IMPLANTS
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7 Ways to Increase Implant Productivity with Your Lab

By Edward Roman (/spear-review/author/edward-roman/) on October 21, 2019 | (/bookmarks/bookmark/39561)

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Profitability in a private dental practice setting can be a daunting challenge in this age of diminished reimbursement from dental insurance companies. This is particularly true with dental implant (https://www.speareducation.com/spear-review/category/implants) procedures. As a private practitioner and dental laboratory owner, I have been able to provide a perspective from both sides of the equation.

Our dental practice management companies always preach the mantra of awareness of our hourly productivity in order to maintain a well-run, profitable private practice. Our dentist clients in our lab tell us that their implant procedures take a substantial amount of chair time, which can become detrimental to our hourly productivity if the procedure does not meet our predicted outcome.

Open contacts, black holes in the esthetic (/spear-review/2013/08/evaluating-facial-esthetics-facial-profile) zone, emergence failures and poor occlusal relationships all contribute to devoting extra chair time that kills your profit for an implant procedure.

Let's look at some of the ways your lab can make implant delivery day a happy day consistently for you and your devoted patients.

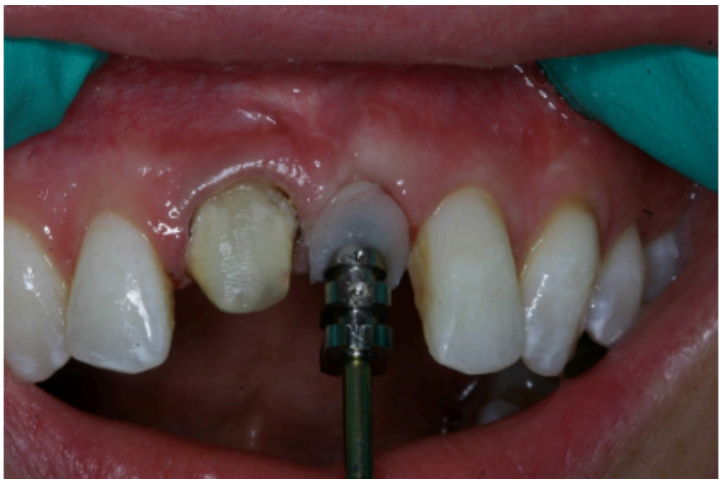
Scan bodies and impression posts

There is no better way to predict chair time than to plan with your surgeon and lab before the implant is placed. Time invested outside the operatory pays huge dividends with regard to hourly productivity.

Our lab gets calls from dental practices when a dentist sees the patient only after the implant is placed. The call goes something like, "Uh, hello, we have Mrs. Jones in the chair but we are not sure we have the right (scan body or impression post). What do we do now?"

We all know what happens next. If we guess with scan bodies or impression posts, there is a high chance of the dentist receiving a call from the lab questioning the integrity of our impression/scan. Even worse, the dentist receives an implant case that does not fit at delivery.

So, our choices are twofold. Either we reschedule Mrs. Jones, or we have our assistant scramble through the implant parts box (yes, we all have them) to find something that looks close and hope for the best. Either way, you have already killed your productivity for the procedure and have indicated to your patient that something out of the ordinary has occurred. This mishap can be avoided by a simple call from a staff person to the lab to ensure that the right scan body or impression post is available at the time of the appointment.



Custom impression post.

