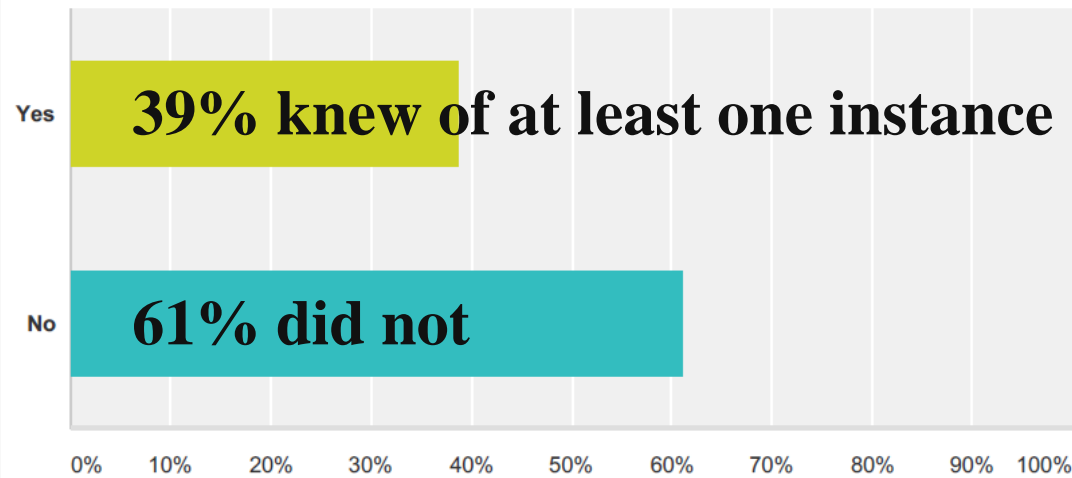


Opioid Abuse in Pediatric Patients?



- Patients with chronic pain conditions
- Patient selling their pills
- Some had unconfirmed suspicions

Opioid Abuse by Patient's Family?



- Some estimated at 0.5% of events
- Many had unconfirmed suspicions
 - ⊕ Especially in cases of refill requests
- Occasional “fictitious pain”

Conclusions

● **Outpatient opioids in pediatric orthopaedics**

- ✦ **Very important for pain management**
- ✦ **Widely used**
- ✦ **Decrease hospital stays**

● **Oxycodone (immediate release or Oxycontin)**

- ✦ **Used in 14% to 34% of instances**
- ✦ **More often in more painful procedures**
- ✦ **Should be initially trialed in hospital with patient days prior to discharge**

Conclusions

● **Length of use**

- ⊕ **Less than one week for most situations**
- ⊕ **Only the most extreme situations call for treatment up to 4 weeks**
- ⊕ **Medications refilled only rarely**

● **“Prophylactic” prescribing**

- ⊕ **Need new strategies**

Conclusions

● Abuse

- ⊕ Potential well recognized
- ⊕ Ever vigilant
- ⊕ Teach parents
 - ✱ Warning signs (sedation, nausea, dizziness)
 - ✱ Only parents can dispense drugs
 - ✱ Keep journal of medication use

● More research

- ⊕ Pediatric pain management strategies
- ⊕ Methods to prevent abuse

THANK YOU