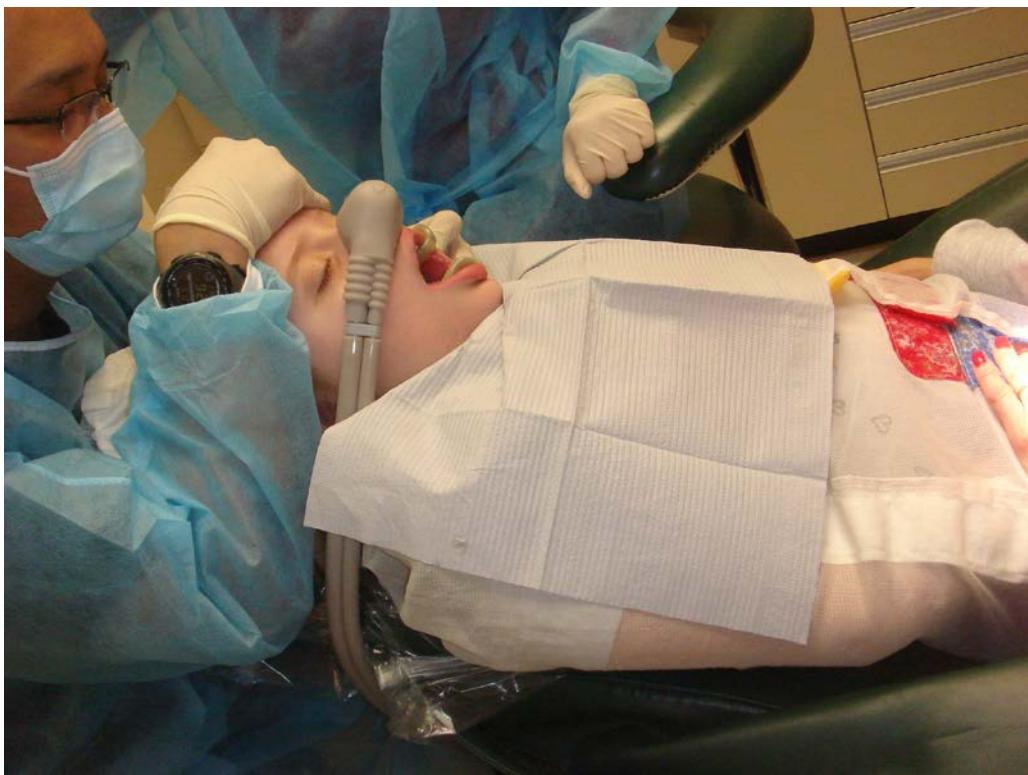


# **Successful Management of Patients with Anxiety or Special-Needs**

**Harvey Levy, DMD, MAGD**

**William F Slagle Dental Meeting  
Memphis, TN   March 4, 2017**



Dr. Harvey Levy  
198 Thomas Johnson Drive  
Suite 108  
Frederick, MD 21702  
Voice/TDD: 301 663-8300  
Fax: 301 682-3993  
[DrHLevy@gmail.com](mailto:DrHLevy@gmail.com)  
[www.DrHLevyAssoc.com](http://www.DrHLevyAssoc.com)

# **Successful Management of Patients with Anxiety or Special-Needs**

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[www.DrHLevyAssoc.com](http://www.DrHLevyAssoc.com)

## **Course Schedule**

**Saturday, March 4, 2017**

8:00-8:20 am	Introduction; Around the room experiences
8:20-9:50	Debunking the Myths
10:00-12:00	Basics of Special-Needs dental care (access, wraps, props)
[Lunch: 12 noon – 1:00 pm]	
1:00-2:30	Basics of Special-Needs dental care cont'd (imaging, gas, drugs, OR)
2:30-3:00	Interactive Case (Huntington's Disease, constant movement)
3:00-3:30	Practical Tips, Tricks and Techniques (PowerPoint and demo)
3:30-4:15	Hands-on work stations (depending on time and reps) <ol style="list-style-type: none"><li>1. Process 2 exposed x-rays (Ergonom-X Self-developing films)</li><li>2. Expose &amp; process 2 new x-rays (Ergonom-X film, NOMAD-Pro)</li><li>3. Expose &amp; process 2 x-ray images (DEXIS Digital, NOMAD-Pro)</li><li>4. Properly place a Nitrous Oxide mask (Porter Instrument)</li><li>5. Apply a Rainbow Wrap (Specialized Care Co.)</li><li>6. Apply 3 different mouth props (Specialized Care Co., Isolite, Hu-Friedy)</li><li>7. Use two different light sources for oral exam (Identafi, Ultralight Optics)</li><li>8. Enter a drug into Lexi-comp to assess interaction (Septodont, Lexicomp)</li><li>9. Modify a toothbrush for a manual-dexterity impaired patient (Colgate)</li></ol>
4:15-4:30	Review Pearls and Closing

Special-needs patient care is more than “why do people climb mountains” and “let’s make a dollar.” It’s a golden opportunity to use your gift, leave your mark, and make a positive difference. — Dr. Harvey Levy

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**William F Slagle Dental Meeting, Memphis, TN, March 4, 2017**

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Special thanks to Aribex, DentalEZ Solutions, DEXIS Imaging Systems, Ergonom-X Self-Developing Dental Film, Hu-Friedy, Isolite, KavoKerr Group, Septodont, SolutionReach, Specialized Care Co, Porter Instrument, and Ultralight Optics for their valuable contributions to the participation portion of this course.

# Debunking the Myths about Special-Needs Patient Care

Harvey Levy, DMD, MAGD

## Myths about treating special-needs patients, in short:

- They're too hard to treat.
- I can't make money.

### A. Administrative barriers

1. It's too difficult to communicate with them.
2. It's hard to get permission or consent to treat them.
3. It's a problem that they rely on others for transportation.
4. They don't keep their appointments or are late.
5. They are disruptive to the schedule.
6. I may have to treat them in a hospital, and getting hospital privileges is too hard.

### B. Management barriers

1. Repulsion factor: They urinate, defecate, expectorate and vomit anywhere.
2. I can't do quality work because they don't cooperate.
3. They are too difficult to restrain.
4. I can't get good x-rays.
5. I have to work around their wheelchairs or helmets.
6. They have disgustingly poor oral hygiene.
7. My staff will not want to work on them. I have a hard enough time attracting good staff.
8. It scares me to be in their presence.
9. It saddens me to work on these people - they have no future.

### C. Medical concerns

1. Pills alone wouldn't allow me to complete the procedure.
2. I'm afraid of having to use oral sedation greater than maximum recommended dose.
3. They have communicable diseases.
4. There may be no one to refer to, if I don't have the skills to perform a procedure.
5. I may not be able to handle their emergencies.

### D. Financial concerns

1. They're all on Medicaid and have no money.
2. It's too hard to ensure payment.
3. I don't want to buy expensive special equipment that I won't use much.
4. I'm only asked to do low-level, low-fee procedures on them.
5. Their treatment takes too long and requires too much staff to be cost effective.
6. Their appearance and screaming frighten away other patients.
7. They won't refer anyone.
8. They are high-risk medical patients. I don't want to be sued for complications.
9. Dentists who treat these people are the ones who can't succeed with regular patients.

# **Successful Management of Patients with Anxiety or Special-Needs**

Harvey Levy, DMD, MAGD  
[www.DrHLevyAssoc.com](http://www.DrHLevyAssoc.com)

- I. Why handle these cases?**
- II. Indications: Who are our patients?**
- III. How we go about treating anxious and special-needs patients**
  - A. Accessibility
  - B. Office Techniques
    - 1. Wraps and other restraints (least restrictive environment)
    - 2. Props and Blocks (wood & foam, rubber, plastic, Molt, Jennings, Isolite)
    - 3. Immobilize the head (five point contact and other restraints)
    - 4. Communicate with patient/caregiver
    - 5. Management and meaning of noises
    - 6. Autism and sound, light, tactile sensitivity
    - 7. Versatility
    - 8. Early morning appt, npo x 6 hr
    - 9. X-ray imaging systems and film
  - C. Nitrous Oxide Analgesia
  - D. Range of sedation:
  - E. Drugs (see Drugs handout for names and recommended doses):
  - F. Additional training available
  - G. If unsuccessful: reschedule, refer, or take to OR
- IV. Qualifying for a facility**
- V. Timeline**
- VI. Pre-operative – consultation and checklists**
- VII. At the hospital**
- VIII. Follow-up**
- IX. Reports**
- X. In conclusion**

# Case Review: Huntington's Disease

Harvey Levy, DMD, MAGD

William F Slagle Dental Meeting, Memphis, TN - March 4, 2017

## Loretta, 40 y-o WF

### I. History and stats of Huntington's Disease

- Described by American physician George Huntington (1872) and called Huntington's Chorea ("dance")
- Cause attributed to single faulty gene on chromosome #4 (1993)
- Autosomal dominant (50% pass to child)
- Inherited, progressive, degenerative brain disorder
- Produces physical, mental, emotional changes with dementia and psychiatric problems
- One in 30,000 in U.S. with no race or gender bias
- Typical onset age 35-50
- Typically fatal within 15-20 years after onset of signs / symptoms
- Woody Guthrie (1912-67) died of it

### II. Manifestations of Huntington's Disease in Loretta

- Signs began when she was 28
- Continuous movement; tics and grimaces; sudden, jerky, uncontrolled movements
- Unsteady gait
- Depression
- Psychological symptoms

### III. Associated problems

- Trismus, dysphagia, dyslalia
- Reduced manual dexterity
- Facial muscle movements eject dentures

### IV. Dental concerns for Loretta:

- Pre-op Dx: Caries, fractured and abscessed teeth, gingivitis, xerostomia
- Treatment: Extractions, restorations, prophylaxis

First dental visit: 7-22-06; OR 8-24-06

# Nitrous Oxide/Oxygen, Drugs for Sedation, Reversal Agents, and Recommended Doses

Harvey Levy, DMD, MAGD

## INHALATION AGENTS FOR SEDATION: NITROUS OXIDE

### NITROUS OXIDE / OXYGEN (N<sub>2</sub>O / O<sub>2</sub>), AKA “LAUGHING GAS” OR “NITROUS”

#### The Basics

- From the late 1800s mixtures of nitrous oxide and oxygen gas have been used extensively for both analgesia and anesthesia in a wide range of surgical procedures.
- When used in dental offices for anxiolysis at 4-6 liters of gas flow per minute, nitrous oxide/oxygen has a relaxing and calming effect on most patients.
- It had a rapid onset within minutes, and is completely exhaled and expressed from the lungs within minutes due to its low blood/gas solubility.
- The flowmeter failsafe prevents N<sub>2</sub>O from flowing without O<sub>2</sub> and limits the N<sub>2</sub>O to a maximum of 70%.
- Administration of this inhalation should be titrated to the desired effect.
- Gases flow two ways. Thus, scavenging system must be on and adjustable whenever nitrous is on.
- Total volume of gas flow of oxygen plus nitrous oxide per minute is:
  1. 6 liters for average adult male
  2. 5 liters for average adult female
  3. 4 liters for child

**Golden Rule:** When the nitrous is on, the bag must be moving.

#### The three most important rules when using nitrous

1. The mask must be properly placed on the patient’s face.
2. Do not talk to the patient or allow them to converse while nitrous is flowing.
3. Ensure you are flowing the correct amount of gas.

## NITROUS OXIDE ANALGESIA INHALATION SEDATION TECHNIQUE

1. Establish a 5 or 6 L/min of 100% oxygen. Place nasal hood on patient’s nose. Adjust the mask.
2. Adjust the flow rate to assure that he/she can comfortably breathe 100% oxygen in and out through the nose with the nosepiece in position. Flush the patient with 100% oxygen for 5 minutes.
3. Start a flow of nitrous oxide at approximately 20%. Add nitrous oxide in 10% increments every 60 seconds until an ideal sedation level is reached.

4. The ideal level of clinical sedation has been achieved when the patient states that he/she is experiencing either a feeling of warmth throughout the body, numbness of the hands and feet, numbness of the soft tissues of the oral cavity, a feeling of euphoria, or a feeling of lightness or of heaviness of the extremities. Not all patients will experience the same symptoms.
5. Administer local anesthetic and complete the planned procedure.
6. Terminate nitrous oxide flow. Allow the patient to breathe 100% oxygen at a flow rate equivalent to the established L/min for the patient for 5 minutes. You may start this before the completion of the procedure, to ensure a more expedient recovery. Give oxygen for 3-5 minutes, longer if clinical signs of sedation persist.
7. If you believe that the patient has completely recovered from sedation, he or she may be dismissed from the dental office unescorted.

## **ADMINISTRATION PROTOCOL (PORTER, MATRX)**

1. Attach sterile mask/liner to tubing.
2. Place mask on patient's face. Do not tighten mask. Only liner touches face.
3. Turn on oxygen to 6-7 L/min.
4. Maintain oxygenation for 5 minutes.
5. Confirm nose not mouth breathing.
6. Complete any dialogue/conversation.
7. Instruct patient on how to respond yes/no.
8. Turn on nitrous oxide to desired percentage.
9. Adjust total volume of mixed gases.
10. Confirm scavenging system is on.
11. Assure bag movement throughout treatment.
12. At end, turn off nitrous oxide and flush patient with O2 for 5 minutes.
13. Remove mask.

## **ADA RECOMMENDATIONS FOR MAINTENANCE AND MONITORING OF NITROUS OXIDE-OXYGEN AND EQUIPMENT**

1. The dental office should have a properly installed nitrous oxide delivery system. This includes appropriate scavenging equipment with a readily visible and accurate flow meter (or equivalent measuring device), a vacuum pump with the capacity for up to 45 liters of air per minute per workstation, and a variety of sizes of masks to ensure proper fit for individual patients.
2. The vacuum exhaust and ventilation exhaust should be vented to the outside (for example, through the vacuum system) and NOT in close proximity to fresh-air intake vents.
3. The general ventilation should provide good room air mixing.
4. Each time the nitrous oxide machine is first turned on and every time a gas cylinder is changed, the pressure connections should be tested for leaks. High-pressure line

connections should be tested for leaks quarterly. A soap solution may be used to test for leaks. Alternatively, a portable infrared spectrophotometer can be used to diagnose an insidious leak.

5. Prior to first daily use, all nitrous oxide equipment (reservoir bag, tubing, mask, connectors) should be inspected for worn parts, cracks, holes, or tears.
6. The mask may then be connected to the tubing and the vacuum pump turned on. All appropriate flow rates (that is, up to 4-5 L/min or per manufacturer's recommendations) should be verified.
7. A properly sized mask should be selected and placed on the patient. A good, comfortable fit should be ensured. The reservoir (breathing) bag should not be over- or underinflated while the patient is breathing oxygen (before the administration of nitrous oxide).
8. The patient should be encouraged NOT to talk or mouth-breathe while the mask is in place.
9. During administration, the reservoir bag should be periodically inspected for changes in tidal volume. The vacuum flow rate should also be verified.
10. On completing administration, 100% oxygen should be delivered to the patient for 3-5 minutes before the mask is removed. In this way, both the patient and the system will be purged of residual nitrous oxide. An oxygen flush is NOT necessary.
11. Periodic personal sampling of dental personnel, with emphasis on chair-side personnel exposed to nitrous oxide, should be conducted (through use of dosimeter or infrared spectrophotometer).

## DRUGS FOR OFFICE SEDATION

***The following summaries are offered as overviews, and by no means are a comprehensive description of each drug. Please consult other sources before actually using these drugs in your practice.***

### 1. Chloral Hydrate / Noctec® (no longer readily available in US)

<b>Description</b>	Short-term sedative/hypnotic
<b>Indications</b>	Preoperative sedative that allays anxiety and induces sleep without depressing respiration or cough reflex.
<b>Contraindications</b>	Patients with marked hepatic or renal impairment or severe cardiac disease. Allergy. Oral dosage forms contraindicated in the presence of gastritis and in patients who have previously exhibited an idiosyncrasy or hypersensitivity to the drug.
<b>Precautions</b>	Porphyria, severe cardiac disease, pregnancy, nursing mothers.
<b>Availability</b>	Syrup, capsules, rectal suppositories, other
<b>Dose</b>	Adult 50-75 mg/kg; max 2 g Child 50-75 mg/kg; max 1g

## 2. Hydroxyzine / Atarax®, Vistaril®

<b>Description</b>	Antihistamine. May be combined with Chloral Hydrate for effective synergistic anxiolytic pre-operative sedation.
<b>Indications</b>	Relief of symptoms of common anxiety and tension. Also to relieve itching from allergic reactions. Can be used as a sedative.
<b>Contraindications</b>	Early pregnancy, allergy
<b>Precautions</b>	Increases the effects of drugs that depress the activity of the central nervous system. May potentiate meperidine (Demerol®) and barbiturates, and increase the effects of alcohol.
<b>Availability</b>	Syrup, pill, other
<b>Dose</b>	Adult max 50-100 mg Child 0.6 mg/kg

## 3. Benzodiazepines

### a. Diazepam / Valium®

<b>Description</b>	A benzodiazepine that exerts anxiolytic, sedative, muscle-relaxant, anticonvulsant and amnesic effects.
<b>Indications</b>	Short-term relief of anxiety symptoms. As a surgical premedication, it provides relief of anxiety and tension, and diminishes the patient's recall of the procedure.
<b>Contraindications</b>	Acute narrow-angle glaucoma, untreated open-angle glaucoma, allergy, or patients younger than 6 months.
<b>Precautions</b>	Kidney or hepatic dysfunction
<b>Availability</b>	Tablets, other
<b>Dose</b>	Adult 2-20mg; max 20 mg; Child 0.2-0.3 mg/kg; max 10 mg

### b. Triazolam / Halcion®

<b>Description</b>	A benzodiazepine that is a hypnotic agent, anxiolytic, and sedative.
<b>Indications</b>	Preoperative anxiolysis. Short-term treatment of insomnia.
<b>Contraindications</b>	Allergy, drinking alcohol, or pregnancy.
<b>Precautions</b>	Driving or operating dangerous machinery or participating in any hazardous activity is not recommended until patient is fully awake.
<b>Availability</b>	Tablets, other
<b>Dose</b>	Adult max 0.25-1.5 mg; Child max 0.125-0.25 mg.

