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).

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 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).

Another recent OR case was that of WG, a 76 yo male for whom the plan called for full mouth extractions and a biopsy of a suspicious lesion. The pathologist confirmed that the lesion was in fact squamous cell carcinoma of the mandible. Without the patient’s explicit permission, we could do nothing more than what was approved on the consent. The patient would have to return another day to remove the lesion (Figure 3).

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.

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).
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.

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).

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).

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

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

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.

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).

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.

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