

Fall 2020 Rounds

Evidence Based Dentistry Rounds

Pediatrics
Group 1A-4
10/14/2020



Rounds Team

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- ▶ **Group Leader: Dr. Smithy**
- ▶ **Specialty Leader: Dr. Engibous**
- ▶ **Project Team Leader: Stefan**
- ▶ **Project Team Participants: Muhammad; Jordan; Aesha**

Patient

3

- ▶ 6-year-old Caucasian male
- ▶ Lives in rural Wisconsin
- ▶ High dental anxiety

Medical History

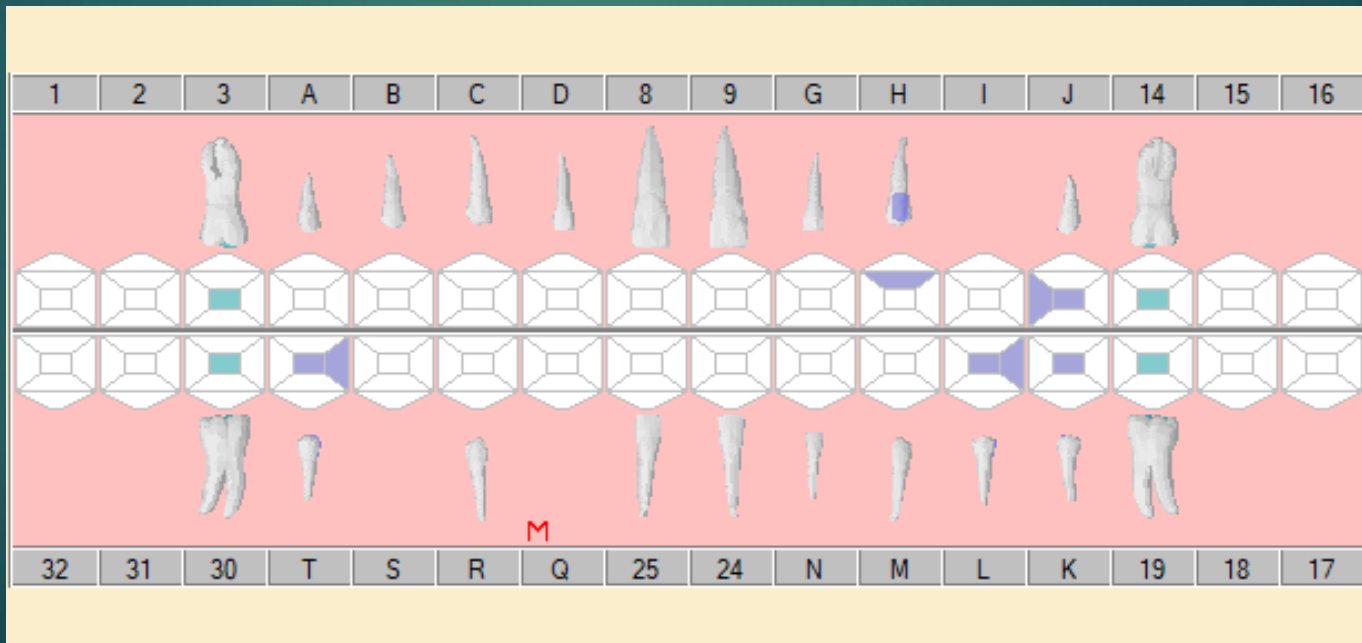
4

- ▶ No medications
- ▶ Seasonal allergies
- ▶ Parent reported no significant medical history
- ▶ No medical consults
- ▶ Dental anxiety