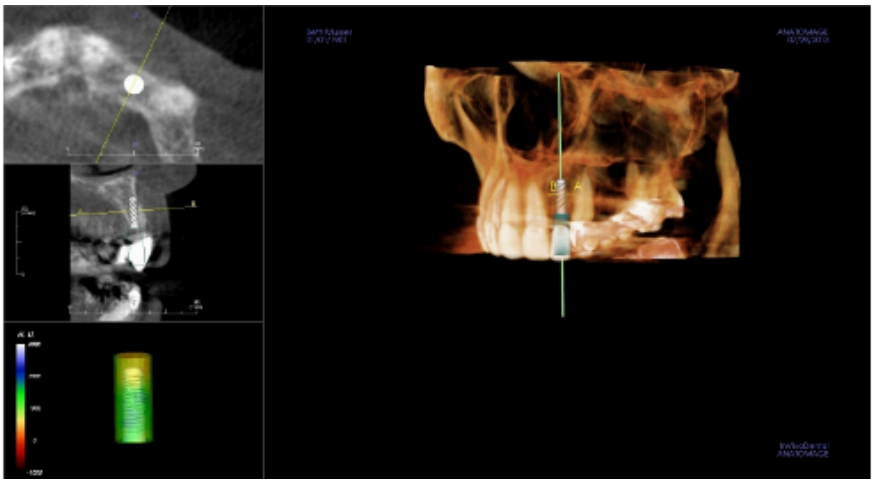
Planning with computerized tomography, diagnostic casts and occlusal records

Our lab highly recommends that you have the patient get a CBCT prior to implant placement. You can do your own or have your surgeon do it as part of the planning process. When you use this procedure in conjunction with diagnostic casts or full arch scans you have engaged one of the most powerful enablers of hourly implant productivity.

All the design is done by your lab and your surgeon by overlaying the CT DICOM file with the STL digital design file. Not only does this allow you to create a case design that is occlusally, biologically and esthetically acceptable, it allows you to predict your lab costs ahead of time so you can accurately quote your patient the fee for your implant procedure.

Our lab never likes making “the call.” It goes something like, “Dr. Smith, this is Oak View Dental Lab. Remember when we quoted you the lab fee for a screw-retained zirconia (https://online.speareducation.com/course/adjusting-and-polishing-zirconia-restorations) hybrid implant crown? Well, we cannot do that because of the unfavorable implant position and angulation. We will need to do a UCLA type of abutment for the case. Your lab fee will be almost twice the amount we quoted you for the zirconia hybrid.”

Now this is OK if you have not yet quoted your patient the fee. However, if you have quoted your patient a fee based on a zirconia hybrid abutment and crown, you have effectively eliminated your productivity for this procedure and probably lose money on the case.



DICOM file used in planning.

Malpositioned adjacent or opposing teeth

Many times, we will get a scan or impression after the implant is placed with little attention placed to malpositioned adjacent teeth. For the sake of discussion, we will use the missing mandibular first molar as an example.

Typically, there is a bite collapse issue going on so not only is the mandibular second molar tipped but the maxillary first molar is over-erupted, as well. When this is not addressed, we all know what happens. The implant scan or impression is taken, the lab receives the file or impression and immediately realizes that due to path of insertion issues with the proposed implant that there will be a high point contact and a huge open embrasure that will catch food. You can make the contact as tight as you want but food will still get caught.

Additionally, if the extruded first molar is not leveled back into the maxillary occlusal plane you will have issues with uneven marginal ridges which exacerbates the food impaction issue. Here's a scenario:

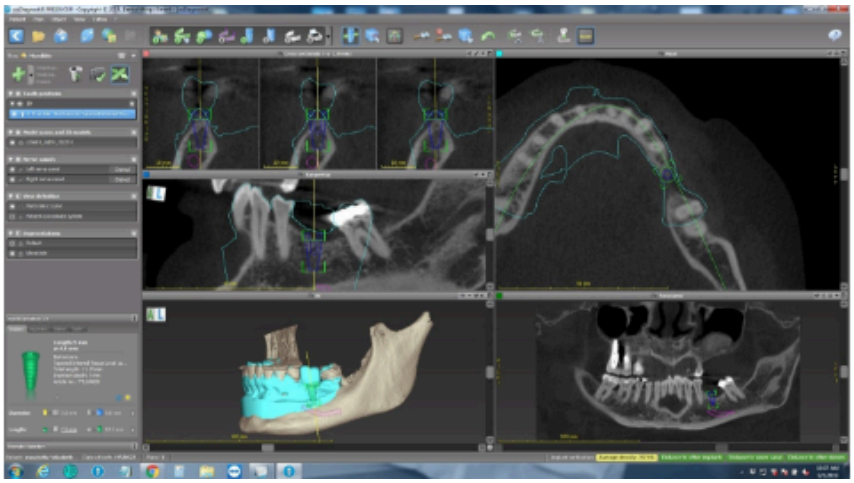
"Well, Mrs. Jones, how do you like your new implant?"