**c. Lorazepam / Ativan®**

<b>Description</b>	A benzodiazepine with antianxiety, sedative, amnesic, and anticonvulsant effects.
<b>Indications</b>	Management or short-term relief of the symptoms of anxiety.
<b>Contraindications</b>	Acute narrow-angle glaucoma, allergy.
<b>Precautions</b>	Avoid with primary depression or psychosis. Caution with elderly, renal or hepatic dysfunction, or compromised respiratory function.
<b>Availability</b>	Tablets, other
<b>Dose</b>	Adult 1-4 mg; Child 0.05 mg/kg; max 2 mg

**d. Midazolam / Versed®**

<b>Description</b>	A water-soluble, short-acting benzodiazepine, central nervous system (CNS) depressant.
<b>Indications</b>	Sedation, anxiolysis and amnesia prior to diagnostic, therapeutic or surgical procedures.
<b>Contraindications</b>	Acute narrow-angle glaucoma, allergy.
<b>Precautions</b>	Monitor for respiratory adverse events and paradoxical reactions. For use only in settings equipped to provide continuous monitoring of respiratory and cardiac function, with appropriate resuscitative management. Caution with CHF, chronic renal failure, chronic hepatic disease, pulmonary disease, cardiac or respiratory compromised patients. Associated with respiratory depression and respiratory arrest especially when used for sedation in noncritical care settings. Possible airway obstruction, desaturation, hypoxia, and apnea especially with other CNS depressants. Midazolam is associated with a high incidence of impairment of recall for the next several hours.
<b>Availability</b>	Syrup, other
<b>Dose</b>	Adult 0.25-1 mg/kg; max 20 mg; Child 0.25-1mg/kg; max: 20 mg

**4. Barbiturates** - Not covered in this course

**5. Narcotics** (Demerol®, Fentanyl®, etc.) - Not covered in this course

## REVERSAL AGENTS

### 1. Flumazenil / Romazicon®

<b>Description</b>	Benzodiazepine receptor antagonist
<b>Indications</b>	Complete or partial reversal of the sedative effects of benzodiazepines where sedation has been produced with benzodiazepines for diagnostic or therapeutic procedures, and for the management of benzodiazepine overdose in adults.
<b>Contraindications</b>	Patients given benzodiazepines for life-threatening conditions (eg, control of ICP or status epilepticus), signs of serious cyclic antidepressant overdose, or allergy.
<b>Precautions</b>	Caution in overdoses involving multiple drug combinations. Risk of seizures, especially with long-term benzodiazepine-induced sedation, cyclic antidepressant overdose, concurrent major sedative-hypnotic drug withdrawal, recent therapy with repeated doses of parenteral benzodiazepines, myoclonic jerking or seizure prior to flumazenil administration. Monitor for resedation, respiratory depression, or other residual BZD effects (up to 2 hrs). Caution with head injury, alcoholism, and other drug dependencies. Does not reverse respiratory depression/hypoventilation or cardiac depression. May provoke panic attacks with history of panic disorder. Patients should have a secure airway and intravenous access before administration of the drug and be awakened gradually.
<b>Availability</b>	IV
<b>Dose</b>	Adults (mg/kg): Reversal of Conscious Sedation: Give IV over 15 seconds. Initial: 0.2. May repeat dose after 45 seconds and again at 60 second intervals up to a max of 4 additional times until reach desired level of consciousness. Max Total Dose: 1mg. In event of resedation, repeated doses may be given at 20-min intervals. Max: 1mg/dose (0.5mg/min); 3mg/hr. Children >1yr: Give IV over 15 seconds. Initial: 0.01mg/kg (up to 0.2mg). May repeat dose after 45 seconds and again at 60-second intervals up to a max of 4 additional times until reach desired level of consciousness. Max Total Dose: 0.05mg/kg up to 1mg.

### 2. Phentolamine Mesylate / OraVerse®

Reverses the anesthetic effects of local anesthetic injections, and is used at the same site as the original oral injection. It has no contraindications, and is supplied in 0.4 mg/1.7 mL cartridges.

### 3. Narcan® for narcotics - not covered in this course

## **DR. LEVY'S RECOMMENDED DOSES (FOR ADULTS)**

- Nitrous Oxide / Oxygen - titrate to desired effect for patient, often 50%
- Chloral Hydrate / Noctec® 1-2 g, (not readily available in US)
- Hydroxyzine /Atarax® or Vistaril® 10-50 mg,
- Diazepam / Valium® 10-20 mg,
- Triazolam / Halcion® 0.5-1.5 mg,
- Lorazepam /Ativan® 2-4 mg,
- Midazolam /Versed® 5-15 mg with monitoring

### **Mild (Light, Anxiolysis) vs. Moderate Sedation**

Maryland State Board of Dental Examiners

From "Anesthesia and Sedation Regulations Effective January 4, 2010"

<http://www.dhmh.state.md.us/dental/sedationregs.htm> **Section .03 Definitions.**

(5) "Anxiolysis" means a drug-induced state, with or without nitrous oxide/oxygen to decrease anxiety, in which patients respond normally to tactile stimulation and verbal commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are maintained and require no assistance.

(18) "Moderate sedation" means a drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway, and spontaneous ventilation is adequate. Cardiovascular function is maintained.

### **Sources used for drug information included in this course**

PDR (Physician's Desk Reference), 2015 and [PDR.net](http://www.pdr.net)

Lexi-Comp's Dental Reference Library, 20<sup>th</sup> edition and [www.lexi.com](http://www.lexi.com)

"Control of Nitrous Oxide in Dental Operatories," U.S. Department of Health and Human Services, CDC, January 1996

"ADA Guidelines for the Use of Sedation and General Anesthesia by Dentists," October 2007. [http://www.ada.org/sections/about/pdfs/anesthesia\\_guidelines.pdf](http://www.ada.org/sections/about/pdfs/anesthesia_guidelines.pdf)

"Guideline on Appropriate Use of Nitrous Oxide for Pediatric Dental Patients", AAPD, Revised 2009. [www.aapd.org/media/Policies\\_G\\_Nitrous.pdf](http://www.aapd.org/media/Policies_Guidelines/G_Nitrous.pdf)

"Reversal of soft-tissue local anesthesia with phentolamine mesylate in pediatric patients". Journal of the American Dental Association **139**, 1095-1105. Aug. 2008.

## **Dr. Harvey Levy & Associates, P.C.**

### **INSTRUCTIONS FOR SAME DAY HOSPITAL DENTAL TREATMENT**

We have agreed to dental treatment in the operating room at Frederick Memorial Hospital (FMH). The list below should be followed exactly and completely.

- 1. Physical Exam**
  - a. Exam must be done within 7 days before surgery, or within 30 days and updated within 7 days by a licensed physician.
  - b. The exam form should be faxed to FMH, 240-566-3636.
  - c. If your physician is not on staff at FMH, please have your doctor fax a credential-approval form to the hospital at 240-566-3636.
- 2. Lab Tests (Pre-admission tests)**
  - a. Pre-op testing will be ordered as applicable, depending on age, gender, and health history.
  - b. To schedule tests done at FMH, call 240-566-3400. If you go to a lab outside the hospital, they should fax results to FMH at 240-566-3636.
  - c. Be aware that some insurance plans require you to go to specific labs.
- 3. Consent Form:** An informed consent form must be signed and witnessed less than 30 days before surgery.
  - a. If the patient is a minor or not of sound mind, a parent or legal guardian must sign. They must provide a copy of the Power of Attorney or Guardianship document.
  - b. The witness must NOT be a relative.
- 4. Financial Arrangements:** Our practice will charge you a fee for the specific dental services, plus a \$260 **dental** operating room surcharge not covered by most insurance carriers. Your hospital O.R. facility and anesthesia fees are billed separately.
  - a. Your estimated uninsured portion is required before the O.R. date.
  - b. After insurance has handled your claim, adjustments will be made and included in a billing statement that you will receive. If you have overpaid us, you may request a refund or credit.
  - c. Discounts are available per our Office Financial and Insurance Policy. Applications for credit through CareCredit are also available.
- 5. No Food or Drink:** The patient must have absolutely nothing to eat or drink after midnight prior to treatment. Check with the doctor regarding any necessary medicines.
- 6. Arrival:** Be at the hospital 1½-2 hours before the scheduled surgery time.
- 7. Follow-Up:** On the day after surgery, call the dental office for a one-week follow-up exam to be certain the mouth is healing normally, and to follow-up on financial arrangements. Thank you.

# Sample of Staff Pre-Operative Checklist

Dr. Harvey Levy and Associates, PC

Patient Name / Age: \_\_\_\_\_

Consult Date / Pat Preferred Phone: \_\_\_\_\_

Case Date / Time / Case #: \_\_\_\_\_

1. DOB: \_\_\_\_\_

2. Agency / Phone: \_\_\_\_\_

3. Parents / Guardian: \_\_\_\_\_

Phone(s): \_\_\_\_\_

4. Diagnosis: \_\_\_\_\_

5. Treatment: \_\_\_\_\_

6. Time Needed: \_\_\_\_\_ Seq.: \_\_\_\_\_ Hyg Needed? Y/N \_\_\_\_\_

7. INSURANCE: Medical \_\_\_\_\_ Pre-Auth. \_\_\_\_\_

Dental \_\_\_\_\_ Pre-Auth. \_\_\_\_\_

8. PHYSICIAN: \_\_\_\_\_

H&P Date: \_\_\_\_\_ H&P Completed \_\_\_\_\_

Lab Date: \_\_\_\_\_ Lab Completed \_\_\_\_\_

Other Tests: \_\_\_\_\_ Co-Operate? \_\_\_\_\_

9. TO BRING: Copy of x-rays \_\_\_\_\_ Models \_\_\_\_\_ Latest TxPlan \_\_\_\_\_

Appliances (spacer, dentures) \_\_\_\_\_ Post-Op Instr./Rx \_\_\_\_\_

Materials (C&B, RCT, shade guide) \_\_\_\_\_

10. CONSENTS: Blue anesthesia consent \_\_\_\_\_ Pink surgical consent \_\_\_\_\_

Other form(s) as needed \_\_\_\_\_ Guardianship \_\_\_\_\_

11. FINANCIAL: Deposit made \_\_\_\_\_ Arrangements for balance \_\_\_\_\_

12. Miscellaneous: \_\_\_\_\_

FINAL CHECK OFF BY (Name & Date): \_\_\_\_\_

## **Sample 1 – Letter of Medical Necessity**

Harvey Levy, D.M.D., M.A.G.D.  
198 Thomas Johnson Dr., Suite 108  
Frederick, Maryland 21702  
301 663-8300 (Voice or TDD)  
301 682-3993 Fax  
October 15, 2012

Dewey, Cheatem and Howe Insurance Co.  
Mytown, US

Re: **TERESA XX XX (DOB XX-XX-95)**  
**ID #XXX-XX-XXXX**

Dear Insurance Plan executive,

This is a letter of medical necessity for urgent medical and dental procedures via out patient general anesthesia planned for November 9, 2012 at Frederick Memorial Hospital in Frederick, Md. We request facilities and anesthesia expense coverage.

The patient is a severely apprehensive, mentally challenged 11 year-old who has an acutely abscessed tooth and multiple dental caries. She suffers from situational anxiety, seizure disorder, ADHD, and mental retardation. Treatment was tried and failed in several dental offices. Multiple treatment visits via oral sedation in an office setting is not an option. The following is the diagnosis and treatment plan:

Diagnosis: Dental caries, abscessed teeth: ICD-9 code 522.5, 520.6  
Treatment: Hospital O.R. visit ADA code 9420, D9220; Extractions, restorations, cleaning: 7111,7140,2140,2150,2160,1110, CPT code 41899 and 00170.

Currently, this patient is in pain. Delayed treatment will be detrimental to the patient's health, nutrition intake, and quality of life. We respectfully request that this medically necessary treatment be approved for insurance benefits. Please call and/or fax a prompt response to at the above address or fax number. Thank you.

Respectfully,

Harvey Levy, D.M.D., M.A.G.D.

xc: Frederick Frankenstein, MD; Dr. Phil McGraw, PhD; G.V. Black, DDS

# **Mad Lib 1 Participatory Activity**

**Fun Town Memorial Hospital**  
**Fun Town, Maryland 21702**

## **Operative / Procedure Report**

Med Record # 0000001

**(Patient name)**

**(Date of Birth)**

**Date of Procedure:** 06-15-2011

**Preoperative Diagnosis:** Multiple dental caries and \_\_\_\_\_

**Postoperative Diagnosis:** Multiple dental caries, \_\_\_\_\_ and \_\_\_\_\_

**Operation Performed:** Dental restorations, extractions and

**Surgeon:** \_\_\_\_\_  
**(Your Name)**

**Assistant:** \_\_\_\_\_  
**(Dental Assistant)**

**Anesthesiologists:** Dr. Max Hillary, relieved by Dr. Manny Dibulaire

The throat pack was inserted at \_\_\_\_\_.  
(Time) The throat pack was removed at \_\_\_\_\_.  
(Time)

**Narrative:** The patient is a \_\_\_\_\_ year old, \_\_\_\_\_ female with Alzheimer's Disease,  
(Age) (Race)  
\_\_\_\_\_, and \_\_\_\_\_ who has been a patient of  
(Medical diagnosis) (Medical diagnosis)

(Medical diagnosis) (Medical diagnosis)  
Record since 1/1/29. She was operated by me at the Happy Camper Surgicenter on \_\_\_\_\_.  
(Date)

She now has a recurrence of her \_\_\_\_\_ . She also now has \_\_\_\_\_ .

(Medical diagnosis) The patient had H&P by Dr. [REDACTED] with appropriate PATS. The only

abnormal value was her \_\_\_\_\_ She reported to the hospital NPO ready for outpatient general anesthesia. She was accompanied by her children, grandchildren, and great grandchildren, one of whom has guardianship and POA for the patient. The indication for general anesthesia is \_\_\_\_\_.

(reason for general anesthesia)

**Operative Procedure:** After successful nasal intubation by Dr. Max Hillary, the patient was prepped and draped in the usual manner for dental restorative care and minor oral surgery. After the throat pack was placed at \_\_\_\_ a.m., I performed a re-evaluation of the preoperative oral findings and performed a \_\_\_\_\_. I noticed the following:

(dental procedure)

The patient was given \_\_\_\_\_IV intra-operatively for \_\_\_\_\_.  
(Medicine) (Diagnosis)

I then turned my attention to the restorative phase where the following procedures were performed:

Tooth # \_\_\_\_\_ Occlusal amalgam.  
Tooth # \_\_\_\_\_ composite  
(Surface)  
Tooth # 12 Simple extraction.  
Tooth # 15 \_\_\_\_\_.  
Tooth # 17 Simple extraction  
Tooth # 32 Surgical extraction.

I used \_\_\_\_\_ carpules of \_\_\_\_\_ for a bimandibular block.  
(Number) (Local anesthetic)  
and multiple maxillary infiltrations. I did not use lidocaine because \_\_\_\_\_.  
We placed Copal varnish and then packed and carved the amalgams to proper contour. The composite used was \_\_\_\_\_  
(brand and shade)

All extracted teeth were in toto with the exception of tooth #32 which fractured into multiple pieces. I hemisected tooth #32 and removed 6 fragments after reflecting a full thickness mucoperiosteal flap. The distobuccal root tip was not retrieved. I plan to \_\_\_\_\_.

(plan for fractured root)  
The clean socket was irrigated with \_\_\_\_\_ and closed with \_\_\_\_\_ 3-0 black silk sutures.  
(Irrigant) (Number)  
After obtaining partial hemostasis, a thick topical fluoride coating was applied to all teeth. The patient tolerated the operation very well. EBL was \_\_\_\_\_ cc. Specimens removed were \_\_\_\_\_ teeth and \_\_\_\_\_ fragments.  
(Number) (Number) (Number)

Complications: \_\_\_\_\_  
(Complications)

The throat pack was removed at \_\_\_\_\_ a.m. The patient was then extubated and brought to the recovery room in \_\_\_\_\_ condition. She will be seen in my office in \_\_\_\_\_ weeks  
(Time) (Number)  
for outpatient follow-up and suture removal. She will be seen sooner if there are any complications from today's operation.

