



# **The Wisconsin Dental Pain Protocol**

Treatment of

**Non-Traumatic Dental Pain**  
in the Emergency Room  
and Urgent Care Center

# Learning Objectives



- Understand the impact of non-traumatic dental pain (NTDP) on patients, emergency rooms, and urgent care centers
- Introduce the Wisconsin Dental Pain Protocol for NTDP
  - Intake
  - Clinical Algorithm
  - Discharge

# Why Teeth Matter



20,000

# Why Teeth Matter



- Critical to overall health
- Growing awareness and research on the relationships between oral infections and:
  - Diabetes
  - CVD
  - Stroke
  - Low-birth weight babies
- Patients with oral infections are not eligible for heart procedures, transplants, or other advanced treatment by physicians

# Why Teeth Matter



- In youth, tooth decay is the most prevalent and preventable disease
- Low income and youth of color have twice the rate of untreated decay
- According to the 2000 Surgeon General's Report, dental pain is the number one reason why kids miss school
  - 50 million hours nationwide



# ED/UCC Protocol | BACKGROUND



- In 2014–2015, a group of health care, ED/UCC, dental, and public health leaders convened to address NTDP presentations with the goals of:
  - Establishing effective intake, treatment, and discharge protocols
  - Minimize use of opioids
  - Direct patients to definitive treatment for emergent oral health issues
- Developed the NTDP ED/UCC Protocol, implemented February of 2015

# ED/UCC Protocol | INTAKE



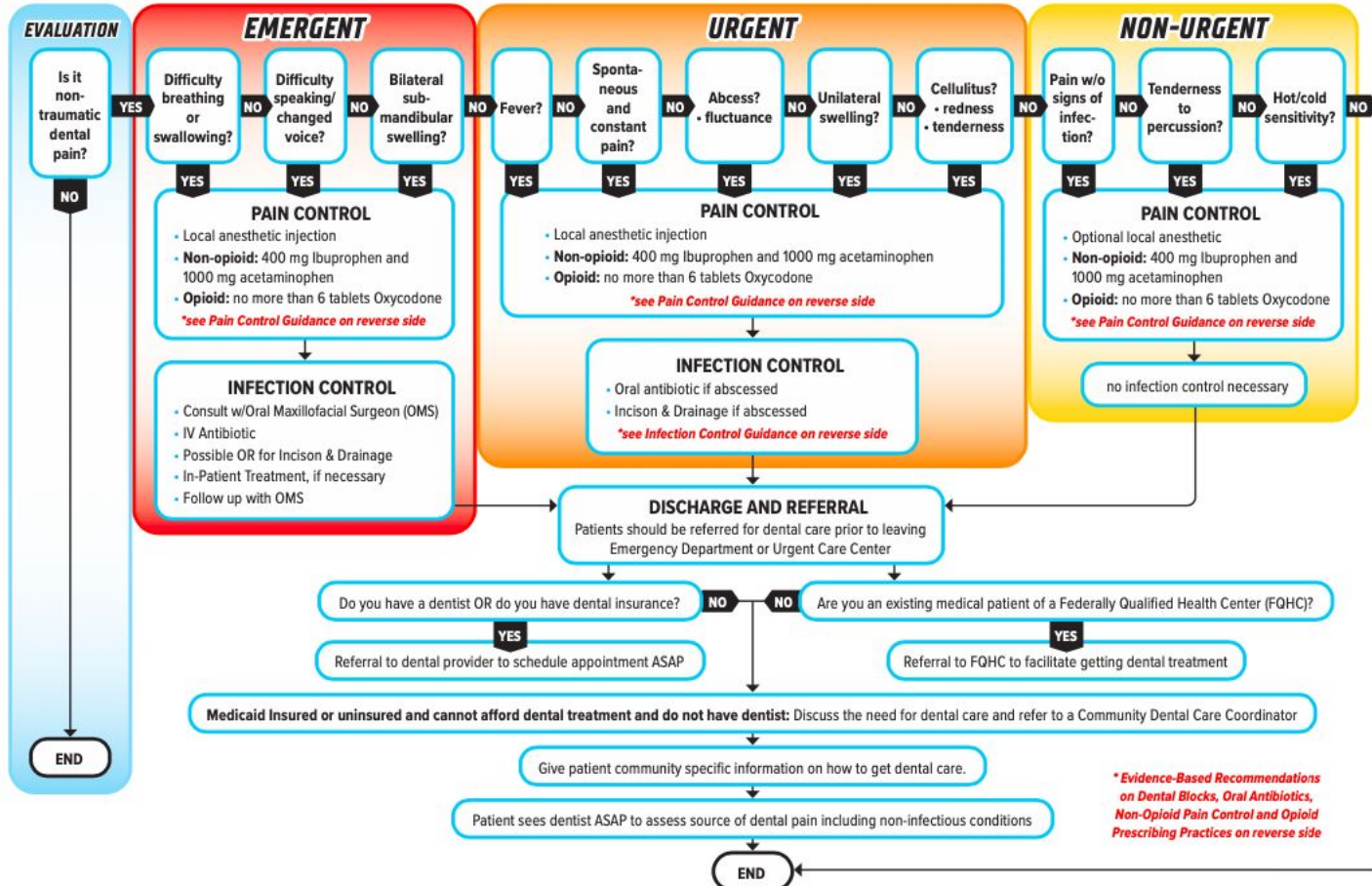
- Create **effective systems for triaging** patients into the proper care
- **Minimize the number of people** coming into emergency rooms and urgent care centers who don't need to be there
- **Nurse line scripts** for triaging NTDP





# Wisconsin Dental Pain Protocol | Clinical Algorithm

This algorithm was developed by Public Health Madison Dane County and is a public domain resource.





