Treating Patients with Anxiety and Special-Needs

Harvey Levy, DMD, MAGD

Eastman Institute for Oral Health
Rochester, NY
April 23, 2014
Treating Patients with Anxiety and Special-Needs

Harvey Levy, DMD, MAGD
www.DrHLevyAssoc.com

EIOH April 23, 2014

Table of Contents

Treatment of Anxious and Special-Needs patients ....................................................... 3
Drugs – Sedation and Reversal .................................................................................... 4
Sample of patient instruction checklist ...................................................................... 11
Sample of staff pre-operative checklist ...................................................................... 12
Sample of Letter of Medical Necessity ...................................................................... 13
Sample of operative report - Mad Lib format ............................................................. 15
Resources .................................................................................................................... 16
“Impossible Dentistry Made Simple” (article) ........................................................... 17
“There’s Always a Way“, Parts 1 and 2 (article) ......................................................... 20

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
Treating Patients with Anxiety and Special Needs

Harvey Levy, DMD, MAGD
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
Nitrous Oxide/Oxygen, Drugs for Sedation, Reversal Agents, and Recommended Doses
Harvey Levy, DMD, MAGD

INHALATION AGENTS FOR SEDATION: NITROUS OXIDE

NITROUS OXIDE / OXYGEN (N₂O / O₂), 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 N₂O from flowing without O₂ and limits the N₂O 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, MATRIX)

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.
7. Instruct patient on how to respond yes/no.
8. Turn on nitrous oxide to desired percentage.
10. Confirm scavenging system is on.
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®**

<table>
<thead>
<tr>
<th>Description</th>
<th>Short-term sedative/hypnotic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indications</strong></td>
<td>Preoperative sedative that allays anxiety and induces sleep without depressing respiration or cough reflex.</td>
</tr>
<tr>
<td><strong>Contraindications</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Precautions</strong></td>
<td>Porphyria, severe cardiac disease, pregnancy, nursing mothers.</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>Syrup, capsules, rectal suppositories, other</td>
</tr>
</tbody>
</table>
| **Dose**          | Adult 50-75 mg/kg; max 2 g  
Child 50-75 mg/kg; max 1g |
2. Hydroxyzine / Atarax®, Vistaril®

<table>
<thead>
<tr>
<th>Description</th>
<th>Antihistamine. May be combined with Chloral Hydrate for effective synergistic anxiolytic pre-operative sedation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications</td>
<td>Relief of symptoms of common anxiety and tension. Also to relieve itching from allergic reactions. Can be used as a sedative.</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Early pregnancy, allergy</td>
</tr>
<tr>
<td>Precautions</td>
<td>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.</td>
</tr>
<tr>
<td>Availability</td>
<td>Syrup, pill, other</td>
</tr>
</tbody>
</table>
| Dose | Adult max 50-100 mg  
Child 0.6 mg/kg |

3. Benzodiazepines

a. Diazepam / Valium®

<table>
<thead>
<tr>
<th>Description</th>
<th>A benzodiazepine that exerts anxiolytic, sedative, muscle-relaxant, anticonvulsant and amnesic effects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications</td>
<td>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.</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Acute narrow-angle glaucoma, untreated open-angle glaucoma, allergy, or patients younger than 6 months.</td>
</tr>
<tr>
<td>Precautions</td>
<td>Kidney or hepatic dysfunction</td>
</tr>
<tr>
<td>Availability</td>
<td>Tablets, other</td>
</tr>
</tbody>
</table>
| Dose | Adult 2-20mg; max 20 mg;  
Child 0.2-0.3 mg/kg; max 10 mg |

b. Triazolam / Halcion®

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

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

### d. Midazolam / Versed®

<table>
<thead>
<tr>
<th>Description</th>
<th>A water-soluble, short-acting benzodiazepine, central nervous system (CNS) depressant.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications</td>
<td>Sedation, anxiolysis and amnesia prior to diagnostic, therapeutic or surgical procedures.</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Acute narrow-angle glaucoma, allergy.</td>
</tr>
<tr>
<td>Precautions</td>
<td>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.</td>
</tr>
<tr>
<td>Availability</td>
<td>Syrup, other</td>
</tr>
<tr>
<td>Dose</td>
<td>Adult 0.25-1 mg/kg; max 20 mg; Child 0.25-1mg/kg; max: 20 mg</td>
</tr>
</tbody>
</table>

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

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

1. Flumazenil / Romazicon®

**Description**
Benzodiazepine receptor antagonist

**Indications**
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.

**Contraindications**
Patients given benzodiazepines for life-threatening conditions (eg, control of ICP or status epilepticus), signs of serious cyclic antidepressant overdose, or allergy.