"To be honest, Dr. Smith, I hate it. If I would have known how much food I would get caught I would have never committed the time and money to this procedure."

Now you are in a quandary. Do you refund the money, which immediately kills your productivity? Do you perform crown procedures on the tipped second molar and the extruded first molar at no cost?

Or do you just give some lame excuse and have a perpetually unhappy former patient give you bad reviews? As you can see, there are no good outcomes regarding profitability with this scenario.

All of the above could have been prevented with an intraoral scan, a scan of your diagnostic casts and a printed digital restorative design to present to your patient to show the problems that can occur if bite collapse is not addressed. In this way you have committed very little chair time and have given the patient the opportunity to assess the risk versus reward of addressing or not addressing the issue.



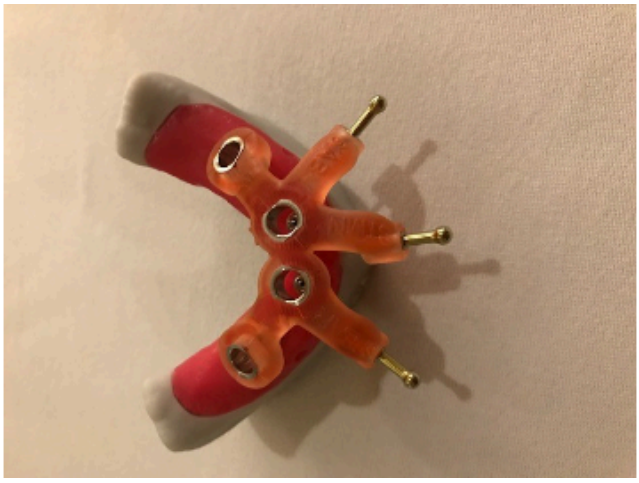
Digital planning workflow.

Printed custom trays

For those of you doing physical impressions, a custom tray can help with your chair time productivity. It may seem like a small time-saver but as we all know, every minute saved in the operatory leads us to greater chair time efficiency.

When using a stock tray – particularly for full arch implant cases – it can take a significant amount of time to cut and adjust the holes for alignment to be able to get a passive, nonbinding fit to allow your open tray impression post to be exposed. Instead, all it takes is a quick alginate impression by your assistant to identify the location of the implants after placement and before the conversion is completed. You can then design and print the tray in your office or send it to the lab for fabrication if you do not own a printer. In this way, there is minimal or zero chairside adjustment of the tray.

With stock impression trays another consideration is the volume of impression material used. All impression polymers have a shrinkage coefficient that increases with volume. This means the risk of distortion increases as more impression material is used in the impression. A custom tray helps prevent this distortion by using significantly less impression material.



Printed Straumann surgical guide.

The impression

If you make sure that your scan bodies are aligned and that the scan field is free of fluids and collapsed gingival tissue, you can be assured that your scan will be accepted by your lab. If the above issues are unaddressed you can expect a call from your lab that they are unsure of your scan accuracy.

From here the clinician must make a decision. Do I need to have the patient return for a new scan or do I tell the lab, “Just do the best you can?” In the first scenario, you get the patient back and do a new scan. Of course, the block of chair time for a re-scan leads to zero productivity for that portion of your daily chair time.

The second scenario is even worse. “Do the best you can” invariably leads to a call to the lab saying, “Uh, the implant restoration you made for my patient does not fit. What should I do?” Well, we already know the answer. A new impression, a re-make, and a new lab fee are assured. In this manner you not only destroy your hourly productivity, you are losing money on this case.

Closed tray impressions work well for physical impressions but are not as predictably successful as open tray. The main source of distortion we see from our dentist clients using the closed tray technique is a well-meaning dentist or staff member inserting the closed tray impression post back into the impression. With most closed tray impressions there is a screw access hole in the top of the closed tray impression post. Impression material flows into this channel, creating a nipple at the bottom of the impression. You cannot fit the closed tray impression post all the way back into the impression if the nipple is still in the impression.