# Wisconsin Dental Pain Protocol | Evidence-Based Treatment Recommendations

This algorithm was developed by Public Health Madison Dane County and is a public domain resource.

It is expected that all recommendations are subject to provider modification based on patient need and protocols for pain and infection control. The following dental pain and infection control recommendations are based on clinical best practices. Providers should prescribe based on their assessment of patient health history and clinical circumstance.



## ONLINE RESOURCES

It is strongly recommended that providers receive training on injection technique prior to utilizing local anesthetic injections. In addition, the link below offers a webinar titled, *Management of Dental Pain in the Emergency Room*. The following time stamps offer targeted information and guidance for your immediate review and use.

**Link:** [www.youtube.com/watch?v=spwoD4x79Tw](https://www.youtube.com/watch?v=spwoD4x79Tw)

Time Stamps:

- I. Opioid Prescribing and Its Impact (2:52)
- II. Local Anesthetic and Use of Vasoconstrictors (7:32)
- III. Anesthetics for Dental Pain (14:52)
- IV. Anesthesia Injection Techniques (25:35)
- V. Delivering Local Anesthetic Demonstration (29:05)
- VI. Types of Analgesia (46:08)
- VII. Dental Infection and Antibiotic Selection (1:02:28)

## PAIN CONTROL GUIDANCE

As identified in the Clinical Algorithm, providers should utilize the following non-opioid and opioid pain control regimens:

1. 400 mg of Ibuprofen and 1000 mg of Acetaminophen every 4–6 hours PRN for pain. Provider may increase dosages at their discretion.
2. If in the provider's judgement the patient requires opiate pain control, patient should be given no more than 6 tablets of Oxycodone and informed there will be no refills.

## LOCAL ANESTHETIC GUIDANCE

Provider should offer immediate pain control through local anesthetic injection. Injection dose of 1.8 cc is standard. Maximum amounts dictated by type of anesthetic, patient weight and health history.

- **General Use:** 2% Lidocaine with 1:100,000 epinephrine can be used for all types of injections.
- **Inferior Alveolar Nerve Block:** 2% Lidocaine with 1:100,000 epinephrine coupled with .5% Bupivacaine with 1:200,000 epinephrine.
- **Infiltration at Source of Pain:** 4% Septocaine with 1:100,000 epinephrine coupled with .5% Bupivacaine with 1:200,000 epinephrine
- **Infected Areas (Exudate or Severe Swelling Present):**  
Add 2% Mepivacaine with 1:200,000 Neo-Cobefrin

## INFECTION CONTROL GUIDANCE

Per the webinar, the following antibiotic regimens are recommended:

**Mild Infections** (no visible swelling, exudate or pain on palpation present)

- Amoxicillin 500 mg – 1 gram loading dose, then BID
- Keflex 500 mg – 1 gram loading dose, then QID
- Azithromax (Z-Pak) 250 mg – 2 tabs first day, then 1 tab till gone (5 days)

**Moderate Infections**

- Amoxicillin 500 mg – 1 gram loading dose, then BID plus Metronidazole 500 mg BID
- Clindamycin 300 mg, QID with 450 mg loading dose
- Augmentin 500 mg, 1 gram loading dose then TID

The 5–7 days is the average with 10 days max.

# ED/UCC Protocol | DISCHARGE



- Essential to get patient into **definitive care** to address current problem but also prevent readmission for same condition.
- **Patient will be given the following directions:**
  - It is important to see a dentist soon to get the treatment you need for your dental problem or the pain and infection will return.
  - If you have dental insurance or already have a dentist, call your dental provider to schedule an appointment right away.
  - **If you are insured through BadgerCare and do not have a dentist OR If you're uninsured, cannot afford dental treatment and do not have a dentist, call the Community Dental Care Coordinator**

# ED/UCC Protocol | OUTCOMES TO DATE



## In Dane County

- Repeat dental pain visits have shown a decline since 2016 in all participating hospital EDs and urgent care centers (UCCs).
- The number of ED visits for dental pain has been cut by more than half since 2014, dropping from 2,405 to 1,123 visits in 2018.
- There is also a similar drop in Urgent Care visits.
- The combination of this initiative, continued collaboration, and an increase in local dental resources may have contributed to this positive outcome.



## In La Crosse County

- In 2021, Community Dental Care Coordinators received **615** calls from patients referred from the participating health care organizations.
  - 550 referrals made to community-based dental care
  - 65% initial appointments attended
- There was an increase in the number of local anesthetics given for dental pain.



**Questions?**



# Clinical Hands-On Training

- Syringe and Manikin Station
- Oral Landmark Station
- Skull Anatomy Station