Increased Efficiency With Tubs and Trays

Everyone is looking for an edge. Everyone wants to lower their overhead and stress level. Finally, everyone is looking for little known secrets of productivity. I think you will be surprised at how easy it is to eliminate one clinical staff position, meet OSHA requirements, and double your operatory efficiency.

At some point in every doctor’s career, you will find yourself looking at new equipment, talking to the local dental reps about expanding and/or moving to a new location so that you can add 4 or 5 more operatories so that you can take your practice to the next level. In this strategy you assume that if you have reached a production plateau with your current number of operatories and staff that to go to the next level, you will need to expand or move. This could be the worst move you could make and probably is the last thing you should do. Are you producing at $20,000 - $25,000/employee/month? Are you producing at $25,000 - $30,000/month/operatory? Is your overhead at 50% - 60%? Is your hygienist producing $1100 - $2,500/day? If your answer to any of these questions is no, then it is not time for you to expand. Expansion will always spell disaster if the basics are not in place. Many years ago we had a doctor who had great production, good overhead, and the perception that he needed to upgrade his office. He had already purchased the perfect lot downtown, paid to have the plans drawn and had everything out for bid. It was about this time that he asked me what I thought about his plans. I took a few days to look at the cost, bids, location, plans, etc., and then called him up to discuss his future. The short story is that he only had to produce 300% more each month to take home the same amount of profit. He basically had a “no way, that can’t be right” kind of response and I assumed he would go ahead with his plans. I didn’t hear from him for a month or so. When I did, he had actually put the lot up for sale, shelved his plans in order to maintain his profit margin, and figured out another way to take his practice to a new level. We have had the privilege working with this doctor for almost 2 decades now. He will do about two million this year, has added a
partner, and is adding a satellite location with an overhead that would be the envy of anyone in dentistry. All of this has taken place in a small town in East Texas. This is a smart guy who runs his practice by the numbers and always keeps the end in mind. He will always have choices in what he does because of his attention to the details of running his practice. His decision to not build was probably a turning point for his great profitability.

There is a myth in dentistry that implies that if you want to produce more, you need more staff and more operatories. This is not true until you meet or exceed the $25,000/Employee and $30,000/Operatory which actually does create a physical blockage. We can take a 6 operatory office with 3 doctors and 4 hygienists, open the practice to 6 days a week, divide each day into two six hour shifts, have the doctors doing $83,000/month, the hygienists doing over $100,000/month and never have more than one doctor working at a time. This creates an incredibly profitable model with low overhead. While there are many strategies that make this possible, I wanted to focus on how to design operatory and sterilization efficiency thru the use of tub and tray setups.

When I was in high school, my part time job was working as an orderly and “all-round do whatever it takes helper” in our local hospital. I put in a lot of hours in the surgical arena helping in surgery, stocking, cleaning up, and preparing for the next surgery. For any of you who haven’t had these experiences, you would be surprised at how sparse the surgical suite is: Light, table, and hookups for gas. Everything else is brought in from a central sterilization area. Every procedure was so standardized as to allow a specific set up for each situation. Once the surgery was started, the goal was to never need to bring in any additional personnel, supplies, or instruments. This requires planning, speed, and efficiency for a consistent outcome.

To my surprise, when I graduated from dental school in the 70’s, I was sold the Pelton-Crane Executive delivery system. I was told that is was the state of the art in dentistry. It was 8 feet wide with rear delivery system, light box, amalgamator, nitrous, and about 20 drawers to store everything you could possibly need for any procedure. Unlike the hospital, we were told to keep
everything in the operatory. In this way if something comes up that you did not plan for, it was right there. It was contaminated, cluttered, and disorganized, but it was right there.

Fast forward a couple of decades and we start to see a change. It just never made sense to me not to go back to a hospital model. In the early 90’s, dentists were page one on the newspapers, cover stories on national magazines and headlines on 60 Minutes TV show for not sterilizing our hand pieces. Running scared, we started to wear scrubs, gloves, protective shields and masks to look like a “real doctor” in order to deflect criticism of our lack of sterilization and general cleanliness. Yet, even today we see current operatory, sterilization, and storage designs that still look like the 70’s. Face it, if you store stuff in an operatory, you cannot meet OSHA standards of sterilization. Open a drawer and touch something, fail to barrier or wipe down and wait 20 minutes and you are violating protocol.