**Precautions**
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.

**Availability**
IV

**Dose**
- **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, (now difficult to obtain 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), 2013 and PDR.net
Lexi-Comp’s Dental Reference Library, 16th edition and www.lexi.com
“Control of Nitrous Oxide in Dental Operatories,” U.S. Department of Health and Human Services, CDC, January 1996
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

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): _____________________________________________

Patient Name / Age: ________________________________________________________________
Consult Date / Pat Preferred Phone: __________________________________________________
Case Date / Time / Case #: ________________________________________________________

EIOH - Dr. Harvey Levy – Anxious and Special-Needs Patients April 23, 2014  12 of 16
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
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: __________________

Assistant: __________________  __________________  __________________

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

The throat pack was inserted at ___________. The throat pack was removed at ___________.

Narrative: The patient is a ______ year old, ________________female with Alzheimer’s Disease,

_______________________, and ________________who has been a patient of

Record since 1/1/29. She was operated by me at the Happy Camper Surgicenter on _________.

She now has a recurrence of her_______________. She also now has

_______________________.

The patient had H&P by Dr._____________________ 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

_______________________.

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:

_______________________.
The patient was given ______________ IV intra-operatively for ______________.

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

Tooth # _____  Occlusal amalgam.

Tooth # _____  ____________composite

Tooth # 12  Simple extraction.

Tooth # 15 _________________.

Tooth # 17 Simple extraction

Tooth # 32 Surgical extraction.

I used _______ carpules of __________________________________for a bimandibular block 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. 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)

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 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 ______________________________________________________________________.

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

Eastman Institute for Oral Health, April 23, 2014

ADSA
877-255-3742
dadsahome.org

Aribex NOMAD hand-held X-ray
801-226-5522
aribex.com

Colgate-Palmolive
800-2Colgate
ColgateProfessional.com

DentalEZ Group
866 DTEINFO
dentalez.com

DEXIS Imaging Systems
888-883-3947
dexis.com

DOCS Education
877-325-3627
DOCSeducation.org

DUX Dental
800-833-8267
DUXDental.com

Ergonom-X Dental Film
Lenty Dental Sales
800-635-3689
lentysales.com

Hu-Friedy
800 HUFRIEDY
hu-friedy.com

Isolite Systems
800-560-6066
isolitesystems.com

Lexi-comp
800-837-5394
lexi.com
wolterskluwerhealth.com

Porter Instrument - Nitrous Oxide
888-723-4001
porterinstrument.com

Septodont
800-872-8305
oraverse.com

Special Care Dentistry Association
312-527-6764
scdaonline.org

Specialized Care Co.
800-722-7375
specializedcare.com

Ultralight Optics
323-316-4514
ultralightoptics.com

Dr. Levy’s on-line courses:  www.DentalEdu.TV, or direct link from
www.DrHLevyAsssoc.com/clinicians.htm
“Impossible” Dentistry Made Simple

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.
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:

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.

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

Ergonom-X self-developing film
Cramer Dental Sales, Inc.
800-723-4895 | www.cramerdental.com

Pedi-wraps and foam mouth props
Specialized Care Co.
800-722-7375 | www.specializedcare.com
Management of Anxious and Special-Needs Patients:
THERE’S ALWAYS A WAY
by Harvey Levy, DMD, MAGD, LLSR

With excitement and eager anticipation you set out to join
your loving relatives for a festive holiday meal at their
place. You have been driving for quite a while and can
almost smell the familiar food when you encounter a total standstill
on the highway. You spot an exit and drive off to a secondary road,
but after a few minutes you see a tree totally blocking your way.
You assess your options, and decide to take an even more indirect
route. Eventually you make it to your destination, albeit via a more
circuitous, time consuming and less traveled path. But you made
it, and the trip feels all the more worthwhile for the travails,
obstacles and threats to the completion of your journey.

Management of anxious patients similarly starts out on the main
highway. Due to circumstances over which you have little control,
you are often forced to try another approach. So you
veer off and try a different modality that looks
promising but that does
not quite allow you to
complete your treatment
plan. You pull one more
rabbit out of your hat and
voilà, you’ve finally treated your patient successfully.