Dental History

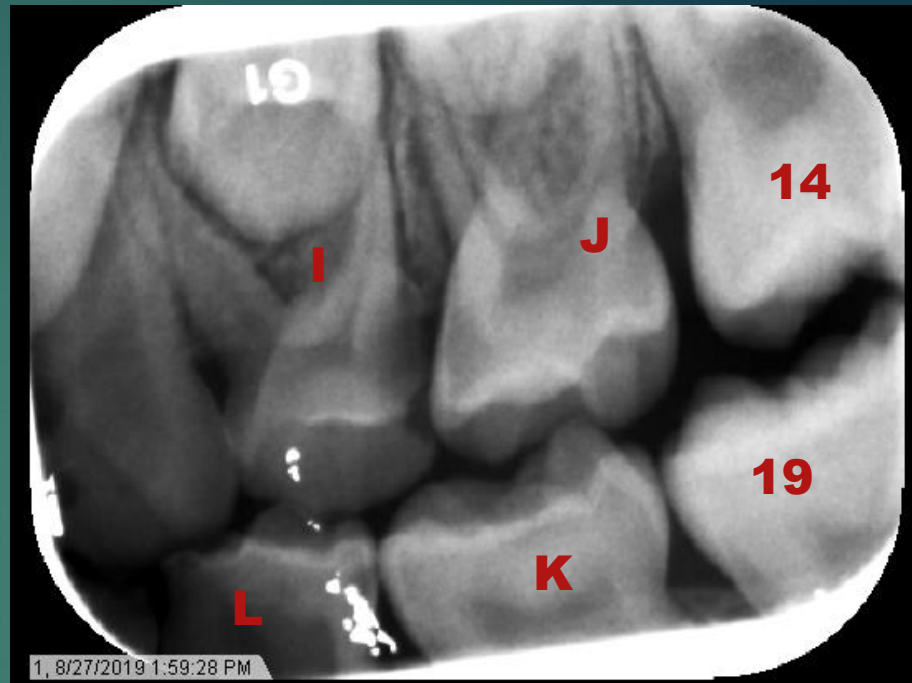
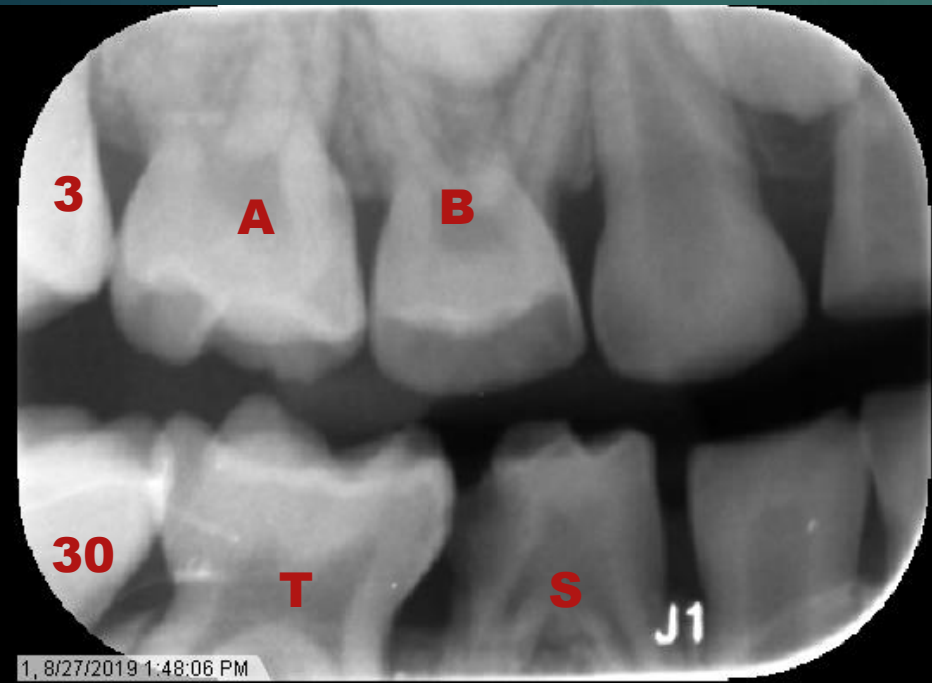
5

- ▶ 1 slide describing past dental history
- ▶ 1-2 years since last dental visit/exam/cleaning
- ▶ No dental pain or discomfort
- ▶ Brushes once a day and infrequent flossing
- ▶ Parent states that “at least one tooth is half gone”



Radiographs

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Radiographic Findings

- ▶ Decay on distal of tooth I leading to space loss
- ▶ Decay on mesial of tooth J
- ▶ Decay on distal of tooth L
- ▶ Gross decay on tooth S leading to space loss
- ▶ Decay on mesial of tooth T