Another aid to physical impression integrity is to use a rigid impression material. Using too much of a wash in the impression can lead to the “wash wiggle.” Our lab likes to see impressions using GC EXA'lence or a similar material.

When we receive the closed tray impression from our client with the impression post in the impression, we at the lab still remove the impression post to examine the post hole. Every time the post is removed and re-inserted there is an increased chance of distortion. We typically use our microscope and specially modified sharp hand instruments to remove this nipple prior to fabrication. Our advice is to never re-insert closed tray impression posts. Let your lab do it. They are better equipped to minimize the risk of distortion and the chances of a production-killing re-make.

Another way to increase your chance of a re-make is to use stock abutments for your impression post. Only use stock abutments for abutment purposes and never as an impression post. Stock abutments are not designed for this purpose because of a lack of “grab” and enough taper to create a wobble or loose fit in the impression. Do not use stock abutments for your impression. They almost guarantee a re-make and “production destruction.”

Implants in the esthetic zone

Planning achieves a satisfactory result.

As a practicing clinician, I have discovered that you cannot charge the same fee for implants in the esthetic zone as you do for implants in the back of the mouth. Proper emergence development takes chair time for which you need to be compensated.

An efficient, chair time-saving technique is to use your lab to help develop emergence. Before our lab was proficient in the quick and efficient technique of milled PMMA hybrid provisionals, I used to use stock temporary abutments that needed to be adjusted, a copyplast template that required a pretreatment impression with the proposed final design in wax or in a printed model, and bisacryl as the provisional material. When I consider how much chair time and pre-operatory planning was involved with this technique, I became convinced that I was unprofitable from the beginning of the case.

Our technique now is to get the patient into the operatory the day of implant placement in the esthetic zone to obtain a 10-minute transfer impression or a scan. From this point, the lab can quickly design and fabricate a milled PMMA screw-retained implant crown cemented to a ti-base, such as Straumann's Variobase, using the prescription parameters supplied by the dentist for their proposed emergence.

Of course, the surgeon must verify initial adequate torque values at the time of placement. If the emergence needs modification in the course of its esthetic preparation, it is an easy process with no chair time involved. The dentist sends a digital photograph to the lab to modify the existing digital file and another PMMA hybrid is fabricated. The old provisional is unscrewed and the new one is screwed into place, usually in my office in a 10-minute procedure. You can keep doing this until you have your acceptable emergence for final fabrication.

Consider the chair time involved if you develop emergence manually, unscrewing your hand-crafted provisional, adding more bisacryl, contouring, and polishing and re-inserting. There is a high likelihood you cannot do this whole procedure more efficiently than the digital workflow. The chair time savings over the course of emergence development can be significant and increase your profitability and patient acceptance.

Remember, you must analyze your fee structure for esthetic zone provisionalization to maintain your implant profitability.

Communicating with your lab

I was at a course a couple years ago that featured Dr. Galip Gurel from Istanbul, Turkey, and Dr. Christian Coachman from Sao Paulo, Brazil. Dr. Gurel prepared the teeth in Istanbul and sent the file of his intraoral scans to Dr. Coachman's laboratory in Sao Paulo, where the crowns were fabricated, shipped overnight to Istanbul and inserted the next day.

The moment made me realize the dentist-lab relationship had changed forever. If you find a lab you trust, digital technology eliminates geography as a detriment to using your trusted dental laboratory. Except for in-office or in-lab custom shades most prescriptions can be fulfilled regardless of the physical locations of the dental office or lab.

We have our clients use Team Viewer or Logmein to communicate with us regarding implant placement and prosthetic restoration. This ability permits the lab and the dentist to plan and design the case before the patient visits the dental office, which saves a great deal of chair time.

It is my hope that dentists and their labs can use the above information to streamline their implant workflow to provide greater productivity, increase profitability, and happy patients who enthusiastically refer more patients to your practice.

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