The patient and her family were given the standard post-restorative and post-extraction care instructions with restricted diet and restricted activities today. For post-op pain she was given \_\_\_\_\_. She was also given a prescription for  
(Dose and drug)

(Dose and drug)

Please send copies of this report to: \_\_\_\_\_

Thank you. \_\_\_\_\_  
(Doctor's name and Signature)

CC: \_\_\_\_\_ and \_\_\_\_\_  
(Primary Physician) (Referring Dentist)

# Resources

Harvey Levy, DMD, MAGD  
[www.DrHLevyAsssoc.com](http://www.DrHLevyAsssoc.com)

## William F Slagle Dental Meeting, Memphis, TN, March 4, 2017

### **ADSA**

877-255-3742  
[adsahome.org](http://adsahome.org)

### **Aribex NOMAD hand-held X-ray**

801-226-5522  
[aribex.com](http://aribex.com)

### **Aseptico**

866-244-2954  
[Aseptico.com](http://Aseptico.com)

### **Colgate-Palmolive**

800-2Colgate  
[ColgateProfessional.com](http://ColgateProfessional.com)

### **DentalEZ Group**

866 DTEINFO  
[dentalez.com](http://dentalez.com)

### **DEXIS Imaging Systems**

888-883-3947  
[dexis.com](http://dexis.com)

### **DOCS Education**

877-325-3627  
[DOCSEducation.org](http://DOCSEducation.org)

### **DUX Dental**

800-833-8267  
[DUXDental.com](http://DUXDental.com)

### **Ergonom-X Dental Film**

Lenty Dental Sales  
800-635-3689  
[Lentysales.com](http://Lentysales.com)

### **Hu-Friedy**

800 HUFRIEDY  
[hu-friedy.com](http://hu-friedy.com)

### **Impact Communication**

Linda Gross  
778-386-3924  
[lgross@impactcomms.biz](mailto:lgross@impactcomms.biz)

### **Isolite Systems**

800-560-6066  
[isolitesystems.com](http://isolitesystems.com)

### **KaVo Kerr Group**

714-516-7400  
[KaVoKerrGroup.com](http://KaVoKerrGroup.com)

### **Lexi-comp**

800-837-5394  
[lexi.com](http://lexi.com) [wolterskluwerhealth.com](http://wolterskluwerhealth.com)

### **Porter Instrument - Nitrous Oxide**

888-723-4001  
[porterinstrument.com](http://porterinstrument.com)

### **Septodont**

800-872-8305  
[oraverse.com](http://oraverse.com)

### **SolutionReach**

866-605-6867  
[SolutionReach.com](http://SolutionReach.com)

### **Special Care Dentistry Assoc**

312-527-6764  
[scdaonline.org](http://scdaonline.org)

### **Specialized Care Co.**

800-722-7375  
[specializedcare.com](http://specializedcare.com)

### **Ultralight Optics**

323-316-4514  
[ultralightoptics.com](http://ultralightoptics.com)

**Dr. Levy's articles and courses:** [www.DrHLevyAssoc.com/clinicians.htm](http://www.DrHLevyAssoc.com/clinicians.htm)

# **Successful Management of Patients with Anxiety or Special-Needs**

**William F Slagle Dental Meeting, Memphis, TN, March 4, 2017**

Harvey Levy, DMD, MAGD  
[www.DrHLevyAssoc.com](http://www.DrHLevyAssoc.com)

## **Hands-on work stations**

1. Develop 2 exposed x-rays (Ergonom-X Self-developing films)
2. Expose & process 2 x-ray images (DEXIS Digital with NOMAD-Pro)
3. Place a Nitrous Oxide mask (Porter Instrument)
4. Apply a Rainbow Wrap (Specialized Care Co.)

**Apply 3 different mouth props:**

5. Open-wide mouth rest by Specialized Care Co.
6. Molt mouth gag by Hu-Friedy
7. Isolite 5-in-1

**Perform an Oral Cancer exam using both Identafi tips:**

8. Lighted straight wand and
9. Lighted dental mirror
  
10. Perform an Oral exam using Ultralight Optics headlight
11. Evaluate any four drugs using Lexi-comp. Evaluate OraVerse in Lexicomp.
12. Modify a toothbrush for a patient with physical impairment (after completing other stations)

Stations will be monitored by reps (pending availability) from:

- DentalEZ Solutions
- DEXIS Imaging
- Isolite Systems
- NOMAD-Pro-2 and KaVo Kerr Group (Brian Hurley)
- Porter Instrument
- Septodont
- SolutionReach
- Ultralight Optics
- Others (TBD)

## Debunking the Myths About Special-needs Patient Care

Dr. Harvey Levy explores 27 myths about treating special-needs patients and counters them with facts and different perspectives.

# Debunking the Myths About Special-needs Patient Care

by Harvey Levy, DMD, MAGD

For me, working with difficult-to-manage patients is a rewarding and worthwhile challenge, which keeps me as enthusiastic about treating patients as I was 36 years ago when I started practicing dentistry. I have asked hundreds of dentists in different states and countries why they choose not to see more special needs or otherwise challenging patients in their practices. I have heard 27 distinct replies, all of which I consider to be myths.

I have grouped these 27 myths into Administrative Barriers, Management Barriers, Medical Concerns and Financial Concerns. I will explore each of these myths and counter them with facts and different perspectives.

### Administrative Barriers

#### 1. It's too difficult to communicate with them.

It is not the patients' job to know our language; rather, it is our obligation to know how to effectively communicate with them. Anyone with teenagers will attest that at times, communication with a wall yields a greater response. If you place me in a country where I do not speak the language, I would appear inarticulate, non-communicative and possibly even combative. It is our job to discover and recognize the "language" of each of our patients, and to establish contact. Often the communication happens with a soft look, a warm smile or a subdued voice. It is not always English, and it's not always verbal.

#### 2. It's hard to get permission or consent to treat them.

It's not hard to get their consent; it's impossible and often illegal. This is why we always ask a legal guardian to approve the treatment plan. Usually this is the same person or agency who will manage the funds to ensure payment.

#### 3. It's a problem that they rely on others for transportation.

Many of us rely on others for transportation, including children under 16. An agency's van or back-up vehicle can be even more reliable than a parent's or caretaker's car.

#### **4. They don't keep their appointments or are late.**

None of my special-needs patients have ever canceled or failed to show up for an appointment because they were stuck at work, had a meeting, couldn't get a baby sitter, or were drugged or drunk from last night's party. For them going to the dentist is an outing, and they are generally early for appointments, not late.

#### **5. They are disruptive to the schedule.**

A spoiled child who causes unexpected problems is far more disruptive than our special-needs patients. We learn what to expect from each special-needs patient during their first visit. For their subsequent visits we plan ahead, and are so well prepared that disruptions seldom occur.

#### **6. I may have to treat them in a hospital, and getting hospital privileges is too difficult.**

I love treating patients who not spitting, biting, jerking their head, flailing their hands, getting up to use the bathroom, texting or answering their cell phone. Usually such ideal patients can only be found asleep in the operating room. Since in the O.R. there is no possibility of any behavior or action precluding me from finishing the agreed-upon treatment, I can guarantee completion of the case. Finally, getting hospital privileges only requires a simple application, proof of liability insurance and dental degree, a CPR card, references and often a small fee.

### **Management Barriers**

#### **7. They urinate, defecate, expectorate and vomit anywhere.**

We ask all our special-needs patients to arrive with an empty stomach, which precludes vomiting. They are asked to use the bathroom before being seated. Those who cannot control their bladder, regardless of age, wear a diaper. The worst they can do is spit onto our protective face shields and masks.

#### **8. I can't do quality work because they don't cooperate.**

There are days I when can't get my own family to comply with my reasonable requests, much less someone else's kids. With special-needs patients I often use nitrous oxide analgesia, pills or liquid sedation drugs to get them cooperate. If this doesn't work, I increase the dosage up to the maximum recommended dose (MRD), or switch to a different family of drugs.

Once they're sedated I can use restraints and wraps to get them to sit still without flailing their hands, kicking their feet, or rotating their head (Fig. 1). I also use various mouth props to get them to open wide (Figs. 2 & 3).

If office sedation, wraps and props don't work, I can take these patients to the O.R., where IV sedation or general anesthesia is used.



Fig. 1: Rainbow wrap, feet restraint and nitrous oxide



Fig. 2: Mouth prop: Mouth rest Fig. 3: Mouth prop: Ratchet



Fig. 4: Nomad handheld X-ray unit



Fig. 5: Patient remains in Wheelchair or gurney



Fig. 6: Working around a wheelchair

## 9. I can't get good X-rays.

Dentists need X-rays to detect gross pathology or fine detail. A caregiver or employee wearing a double-lead apron can help obtain satisfactory radiographs showing gross pathology, such as impactions. We can obtain higher-quality X-rays when the patient is relaxed or sedated. If all else fails, we take the best X-rays when the patient is asleep in the O.R. Our greatest success is with the DEXIS sensor and a portable laptop, where we can take and retake X-rays within seconds. In the person's home, facility or even in a parked vehicle, we use the NOMAD portable hand-held unit to take X-rays. We love the Ergonom-X self-developing films, which require only water and about 60 seconds to develop. These tools enable us to always obtain the diagnostic X-rays we require (Fig. 4).

### **10. I have to work around their wheelchairs and helmets.**

If the patient chooses to remain in the wheelchair, using only one finger we can easily move our Dental-eze Airglide operatory chairs to the side or even out of the treatment room (Fig. 5). When a caregiver is not available to stand behind the patient and immobilize the head with their chest and hands, we use portable headrests. If the patient arrives with a helmet, we remove it and put it back on after we're done. It's not much different for us to work on a patient in a wheelchair, and it is more comfortable for the patient (Fig. 6).

### **11. They have poor oral hygiene.**

In my lectures, I display photos of mouths with poor oral hygiene and have participants guess which patients are special-needs and which are not. Rarely can a clinician ever tell the difference. Poor oral hygiene isn't unique to special-needs patients.

### **12. My staff will not want to work on them. I have a hard enough time attracting good staff.**

Whether we are incorporating a new technology, a new procedure or a new patient population, we need to train our staff. Reluctance to work on special-needs patients is often based on the lack of education about the subject. Share this or other articles with your staff, and have them attend a CE class on treating special needs patients. In my experience, once they are educated, most staff will be as open and receptive to incorporating this population into your practice as they were for to lasers, implants, or Invisalign.

### **13. It scares me to be in their presence.**

We fear the unknown, so at first glance some special-needs patients may appear frightening. My staff and I feel totally comfortable with mentally-challenged, autistic or Alzheimers patients, especially when they are being closely monitored by their caregivers. From our patients' perspective, it scares them to be in our presence.

### **14. It saddens me to work on these people – they have no future.**

The future is promised to no one. Having empathy for someone whose mental or physical condition will never improve or whose Alzheimers will not reverse is understandable. However, denying them dental care because their employment prospects are dim is insensitive and small-minded. Would you like to see your loved ones denied routine health care if they were old, wheelchair-bound or couldn't articulate their words clearly?

## **Medical Concerns**

### **15. I'm afraid of having to use oral sedation greater than the maximum recommended dose.**

MRDs are useful and practical guidelines for the great majority of cases. When confronted with a situation where the maximum is not quite enough, there are justifications for going a bit higher –if, and only if, you are knowledgeable and are prepared to handle potential emergency situations (which you should be for all of your patients anyway). Finally, if that fails, you can use parenteral sedation or general anesthesia, as described in Myth #8 above.

### **16. They have communicable diseases.**

When was *your* last physical exam, and how often do you get thoroughly checked by your physician? These patients are less likely to be sick than the rest of us, because their health is more closely monitored. We are

more likely to get sick from shaking hands with a friend, touching a doorknob or hugging our runny-nosed children than we are from working with these patients. With our standard barrier protection in the operatory, we are more protected against disease in our office than we are in an elevator or car.

**17. If I don't have the skills to perform a procedure, there might be no one to whom I can refer.**

Until I know that I am unable to perform a procedure, I feel obliged to give it my best try. If you have a phone, then you have a referral source. The decision to call a colleague or a dental school should be based on the procedure, not the patient.

**18. If something happens, I might not be able to handle their emergencies.**

Special-needs patients are far less likely to have an emergency in your office than the obese executive, the drug addict or the patient who has not seen a physician in a decade. Because their health is monitored closely, the preparedness protocols you have implemented in your practice already apply to special needs patients, except they won't require them as often.

## **Financial Concerns**

**19. They're all on Medicaid and have no money.**

I learned long ago not to judge an assets portfolio by a person's clothing. Our job is to present the best clinical treatment plan, including alternatives, without making people's decisions for them. The patient's choice might surprise you.

**20. It's too hard to ensure payment.**

I would rather have a \$50/month signed financial agreement for the care of a special-needs patient than be stiffed by a stockbroker who promises to pay for a bridge upon receipt of my monthly statement. Special-needs patients have legal proxies who properly manage their accounts; renegeing on agreements is not an option. My collections rate from special-needs patients is greater than 99 percent. I cannot boast the same figure from my other patients.

**21. I don't want to buy expensive special equipment that I won't use much.**

I own a fancy treadmill that I've used three times in the past three years. You too may have bought a boat or another expensive item for which you never got your money's worth. The equipment required for this special population consists of wraps and props. The gentle Velcro body wraps (Fig. 1) range from \$105 to \$230, and are good for more than 100 uses. The disposable mouth rests (Fig. 2) cost about \$1 each. Both these products, sold by Specialized Care Co., allow me to treat special-needs patients with almost no capital outlay.

**22. I'm only asked to do low-level, low-fee procedures on them.**

This statement is often followed with the explanation, "I don't want to spend my entire day doing extractions and dentures." Even though I can still make a good living from exodontia and prosthodontics, the procedures we perform on special-needs patients include all areas of dentistry. Other than financial barriers, the treatment should be based solely on each patient's needs and the dentist's skills. No other variables should enter the decision tree.

**23. Their treatment takes too long and requires too much staff to be cost-effective.**

Successful management of special-needs patients does require more staff and more time than other patients. If handled intelligently, however, this fact becomes an asset instead of a liability. I schedule my special-needs patients on my slowest day of the week. I also schedule their recalls on my slowest months of the year. While my colleagues are struggling with empty chairs on Tuesdays in August and December, our schedule is completely filled. Intelligent scheduling is what makes treating special-needs patients extremely cost-effective.

**24. Their appearance and screaming frighten away other patients.**

Young children can easily be frightened, thus we have set designated hours when only special-needs patients are scheduled. If someone calls with an emergency, we inform them that there may be mentally challenged patients in the waiting room. The caller is given a choice, and on rare occasions opts to bring in their young child at a different time. As you schedule more special-needs patients you may wish to inform regular patients, and offer them the choice of arranging a different time.

**25. They won't refer anyone.**

In 36 years we have never had a single referral from a special needs patient. However, our practice accepts 900 new patients a year, with zero advertising budget; all come to us by word-of mouth. We are referred by the families, the drivers and the caregivers of our special-patients. The caregivers themselves choose to support us by coming into our practice because they were impressed by your treatment of their clients or loved ones. More than one caregiver has told us, "I don't care how much you know until I know how much you care."

**26. They are high-risk medical patients. I don't want to be sued for complications.**

We have never been sued by a special-needs patient or their representatives. We have never even been legally threatened by them. They are so pleased and grateful that we reach out to assist them that they would be the first to defend us. I cannot say the same for our other patients, who are far more ready to sue. I have never met a special-needs patient who has been willfully unpleasant.

**27. Dentists who treat these people are the ones who can't succeed with regular patients.**

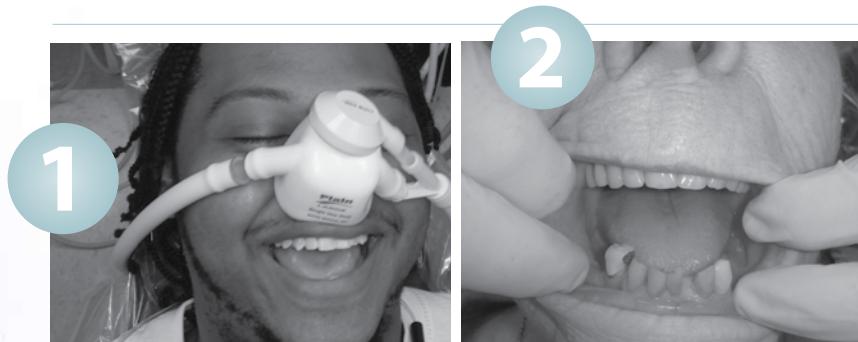
We choose to treat special-needs patients because we enjoy getting paid with grateful smiles and hugs, as well as monetarily. The mother of our young autistic patient says we are wonderful. The children of our Alzheimers patient consider us heaven-sent. We are heroes to the families of our profoundly challenged patients.

In conclusion, special-needs patients are not hard to treat, and you can make a very good living. If your hands are extended and your mind is open, these 27 statements – these myths – are easily debunked, and you can reap great rewards.

## Author's Bio



**Dr. Harvey Levy** is a general dentist from Frederick, Maryland, who has earned Mastership and two Lifelong Learning Service Recognitions in the AGD, eight fellowships and four diplomate certifications. He has published numerous articles and offered seminars and participation workshops all over the country. His work with anxious and special-needs patients earned him the 1986 AGD Humanitarian Award, the ADA Access to Care Award, and the honor of being a 2002 Winter Olympic torch runner.



# “Impossible” Dentistry Made Simple

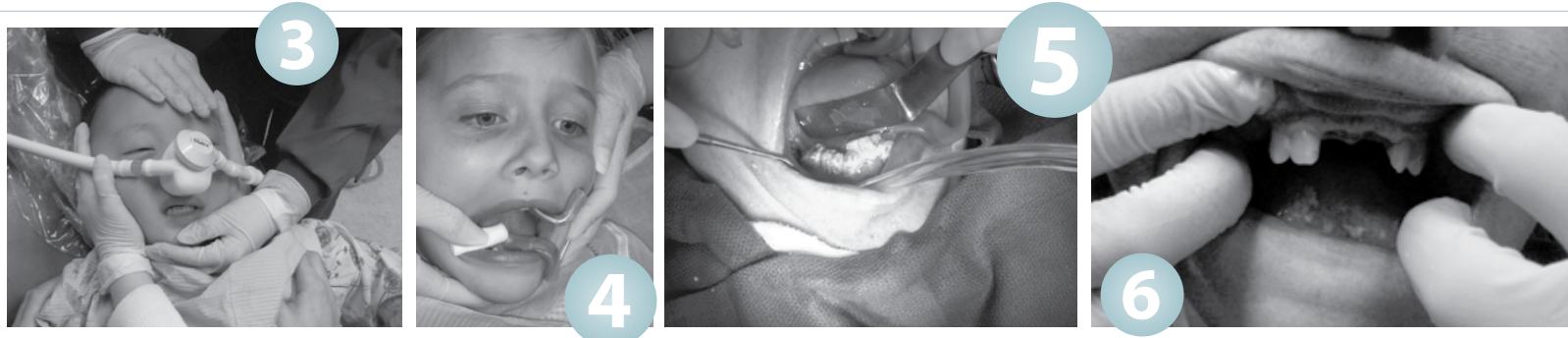
12

by Harvey Levy, DMD, MAGD, DDOCS

You are a master at doing all sorts of restorations: you're highly skilled at bridges, partials, perio, most extractions and most endo – you're even pretty good at implants and other high level procedures. Despite your talents, however, what do you do when a patient won't open his mouth? How do you respond when he won't stop thrashing, can't understand your simplest directions or is so frightened that he can't comply despite his best intentions? Finally, how do you treat a patient who is so medically compromised that you can't use any local anesthetic?