ANXIOUS PATIENTS

Anxiety by definition is “worry gone out of control”. It is
irrational and illogical, but frighteningly real to the patient. You,
the dentist, don’t have to understand it. In fact, unless you’ve
experienced it, 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, compounding it with the kind of fear
felt by young children who can’t yet understand. Or with the fear
felt by Alzheimer’s patients who can no longer understand. Or with
the fear of mentally challenged patients who never understood. Or
even worse, with the fear felt within the isolated misunderstood
world of autistic patients. Not all anxious people are special-needs
patients, but all special-needs patients are anxious.

How do we gain their cooperation, in order to provide them
with the dental treatment they need? The answer is... there is
always a way. Always.

For the most extreme case — that of the patient who cannot be
seen at a dental office due to high medical risk, paradoxical
reactions to medications, or extreme adverse behavior — success
can be assured in a hospital or surgical center operating room
(OR). For other cases along the spectrum, there are many
alternative roads.

Some dentists try behavior modification, which often includes
multiple orientation and familiarization visits. But who has the
patience, and who will pay for these multiple “let’s get familiar”
visits? Assuredly, not the insurance companies.

Some dentists have limited success with hypnosis or
acupuncture, which works for a small number of patients. The
majority of our anxious and special needs patients are refractory
to these methods, forcing us to try a different avenue.

PRESCRIPTION DRUGS FOR ORAL
CONSCIOUS SEDATION

Let’s start by relaxing the patient with a little medicine. Some
dentists will prescribe a p.o. or enteral relaxant, sedative or hypnotic
(“conscious sedative”) the night before to ensure a restful sleep,
supplemented by more medication 30-60 minutes before the
appointment. If that dose doesn’t relax the patient sufficiently, he or
she may be given a little more while in the chair, or rescheduled to
return another day with a higher dose or a different family of drugs
(if a built-up resistance or tolerance to the initial choice is noted).

A variety of drugs are available for use as anxiolytics or
conscious sedatives in the treatment of nervous dental patients. A
brief selection of these drugs, and the most common adult dosage
range, appears in Table 1. A thorough review of the patient’s
medical history, current medication list and a familiarity with
these agents will allow for safe and effective use.

<table>
<thead>
<tr>
<th>Agent</th>
<th>Common adult dose</th>
<th>Delivery form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloral Hydrate / Noctec®</td>
<td>1-2 g</td>
<td>liquid, capsule</td>
</tr>
<tr>
<td>Hydroxyzine /Atarax® or Vistaril®</td>
<td>10-50 mg</td>
<td>tablet or syrup</td>
</tr>
<tr>
<td>Diazepam / Valium®</td>
<td>10-20 mg</td>
<td>tablet, solution</td>
</tr>
<tr>
<td>Triazolam / Halcion®</td>
<td>0.5-1.5 mg</td>
<td>tablet, solution</td>
</tr>
<tr>
<td>Lorazepam /Ativan®</td>
<td>2-3 mg</td>
<td>tablet, solution</td>
</tr>
<tr>
<td>Midazolam /Versed®</td>
<td>5-15 mg with monitoring</td>
<td>syrup</td>
</tr>
</tbody>
</table>

NITROUS OXIDE

Another safe option for relaxing
the anxious patient is to use nitrous
oxide. Make sure that the patient has
not eaten for six hours prior to the
appointment time, to prevent
regurgitation and life-threatening
aspiration into the lungs.
CONSCIOUS SEDATIVES IN CONJUNCTION WITH NITROUS OXIDE

A conscious sedative in conjunction with nitrous oxide works most of the time. If that combination fails to allow completion of the dental procedure, then other options need to be considered. You can supplement the drugs already ingested with more conscious sedatives during that same session. If that is not an option or if that alternative fails, the next step is to reschedule the patient and escalate the prescribed conscious sedative to a higher dose or stronger sedative, plus employ nitrous oxide.

Note that the continuum of sedation, from light to moderate to deep, is not dependent on dosage as much as on the patient’s response. You may think you’re delivering a small dose, but a hyper-responder may manifest signs or symptoms of a deeper level of sedation. I strongly encourage dentists to consider obtaining the additional training and certification mentioned in the “Moderate Sedation” section below.

