Splinting Made Easy

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Disclosures

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Objectives

• Internists who attend this workshop should be able to:
  • Perform common splinting and safe immobilization techniques for the finger, wrist, elbow, knee and ankle
  • Describe frequent pitfalls that occur when splinting/immobilizing a joint
  • Understand when it is better to use a hand-made vs. a pre-fabricated splint
Objectives

• Splinting
  – Why?
  – When?
  – What?
  – How?
  – Pitfalls?
Orthopedic History
“You put your finger where?”
Splinting – Why?

• Control
  • Position
  • Swelling
  • Motion
  • Rotation
  • Neurovascular Status
• Pain
• Timing
Splinting – Why?

• Protection
  • Skin
  • Nerve
  • Vessels
  • Muscles (compartment)
  • Bone

• Transition of Care
Splinting – When?

• Transition of care or definitive care
  • Emergent
    • Open fracture or dislocation
    • Compartment Syndrome
  • Urgent
    • Pain control
    • Swelling management
  • Definitive
    • Injury, rehab, and outcome objectives
BEWARE

• Lack of Communication
  • Acute or Chronic Mental Status Limitations
  • Age

• Secondary Injury

• Change in status
  • Pain as a vital sign
  • Ability to adjust treatment quickly

• Abrasion or open fracture
Splinting - What?

- Pre-Fab
  - Sling
  - Aluminum and Foam
  - Joint Specific
Splinting – What?

• Materials
  • Fiberglass
  • Padding
  • Elastic or Cotton Wrapping
  • Water – temperature?
  • Scissors
  • Patience
BEWARE

• Wearing a Splint is not natural
• Extreme positions are not good
• Bony Prominences need extra attention
  • Ulnar styloid, olecranon, fibular head, ankle malleoli
• Don’t create an emergency and increase cost
Splinting – How?

• Natural and Neutral positions are the safest
  • “Make it look like a hand”

• How much to include
  • Fingers / No fingers
  • Elbow / No elbow
  • Shoulder / No shoulder
  • Knee/ No knee
Long Arm Splint Demonstration
Long arm Splint X-Ray
Elbow Splint Demonstration

• Posterior Padding
• Wrist Padding
• Rotation control
Elbow
Wrist/Hand Splinting Demonstration
Finger or No Fingers?
Wrist
Finger
Fingers
Finger Splinting
Fingers
Knee
Ankle
Patience, Patience
Foot
Toes
Splinting – Style Points

- No Wrinkles
- 50% cotton overlap
- Extra padding on bony prominences
- No Prickles
- Rolling not Pulling
- Modifiable
- Only what you need
Splinting - Pitfalls

- Skin Breakdown
- Too Much / Too Little
- Unrelieved Swelling
- Urgent becomes Definitive Treatment
BEWARE - Compartment Syndrome

- Pain out of proportion
- Pain with passive ROM

Clinical Diagnosis

- Paresthesias
- Pallor
- Poikilothermia - cold
- Paresis
- Pulseless
Splinting - Documentation

- Swelling controlled (Compartments Soft)
- Capillary Refill (less than 2 seconds)
- Sensation intact
- Motor intact
- Position

- Type of splint
- Well Padded
- Patient Aware
- Signs and Symptoms of Compartment Syndrome
- Timing for Follow up
Splinting – Materials

- Custom
  - Fiberglass
  - Padding
  - Elastic or Cotton Wrapping
  - Water
  - Scissors
  - Tape
  - Patience

- Pre-fab
  - Sling
  - Straight leg immobilizer
  - Boot
  - Aluminum
## Costs and Reimbursement (Medicare)

### Material Reimbursement
- Long-Arm splint $15.07
- Short-Arm splint $12.62
- Long-Leg splint $35.45
- Short-Leg splint $19.38

### Application Reimbursement
- Long-Arm splint $84.56
- Short-Arm splint $66.84
- Long-Leg Splint $88.52
- Short-Leg Splint $73.56

### Evaluation and Management
- Office Visit: New - Level 3 $77.44
- Urgent Care $$
- ER visit $$$$$
Thank You