It is possible for you to perform your normal dental procedures on patients that are currently impossible to work on, and make a handsome profit as well. This is how:

- Proper training
- Trained staff (including CPR, desensitization, familiarization with equipment and drugs, including nitrous oxide)
- Proper attitude
- Special equipment: Pedi-wrap, mouth props, self-developing film, handheld x-ray unit



I had already completed thousands of sedation cases in my 34 years of practice before obtaining my Fellowship and Diplomate from DOCS Education. I am now working with the greater confidence that comes from being more knowledgeable about “wise dosing,” and being more mindful and careful. I found that the DOCS protocols allow for safer management of difficult and apprehensive patients, while providing the best in dental care.

With the right training, staff, equipment and mindset, you can perform a valuable service to this niche of neglected and undertreated patients. You can feel great about your clinical and management successes, and be rewarded emotionally and financially.

I am not always successful on the first try. Sometimes I reschedule for another day. Sometimes I have to abort and treat the patient in a hospital or surgi-center operating room. Below are seven examples of different types of patients we treated successfully in our office, all of whom required anxiolysis or conscious sedation.

#### Examples of office sedation

**1** Anxious: Ken is a large, anxious 26-year-old male who avoided dentists for years, but needed composites, periodontal scaling, and extraction of abscessed third molars. With 10 mg Valium® and nitrous oxide, we elicited a smile from Ken and successfully performed the treatment.

**2** Geriatric: Ruby is an 83-year-old female who is a partially deaf cancer patient. She required three extractions, two composites, periodontal scaling, and repair of her lower partial denture. She takes one aspirin a day for blood thinning, and is extremely anxious. In cooperation with her physician, we withheld her aspirin for 5 days preoperatively plus one day post-op, and gave

her 20 mg Valium one hour pre-op. Using nitrous oxide, we scaled her salvageable teeth, then extracted the three abscessed teeth. A week later, with 5 mg Valium®, we placed the two composites and delivered the repaired partial.

**3** Fearful child: Andrew is a 4-year-old frightened boy who had dental caries and an abscessed tooth. We gave him 500 mg chloral hydrate plus 20 mg Atarax® plus nitrous oxide to place composites and extract the abscessed tooth. We used Pedi-Wrap® and dad’s lap for gentle protective restraint.

**4** Autistic: Sophie is an autistic 8-year-old girl who had an abscessed tooth. With 1 gm chloral hydrate plus 20 mg Atarax®, we used Pedi-Wrap® to take impressions and then extract the abscessed tooth. Two weeks later, we employed the same protocol to cement the space maintainer.

**5** Medically compromised: Ed is a 49-year-old male nursing home resident who was in a coma for 8 years following a 1991 direct lightning strike. He is non-verbal, unable to open wide or stop quivering. After placing 2 gm chloral hydrate plus 30 mg Atarax® elixir into his g-tube and playing his favorite country music, Ed remained in his gurney as our hygienist removed his calculus bridges.

**6** Mentally challenged: Marylou is a 46-year-old mentally challenged female who had periodontitis, dental caries, and missing teeth. She is hyperactive with psych disorders and low blood pressure. With 1 mg Halcion®, we were able to scale the mouth, place four restorations, and take impressions for removable partial dentures. Currently, she is wearing her appliances, which her counselors insert and remove each day.

**7****8****9****7**

Mentally challenged and wheelchair-bound:  
Linda is a 62-year-old female with cerebral palsy, hypertension, hip fracture, psych disorders, who is mentally challenged and wheelchair bound. She had periodontitis and two abscessed teeth. With 0.5 mg Halcion®, she had an anxiety and hypertensive episode in our waiting room before even being seated. On a different day, with 10 mg Valium®, we uneventfully scaled her entire mouth, and extracted the two abscessed teeth as she remained in her wheelchair.

Sometimes no amount of office sedation suffices to relax the patient sufficiently. About 75 times per year I work on patients under general anesthesia at our hospital operating room (OR). Prior to the OR we attempt, at the office, to obtain a thorough oral exam, radiographs and models, employing one of the DOCS protocols. We follow-up every OR case at the office, when we check the occlusion on the restorations, clean out the extraction socket, remove the sutures, get a post-op root canal film, cement a crown or bridge, insert a space maintainer, or deliver an appliance. Here are two examples of combined office/OR cases:

#### **Example of combined office sedation/ hospital OR general anesthesia cases:**

**8**

Seth is a 22-year-old male with Klippel-Feil syndrome. He is a deaf young man who has trismus, c-spine fusion with no neck mobility, and cardiomyopathy. With 10 mg Valium®, we were able to perform an oral exam and get some radiographs. We then went to the hospital OR to perform periodontal scaling, restorations, root canals, frenectomy, extractions, and crowns. Two weeks later, in the office, with 10 mg Valium®, we checked the surgical sites and occlusion on the restorations, and cemented all the crowns.

**9**

Loretta is 42-year-old female with Huntington's Disease. She is a retired nurse whose disease includes poor balance and dexterity, constant head and body movement, and anxiety. In the office, we were able to obtain an exam, radiographs and models. In the hospital OR, we performed scaling, restorations, extractions, and seven crowns. In the office two weeks later, with 2 mg Ativan®, we checked the restorations, extraction sockets,

and cemented all seven crowns. The patient's constant movements were controlled enough for us to successfully complete the case.

We have had many similar cases where referral to an oral surgeon would have addressed only the surgical component of the treatment, and where a pedodontist would not have welcomed older patients. My staff and I have found sedation dentistry to be personally and professionally satisfying. It expands our repertoire of treatment offerings. We welcome the gratification that comes with the successful outcomes, for management failures in the office are invariably followed by success in the operating room.

The demand and the need are clearly there. These anxious and special-needs patients deserve the same quality of dental care as everyone else. They want it. They need it. They will pay for it. Everyone will benefit. Consider trying it yourself—go out and embrace it. You can definitely make the “impossible” happen.



*Dr. Harvey Levy is a general dentist from Frederick, Maryland who has earned Mastership and Lifelong Learning Service Recognition in the AGD along with eight Fellowships and four Diplomate certifications. He completed a two-year residency in Rochester, NY, and was a GPR clinical residency director at the Univ. of Penn. Hospital. With 34 years of clinical experience in treating special-needs patients, he has written articles, produced audio and video tapes, taught many special-needs patient care courses, and lectured about the management of special patient care. His work earned him the 1986 AGD Humanitarian Award, the ADA Access to Care Award, and he was a 2002 Winter Olympic torch runner. To date, Dr. Levy has treated 1,000 patients in the OR and 30,000 patients in his office with oral sedation.*

#### **RESOURCES:**

Aribex Nomad Handheld x-ray unit  
Aseptico, Inc.  
800-426-5913 | [www.aseptico.com](http://www.aseptico.com)

Ergonom-X self-developing film  
Cramer Dental Sales, Inc.  
800-723-4895 | [www.cramerdental.com](http://www.cramerdental.com)

Pedi-wraps and foam mouth props  
Specialized Care Co.  
800-722-7375 | [www.specializedcare.com](http://www.specializedcare.com)



The Annual Session of the Texas Dental Association

# PREVIEW

## Treating Patients with Anxiety or Special Needs: There's Always a Way

**Harvey Levy, DMD, MAGD**

Imagine you are driving to work and encounter a roadblock. You detour and make it to your destination, albeit late. Management of anxious patients similarly starts out on a main road. Due to circumstances beyond your control, you are forced to try another approach or 2, or even 3. Eventually, you arrive, having treated your patient successfully.

### ANXIOUS PATIENTS

Anxiety by definition is “worry gone out of control” (Figure 1]. It is irrational but frighteningly real to the patient. Unless you’ve experienced anxiety, you cannot understand it. Try describing the color blue to a congenitally blind person and you will appreciate the impossibility of understanding a patient’s situational anxiety.

Now magnify that anxiety with the kind of fear felt by children too young to understand, Alzheimer’s patients who can no longer understand, mentally challenged patients who never understood, or autistic patients who live within an isolated world. Not all anxious people are special-needs patients, but all patients with special needs are anxious.

How do we gain the cooperation of anxious patients so we can treat them? There is always a way. Always!



**Figure 1.** Anxiety is worry gone out of control.

## PREScription DRUGS FOR CONSCIOUS SEDATION, PLUS NITROUS OXIDE

We start by relaxing the patient with some medicine. We prescribe an oral sedative the night before and/or just before the appointment. Nitrous oxide gas may be given as a supplement.

Our office protocol has been successful in 96% of our 35,000 oral sedation cases. Patients are relaxed enough to be wrapped, propped, radiographed, and treated to completion.

## WRAPS

To prevent patients' self-injurious behavior, we restrain their hands using soft wraps (Figure 3).

We place the wrap onto the operatory chair before the patient is seated (Figure 4). We then seat the patient and gently secure the wrists with Velcro (Figure 5) and the legs (Figure 6) to prevent sudden movement.

The head is immobilized by commercial head restraints or by a caregiver.



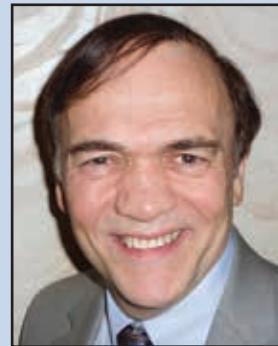
**Figure 2.** Anxious patient relaxing comfortably with nitrous oxide.



**Figure 3.** Anxious boy is comfortable and safely restrained with wrap.



**Dr Harvey Levy's  
Class Schedule at the  
TEXAS Meeting:**



*Harvey Levy, DMD, MAGD*

### FRIDAY, MAY 8TH

#### Successful Office Management of Anxious and Special-Needs Patients

8:00 AM – 11:00 AM  
Course Code F48

#### Portable Dentistry: Successful OR and Off-Site Management of Patients

1:00 PM – 4:00 PM  
Course Code F49

### SATURDAY, MAY 9TH

#### Tips, Tricks, Techniques and Tools for Managing Anxious Patients

8:30 AM – 11:30 AM  
Course Code S20



**Figures 4-6.** Applying the wrap in 3 easy steps.

## MOUTH PROPS

To open the mouth, we start with a foam-covered mouth rest (Figures 7,8).



**Figure 7.** Open Wide™ mouth rest is inserted horizontally.



**Figure 8.** Open Wide™ mouth rest is rotated vertically.

We then switch to a ratchet mouth prop (Figure 9).



**Figure 9.** Molt ratchet prop is inserted for wider opening.

What if the patient will not open? There's always a way. A simple technique prompts the patient to open the mouth, with a >98% success rate. We pinch the nose while hovering around the lips with the mouth rest. As soon as the patient takes a breath, we slide in the mouth rest and rotate as illustrated (Figures 10,11). The remaining 2% are opened by techniques taught in our hands-on courses.



**Figures 10 and 11.** Pinching the nose forces patient to open mouth.

Once the mouth prop is in the vertical position, you can easily insert and immobilize a ratchet prop (Figure 14).



**Figure 14.** Finger on hinge of ratchet prop.



**Figure 15.** Isolite™ retractor inserted into mouth.



**Figure 16.** Isolite™ with light illuminates the mouth.

## ACCESSIBILITY

According to the Americans with Disabilities Act, an office must accommodate wheelchairs. We use movable operatory chairs, displayed below (Figures 17,18).



**Figures 17 and 18.** DentalEZ Airglide™ chair can be pushed aside to allow patient to remain in own wheelchair.

A switch turns the heavy operatory chair into a hovercraft. A cushion of forced air allows a clinician to move the chair out of the way with one finger. This enables patients to remain in the comfort of their wheelchair or gurney (Figure 19).



**Figure 19.** Patient being treated in own gurney.

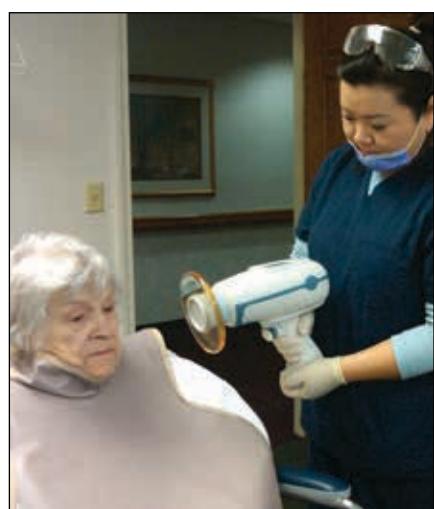
When wheelchairs don't have a headrest we clip one on, or use the chest of a caregiver as shown in Figure 20.



**Figure 20.** Our favorite headrest is a caregiver's chest.

## RADIOGRAPHS

For radiographs we love the portable, hand-held, cordless x-ray units (Figures 21,22).



**Figures 21 and 22.** Nomad™ and Nomad Pro™ hand-held X-ray units.

Digital imaging X-ray systems enable us to expose, process and immediately view images, and retake within seconds (Figures 23,24).

What if you don't have an assistant, a functioning computer, or electric power? Our answer is self-developing dental film in conjunction with a hand-held X-ray unit (Figures 25,26). For about \$1, you have a complete film and darkroom enclosed within a packet the size of a #2 dental film.

A high quality film results when the film packet is exposed, withdrawn, squeezed, and rinsed with water.

## MODERATE SEDATION

Relaxing the patient more deeply requires moderate sedation. The dentist must hold a Class I permit, which generally requires a 3-day course, ACLS card, and site visit.

## OPERATING ROOM: A PATH THAT ALWAYS WORKS

When all else fails, I work on the ideal patient: one who is asleep and cannot spit, bite, kick, hit, or resist treatment in any way. When a patient is under general anesthesia, it is guaranteed that you will complete the case. Success depends only on your clinical dental skills, where you can do your finest dentistry (Figure 27).

We have calculated, based upon our latest 1,500 O.R. cases, that the hourly net income in the O.R. is more than 4 times that of our office cases. All our O.R. work is done with no interruptions by the patient (Figure 28).

Advantages to having work done in the O.R. include: 1) This may be the patient's last resort; 2) The patient



**Figures 23 and 24.** Nomad™ and DEXIS™ being used in the operating room.



**Figure 25.** Ergonom-X™ self-developing film.

**Figure 26.** Nomad-Pro™ and Ergonom-X™ self-developing film being used together.



**Figure 27.** A dentist's ideal clinical setting.



**Figure 28.** The author with a hygienist and 2 dental assistants treat a patient in the operating room.

has no memory of being restrained or operated on; 3) The work gets done 4 times faster than it would in an office.

To treat patients in an O.R., you do not need a special permit. You only need what you already have: a license, insurance, and basic CPR card.

an operating room. Determining the best path for each patient requires resourceful creativity that results from knowledge, skill, and practice. If you have the motivation, you can learn the clinical skills in CE courses. There's always a road that will enable you to treat any patient.

## CONCLUSION

Every patient can be treated successfully, in a dental office or in

*For copies or comments, please contact Dr Harvey Levy at DrHLevy@gmail.com or visit DrHLevyAssoc.com.*

# Dental Education by ~~CIRCUIT~~ Training

by Harvey Levy, DMD, MAGD

Imagine you are sitting in a lecture hall. You have checked your e-mail on your cell phone three times in the last two minutes. The lecturer, talking in monotone, hides behind the podium, projecting slides with too many words on them. The room is dark. There are no windows to gaze out of, and the people on either side of you are equally uninterested.

Now, instead, imagine a room with eight tables and several chairs filled with dental supplies, equipment and interesting paraphernalia, each monitored by a representative of a dental supply or manufacturing company. During the animated, audience-involved lecture and PowerPoint presentation you learn why each product is useful, how it works and when it is applicable. The lecturer calls one or two volunteer participants to the front of the room to demo each product.

The day ends with "circuit training." During the final two or three hours, you are assigned your workstation sequence, which reminds you of circuit training in a gym. You pair up with a colleague and go to each table in turn. You touch and handle the equipment and use it on your partner under the careful guidance of the representative. After you have completed each task to your satisfaction, your partner applies it on you using sterile supplies.

As a presenter of participation courses, I have found circuit training to be a very effective way of teaching dentists and staff new skills and exposing them to tools, supplies and equipment with which most are unfamiliar. At the end of each module, I ask attendees to articulate one valuable finding – a "take-home pearl."

A typical PowerPoint lecture caters only to learners with aural and visual learning styles. Involving participants in demos that allow them to touch and manipulate three-dimensional objects adds kinesthetic and linguistic learning styles to the mix, allowing participants to better retain concepts (and avoid falling asleep).

My teaching philosophy is based on the Confucian directive: "Tell me, and I will forget; show me and I may remember; involve me, and I will understand." The attendance in my participation courses is typically 20-45, comprised mostly of dentists but include dental students, hygienists and dental assistants.

There are endless topics that can be taught with the circuit training model. Since I work primarily with treating special-needs patients, I've included one such class as an example for this article. Each of the eight workstations tries to answer a question in practical way, reinforcing the slides and demo seen during the lecture part of the course. Take this example and apply the method to your area of expertise.