In our practice, this protocol for sedation has been successful in 97% of our 30,000 documented cases over the past 30 years. Patients are relaxed enough to be wrapped, propped, radiographed, and treated to completion.

WRAPS

To prevent patients’ self-injurious behavior such as bringing hands to their mouth while we have sharp instruments or drills in the area, we mindfully restrain their hands using Rainbow Wraps [Fig. 1].

Applying the wrap requires three easy steps. We place the wrap onto the operatory chair before the patient is seated [Fig. 2]. We then seat the patient and gently secure the wrists with Velcro [Fig. 3]. Often, we also wrap the legs with stronger Velcro [Fig. 4] to prevent sudden kicking.

After the patient is snugly wrapped, the head is immobilized. Commercial head restraints are available, but we prefer to have the head be gently held by caregivers or staff. Thus, jerky head movement is restricted in all six possible directions.

MOUTH PROPS

To open the mouth, we start with a small and simple Open Wide™ foam mouth rest, which we insert horizontally then rotate vertically. After that, we often switch to a Molt ratchet-type mouth prop [Fig. 5].

What if the patient will not open? There’s always a way. Actually we have two techniques to convince the patient to open the mouth, with a 99% success rate. The first is to pinch the nose while hovering around the lips with the Open Wide™ mouth rest. As soon as the patient opens the lips to take a breath, we slide in the Open Wide™ mouth rest horizontally, then rotate vertically.

The second technique to get the patient to open the mouth is to use your finger or knuckle to push 45 degrees down against the chin, to activate acupuncture point Conception 24. The patient opens the mandible to avoid the momentary discomfort, just long enough for you to insert the Open Wide™ mouth rest.

Once the Open Wide™ mouth prop is in the vertical position, you can easily insert a larger ratchet prop as described above.

Note that once the ratchet mouth prop is in place, someone MUST keep one finger on the hinge at all times to prevent the patient’s tongue from dislodging it from the mouth.

Do all of your dental work on the side of the mouth opposite the ratchet. Once that side is completed, do NOT remove the ratchet prop. Instead, close the gears of the ratchet, and rotate it 180 degrees within the mouth until it reaches the other side. Then, reopen the gears to the same maximum you used on the initial side. Place a finger on the hinge, and do your dentistry on the second side. If you forget to keep the prop in the mouth when you switch sides, you will have to lure or convince the patient to open all over again.

A new prop that we have been using more recently with impressive results is the Isolite™. Isolite™, its basic unit, serves as an effective mouth prop, tongue retractor, cheek retractor, and saliva ejector. The newer units also have a built-in light source that totally illuminates the areas of the mouth [Fig. 6].

The Isolite™ is so effective that the dental assistant does not need to retract, suction, or adjust the lights. It’s like having an extra dental assistant for the cost of a disposable plastic cheek retractor and saliva ejector.

ACCESSIBILITY

An office needs to be able to accommodate large wheelchairs and gurneys. The U.S. Department of Justice specifies the requirements
that your dental office should follow, including a low height check-out counter, per the Americans with Disabilities Act of 1990.

In addition to the wraps and props, there are some tools and equipment that we find indispensable to our success in treating anxious and special-needs patients.

One is the DentalEZ Airglide™ operatory chair [Fig. 7 and 8]. A simple switch on the chair itself turns the heavy immovable operatory chair into a hovercraft. Its half-inch cushion of forced air allows us to move the chair with literally one finger to anywhere in the operatory, or even out of the operatory altogether. This maneuverability enables patients to remain in the comfort of their familiar or motorized wheelchairs, or even their gurneys.

Headrests make our work easier. When wheelchairs don’t have a headrest we clip one on. Our very favorite headrest, however, is the chest of a family member, caregiver, or dental assistant, as shown in Figure 9.

**RADIOGRAPHS**

For radiographs we love the 8½-lb Nomad™ or the 5½-lb Nomad Pro™, portable, hand-held, cordless x-ray units that resemble a speed-detecting radar gun [Figure 10].

We bring the Nomads™ into our office waiting room, into vans in the parking lot, into nursing and private homes, and into the hospital and other institutions. Its built-in collimator shield eliminates the need for the operator to wear a lead apron.

When your window of opportunity to work with a patient is small, any gain in speed is welcome. The DEXIS™ x-ray system enables us to expose, digitally process and immediately view images. Thus, a retake or additional images can be done within seconds of discovery or diagnosis. Coupling the Nomad™ with the DEXIS™ systems, the operator is still in the room while exposing, viewing and retaking radiographs until satisfactory images are obtained.