Clinical Findings

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- ▶ Decay on distal of tooth I
- ▶ Gross decay on tooth S
- ▶ Decay on occlusal of tooth L
- ▶ Decay on occlusal of tooth K
- ▶ Decay on facial of tooth H
- ▶ No sealants on teeth 3,14,19,30

Specific Findings

- ▶ Radiographically, the decay on tooth I and S was encroaching on the pulp chamber
- ▶ Planned for either pulpotomy and stainless-steel crown (SSC) or extraction and space maintainer

Diagnosis

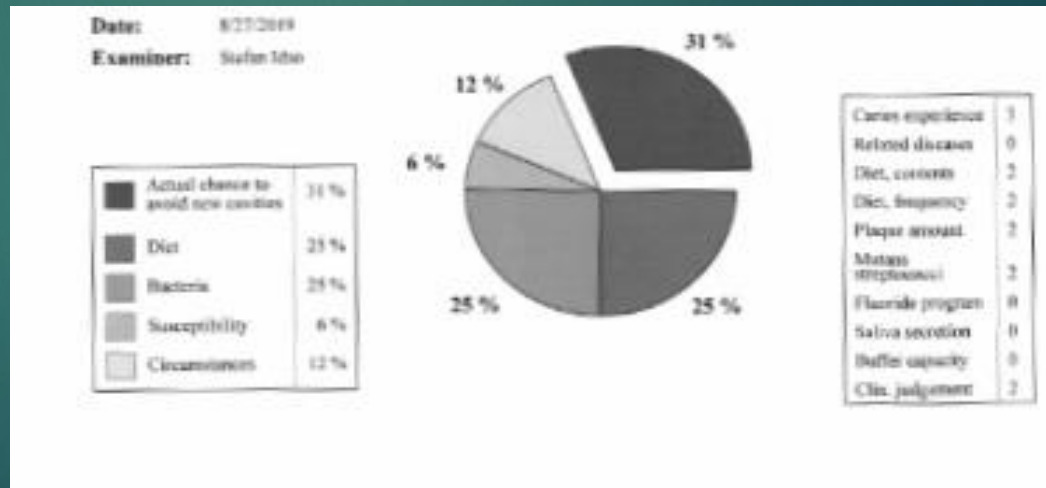
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► Caries

Problem List

10

- ▶ Caries
- ▶ Space loss
- ▶ Anxiety/behavior
 - ▶ Frankl score of 2 at all appointments
- ▶ Oral hygiene



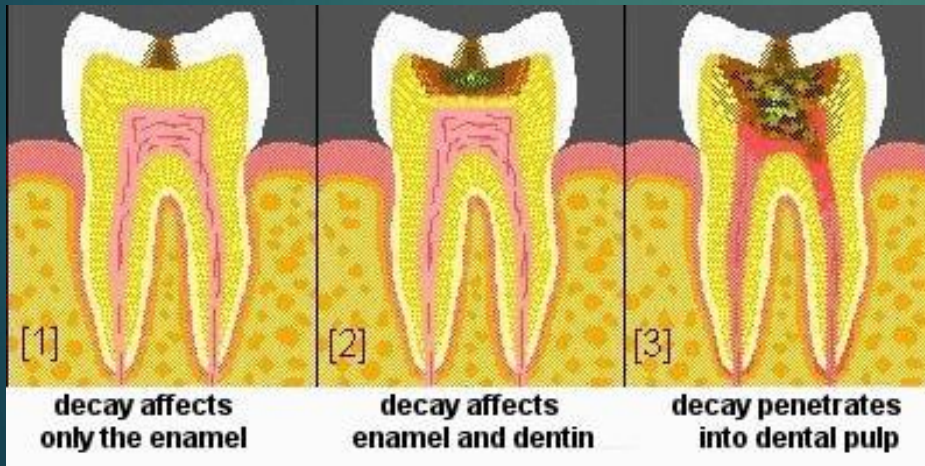


D1 Basic Science

MUHAMMAD SALAHUDDIN

Nitrous Oxide for Dental Anxiety

- ▶ Dental Anxiety
 - ▶ 42% of children in a study (105/250)
 - ▶ Injections #1, dentist drills #2
 - ▶ Can lead to long term effects if untreated



https://www.infodentis.com/images-eng/dental_decay_progression_large.jpg



<https://colleyvillepediatricdentist.com/wp-content/uploads/2019/10/scared-of-the-dentist.jpeg>