## Workstation 1

**Question:** How can you get uncooperative patients to sit without kicking or flailing their arms?

**Answer:** Use body wraps, knee/leg stabilizers and forehead stabilizers.

I demo this equipment by selecting the largest man in the group, wrapping him up and challenging him to get out of the Velcro wrap.

For the workstation sequence, a chair is placed next to a table covered with Rainbow body wraps – colorful, washable and inexpensive mesh adjustable with Velcro, made in the U.S. by Specialized Care Co. (Fig. 1). The wraps come in seven different sizes and are non-threatening. They are extremely effective in gently restraining any patient's arms and legs.



The attendee who is playing patient sits on the chair, and the attendee who is playing dentist is asked to wrap him or her up. Once wrapped, the dentist further immobilizes the patient with Velcro knee and leg stabilizers and then with forehead stabilizers. The patient is then asked to wiggle and try to kick the dentist or to injure him or herself. If the dentist has properly applied the equipment, the patient will be unsuccessful.

## Workstation 2

**Question:** How can you open the mouths of uncooperative patients?

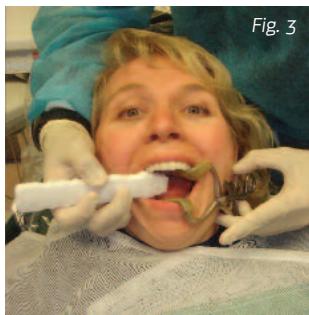
**Answer:** Use mouth props.

After the patient is wrapped and restrained, the dentist explores several different mouth props on the patient. During the lecture the attendees are taught several techniques to open the patient's mouth, not commonly known or used in dental offices, which they can now practice.

The first technique is to hold the patient's nose with two fingers, while the dentist's other hand (or an assistant's) hovers near the mouth with the Open Wide mouth rest (Fig. 2), made of two tongue depressors wrapped in foam. When the patient opens his mouth to breathe, the prop is gently and quickly inserted.

The second technique is to use one finger to firmly push the middle of the chin down at a 45-degree angle, applying vibrating pressure to the acupuncture meridian point Conception 24.

Once the patient's mouth is open with the mouth rest in place, the dentist inserts a unilateral Molt Mouth Gag manufactured by Hu-Friedy on the opposite side (Fig. 3). The den-



tist then withdraws the foam mouth rest and slowly ratchets open the Molt Gag, which is made of metal and two short rubber hoses. The mouth is now comfortably wide open.

The dentist then inserts a bilateral Jennings mouth prop (Fig. 4) in the patient's mouth, contacting all the premolars to expose all 12 anterior teeth. This all-metal appliance is commonly used by ENT specialists to examine and treat tonsils, but can also be used by dentists to isolate and treat front teeth.



The dentist then inserts the Isolite five-in-one device in the patient's mouth, learning how to select the proper size or to modify it accordingly (Fig. 5 & 6). This time-saving tool is a mouth prop, high-velocity saliva ejector, lip retractor, tongue retractor and three-level light source. The Isolite device isolates, illuminates and dries an area during restorative procedures. Its use in our practice has virtually eliminated no-charge redos of sealants or composites.

At the end of this leg of the circuit training each attendee will have experienced these props from the patient's vantage point, and learned how to properly apply them. Feedback received from peers ("You're hurting my TMJ!" or "You nipped my lip!") is immediate and honest, which leads to improved chairside application of props.

## Workstation 3

**Question:** How can you relax anxious patients?

**Answer:** Use nitrous oxide (laughing gas).

Nitrous oxide anxiolysis is covered in a lively lecture, and I demonstrate proper mask application on an attendee. For many patients, sedation drugs alone are just not enough to allow the needed dental care to be completed. I present videos of several patients experiencing laughing gas.

During the circuit training the dentist learns how to properly select and fit a mask on the patient. The nitrous oxide system available to attendees is one by Porter Instrument (Fig. 7).



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Its representative demonstrates more effective ways of securing the mask and reducing air leakage. No actual gas is used in the classroom setting – that would cause us all to lose focus for the rest of the course! – but merely handling the mask helps each attendee experience what it might feel like to be both the dentist and the patient.

## Workstation 4

**Question:** How can you easily obtain X-rays on special-needs patients when you have a computer loaded with sensor and software?

**Answer:** Use a handheld portable X-ray unit and a digital imaging system.

The presentation includes slides illustrating the versatility of the NOMAD and the even smaller Nomad-Pro, manufactured by Aribex, in a wide variety of settings. I point out how images can be made without requiring electricity. The Nomad-Pro (Fig. 8), the DEXIS sensor (Fig. 9) nor my laptop need to be plugged in to a wall outlet, and no Internet connection is required. This system can be used in waiting rooms, patients' homes, nursing homes, hospitals, institutions and even lecture rooms.



Fig. 8

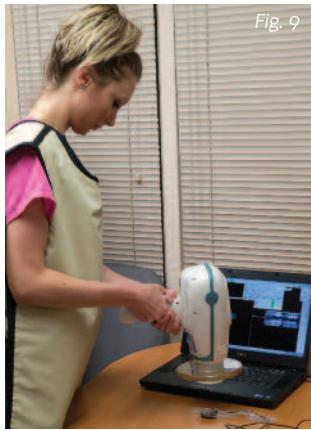


Fig. 9

During the demo I illustrate taking an X-ray with the five-pound Nomad-Pro and my laptop, installed with DEXIS instant digital imaging software and hooked up to the sensor. I use an extracted tooth and project the X-ray image on the large screen for all to see instantly.

During the circuit training, attendees use the Nomad-Pro to take an X-ray of an extracted tooth or piece of metal of their own (ring, earring), guided by Aribex and DEXIS representatives. The reps then ask each attendee to promptly take a second image – pretending that the first image missed the apex. A second image instantly appears on the laptop screen, replacing the original image, which is archived, not overwritten.

Although lead aprons may not be considered necessary for the operator, we always have them available at our courses for anyone who requests them. Aprons can provide an extra level

of protection from scatter radiation, should an attendee who is learning the system not properly line up the cone at 90 degrees to the object and sensor.

## Workstation 5

**Question:** How can you easily obtain X-rays on special-needs patients without a computer?

**Answer:** Use a handheld portable X-ray unit and self-developing film.

If I don't have access to the DEXIS system for any reason – computer malfunction being the prime one – my fallback is Ergonom-X self-developing film (Fig. 10), also called Dental Film. Ergonom-X has bailed us out of more emergencies than I care to admit.

In my demonstration I use the Nomad-Pro by Aribex to expose an extracted tooth onto the dental film, and show attendees how to process the image. All it takes is to gently massage the packet's internal chemicals onto the



Fig. 10



Fig. 11



Fig. 12

film for 60-90 seconds. Then I remove the film from the packet and rinse it off in water. The image can be viewed while it is still wet (Figs. 11 & 12).

During the circuit training, attendees develop two films previously exposed by my office staff with different mystery objects. They are asked to identify the objects, and place the developed films on a hanger to dry.

Attendees then use the Nomad-Pro to take new images of an extracted tooth or piece of metal of their own (ring, earring) onto two fresh film packets, under the helpful guidance of the Aribex and/or Ergonom-X representative.

## Workstation 6

**Question:** How can you treat patients outside the dental office?

**Answer:** Use a portable or mobile dental cart (and have a backup cart).

To demo a lightweight portable cart (Fig. 13), I often use an Aseptico unit. I demo a fully assembled unit in operation, turn



Fig. 13

it off, break it down, prepare it for transport and finally reassemble it.

The second category of portable tools I demo is headlights. Not all portable or mobile carts have lights attached. I provide a variety of headlights for attendees to explore. Dental practitioners who already use headlights requiring an electrical outlet are delighted to learn about options for lightweight battery-operated headlights.

Before demonstrating the Sheer Vision (Fig. 14a), Ultra-light Optics or other commercial headlamps, I don my \$15 Panther Vision PowerCap my wife picked up at Lowes (Fig. 14b). These handy caps have three inconspicuous light sources and we use them in

the dental office as well as during home blackouts or out-of-the house emergencies. I have used these inexpensive lifesavers while camping, hiking, fishing, and reading on buses and cars.

During the circuit training, teams of attendees begin with a fully set up portable dental cart. They dismantle the suction, water canister, electric plug and close the boxes. They then reassemble it to the original condition. We don't ask attendees to clean out the suction, replace the water or oil or lubricate the unit, but they get the idea from dissembling and reassembling the unit.

The teams then explore the different headlights. The dentist dons the headlight and the patient is asked to squirm in the chair. The dentist is asked to rotate his head to keep the mouth of the patient in their field of vision and direct light.

When we have a wheeled mobile cart available attendees examine and explore the unit to gauge how effective these carts can be in providing complete dental care in a non-office setting. Typically, mobile carts include high- and low-speed hand-pieces, fiber-optic lights, sonic scalers, air/water syringes and X-ray viewing boxes. Popular models we have used in our courses include DNTL, Port-Op, Aseptico and ASI.

## Workstation 7

**Question:** How can you modify a toothbrush for manual dexterity-impaired patients?

**Answer:** Easily – use your imagination plus arts-and-crafts supplies.



Fig. 14a

Fig. 14b

During my lecture I display photos of a few examples of toothbrushes that were adapted to such patients by attendees in past courses.

When participants reach this workstation they see several dozen Colgate or DentalElite toothbrushes (Fig. 15) and a wide variety of inexpensive arts and crafts supplies. The items include



Fig. 15

Play-Doh, Velcro, bicycle handles, Styrofoam, rulers, rubber bands, whiffle balls, different kinds of tape, and more.

I challenge attendees to modify a toothbrush so that it can be easily used by some category of special-needs patient.

Attendees take one or more toothbrushes, enhance it with the items on the table, and submit their creations to be judged as the most practical and effective.



Fig. 16

At the end of the program, attendees describe their target population's physical challenge, demonstrate the modified toothbrush and explain how their creation would be used by these patients (Fig. 16). I, along with the vendors and reps select one as "best design."

## Workstation 8

**Question:** How can you work on patients in a wheelchair or gurney?

**Answer:** Use movable operatory chairs.

My practice in Maryland treats a large number of wheelchair- and gurney-bound patients. Many prefer or need to remain in their own chairs during dental treatment. Others arrive in their wheelchairs and need to be transferred to our



Fig. 17



Fig. 18

*continued on page 66*

operative chairs. We used DentalEZ J-chairs with Airglide (Figs. 17 & 18).

Since we are unable to display these heavy chairs in our courses, I show videos instead. Attendees see accessibility features we implemented in our office, and see DentalEZ J-chairs with Airglide sliding across a treatment room. Other videos show obese, quadriplegic, amputee or other physically challenged patients remaining in the comfort of their wheelchairs or gurneys during treatment.

When this course is taught at a large dental meeting with exhibitors, the attendees are encouraged to visit the DentalEZ booth to see the movable operative chairs for themselves. Often, a DentalEZ rep is there to demonstrate and have everyone practice with the Identafi Oral Cancer screening light. The station exercise calls for each attendee to use the three different colored lights to search out any abnormal soft tissue in the person's mouth, using both the straight wand with a disposable plastic cover and then again with a disposable illuminated mirror. The Identafi light readily detects enamel crazes as well as abnormal soft-tissue lesions.

## Other Hands-on and Participation Activities for Hospital Dentistry

My two-day and three-day courses include an entire day about hospital dentistry. One of the exercises for that module includes working on a mannequin or dentiform, similar to those used in dental schools.



Fig. 19

Each group of two attendees is asked to place a throat pack (Fig. 19) (about 18" of an ace bandage) into the dentiform's mouth, replicating what they would do on a sleeping dental patient in the operating room of a surgical center or hospital. Attendees are further asked to use a mouth gag or prop to keep the mouth open. Then, they perform or simulate a dental procedure – such as applying a Trident or other matrix on a tooth on the non-proppped side – as part of a mock composite placement. Attendees experience what it would be like to efficiently work on a propped and throat-

packed mouth that has no head or tongue movement, no saliva and no chance of aspiration.

A second activity for the operating room module is to simulate creating and dictating an operative report (Fig. 20), upon completion of a dental case under general anesthesia in an operating room. My course handout includes three different sample operative reports of hospital O.R. dental treatment. In the style of Mad Libs, many words about specific details and results of the case have been replaced by underscored blanks.



Fig. 20

Each attendee is assigned one of the three operative reports and fills in the blanks. Each sample operative report is read out loud to the group, with different participants reading successive sections. Operative case reports have ranged from extremely technical and serious to hysterically funny and entertaining. The only requirement is that all the blanks be filled in to indicate a completed operative report. These group readings are always memorable and everyone learns from each other.

## Conclusion

At the conclusion of my courses we go around the room one last time to share a personal epiphany or take-home pearl. Invariably, everyone comments on how they enjoyed the circuit training format. This is where someone also invariably reminds me of the promise I made at the beginning, "No one will enjoy or learn from *every* single workstation, but everyone will take home at least two pearls that they can incorporate into their professional practice."

To date, I have not had a single person tell me that this promise did not ring true. The course goals were met without anyone falling asleep, and everyone benefited. This includes the attendees, the host organizations, the co-sponsoring companies, me and most importantly, tomorrow's patients.

I encourage you to learn from this model and adapt it to courses you teach. Changing the format of a course from lecture to hands-on "circuit training" allows clinicians to learn in a different way and helps them to retain information. ■

## Author's Bio

**Dr. Harvey Levy** is a Tufts 1974 graduate who has been practicing general and hospital dentistry in Frederick, Maryland since 1980. He holds eight fellowships, four diplomas including Special-Patient Care and DOCS, Board Certificate in Integrative Medicine, and has earned Mastership and three Lifelong Learning Service recognition awards from the AGD. He is the recipient of the AGD Humanitarian Award, the ADA Access to Care Award, the Maryland Governor's Doctor of the Year Award, and ran the 2002 Winter Olympic Torch in honor of his dental care for special-needs patients in Maryland. He has written and lectured extensively on management of anxious and special-needs patients. For more information, contact him at DrHLevyAssoc.com or drhlevy@gmail.com.



# Comprehensive General Dentistry In The O.R.

## Part 1

By Harvey Levy, DMD, MAGD

### Abstract

Dental care in a hospital or a surgical center operating room (OR) is often the only effective means by which many anxious, autistic, intellectually disabled, medically compromised patients, or people with special needs can receive needed comprehensive dental care. Some patients are too uncooperative or too high risk for routine dental care in an office or alternative setting. The OR provides a safe, effective and efficient environment for needed dentistry to be successfully performed (Figure 1).

The author describes: 1) Why there is a need to use the OR for dental treatment, 2) Which patient populations benefit the most from treatment in the OR, 3) The significant financial benefits to the dental practice when expanding services into the OR, and 4) The steps required to provide such care. Specific pre-op, intra-op and post-op considerations are described, as well as the medical records that must be kept. Ways to minimize the risk of lawsuits are discussed as well as tips found to be useful to the dentist in the OR, the office, and in alternate practice settings.



Figure 1. Dr. and assistants perform general dentistry in a hospital OR.

### Introduction

Dentists are very skilled and comfortable performing technical procedures on cooperative patients in their private offices. However, when patients are uncooperative (Figure 2), dentists and hygienists cannot perform their best work, or may not be able to complete the procedures.

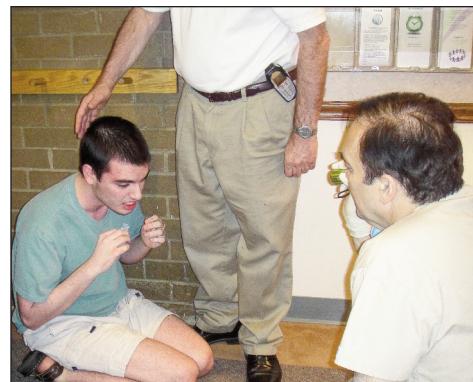


Figure 2. Uncooperative patient refuses to get off the waiting room floor.

Some dentists arrange for anesthesiologists or nurse anesthetists to put patients to sleep in the dentist's office. That excellent option is beyond the scope of this paper. Also not included in this paper

are the myriad of successful sedation or anesthesia modalities for dental care in an office setting. These options and techniques are briefly mentioned here, and described in detail in many published articles readily available via our drhlevyassoc.com website.

Specific protocols and adaptations are required to provide services in the OR setting. Patients benefit by receiving optimal dentistry in a comfortable and safe environment. Moreover, dentists benefit by expanding their practices, increasing their incomes, and providing care to an underserved population, thus expanding their referral network.

### I - HOSPITAL & SURGICENTER GENERAL DENTISTRY: Access to Care

#### Is there a need for dental care in the OR?

It is the responsibility of the profession of dentistry to identify and break down the existing barriers to patient care. People are living longer due to medical advances.

Dental advances now allow teeth to be maintained for a lifetime. Even though the traditional model of dental health care delivery does not include out-of-office care on a part-time basis, the dental profession ethically and economically must adapt to society's needs, meeting them appropriately and with competence. Additionally, if we don't do this ourselves, as a profession, it may be mandated upon us by unsympathetic politicians and bureaucrats.

The dentist may be called upon to provide care outside of their private practice for a patient who is homebound, or has been admitted to an institution, assisted living, nursing home, hospice or hospital (Figure 3).

The oral health status of many homebound individuals has been found to be poor, with over 80% of the subjects requiring dental care. Older patients of record within the private practice may be diagnosed with Alzheimer's disease, profoundly handicapping syndromes, or other medically challenging conditions which make private practice care very difficult, disruptive, problematic, and potentially unsafe for all involved.