What if you don’t have an assistant, a functioning computer, or electric power? The side road in this case is Ergonom-X™ self-developing film in conjunction with a Nomad™ hand-held x-ray unit [Fig. 11 and 12]. For about one dollar, you have a complete film and darkroom enclosed within a packet the size of a pair of size 2 dental films. The developer and fixer are inside the tiny packet. The x-ray is exposed as always, and has no tin foil to create a herringbone pattern from reverse placement.

After standard film exposure, the packet is withdrawn from the mouth, squeezed until the self-contained fluid comes in contact with the exposed film, then manually massaged for 60-90 seconds. The x-ray film is then removed from the packet, and rinsed with water. Within two minutes of exposure, you have an excellent quality processed film. It is not digital, but the film can be scanned and archived.

Part 2 of this article, which will appear next issue, will discuss parenteral sedation and the care of patients in the operating room setting.

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

I wish to thank Dr. Richard Wynn for his suggestions on the pharmacology section, and Lena R. Rotenberg for editing and proofreading this article.

References:
1. Physicians’ Desk Reference 2011, and PDR.net, for information on specific drugs.
2. Lexi Comp Dental Reference Library, 16th edition, for information on specific drugs.

About the Author
Dr. Harvey Levy is a general dentist from Frederick, Maryland who has earned Mastership and two Life Long 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.

The Nominating Committee of the NJAGD Board of Directors has advanced the following slate of candidates for election for the upcoming year. If uncontested, this slate of candidates will take office on May 20, 2011.

Mark D. Robinson, DMD, FAGD: NJAGD President
Evan Spivack, DDS, FAGD: President-Elect
Thomas J. Boyle, DMD, MAGD, ABGD: Vice President
Tomas Ballesteros, DMD: Treasurer
YOU FAILED IN THE OFFICE. NO PROBLEM.

In Part One of this series, we identified the characteristics of anxious and special-needs patients who require additional physical means, drug protocol, or clever techniques to enable us to successfully complete their dental treatment in an office setting. We covered wraps and props, office sedation with nitrous oxide and enteral sedation drugs, radiological equipment and imaging methods, accessibility with movable air-glide operatory chairs, and other tips and tricks to get the job done.

With the correct application of proper techniques, tools and equipment, our experiences have shown success in caring for persons with special needs about 97% of the time. The few failures that occur will happen primarily with the hypo- and non-responders who are drug-resistant, the autistic, or the strong and combative. What is the alternative road for this remaining three percent?

There are two practical options. The first is to relax the patient more deeply in the office. The second is to perform the needed treatment in the operating room of a hospital or surgical center. The second option may be easier, and is certainly more successful.

MODERATE SEDATION

Relaxing the patient more deeply requires at least moderate sedation. Most states in the U.S. already or soon will mandate that dentists must hold a Class I permit to apply enteral moderate sedation (oral or rectal only). To obtain this permit, dentists will generally need:

1. A three-day course that includes discussion of twenty different patient scenarios and doses;
2. Advanced Cardiac Life Support (ACLS) certificate;
3. A site visit including an equipment and supplies evaluation, plus an oral practical knowledge quiz;
4. An application and fee.

Courses are readily available from various dental organizations (AGD, ADA, state dental associations), dental schools, and private, specialized dental training groups (DOCS, American Dental Society of Anesthesiology).

Alternatively, a dentist may consider using either intravenous or intramuscular sedation to totally sedate the patient in the office. However, those deeper sedation protocols now require a Class II sedation permit, which demand more training and preparedness. Some (very few) dentists even perform general anesthesia in the office, which requires a Class III permit, including an anesthesia residency, mini-residency, or other extensive training and certification with testing.

There are considerable risks and burdens involved in the provision of office IV or IM sedation. I do not feel comfortable managing both the dental and medical aspects of the case, and applaud those dentists who safely do so. If moderate sedation fails to relax a special needs or anxious patient, I take the ultimate side road, and bring the patient to a hospital or surgical center, where an anesthesiologist or anesthetist can render the patient unconscious. I prefer to focus on what I do best (general dentistry) while leaving the patient’s vital signs, overall health, and anesthetic management to someone else (figure 1). Alternatively, some dentists elicit the aid of an anesthesiologist or anesthetist who will come into the dental office to provide anesthesia services for patients undergoing care.