Let’s set contamination and sterilization aside and look at just the ergonomics of cleaning and preparing the operatory for the next patient. How long should it take to dismiss, clean, restock, and seat, bib, and begin? I see schedules with 20-30 minute turnover times. How can we improve on this and still be efficient and effective with our system?

Let’s start from scratch and assume that we have an empty space. No technology, no cabinets, sinks, cubby holes or equipment. Just an area on which to plan for the most efficient use of space, while keeping in mind our desire to be able to turn it quickly and still meet OSHA standards. We want the most efficient use of space while still retaining the feeling of a quality, open operatory.

Probably one of the smartest people I know is Dr. David Ahearn who has dedicated himself to de-cluttering a disorganized and congested operating suite for dentistry. His company, Design Ergonomics, is the leader in space efficient dental office design. The trouble with change is that we all “filter” what we read, see, and hear through our past experiences and prejudices. We need to clear away those things that might keep us from being open to new ideas and ways to make our practices prosper. Put down this article, and go to www.desergo.com.
(800-275-2547), and then go to www.youtube.com, and type in Design Ergonomics and watch the video on “morphing operatory”. In a matter of minutes you will see the normal operatory transform into a new, very efficient look. It is OK not to like everything in the video. What I would like you to see is that many areas of operatory design are open to transformation into a better working model. While you are visiting www.youtube.com, also take a look at Mitch Friedman’s office that was designed by David a couple of years ago. Of the dentists I have had the privilege of speaking and working with, Mitch takes the prize for analyzing and implementing the latest technology and practice management trends in dentistry. He does not do it blindly. He researches, studies, and only after evaluating every option, act. If Mitch is doing it, you should, too. What I hope you get out of the video is that there are ways to do operatory design differently than most of us currently use. This should open your eyes to the fact that the status quo is no longer good enough. When you are done with change, you are done. If there has been one constant in dentistry in the last 30 years it has been change. Do whatever it takes.

So how can we take what we have and improve on the flow and efficiency without making a huge investment in redesign? Step one is to remove everything possible from the operatory and relocate it to the sterilization area and storage closet. Try to pare down all the “stuff” that has accumulated in your operatory. Expect to get some push back from the staff. They, like you, have fixed ideas and feel uncomfortable with change. Whenever making changes, always list the benefits it will bring and try to involve the staff at the earliest part of its inception. You will get a better result when the people you are managing own the process. Let it be their idea. The goal here is to remove everything so that whatever is left can be covered with a barrier. Barriers are more efficient to place and remove. This allows a faster turnover without having to spray, wipe down, and wait. To save money in our office, we went to a dry cleaning supply company and used shirt bags for trays, sweater bags for x-ray heads, and coat bags for carts and chairs and stools. We tried to cover everything. We could turn a room in a couple of minutes. Once you have removed everything from the operatory that you can, be sure and resist the urge to let it refill. Instead, improve your tub and
tray set ups to reflect any shortages of supplies or instruments or changes in clinical procedures. Constantly improve the system to make it as efficient as possible.

Let me describe what our operatories contained before any procedure. The operatory was designed by the Pride Institute with two rear openings (no doors) with a power panel between them. The chair faced a window covering the entire width of the room. Track light, X-ray mounted on the power panel at the rear of the chair, rear delivery system using an Adec cart, Nitrous unit, cavitation/prophy jet, electric hand pieces, CPU under one of the side cabinets containing a sink, with two monitors (one for the patient, and one for patient information). There was an intraoral camera and curing light hung from the Adec cart at the twelve o'clock position. The only other thing in the entire operatory was a carpule warmer. With this list, you must realize that everything else is brought in and removed on a tub and tray set up.

**TUB and TRAY Setups:**

Let’s take a look at what is on, and how we set up a tub and try system for each procedure. You can go to [www.zirc.com](http://www.zirc.com) and see every type of tub and tray you could imagine.