Medically compromised patients with life-threatening septicemias or bacteremias of odontogenic origin are most appropriately managed in an OR as there will be no delay in professional emergency care. This also holds true for severely hypertensive, cardiac, or renal failure patients



Figure 3. Geriatric patient with Alzheimer's showing her front teeth.

who require dental care with close medical monitoring. Mentally challenged, intellectually disabled or autistic patients may be too combative to be treated safely in an office setting (Figure 4).



Figure 4. Autistic spectrum patient about to have dental treatment in the OR.

Infants and young children may require sedation approaching dangerous levels in order to relax them sufficiently. Perfectly healthy but apprehensive people deny themselves elective dental care due to situational anxiety or other phobias. The operating room may well be the only way to provide these “special needs” groups with excellent complete dental care under safe, controlled circumstances.

Some dental staff members work well in the routine practice, but may not be comfortable with the special needs patient in that same office setting (Figure 5). In

the OR, the conditions can be better controlled and are delivered in a professional and comfortable manner for all. Issues often arise in treating the mentally or medically challenged that make the delivery of care in the private office both unsafe and inappropriate, necessitating use of an OR. The goal for dental treatment in the OR is the delivery of controlled, safe, and high quality dental care. Cooperation may be accomplished by utilizing IV sedation or general anesthesia.

Providing OR dental care for the special-needs patient, the uncooperative pediatric, or the high risk geriatric patient population places the dentist's business into a unique position which distinguishes it from the traditional or typical dental practice.

#### When anesthesia in the office is not enough: Modalities of anesthesia

Rarely is there only one way of doing something. When operating on a patient, there are a number of safe anesthesia modalities which can be used alone or in combination. The options include: oral pills or tablets, oral liquids or elixirs, oral medicated lollipops, liquids through a g-tube, rectal suppositories, regional local anesthesia, intravenous (IV) sedation, intramuscular (IM) sedation, gas inhalation, monitored anesthesia care (MAC), nasal intubation general anesthesia, oral intubation general anesthesia, tracheal tube general anesthesia, acupuncture, and hypnosis.

Each of these modalities has its own unique onset, duration, indications, and contraindications. In a hospital setting, a combination of modalities is most typical. It is common for a patient to have Ativan, Halcion, Valium, or Atarax at home, to begin the pre-operative sedation and cooperation process. Oftentimes, in the pre-operative holding area, liquid Versed or IM Ketamine and/or nitrous oxide gas is employed prior to starting an IV, before intubation

general anesthesia is initiated. Not every patient allows an IV to be started without a fuss, and therefore some medicinal coaxing is often necessary.

In the private dental office, the most often-used modality is local anesthesia, then preoperative p.o. sedatives, nitrous oxide, followed by IM or IV sedative or analgesic agents. Differing levels of training, skill, and monitoring are required for each of these modalities. New rules and restrictions have been developed and implemented to regulate the use of these substances in dental offices. Licensing, tests and permits are now required. In most states, anything more than simple anxiolysis requires a permit, attained only after passing an ACLS course, completing a 24 hour course that includes 20 Power Point patient interactions (such as the courses offered by ADSA, ASDA, DOCS, other organizations and dental schools), plus a site visit. The permit is NOT required in a hospital or surgicenter operating room, where the anesthesiologist or anesthetist, not the dentist, is responsible for monitoring the patient's vital signs.

It is essential that the proper skills, manpower, and equipment be available for each modality. The minimum skill level for light or mild sedation or simple anxiolysis would be current CPR certification with an emergency medical kit and oxygen. Moderate oral sedation would require at least the protocol indicated in the previous paragraph. Deep oral sedation or general anesthesia in the office would require even more training and certification.

Annual review of office medical emergency protocol is performed in the more cautious and responsive offices. This includes training with the clinical and clerical staff on “who does what and when” for emergencies. Remember that the chain of response is only as strong as its weakest link: someone has to be assigned to call 911!

If local anesthesia, oral sedatives or nitrous oxide are insufficient, be prepared for the inherent risks of placing medicine into someone's muscles (IM) or veins (IV). If you do not have the additional permits, certification, level of training, equipment, supplies and insurance required to deal with these more dangerous modalities of anesthesia in your office, it is best to operate in a setting that can attend to any emergency. ORs in approved surgical centers or hospitals are the most suitable environment in which to handle these cases. In this setting, the treatment is sequestered and the dentist is not responsible for the anesthesia, nor is the dentist required to certify for moderate/deep sedation or general anesthesia permits, as would be required in a private dental office.

#### Who are the patients?

Examples of patients who may be candidates for IV sedation would include those with acute hypertension, pulmonary problems, multiple organ and pharmaceutical complications, or the Alzheimer's patient who requires minimal dental care, yet requires the safe and well-prepared OR setting.

The choice to utilize the OR is appropriate because the hospital medical staff is available to closely monitor and assist in the event of any complication or emergency. The patient who is a candidate for general anesthesia may range from the frightened pediatric patient (Figure 6), to the combative intellectually disabled adult, to the elderly patient with dementia, Parkinson disease, or stroke, the dental phobic, or the patient with severe spreading dental infections requiring IV antibiotics.

These patients may be unable to cooperate while awake or alert, but are medically capable of withstanding extended dental treatment with deep sedation or general anesthesia.

Treatment planning considerations regarding the **level of care** to be provided to patients must include whether the dentist provides minimum palliative care or comprehensive definitive care.



Figure 5. Combative patient restrained for exam on operatory floor.



Figure 6. Child having dental care in the OR under general anesthesia.

For example, the healthy but apprehensive 22-year-old with caries and impacted wisdom teeth would be managed very differently from the 92-year-old with Alzheimer's, advanced periodontal disease, and multiple abscessed teeth. This author feels that everyone has the right to be **pain-free and infection-free**. This is the minimum baseline for quality of life. Moribund nursing home patients, seemingly oblivious to the draining infections in their mouths, are still entitled to be free of pain and infection. This dental care is designed to improve one's quality of life, if not the longevity.

Symptomatic teeth need to be extracted, even when necessary periodontal and restorative therapy is not performed. We would not consider full-banded orthodontics on an uncooperative Alzheimer's patient, but we would remove their infected teeth, in the office or in the OR, under safe conditions.

It is plausible that the term "**cooperate**" originated from two doctors simultaneously operating on the same patient in the OR. This is a common practice in the OR. Whenever we have a mentally challenged or combative female, we always invite the OBGYN to come in to perform a Pap and pelvic exam. It takes 10 minutes of OR time, and is a valuable service to the patient. We often invite other doctors—especially ENT, GI, and podiatry specialists—and technicians who need to run various lab tests such as blood draws, x-rays, and EKGs—to co-operate with us, while the patient is asleep (Figure 7).



Figure 7. Patient having treatment by ENT in conjunction with dental care in the OR.

#### What are the benefits to the dental practice?

The dentist who assists these patients benefits personally and professionally. Dentists with hospital privileges who treat medically compromised patients are regarded as dental authorities by the hospital medical staff. They are recognized as such and

receive patient referrals from the hospital and from the physicians' private practices. The patients who are treated become 'missionaries' for the dental practice because the hospital dentist was there for them when they were in severe need. The community benefits from this provision of service because the special patient population, the pediatric, and the geriatric patients are enabled to maintain their teeth, thereby improving their nutritional status, their quality of life, and prolonging their life expectancy. The community further benefits by having problems attended to by appointment, rather than clogging the emergency rooms with untreated chronic oral infections.

Dentists may consider treating only three or four patients in a day at the hospital to be a low-production use of their time, when they can treat more than twenty patients in their private practices. It may be argued that the total number of patients cared for would diminish, but the opposite is the case because patients not currently receiving dental care would be brought into the health care system. In the OR virtually all the work can be completed in one long uninterrupted visit, rather than in multiple, less productive, shorter office visits, which do not even ensure successful completion.

Private practice dentists who contemplate working in the OR may be concerned that their practice productivity could potentially decline, and that their ability to service debt obligations while generating a livable income may be compromised. This concern is not valid. In fact, working in the hospital OR generates a four-fold increase in productivity per unit time in comparison to private practice, and a quadrupling of OR gross income relative to office gross income. If your office hourly income is \$750/hour, generating \$3,000/hour in the OR is easily a realistic expectation.

The productivity of the hospital arena is enhanced by the fact that with the patient under general anesthesia, the dentist has total control while the patient is in complete compliance. The patient cannot fight, spit, thrash or get out of the chair. Resistance really is futile. The required time to accomplish procedures is greatly diminished and the number of procedures provided is dramatically increased. This clinical efficiency offsets the time in travel, consultations, hospital report dictation and other tasks, realizing a 400% increase relative to the office hourly income.

There are several professional benefits that the hospital dentist receives from providing OR care. As members of the hospital medical staff, dentists will, by association and affiliation with other professionals, be encouraged intellectually and clinically by their peers. Hospital dentists may be asked to present dental health care issues at medical staff meetings, which create opportunities to promote public dental health awareness as well as promote their own private practices. The hospital emergency room will appreciate being able to call the hospital dentist whenever they have dental emergency patients. Referrals may also originate from medical colleagues, nurses, technicians, clerical and administrative staff at the hospital, the local dental society, as well as from dentists who do not offer hospital dental care.

#### How to go about providing OR dental care

The dentist needs to become comfortable with the idea of providing special needs patient care outside their office. The practitioner may choose to gradually incorporate OR care into their practice. This may begin with an occasional case, perhaps on a day off, and progress to a regular schedule of periodic OR block time, depending upon caseload. In some hospitals or surgicenters, dentists may be able to schedule cases as their first patient of the day at 7 or 7:30 am, or the last patient at 4pm, or even on Saturdays.

(If you, the dentist, are still reading this article, we'll assume that you are interested, and thus will address **you** in the second person.)

You must now decide where to treat these patients. ORs are available in most communities in both hospitals and surgicenters.

**Surgicenters** are less expensive for the patient, less labor intensive for the dentist and provide a quieter environment than hospitals. Surgicenters do not support an expensive ER and there is also a lower staff payroll and bureaucracy to fund. They spend proportionally less money on equipment and supplies, which helps keep expenses and overhead down. For the doctor, surgicenters are often easier to schedule since there may be less competition with other doctors for OR time. There is less paperwork involved and the turnover time between cases is less than that in a hospital setting. The doctor is free of obligations to attend time-consuming staff or department meetings or join committees. Surgicenters are smaller and generally more efficient than hospitals. They provide a quieter and more private pre-operative and post-operative area. This often suits the autistic child who shuns bright lights and abhors a noisy environment, the busy person who desires efficiency of time, or the private person who prefers not be seen in a public medical setting. This setting is ideal for the American Society of Anesthesiologists (ASA) type 1 or 2 patients. The ASA physical status classification system is a system for assessing the fitness of patients before surgery which has a six-category classification system. These are:

1. A normal healthy patient.
2. A patient with mild systemic disease.
3. A patient with severe systemic disease, which limits function, but is not incapacitating.
4. A patient with severe systemic disease that is a constant threat to life.
5. A moribund patient who is not expected to survive without the operation.
6. A declared brain-dead patient whose organs are being removed for donor purposes.

**Hospitals**, on the other hand, have many advantages that make them the first choice and sometimes the only choice for many cases (Figure 8). While surgicenters are confined to ASA 1-2 type elective cases (occasionally an ASA type 3), hospitals can accommodate ASA 1-5 cases for dental care. Hospitals offer overnight admissions before and/or after the surgery, which may be required for cases involving anticoagulation disorders, trauma, respiratory complications, behavior-compliance issues, and a host of other reasons requiring skilled medical nursing, laboratory support, and monitoring.

At times, an unexpected medical problem during the elective general anesthesia mandates an overnight stay for treatment or monitoring. If any medical problem should arise, physicians and nurses will respond immediately. By providing care in the hospital OR there is no need to transport the patient to a hospital ER for potential emergency care or evaluation. Some procedures are only covered by the insurance carrier if performed in a hospital that participates in that policy or program. Hospitals are known to participate in insurance plans and programs for which surgicenters may have chosen not to participate. Hospitals have a large staff, which offers more opportunities for networking and thus for new patient referrals. The nurses, doctors, clerical and other staff may



Figure 8. Patient too sick to leave the hospital will have dental care in the OR.

themselves become patients, in addition to the patients who they refer to your office. However time-consuming, department and staff meetings, and tumor boards allow the dentist to consult with medical colleagues to discuss cases, enjoy sponsored meals, meet old friends, make new acquaintances, take advantage of educational opportunities, and access library resources.

In choosing a hospital or surgicenter, you may wish to consider the location and proximity to your office as well as your home, the hours of OR availability, the type and condition of dental equipment available for use, and the attitude or helpfulness of the OR staff. You should locate a facility which offers OR times that complement your lifestyle, rather than complicate it.

The hospital or surgicenter will require you to complete an application for OR privileges. Some facilities utilize a universal application to facilitate the process. The universal application may be completed once and used for many facilities. Other facilities require a specific application that includes confirmation of background and training, CPR, liability insurance, and other details. You will apply for privileges to perform specific procedures and your scope of practice will be limited to those procedures for which privileges are granted by the facility's credentials committee.

Most often, outpatient dental surgical patients are dismissed 60-90 minutes after surgery. Sometimes there is a medical or dental complication, and a patient may need to be observed for several more hours. The hospital dentist may need to apply for admitting privileges in order to permit the patient to stay at the hospital for post-op care and observation overnight. Otherwise, a staff physician or hospitalist may be asked to admit and care for the in-house patient. Hospitals and surgicenters may differ in their application processes for privileges. Admissions privileges also vary from state to state.

If you decide to offer OR services, you might wish to start your marketing efforts by informing your own patients that these services are available. Your current patients and staff provide your best testimonials and are your best "word of mouth" advertising. Just let it be known, and don't be shy about promoting what you are offering. You can also use newsletters, articles, ads, lectures, fliers in your waiting room, and many creative other ways to inform your potential referral base of the services you offer and perform.

## II - IN THE OR

### Pre-Op Procedures #1: Consult and Consent

Following the patient's agreement to go to the OR with an approved treatment plan, the dentist and patient, or the dentist and the legal guardian or responsible party must meet to review the informed consent for care in the OR (Figure 9).



Figure 9. Mother of handicapped child consulting with dental staff prior to OR.

This informed consent must clearly explain to the parties involved the treatment indicated, options for alternative care, anticipated outcome, and potential complications. The option of "no treatment" must be discussed, along with the potential risks to the patient associated with general anesthesia. Through analysis of the risk to benefit considerations for the patient, it might be determined that the risk outweighs the benefit, and thus dental treatment is restricted or withheld. For example, in an elderly patient with pulmonary problems, IV is considered rather than intubation general anesthesia in order to reduce the likelihood of pulmonary complications. The patient and family must be willing to discuss and accept responsibility for the possibility of potentially undesirable outcomes. Prior to rendering treatment, frank and open discussion of potential complications will prevent hostility, if the outcome is not what was anticipated. Extensive details about informed consent are provided below.

### Pre-Op Procedures #2: Clinical considerations

Prior to care in the OR, the patient's dental diagnosis and treatment plan must be relayed to the physician, preferably with privileges at that particular facility. The patient will be given an H&P ("History & Physical Exam") by that physician. Based on this assessment and the treatment recommended by the dentist, the physician may request lab tests in addition to those required by the hospital. The physician establishes that the patient is a good candidate for care under general anesthesia and for the procedures that are being recommended. In the OR, the patient's medical history and the doctor's recommendations will be reviewed by the anesthesiologist.

**Lab pre-admission tests (PATs)** are essential to determining a patient's pre-operative medical status and condition. Test results provide valuable and needed information that can be critical to the anesthesiologist who has the primary responsibility to maintain the patient in stable health while you, the dentist, operate on their mouth. These tests are gender- and age-specific, and reduce the

chances of any untoward events that may compromise the patient's health. Knowing a patient's underlying cardiac and respiratory status can mean the difference between a routine, successful case versus one with life-threatening complications. Knowing the pregnancy status of a female patient can prevent an inadvertent loss of pregnancy. Blood tests and careful planning are essential for patients with coagulopathies. Monitoring of glucose and insulin levels is essential for patients with diabetes. Monitoring of liver function is necessary with hepatitis patients, and renal tests are necessary with dialysis patients. This list is far from exhaustive, which is why it is necessary to rely on our medical colleagues for consultation and coordination of efforts, to ensure the welfare of our patients.

Tests cover more than blood and other body fluids. Chest x-rays, EKGs, various scans and other diagnostic tools can reveal essential data, useful to all the physicians who will attend to the patient as well as to the physicians who will monitor the patient's health before and after the operation, and to the anesthesiologist who is responsible for the patient's health and well-being until the patient is safely discharged from the facility. Some patients may become too combative for any pre-operative testing. Intellectually disabled patients may not allow anyone to draw blood, or may not sit still long enough for an X-ray or other non-invasive tests to be performed.

On these occasions, in consultation with the primary physician and with the approval of the anesthesiologist, intra-operative tests can be performed with a pre-arranged stat test result. Urine can be brought in by the family or caretaker. After the patient has been successfully sedated, blood and other fluid tests can be run along with chest x-ray, EKG, etc.

In the case of routine screening tests, such stat tests need not delay the operation. For the medically compromised patient, such tests pose a higher risk, and the operation may be delayed until the tests have been performed and stat results are reported to the satisfaction of the anesthesiologist.

**Pre- and post-operative alteration of medications** must be coordinated and discussed with the attending physician. Common medications potentially requiring an alteration of the schedule and/or dosage may include insulin, antibiotics, hypertensive medications, corticosteroids, anticoagulants, seizure medications, and analgesics.

### Intra-operative consideration #1: Anesthesia

The treatment of the patient in the OR is similar to treatment in the dental office, except that while under general anesthesia the patient is totally cooperative and compliant. The anesthesiologist is responsible for safely putting the patient to sleep, by whatever technique the anesthesiologist and the dentist have agreed upon. Naso-tracheal intubation is preferred in order to give the dental team the greatest access to the oral cavity (Figure 10).