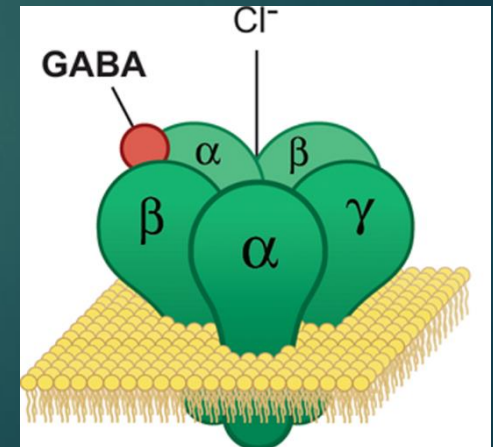
Kakkar, Mayank, et al. "Prevalence of Dental Anxiety in 10-14 Years Old Children and Its Implications." *Journal of Dental Anesthesia and Pain Medicine*, 21 Sept. 2016. jdapm.org/search.php?where=aview.

Nitrous Oxide for Dental Anxiety

- ▶ Dental Anxiety
 - ▶ Increased neuronal activity
- ▶ Anxiolytic Effect
 - ▶ GABA (inhibitory neurotransmitter) binds to GABAA Receptor
 - ▶ Reduction in neuronal activity = reduction in anxiety
- ▶ Dopamine
 - ▶ Produces euphoric feeling



https://northsidedent.com/wp-content/uploads/2018/10/shutterstock_1573121599.jpg



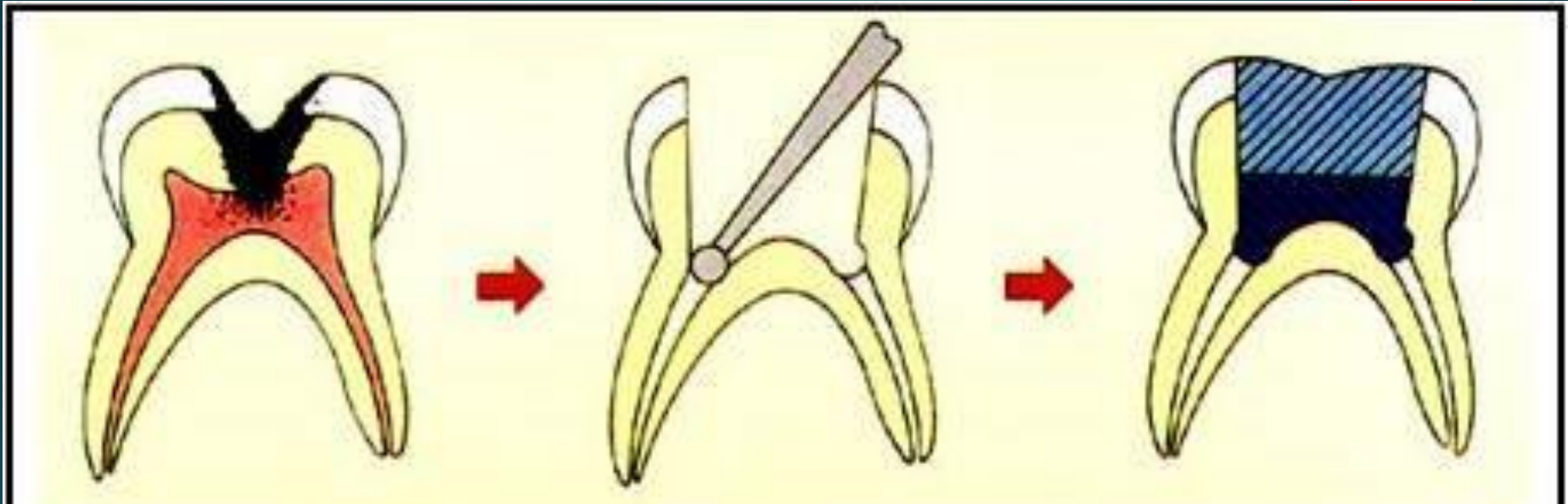
https://www.hussmanautism.org/wp-content/uploads/2016/02/GABA-receptor_mod.png

Use of Nitrous Oxide for Pediatric Dental Patients. American Academy of Pediatric Dentistry, 2018, www.aapd.org/research/oral-health-policies--recommendations/use-of-nitrous-oxide-for-pediatric-dental-patients/



D2 Pathology

JORDAN DIETRICH



What is a Pulpotomy and What Leads to a Pulpotomy Being Indicated?