THE OPERATING ROOM: A PATH THAT ALWAYS WORKS

There are times when I fail in the office with special-needs or anxious patients. In the OR, however, that very difficult patient becomes the ideal patient: he or she is asleep and cannot spit on me, bite me, kick my assistant, hit my staff, or resist treatment in any way. A sleeping patient also doesn’t pick up the cell phone or take a bathroom break, thus allowing me to perform my best work without distractions or interruptions.

While under general anesthesia, the patient’s behavior is removed from the equation. You can essentially guarantee that you will succeed in completing the case. Success depends only on your clinical dental skills.

Caring for a patient with a dried mouth, an anesthesia tube in their nostril and a throat pack in the oropharynx is no different from working on a Dentiform or on a mannequin. You are in total control of the clinical situation, and can do your finest dentistry (figure 2).

Patients who are too combative or uncooperative to allow radiographs can have excellent quality images taken while they are asleep. For years, we have used the Ergonom-X self-developing films which require no darkroom, no equipment, no electricity, and very little time. Once exposed by the dental assistant or hygienist, the OR nurse or technician can process the films, and place them on an X-ray hanger in 60-90 seconds (figures 3 and 4).

More recently we have incorporated the DEXIS imaging system, which allows us to take excellent quality digital images that are
reviewed on the laptop in less than a second, with retakes just as fast (figure 5).

The instant digital images taken in the OR can readily be filed, reorganized, archived, shared, e-mailed, or printed, and can even be instantaneously backed up in the office via a VPN (virtual private connection). We continue to use the Ergonom-X self-developing films as a perfect back-up, especially for diagnoses, surgical root tip fractures and for root canal intra-operative and post-operative images.

Although our OR has an old reliable X-ray unit on wheels, it is bulky and hard to bring close to the OR table. We prefer Aribex's NOMAD-Pro, which weighs 5 1/2 pounds, can be hand-held or tripod mounted, and operates cordlessly without the need to worry about electrical outlets.

The light weight and two batteries of the Aribex NOMAD and NOMAD-Pro allow us to use these versatile units anywhere in the hospital, including bedside in the emergency room and in patients' rooms.

Another notable advantage of treating patients in the OR is that all scaling and root planing is done by the hygienist in one very short session, with no need for local anesthesia. With the patient asleep, hygienists typically complete all of their work on the most difficult mouths in under an hour (figure 6).

Root canal therapy is also completed more quickly in the operating room setting than in the dental office. With the use of a gauze throat pack to protect the airway and prevent the aspiration or water or debris, no rubber dam is needed (figure 7).

Extractions, periodontal surgery, finar oral surgery and other surgical procedures, when accomplished in the OR, may be performed more quickly and effectively without the patient wiggling, thrashing, or squirming (figures 8 and 9).

We do our finest esthetic and other restorative work when there is no blood or saliva interference. Treatment of patients under general anesthesia allows for the maintenance of a dry field. As such, there is no need to redo composites or sealants due to water, saliva or moisture contamination. Placing composites or sealants is not considered underwater dentistry if there is no saliva nearby! (figure 10). Here, also, the total absence of any head or body movements allows us to do our finest quality work.

Thus, as general dentists, we are in a unique position. An oral surgeon might not do any restorations or cleaning. A pediatric dentist might not take out impacted third molars. A periodontist might not do any crowns or root canals. General dentists, on the other hand, can perform all of the above on a special needs or anxious patient under general anesthesia. It's a true win-win: less stressful for the patient, easier and more profitable for us, and more successful all around.

LESS STRESSFUL FOR THE PATIENT

The American Society of Anesthesiology (ASA) physical status classification system is a categorical system for assessing the fitness of patients prior to surgery. The five-category physical status classification system includes:

1. A normal healthy patient.
2. A patient with discrete or mild systemic disease.
3. A patient with severe, non-incapacitating systemic disease.
5. A moribund patient who is not expected to survive without the operation.