The Sterilization area is divided into dirty, clean, and sterile areas. The tray and tub setups are located in an upper cabinet on the sterile side. Everything that would go in the tub or tray is located in drawers below the cabinet on the sterile side for easy access. These drawers are restocked from our bulk supply closet every few days. Philosophically, we have enough trays that we could probably go all day without sterilizing. We don’t, but we could. The same was true for hygiene also. Extra instruments don’t get sick, take maternity leave, complain, or ask for raises or benefits. Buying equipment and instruments to eliminate the need for extra staff is always profitable. We probably had 20 or so hand pieces, with 30 or so tray set ups.

1. **Basic tray set up:** This is the first and foundational tray set up that was used in every procedure. Everything from fillings to crown and
bridge or endo used this tray. It was a standard size zirc tray with no dividers, just flat. It contained, 2 mirrors, 2 cotton forceps, 1 explorer, 1 scaling instrument, 1 plastic instrument, ½ Holenbeck carver, slow speed hand piece, high speed hand piece, 6 cotton rolls, syringe with needle, McKesson medium mouth prop, universal clamp, pliers, rubber dam (2) with form already attached, bur block with #6 round, #2 round, 2 KS 2 diamonds, 2 great white crosscut carbide burs, football shaped and small flame shaped finishing burs, and a straight 15 flute bull nosed finishing bur (all the doctors agree to the bur set up. No one adds or takes away a bur without everyone agreeing), bib, a few 2x2 gauze.

2. **Composite tub set up**: We used the standard tray and the assistant would bring a tub with sectional matrix, blue rubber cups and discs for polishing, flex discs for anteriors, and compules of posterior composite, and syringes of all colors for anterior composites. We have not done amalgams in 15 years. (If you are currently using amalgam fillings at all, please consider stopping. It is outlawed in Europe, in children in Canada, and three states have pending litigation and class action suits over its use. You will notice the ADA is silent about taking a stand on its use, and for good reason. I will not debate the clinical or medical implications of its use. I even have patients that I placed amalgam in 30 years ago that are still doing OK. I will defend my action of not using it based purely on marketing. Do you want to be the last dentist in town to have digital x-rays, cameras, and computers? I think not. Dentists who continue to use amalgam will be caught in the middle when it is finally outlawed or shunned from use in the near future. You cannot, not market. Everything you do says something about you and your practice. Make the change and take the first step in looking like a cutting edge dentist that is concerned about his or her patients)

3. **Crown and Bridge tub**: We add a tub with a gun rack (plexiglass stand with a place for heavy body, and light body impression material, blue mousse for temporary impressions, and our material
to make temporaries with several shades, along with dual arch impression trays), two sizes of retraction cord, cut-trol to control bleeding, and Vita 3D shade guide. Add anything else you might only use for C&B.

4. **Endodontic tub:** Medidenta 1500 ultrasonic endo handpiece, gyromatic handpiece for blocked canals, regular rotary handpiece, files, paper points, thermafial, gutta percha points, EDTA, endodontic sealer, and rubber dam and supplies. Once again, add anything you might use for an endodontic procedure.

5. **Oralsurgery trays:** We had three separate trays. One for lowers, one for uppers, and a special set up for wisdom teeth that included more elevators, striker handpiece with burs, material for bone augmentation, surgical aspirators, and gauze.

In all three set ups I always included a diabetic syringe to load a couple of cc’s of Dexamethasone to inject into the buccal fold following surgery or quadrants of dentistry to prevent swelling, muscle trismus or post op soreness. You’re getting the idea. Create a system, refine it, standardize it, and then take photos of the setup once you have it the way you want. Post the photos in the sterilization area until the set ups become second nature. Also place photos in your office manual along with your job descriptions. If you find that you are sending your assistant out of the operatory to fetch something after starting a procedure, then add it to the set up. You should not have to stop or interrupt a procedure once you start. Take the time to refine the setup and get it down perfect. Do this right and your 8 year old daughter could set up a room if she knew what procedure was going to be performed. (MA)

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