Pulpotomy

► What is it?

- Most often done in primary teeth
- Pulp is removed in the crown of the tooth
- Remaining pulp is then capped and sealed
- A crown is most favorable, however depending on the extent of caries and esthetics other options may be used

► Indications

- Vital tooth
- No abscess or pain near root
- Damaged pulp or irreversible pulpitis

D3 PICO

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► **Clinical Question:**

PICO Format

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P:

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C:

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PICO Formatted Question

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Clinical Bottom Line

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Search Background

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- ▶ **Date(s) of Search:**
- ▶ **Database(s) Used:**
- ▶ **Search Strategy/Keywords:**

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Search Background

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► MESH terms used:

Article 1 Citation, Introduction

- ▶ Citation: Authors, Title, Journal, Date, Volume, Page Numbers.
- ▶ Study Design:
- ▶ Study Need / Purpose:

Article 1 Synopsis

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- ▶ 1-2 slides
- ▶ Method
- ▶ Results
- ▶ Conclusions
- ▶ Limitations

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Article 1 Selection

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- ▶ 1 slide
- ▶ Reason for selection
- ▶ Applicability to your patient
- ▶ Implications

Article 2 Citation, Introduction

- ▶ Citation: Authors, Title, Journal, Date, Volume, Page Numbers.
- ▶ Study Design:
- ▶ Study Need / Purpose:

Article 2 Synopsis

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- ▶ 1-2 slides
- ▶ Method
- ▶ Results
- ▶ Conclusions
- ▶ Limitations

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Article 2 Selection

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- ▶ 1 slide
- ▶ Reason for selection
- ▶ Applicability to your patient
- ▶ Implications

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Levels of Evidence

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- ☐ **1a** – Clinical Practice Guideline, Meta-Analysis, Systematic Review of Randomized Control Trials (RCTs)
- ☐ **1b** – Individual RCT
- ☐ **2a** – Systematic Review of Cohort Studies
- ☐ **2b** – Individual Cohort Study
- ☐ **3** – Cross-sectional Studies, Ecologic Studies, “Outcomes” Research
- ☐ **4a** – Systematic Review of Case Control Studies
- ☐ **4b** – Individual Case Control Study
- ☐ **5** – Case Series, Case Reports
- ☐ **6** – Expert Opinion without explicit critical appraisal, Narrative Review
- ☐ **7** – Animal Research
- ☐ **8** – In Vitro Research

Double click table to activate check-boxes

Strength of Recommendation Taxonomy (SORT)

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<input type="checkbox"/>	A – Consistent, good quality patient oriented evidence
<input type="checkbox"/>	B – Inconsistent or limited quality patient oriented evidence
<input type="checkbox"/>	C – Consensus, disease oriented evidence, usual practice, expert opinion, or case series for studies of diagnosis, treatment, prevention, or screening

Double click table to activate check-boxes

Conclusions: D3

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How does the evidence apply to this patient?

- ▶ Consider/weigh:
 - ▶ Literature
 - ▶ Group Leader & Specialist experience
 - ▶ Patient circumstances & preferences

Based on the above considerations, how will you advise your D4?

Conclusions: D4

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Based on your D3's bottom line recommendations,
how will you **advise** your patient?

How will you **help** your patient?

Discussion Questions

33

- ▶ 1-2 slides
- ▶ List posted discussion questions
- ▶ Questions may also be from Group Leader or Specialist

General Information

- Keep the order of slides the same as this template.
- Limit the number of slides to about 35.
- Add graphics to illustrate concepts.
- Cite references, illustrations on slides.
- Avoid crowding the slide with too much text.
- Best font size: 32.
 - Font size smaller than 24 will be difficult to read.