When we treat an ASA type-2 patient in our office, we must be mindful of their systemic disease(s) so that our interventions do not cause a worsening of the patient's health issues. For our ASA type-3 patients, we are likely to trigger a medical emergency in the dental office if we do not take specific precautions regarding the high risk of their particular ailment. ASA type-4 patients are such high risk that they must be closely monitored. They have a life-threatening disease, for which the emotional stress of an office dental procedure, the physical pain of an extraction, or even the injection of a local anesthetic may be enough to trigger a medical crisis. These patients may require more monitoring than our dental office can provide. A hospital or surgical center setting is far better equipped to manage the potential medical emergencies that accompany ASA type-3 and type-4 patients, especially if they have special-needs or are anxious or medically compromised.

For the patient, there are numerous advantages to having treatment performed in the operating room setting: 1) Treatment in the OR may
be the patient’s only option, whether for psychological, behavioral or medical reasons; 2) OR-based care is traumatic for the patient, who wakes up after the procedure with no memory of being held, restrained, or operated on; 3) Treatment is accomplished four times as quickly in the OR as it would in our office, saving time for the patient and oftentimes their caregiver(s). Procedures in the operating room are done six-handed, without interruptions initiated by the patient (Figure 11).

EASIER AND MORE PROFITABLE FOR US

To treat patients in a surgical center or hospital OR you do not need a Class II (deep sedation) or Class III (general anesthesia) permit. In fact, you do not even need a Class I (moderate sedation) permit! You already have what you need: a dental license with proof of liability insurance, and a basic CPR card. Other requirements are fairly simple: apply for facility privileges, demonstrate that you know how to wash your hands, and fill out an application. Obtaining OR privileges for your dental assistant or hygienist is similar, and just as easy. Even though the facility provides nurses, it is advantageous to bring your own staff, as they already know your expectations, the dental tools and terminology, making the case flow even faster and smoother.

Being able to treat patients in an operating room will enable your practice to present a wider portfolio of treatment offerings and modalities. It may provide an exciting expansion of your skills, and further your opportunities for personal and professional growth. Your patients will benefit from your services, your practice will grow, and you may very possibly find a renewed energy in your staff, your practice and yourself. The increased income is not bad either.

We have calculated, based upon our last 1,200 documented OR cases, that the hourly net income in the OR is four times that of our office cases (Figure 12).

CONCLUSION

In this two-article series, we have shown that there is always a way to successfully treat any patient, if not in a dental office, then in a hospital or surgical center’s operating room. To determine the best path for each patient—whether to go directly to the OR, or to try different roads when you identify obstructions on your current path—requires knowledge, skill, and resourceful creativity, which you can obtain through continuing education courses and oftentimes from other sources in your own community.

As I like to say, special-needs patient care is more than “why do people climb mountains” and “let’s make a dollar.” It is a golden opportunity to use your gift, leave your mark, and make a positive difference. If you have the clinical skills and motivation, there’s always a road that will enable you to treat any patient, always.

Dr. Levy’s on-line courses: www.DentalEdu.TV, or direct link from www.DrHLLevyAssocs.com/clinicians.htm

For copies or comments, please contact Dr. Harvey Levy at DrHLLevy@gmail.com or visit DrHLLevyAssocs.com

Resources for Article Parts 1 and 2

ADSA
877-255-3742
www.adshome.org
www.isolettesystems.com

Arbex NOMAD hand-held X-ray
801-226-5522
www.arbex.com

Colgate-Palmolive
800-2Colgate
www.ColgateProfessional.com

DentaleZ Group
866 DYTEINFO
www.dentalez.com

Dentist’s Advantage Ins.
888-778-3981
www.dentists-advantage.com

DEXIS X-ray Systems
888-883-3947
www.dexis.com

DNTL
801-847-0694
info@DNTLworks.com

DOCS Education
877-325-3627
www.DOCSeducation.org

Ergonom-X Self-developing film
Cramer Dental Sales
800-723-4895
www.cramerdental.com

Isolite Systems
800-560-6066

M-DEC
800-321-MDEC

Novaral Pharmaceuticals
888-889-1441

Novolac.com

Porter Instrument - Nitrous Oxide
888-723-4001

SheerVision
877-678-4274

Sheervision.com

Special Care Dentistry Association
312-527-6764
http://scdaonline.org

Specialized Care Co.
800-722-7375
www.specializedcare.com

Triodent, Inc
800-811-3949
www.triodent.com

Walter L. Lorentz Surgical / Biomet
574-267-6639
www.biomet.com

About the Author

Dr. Harvey Levy is a general dentist from Frederick, Maryland who has earned Mastership and two Life Long Service Recognitions in the AGD, eight fellowships and four diplomat 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.