At times nasal intubation fails or is impossible. In those instances, oral intubation is utilized. For both types of



Figure 10. Patient with MRSA having dental care via nasal intubation general anesthesia in the OR.

intubation the patient's airway is always protected with a throat pack. This may simply be a roll of moistened gauze packed into the posterior pharynx from side to side. A lubricant is applied to the lips, and a mouth prop is utilized to maintain access to the oral cavity.

In our 1,600 OR cases, the desired nasal tube was not possible 15% of the time. More details about nasal and oral intubation are provided in the "tips" section later.

### Intra-operative consideration #2: Procedures

In some cases, intra-operative IV antibiotics and/or steroids are employed to protect the patient and to facilitate post-operative healing. Often a local anesthetic is also administered for hemostasis and post-op pain-control. For nasal intubations, a mouth prop is placed on one side while all non-surgical procedures are performed on the other side.

Following completion of the diagnostic exam and periodontal therapy, then restorative and endodontic procedures, the mouth prop is switched to the other side of the oral cavity. For oral intubations, a ratchet mouth prop is employed on the same side as the tube while treatment is rendered on the opposite side.

The ideal sequencing of restorations allows restorative materials to harden with maximum time prior to the extraction of adjacent teeth. Surgical procedures are usually performed last, in order to prevent blood from interfering with the restorative or endodontic procedures. The application of bio-mechanical principles of exodontia will greatly expedite the removal of teeth, eliminate wrist fatigue, and reduce the number of fractured roots by 75%. This is an entire topic unto itself. For more information via an online course, see [www.nova.edu](http://www.nova.edu) oral surgery by Dr. Harvey Levy.

Upon completion of the dental case, the mouth is thoroughly irrigated and the throat pack is removed. The dentist and auxiliaries stand back as the anesthesiologist extubates and safely wakes up the patient.

### Intra-operative consideration #3: Keeping records

Throughout the operation the dentist continually announces the work being performed. Someone in the OR is assigned to record these notations, to enable the dentist to later dictate an accurate operative report. The anesthesiologist also monitors the patient and keeps records pertaining to anesthesia throughout the operation.

## Post-operative considerations

The completion of the operation is NOT the end of the case. When **your** work is done, someone else's job is just beginning. The OR staff transports the patient to the post anesthesia care unit (PACU), where a new team takes over the care of the patient. The recovery staff is given a verbal narrative by the OR nurse who transported the patient, as well as written orders and instructions by you. The recovery team needs to know the following: what procedures were performed, what is expected of them for the duration in the unit, and what is expected of the patient and his/her family or guardian/caretakers upon discharge. They need to know the criteria for discharge, and what to give the patient in terms of medicines, gauze, written instructions, and follow-up after discharge. Though you'll provide the written criteria for discharge, it will be the PACU nurse's judgment call just when to discharge. The patient shouldn't be kept longer than necessary, but should only be allowed to leave when it is reasonably safe to do so. Vital signs, bleeding, nausea, pain and alertness all play a role in the decision.

## Medicines

Healing and patient comfort are facilitated by prudent pharmaceutical therapy. Upon completion of the operation, the dentist prescribes post-operative medications, as well as orders for the PACU and for home care. Appropriate analgesics may be administered IV by the anesthesiologist prior to extubation or in the PACU, and continued by prescription at home after release. Such medications often include: analgesics, antibiotics, anti-inflammatories, and antiemetics (to prevent dehydration, swelling and other post-operative complications arising from gastric contamination of oral surgical wounds).

## Gauze

The nursing staff in charge of the patient in the PACU will need to know how to care for the oral surgical sites and what to expect. The dentist should provide instructions for hemostasis and compression of the wounds using gauze packing. Instructions to the staff must also address issues such as the use of straws and ice chips. The non-surgical patient can sip liquid through a straw. Straws are discouraged in surgical cases where the vacuum action of the straw may disrupt the blood clot from the fresh extraction site. For patients who have undergone restorative care with amalgams, implants or temporary acrylic crowns, ice chips may be contraindicated. The patient may receive clear liquid by sipping from a cup.

## Written instructions

Follow-up care for the patient must be prescribed at the time of release, and the patient must be given this recommendation in writing prior to discharge from the hospital. Typically these instructions are reviewed prior to discharge to ensure that the patient or caretaker is capable and willing to follow them. The patient is typically contacted within 24 hours by a phone call and/or a visit. This allows the dentist to respond to any condition resulting from the operation which may require attention. Close and continued follow-up care on a periodic and on an as-needed basis reduces the likelihood of complications or reoccurrence of the dental conditions.

## Follow-up after discharge from the PACU

After discharge from the PACU, the patient may either be sent to a room in the hospital for continued follow-up care, or sent directly to their home, nursing home, institution, or other facility. If the patient is going to a room in the hospital, then the floor nurse will comply with your notes and orders. If the patient is going home, you must provide to the patient and/or to the person who is taking them home both written and verbal instructions regarding immediate care, information for the next one to two days, and further follow-up.

## Immediate and next-day instructions:

These include how to care for the mouth, important information about general health (vital signs and medical considerations), what can be expected concerning the mouth, any new medications you've prescribed, resumption of suspended medications, what to do if something unexpected occurs, and who to contact if assistance is needed after discharge. Having pre-printed instruction sheets for each separate procedure (extraction, root canal, crown/bridge, immediate denture, partial/full removable dentures, implant, space maintainer, periodontal treatment) virtually eliminate patients' follow-up calls with predictable questions. If you use pre-printed instruction sheets in the office, then bring them to the OR with you. If not, then make them and use them to save time

and prevent late night calls. If local anesthetics were used for either hemostasis or pain control, then OraVerse (phentolamine mesolite by Septodont) may be injected into that same site to hasten local vasodilation and reversal of the anesthetic effect. This often prevents post-operative biting of one's tongue, lip or cheek.

#### Follow-up appointment information

This should be included so that the dentist can check any sockets or surgical sites, treat high spots on restorations, deliver or adjust appliances being fabricated including crown/bridge, implants, space maintainers, full or partial dentures, and review with the patient and caretakers what to do regarding long term care in order to reduce the likelihood of repeat operations. Oral hygiene and home care review is essential at this point. The follow-up appointment is also a good time to handle any financial and insurance matters, and to make an appointment for continued dental care.

*This article will be continued in the next issue of the GP, the journal of the NYSAGD.*



*Dr. Harvey Levy has been practicing general dentistry in hospital and alternative settings in Frederick, Maryland since 1980. Originally from Brooklyn, NY, he graduated from Tufts Dental in 1974, and completed a 2-year GPR at Eastman in Rochester, NY in 1976. He is a former full time instructor and program coordinator of the Hospital of the University of Pennsylvania General Dentistry Residency Program. Dr. Levy is a recipient of the ADA 2002 Access to Care Award, the AGD 1986 Humanitarian Award, the Maryland Governor's Doctor of the Year Award, the Morgen State Public Oral Health Award, Maryland State Dental Association first Arthur Fridley Humanitarian Award, and the Special Care Dentistry Saul Kamen Award. He holds eight dental fellowships, five Diplomate certificates, Board Certification in Integrative Medicine in addition to AGD Mastership plus four Lifelong Learning and Service Recognitions in the AGD.*

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## Congratulations, Paula!

Please join us in celebrating and thanking our Executive Director, Mrs. Paula Bostick, upon reaching her 10 year anniversary with the New York State Academy of General Dentistry. Paula joined the NYSAGD on January 3, 2006, and initially served as Education Manager. On September 12, 2011, she was appointed Executive Director of the NYSAGD. In 2012, Paula was very instrumental in the relocation of the NYSAGD headquarters from White Plains to Whitestone and the establishment of our Learning Center. Paula continues to serve as our Executive Director and very efficiently carries out the continuing education and the administrative operations of the NYSAGD. We look forward to having Paula Bostick as part of the NYSAGD family for many years to come and thank her for her teamwork and many contributions.



# Comprehensive General Dentistry in the Operating Room, Part 2

By Harvey Levy, DMD, MAGD

## Abstract

In Part 1 of this article we provided an overview of how we practice dentistry in the hospital or surgical center operating room. Part 1 Section I covered access to care, modalities of anesthesia, target patient population, benefits to the dental practice, and how a dentist can get started. Part 1 Section II provided an overview of general dentistry in the OR, including pre-operative, intra-operative, and post-operative considerations.

Here, in Part 2, we will go into more detail about important issues mentioned in Part 1, such as paperwork and legal issues, and offer some tips and tricks that enable us to provide excellent OR dentistry. Finally, we will reiterate the benefits of general dentistry in the OR.

## III – PAPERWORK

Reports are a necessary part of any operation or hospital stay. Reports are how we document what we did and communicate with all interested parties, both current and future. Before bringing a patient to the OR, the dentist writes or dictates the following:

- **Treatment plan:** Regardless of the formality or the extensiveness of the plan, a written treatment plan must be created, and be approved by the parties prior to any operation.
- **Consent form:** Even though clinical reality might turn out differently, the consent form signed by the patient or guardian must state what is being planned and anticipated based upon available information. If there is ANY possibility of performing a certain procedure, it MUST be on the consent form, or it cannot be performed.
- **Letter of Medical Necessity:** Addressed to the medical insurance carrier.
- **Pre-operative report:** If there is an agency or institution involved (e.g., for the handicapped, nursing home), a pre-operative report is often required. It justifies the operation detailing the risks, benefits, options, and alternatives.

Other reports are generated by other doctors prior to or at the hospital. For all OR patients:

- **History and Physical:** The primary care physician involved must write, dictate or check-off a current history and physical (H&P). If multiple physicians or specialists are involved, they may provide consultation reports. Some states and facilities allow the dentist to perform their own H&P.
- **Progress notes and Doctor's orders:** The dentist is obliged to personally write brief notes in the patient's hospital chart before and after the operation, documenting the patient's condition in a timely fashion.
- **Operative report:** During the operation, the dentist announces to a note-taker (usually a dental staff member or an OR employee) exactly what is being done (Figure 1).



Figure 1. Second OR dental assistant takes notes in the OR.

Within 24 hours of the operation, the dentist uses those dictated notes to prepare a detailed report of the operation. This **operative report** may be dictated or typed by the doctor's personal staff. After the dentist reviews and proofreads the written draft of the operative report, they must hand-sign or e-sign it, depending on the facility's policy. Finally, the facility sends a copy of the operative report to all practitioners involved in the patient's health care who were designated by the dentist, and the dentist places the operative report in the patient's dental chart.

If the patient is admitted into the hospital and not treated as an outpatient, other documents are required:

- **Admission note:** If the dentist is allowed to admit the patient to stay in a room at the facility before and/or after the operation, he/she must write an admission note in the patient's hospital's chart, or dictate into the dictating system. The dentist must document the patient's pre-operative health status, a reason for the operation, a statement that the H&P was done with all necessary pre-admission tests (PATs), and that the consent form was properly reviewed and signed.

After the operation, a brief entry in the patient's hospital chart is made documenting what procedure was done and why, mindful that the pre-operative and post-operative diagnoses are not necessarily the same.

- **Daily hospital progress notes:** If the patient spends time in a hospital bed other than the OR, pre-op holding or PACU (post-anesthesia care unit), additional progress notes must be written in the patient's hospital chart at least on a daily basis by the dentist and/or by each treating health provider.
- **Discharge summary:** If the patient sleeps in the hospital overnight, a more detailed **discharge summary** of the patient's stay in the facility must be dictated by the admitting doctor.

#### IV – LEGAL ISSUES

*The following suggestions should not be construed as legal advice. For specific legal advice, please contact an attorney.*

The timely completion of the reports listed above serves an additional purpose: they are a judicious register of your actions and justifications. Every operation and procedure performed in your office or in the OR involves a health risk to the patient and, therefore, poses a legal risk to the dentist. As you obtain informed consents from the patient or their representative regarding planned surgical procedures, present the options clearly, engage in the appropriate steps when a patient refuses care, and maintain a careful record of procedures. In so doing you prudently take reasonable precautions to prevent the risk of lawsuits.

#### Informed Consents

**Consent forms** are essential to a successful practice. Hospitals and surgicenters require properly signed and timely informed consent forms, witnessed by a non-relative. Your dental practice should require them too, especially for surgical procedures. Consent forms vary on how much detail they require. What is mandatory, however, is that patients (or their representatives) understand what they are reading, understand what they are signing, and know the alternatives. Undergoing surgery is a choice, and each competent patient must be aware of his or her options. This includes knowing the benefits, risks, options, and alternatives, as well as understanding that nothing is guaranteed other than the doctors' promise to do their best to achieve the anticipated results. Doctors cannot ever guarantee specific performance.

The consent form must also list the anticipated procedures to be performed. The doctor should not leave the OR in the midst of a surgical procedure merely to modify the plan with the parent, guardian or third party with power of attorney (POA). Anticipated procedures must be indicated and agreed upon by both parties in advance, in writing. If you planned to save a tooth under general anesthesia which turns out to be non-salvageable, the extraction may be legally actionable if not pre-approved on a written consent. Once sedated, a patient cannot legally sign or change any document. Rescheduling a new procedure would be wasteful for all involved, and denial of the needed treatment by the operating doctor is not a possibility.

The only reasonable course of action is to obtain written consent in advance. If the dentist suspects that there is a 1% chance of having to perform an extraction, a root canal, or any other procedure, then those procedures should be included on the consent form. One attorney suggested we add the following to our consent forms: "If any unforeseen condition(s) arise(s) during the course of the operation requiring, in the doctor's judgment, procedures in addition to, or different from, those now contemplated, I further authorize the doctor to do whatever he or she deems advisable with ordinary and reasonable care and skill according to acceptable medical and dental standards."

#### Present and Explain the Options

Patients may refuse needed medical or dental care for a variety of reasons. One reason may be based upon religious beliefs. This is the patient's right, as well as the right of a minor's legal guardian. Older citizens with multiple medical illnesses may present with Advance Directives that may limit and restrict the scope of medical care in situations where a DNR (do not resuscitate) order is in place.

Within the practice of dentistry it is common for a patient to insist upon the extraction of a tooth that the doctor knows can be saved by a root canal and/or a crown. As a healthcare provider you are required by the standard of care to present options and alternatives, and to explain these to the patient in layman's terms. The patient may choose your second or third alternate recommendation for treatment, and this is their right. You may thus perform

your second, third or fourth choice. But you may not knowingly breach the standard of care in performing the procedure, and there is no obligation to perform a procedure that you are not comfortable doing.

At our dental practice we have two consultation rooms, where a doctor or dental assistant holds a thorough (30-60 minutes) conversation with the patient and/or legal representative in order to choose a treatment plan and to set an OR date. Modeled after the medical SOAP system (Subjective, Objective, Assessment, Plan), we adopt the following triad:

1) FACTS. These are the clinical facts about the patient's condition, and these are the treatment options, risks, benefits, prognoses and costs for each.

2) OPINION. This is the doctor's opinion of which option is best.

3) CHOICE. We reiterate that it is the patient's choice to determine which option will be performed.

#### Maintain and Retain Detailed Records

Documentation is vitally important because the dentist may be asked, even months or years later, to justify why they extracted a tooth that another dentist now states could have been saved. Accurate record keeping will allow you to retrieve the informed consent, treatment plan(s), and patient's refusal of recommended treatment forms, all of which have been signed and dated by the patient or representative. Written documentation generally places you on safe legal ground. There are very few reasonable plaintiff's arguments against a signed and witnessed document proving that the patient had been properly informed, presented with options, and that they chose not to accept the recommended treatment plan or standard of care.

It is common for patients to refuse dental x-rays. You may choose to either decline to work on the patient (acknowledging your inability to properly diagnose and meet the standard of care), or you may perform the procedure after the patient signs a release from responsibility. When a patient declines the dentist's recommended treatment plan and selects one that, while clinically acceptable, is NOT the best choice in the opinion of the treating dentist, the release form becomes necessary. Said form must be properly signed, dated and witnessed. A dentist may not knowingly perform the wrong procedure under the standard of care, but may perform a viable, alternate procedure if that is the patient's informed and documented wish.

If the patient offers a valid reason to refuse x-rays, the dentist can choose to delay the procedure until an x-ray can be taken (such as in the case of a woman who may be pregnant or has had other x-rays within the past 30 days). Dentists have been sued for not diagnosing periodontal disease or not including implants as an option for tooth replacement. It stops an attorney cold in his tracks when the dentist presents a signed form stating that the patient refused periodontal treatment or opted not to consider implants. Consider this oft-quoted suggestion: "Trust everyone, but get it in writing."

#### Preventing lawsuits

Let's say you've followed all of the steps above. How can you avoid being sued? This is a trick question because anyone can be sued for any reason; frivolous lawsuits fill the dockets every day. Assuming you prevail, you will still have been greatly inconvenienced by lost time, sleep, income, and an increased number of lost or gray hairs. "**How do you prevent a successful lawsuit?**" may be the more appropriate question. The answer to this question has at least three parts which are detailed below.

The first precaution a dentist can take against successful lawsuits is to **avoid surprises**. If a patient has a mental picture of a certain

outcome, they can become irrational and enraged if that image is not fulfilled. If there is a 1% chance of an adverse reaction occurring, then the patient needs to be made aware of that possibility, and agree to the risk factor by assuming the risk of the procedure in writing. This is where “forewarned is forearmed” comes into play. If the 1% outcome you projected occurs, you will be seen as experienced and intelligent. If, however, you first have to break the news after the occurrence, the disgruntled patient is likely to consider you to be a lousy dentist. It is certainly within the realm of probability that a planned root canal ends up in an extraction when a vertical fracture is discovered. In the OR, there is no option for dialogue. Unless an extraction was allowed on the consent form, you may be liable for damages if you extract the tooth and the patient does not accept your explanation.

I recently brought MS, a very apprehensive 20 year old female, to the OR for a large number of restorations and extraction of one supernumerary tooth (a malformed and crowded third premolar between #12 and 13). While extracting the supernumerary tooth I discovered that the adjacent premolar #12 was fused to it. The extraction would have meant the loss of tooth #12. Had the consent allowed for “extractions” rather than “extraction of only the supernumerary tooth,” we would have felt legally comfortable extracting both teeth and explaining our decision afterwards. In this case, we decided to not extract the supernumerary tooth because the consent did not include any other extractions. In subsequent cases, we always used the plural “extractions” to prevent similar dilemmas (Figure 2).



*Figure 2. Ankylosed tooth extracted along with abscessed tooth.*



*Figure 3. Oral intubation for extractions and biopsy.*

A prudent dentist gives patients written handouts or literature about what to reasonably and realistically expect from a procedure, be it a crown, bridge, root canal, denture, periodontal therapy, and especially a surgical procedure or immediate appliance. A reasonable step beyond this would be to have the patient sign a form stating that they received said pamphlet or the appropriate materials discussing the procedure. Remember, if the patient is surprised with an unexpected outcome, you may receive a surprise from the process server.

The second precaution is to have the patient **sign (or initial) and date your treatment plan consent**, and/or have your assistant initial and date the approval in the chart. Only contemporaneous notes and chart entries are acceptable, and the use of an ink or electronic pen is strongly recommended. You may not modify the chart after your records are subpoenaed. Record tampering is synonymous with professional suicide: don’t even think about it. Whether the patient or their proxy signs in ink or electronically, always “inform before you perform” and have the patient date and sign or initial every consent form.

The third precaution is to maintain a **good relationship** with the patient and the family. I personally call every patient on the same evening or the day after every office surgery and every OR case. If I am unable to make the call myself, I have a staff member do so and document it. People don’t sue over microscopically imperfect crown margins. They sue over poor communication and perceived lack of caring.

### Preparing for the worst

If you are **sued**, what do you do? First, you “remain calm and carry on,” knowing that your liability insurance offers maximum coverage. (You cannot afford to be thrifty here—go for the max!) As soon as you’re served, contact your malpractice carrier and describe the paperwork you received. From that point on, follow all instructions from your assigned malpractice attorneys. They will talk you through the process, hold your hand, and allow you to sleep at night. Keep in mind, however, that if you are sued above and beyond policy limits, you and your practice may be liable for the remainder.

**Death** is a part of life, but not if it is considered untimely. If a patient dies while under your care in the OR, or in your office, there will be an official inquiry involving everyone who was present. Questions will be raised to discover exactly what happened leading to the cause of death. You need only to establish that your actions were what a **reasonable** dentist in your situation would have done. Your excellent documentation will be your best friend.

*Disclaimer- I am a dentist and not an attorney, writing from my own experience and knowledge. This article offers personal suggestions and not legal advice. For specific legal advice about any of the matters discussed in this article, please contact an attorney.*

### V – ASSORTED TRICKS AND TIPS FOR YOUR BEST OR DENTISTRY

Below are some tips I did not learn in dental school, but picked up during my 42-year journey as a dentist.

#### Getting Good Radiographs in the OR

For difficult, uncooperative or gagging patients for whom it was impossible to obtain preoperative x-rays in the office, we obtain intra-oral x-rays in the OR. To expose intraoral radiographs in the OR we use either the hospital standard mobile x-ray unit on wheels or portable units. There are three portable units we use: the original 8.5 lb **Nomad™** hand-held unit, the lighter-weight 5.4 lb **Nomad Pro™**, and the newest 5.4 lb **Nomad Pro-2™**. All are manufactured by Kavo-Kerr’s **Aribex™** (Figures 4-6).



*Figure 4. Ergonom-X™ dental film exposed with NOMAD-Pro™ on a nasal-intubated patient.*



*Figure 5. DEXIS™ image captured with NOMAD-Pro™ on a nasal-intubated patient.*



*Figure 6. NOMAD-Pro™ exposing a DEXIS™ image on an oral-intubated patient.*

Digital x-ray technology enabled us to gleefully eschew the dark-room and chemicals, and obtain immediate results with excellent resolution. In the OR our primary system is the **DEXIS™ instant imaging system**. We bring our laptop into the OR, to which we upload the radiographs to be viewed. The beauty of the system, in addition to the ease of use and versatility, is the instant feedback. We know within a second if we missed the apex, and can retake the shot immediately and repeatedly until we are satisfied. The previous views are archived, not overwritten, making them readily retrievable if needed.

We upload the images to our office system at the close of our day in the OR. It should be mentioned that the radiographs are “individually identifiable health information” and thus subject to HIPAA protection. Our laptop is password protected and its hard drive is encrypted in case the laptop is separated from our office staff or me.

Because the hospital we work at does not allow us to establish a VPN connection from our server to our laptop, we use encrypted pen drives to transfer the radiographs from the laptop to our office server. Thus, there is no risk of a pen drive containing OR data being lost and accessed by a stranger.

When for whatever reason DEXIS™ or our laptop is unavailable, our backup is the **Ergonom-X™ Self-developing Dental Film** (Figure 4). These self-contained dental films are exposed in the OR and developed by any nurse or technician in 60 seconds without leaving the room. The quality is excellent for diagnostic purposes, but not archival-perfect.

### Anesthesia in the OR

In the OR, we ALWAYS ask the anesthesiologist or anesthetist to use **nasal intubation** (Figures 4, 5, 7 and 8). A patient’s mouth in the OR will have at least six objects in it: the dentist’s two hands, the assistant’s two hands, the handpiece (drill or sonic scaler), and the suction. An oral endotracheal tube does not leave much room to work, especially in the mouth of a child. The nasal tube allows the dentist to cross the midline freely, and not be confined to only one side or have a round hollow plastic obstacle in the way.



*Figure 7. Molt™ mouth gag used to prop open a nasal-intubated patient.*



*Figure 8. Identafi™ used with Molt™ mouth gag to detect oral cancer on a nasal-intubated patient.*

At times, nasal intubation might not be possible due to nasal obstruction, goiter, trauma, tonsils and adenoids, blood thinners, or infection. As Mick Jagger told us in 1968, “You can’t always get what you want.” For oral endotracheal tube cases, the gauze throat pack may need to be removed and replaced in order to move the tube from one side of the mouth to the other. This adds time and risk to the case, and pauses the dental operation while the tube is relocated within the mouth (Figures 3 and 6). So always ask for nasal, and you will get it most of the time; 85% of our 1,800 OR cases were performed via nasal intubation.

### Preserving Your Body

In the OR on an asleep patient, procedures are performed more quickly with no pause, and the dentist may become tired especially when confronted with successive extractions.

The proper use of **biomechanics** when extracting teeth provides numerous advantages with no recognized disadvantages. Over the past fifteen years, we have noted a 75-80% reduction in tooth fractures relative to the previous fifteen years, having implemented no significant change other than incorporating proper body mechanics.

The patient benefits from more efficient extractions, leading to fewer fractures, less postoperative pain, and quicker recovery. The dentist benefits by being able to perform a greater number of extractions in less time, with no wrist or body fatigue, resulting in a greater net income.

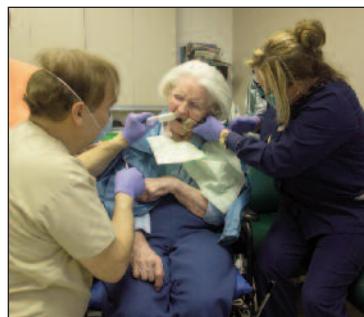
### VI – ADDITIONAL TIPS TO MAKE THE OR CASE SUCCESSFUL

In terms of preparation and follow-up there are a number of tasks that can make or break the success of an OR case.

Most follow-up visits require the patient to be relaxed and non-combative in our office. We accomplish this 96% of the time by using a combination of oral conscious sedation pills or elixir and/or nitrous oxide to raise their tactile threshold; body-knee-head wraps to reduce thrashing or unexpected movement; sunglasses or blindfolds to prevent light irritation; and sound-reducing headphones to eliminate sound as a behavior trigger. This and other more specialized equipment are mentioned below.

### Special Operatory Chairs

Unless we have to visit the patient at their facility, we like to use our nine office hovercraft-style air glide base chairs. We can move the DentalEZ J-chair™ or Nu Simplicity™ chair in any direction, allowing the patient the easiest access into the operatory chair. For those who prefer to remain in the wheelchair or gurney, these operatory chairs glide across the room with one finger or one foot after pushing the button to release the cushion of air (Figures 9 and 10).



*Figure 9. Open-wide™ Mouth Rest used along with Molt™ mouth gag on a wheelchair bound geriatric patient.*



*Figure 10. Dental EZ J-chair™ airlighted aside to allow treatment of patient in wheelchair.*

### Immobilizing Wraps

Whether performing a preliminary dental work-up or seeing a patient in the office for a follow-up, there is one piece of equipment I find essential. It is the **Rainbow Wrap™** by Specialized Care Co. These gentle Velcro™ whole body wraps are crucial to immobilizing the patient so we can assess the clinical picture before going to the OR or cement/deliver an appliance like a bridge or space maintainer after the OR case. The wraps come in six sizes plus infant and can be washed many times before they start to fray. They gently and effectively bind the hands, torso and

feet and prevent injuries to everyone, especially the patients (Figure 11).



Figure 11. Knee/Ankle Belt used with Rainbow Wrap™, to stabilize a combative patient.

### Alternative to Radiographs

An excellent alternative to pre-operative x-rays is the Kavo-Kerr's CariVu™, which reveals caries images with no radiation exposure. This device is easily used by the hygienists during the preliminary exam. These images are less technique-sensitive than radiographs, tolerate a little patient movement, and no one needs to leave the room or wear special aprons.

### Mouth Props

Another item we like and use often is the mouth prop. In the office we generally screen uncooperative patients with **Specialized Care's "Open Wide"™** tongue depressors inside of foam disposable mouth rests. We find them practical, inexpensive, easy to use, and harmless to enamel (Figure 9).

Dental practices use various kinds of rubber or plastic mouth props, whether a piece of floss is tied around them, or a saliva ejector is inserted through them. More versatile than the solid one-piece props are the **Molt™ ratchet mouth gags**. We always place a rubber hose around the two metal tips to prevent enamel fracture (Figures 7 and 8).

The bilateral **Jennings™ mouth prop**, found in ENT catalogs, props open the premolars and provides great access to the incisors and cuspids. Protective rubber hose cannot be used with the Jennings™ prop, so be mindful of patients clenching on it and fracturing porcelain or enamel.

### Lighting the Field

Since uncooperative patients often move about in the office operatory chair, we use our Ultralight Optics™ head lights in order to constantly keep the mouth in the light field. We merely need to slightly move our head as the patient moves theirs.

### Reducing irritating sounds

Many patients on the autism spectrum have adverse reactions to touch, light or sound. They can often be a trigger to a behavioral issue that precludes any treatment or even examination of the mouth. This is when we have the patient don opaque sunglasses or blindfolds, plus sound-reducing headphones, with small disposable covers which tune out sounds of the drill as well as our voice (Figure 12).



Figure 12. Sound-reducing headphones preclude sound as a negative behavior trigger.

### Identafi Screening

We use the Identafi™ screening device to detect increased vascularization in the soft tissue, suggesting trauma, cancer, or other oral pathology. We use it for oral exams, where with one hand we can retract, prevent biting, and illuminate the field with superb clarity. This device is also used to trans-illuminate for possible craze or fracture lines, and is ideal for bedside oral exams, or limited oral evaluation on a moving mouth (Figure 8).

In addition to tools and equipment, here are procedures we find useful to our success in successfully completing OR cases.

### Safe and Proper Prescribing

Most often we must sedate the patient for the initial exam and/or follow-up. Our patients may be taking prescription drugs. To prevent an untoward reaction, be it synergistic or antagonistic, we look up their drug(s) in the Lexicomp™ database prior to choosing the sedative we will use. This program will tell us if the drug is safe to prescribe.

### Post-Op Follow-Up

After the patient leaves the hospital or surgical center, we call them at our convenience so that they don't call us at our inconvenience. If there is a problem, pending issue, or just the need for reiteration and reassurance, that is done easily with a timely phone call. Our initiating a prompt follow-up call maintains rapport and is a great practice builder. Document every phone call with a very brief narrative. In the eyes of the judge, if you didn't write it down, it didn't happen.

If possible, see the patient within a few days to check on healing of extraction sockets, reduce high restorations, deliver or adjust an appliance (especially an immediate denture), reshape a temporary crown, or simply reassure them that all is well. Sutures may have to be removed or re-evaluated for resorption in 7-10 days. Appliances may have to be inserted, delivered or adjusted after two weeks.

### Preventing Post-Op Self-Injurious Behavior

Depending on the degree of cooperation from a patient we sometimes prepare a crown or bridge in the OR under general anesthesia, and try to cement the prosthesis in the office via oral sedation, nitrous oxide and local anesthesia two weeks later. In order to relax the patient for this necessary follow-up, we usually prescribe oral Valium or Halcion on an empty stomach and empty bladder. We use Porter Instruments' low profile disposable Silhouette™ masks, which allows for eye glasses to be worn. It comes in four sizes and does not promote air leakage due to mustaches or beards (Figure 13).

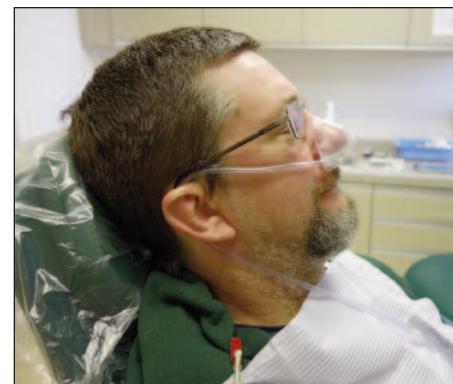


Figure 13. Silhouette™ nitrous mask facilitates anxiolysis.

If local anesthetic is used, in particular a mandibular block, upon completion of the dental procedure we like to reverse the anesthetic effect by injecting Septodont's OraVerse™ (phentolamine mesolale) into the same site. This prevents post-operative biting of the lip, tongue, or cheek during the critical first 30 minutes during which the caregiver or family member is usually transporting the patient home. OraVerse hastens the dissolution of the an-

thetic by vasodilating the nearby blood vessels, promptly returning the normal protective sensations (Figure 14).

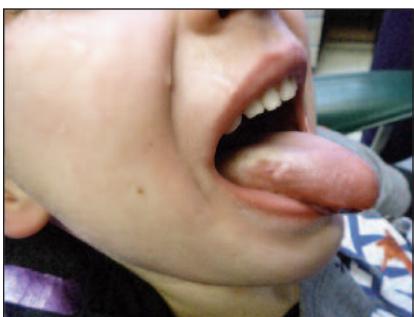


Figure 14. Patient bit tongue following dental procedure when OraVerse™ was not used.

#### Two-Week Follow-Up

It is at the two-week follow-up visit that we go over both clinical and clerical details. Clerical details include insurance forms and financial reconciliations. The clinical part covers oral hygiene instructions to the patient and/or caregiver to reduce the chance of recurrence of the clinical problems.

#### Working at full throttle

Being able to operate at maximum efficiency, comfortably completing eight hours of dental work during a two hour OR visit, provides a great sense of accomplishment. The patient benefits from the compression of multiple office visits into a single visit during which they were asleep, with no gagging, no discomfort, and no recollection of any unpleasant experience. The dentist benefits from the patient's total compliance, with no pausing for any reason.

By incorporating the OR into your practice you can care for patients who may otherwise be left untreated. It is also a path onto a healthy, active, growing, and successful practice. By working in the OR in addition to our office, we serve our patients better, serve ourselves and our loved ones, and leave our mark in the lives of others in a most positive manner. There may be no better public service or practice builder. Everyone benefits by general dentists adopting the OR as an expanded access to care.



*Dr. Harvey Levy has been practicing general dentistry in hospital and alternative settings in Frederick, Maryland since 1980. He is a former full time instructor and program coordinator of the Hospital of the University of PA General Dentistry Residency Program, and currently Chief of General Dentistry and Pedodontics at Frederick Memorial Hospital in Frederick, MD. He is a recipient of the ADA's 2002 Access to Care Award, the AGD's 1986 Humanitarian Award, the Maryland Governor's Doctor of the Year Award, the Morgan State Public Oral Health Award, Maryland State Dental Association's first Arthur Fridley Humanitarian Award, and the Special Care Dentistry's Saul Kamen Award. He holds 8 dental fellowships, 5 Diplomate certificates, Board Certification in Integrative Medicine in addition to AGD Mastership plus 5 Lifelong Learning and Service Recognitions in the AGD.*

#### VII – CONCLUSION

In the OR, the operating dentist can work six-handed with a hygienist and/or assistants. Documentation of the income of dental office vs. OR reveals a four-fold advantage when in the OR. Gross income from the throat pack's insertion to removal averages \$3,500/hour for us. It is the ultimate in dental efficiency, wherein both the patient and the practice benefit. In terms of quality and quantity, we do our best work when there is no movement, no saliva, no trismus, no spitting, no kicking, no answering cell phones, no bathroom breaks, and no need to stop until we are satisfied that the case is totally completed.

Besides best quality of work and financial reward, there are other reasons to consider incorporating the OR into your current modalities offerings.

#### Personal gratification

For us, the heartwarming gratification of treating someone who was unable to receive needed dental care in an office setting is one of the best feelings in the world. A hug from a child with Down's syndrome or a hand-squeeze from a patient with Alzheimer's after a procedure keeps my staff and me energized and invigorated for quite a while (Figure 15).



Figure 15. Geriatric patient hugs hygienist after successful case completion.

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