The Basic Rules of Facially Generated Treatment Planning

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"This book is dedicated to and a product of my FOCUS Study Clubs and all the learning, sharing and caring we have done together."

Preface

My motivation for penning the first two books in this series, *The Basic Rules of Oral Rehabilitation* and *The Basic Rules of Occlusion*, was to create short, concise references for all levels of dental professionals and their ancillary support networks for the treatment of their adult patients. To date, the favorable response that I have had and the continuous input from all our colleagues that I have the privilege of mentoring via my FOCUS Educational Continuum (study clubs, proprietary programs, coaching, 2nd opinions only) has led to ongoing reflection on these topics with further distillation of the concepts. Providing colleagues with another avenue to simplify the conceptualization of comprehensive dental care is why *The Basic Rules of Facially Generated Treatment Planning* has therefore been conceived. This third book in "The Basic Rules of" series is meant to be, just like the previous two, a relatively quick study and serve as a guide for dental care or further exploration. To this end, the layout of this book will again economize word usage and mesh the use of graphics and pictures to convey the main thoughts and lessons.

The Basic Rules of Facially Generated Treatment Planning is divided into three main sections comprising an introduction, the body, and a conclusion. The introductory "Basic Rule" will be a recommended approach to patient care, what I like to call the Triad Algorithm. The Triad Algorithm is an overview beginning with patient introduction employing evidence-based methodology leading patient informed consent to care. Before proceeding with the actual treatment, prognosis and long-term maintenance considerations are addressed next. Treatment then follows a well-orchestrated logical

sequencing process. A whole person approach to care is the result. Facially generated treatment planning runs in concert with the Triad Algorithm harmonizing its various elements.

For the body section, the "Basic Rules" will describe the facially generated treatment planning mantra, namely: Meet The Person, Meet The Face, Meet The Mouth, and then Meet The Teeth. The concluding "Basic Rule" will discuss general maintenance planning considerations. All-in-all, there will be six Basic Rules of Facially Generated Treatment Planning. A Basic Rules of Facially Generated Treatment Planning Check List will summarize the overall concepts of this book and will serve to be a quick clinical reference.

Although *The Basic Rules of Facially Generated Treatment Planning* could be read on its own, I believe the reader would benefit to a greater extent by first perusing *The Basic Rules of Oral Rehabilitation* (2010) and then *The Basic Rules of Occlusion* (2012). Both previous books are a natural lead up to the current publication.

I hope you enjoy reading *The Basic Rules of Facially Generated Treatment Planning*. I would be interested in hearing your thoughts on this work so please feel free to contact me with your queries or suggestions.

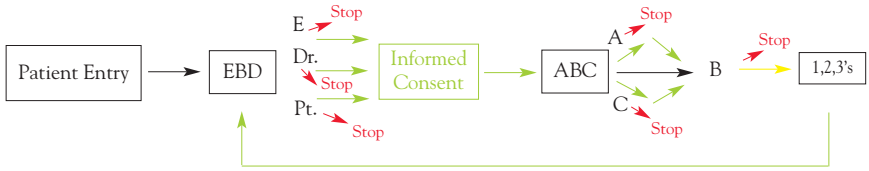
Dr. Michael J Racich

The Whole Person

Undergraduate dental schools prepare students to be competent in the restoration of teeth. Subjects ranging from human anatomy and physiology to oral pathology and maxillofacial surgery are also taught to dental students but primarily the student leaves dental school competent in the fixing of teeth, simply stated. Early in a dental professionals career the skills learned at school suffice but sooner or later it is not enough as the cases that present require more knowledge and techniques. Most dental practitioners seek out further training which eventually might lead some to acquire comprehensive dental care abilities. Comprehensive dental care requires that the dental practitioner deals with the whole person (gnathology) and not just individual teeth or quadrants at habit bite or maximum intercuspation.[1] Evaluation, diagnosis, treatment, and maintenance following a whole person care approach enable the dental team to work with their patients and for their patients to work with them. The dental team are the facilitators of care while the patients are the owners of care which includes maintenance thereof. Hence, we do not end up with *difficult* patients, just collaborators of care as we all work together to optimize our patients' dentition in harmony with their stomatognathic system. Dealing with the whole person can be daunting at times but if approached in a coordinated, systematic manner the journey for all stakeholders can be rewarding, predictable, and harmonious. One such coordinated, systematic approach that allows us to treat the stomatognathic system gnathologically is what I like to call The Triad Algorithm (Figure 1) in which we look into the art and science of dental therapy by first meeting the person, then the face, followed by

Triad Algorithm:

1. Evidence-based Dentistry (evidence, patient-team biases)
2. A,B,C's (pre-, during, post-care)
3. 1,2,3's (methodical treatment approach)



Stop = Review, Reconsider, Re-relate, Release, or Retrain

Figure 1

the mouth and then finally the teeth (i.e. facially generated treatment planning).[2-4]

Let me explain The Triad Algorithm. In order to practice contemporary, gnathologic dentistry, the dental team must follow the principles of evidence-based dentistry. Evidence-based dentistry involves the blending of the published evidence with patient beliefs and values as well as those of the dental team (Figure 2).[5,6]

All three of these variables must be realized for evidence-based dentistry to be practiced. Looking at The Triad Algorithm (Figure 1) we see that after the patient is introduced to our practice we explore the patient's beliefs, values, wants (expectations) and needs; we decide whether they are compatible with our practice model; we explore the literature as needed to confirm the efficacy of any proposed treatment. As The Triad Algorithm shows, if any of these three evidence-based variables are not favourable then the dental team should stop and think, for to proceed would be pure folly. Stop means we need to either review what our motivations are, reconsider whether we want to proceed, re-relate or try to reconnect with our patient, release or terminate our relationship with our patient, or retrain in order to provide the care that has been requested. On the other hand, if the process of evidence-based dentistry has been successful with all three variables then the patient will give us their consent, an informed consent, to proceed. Without informed

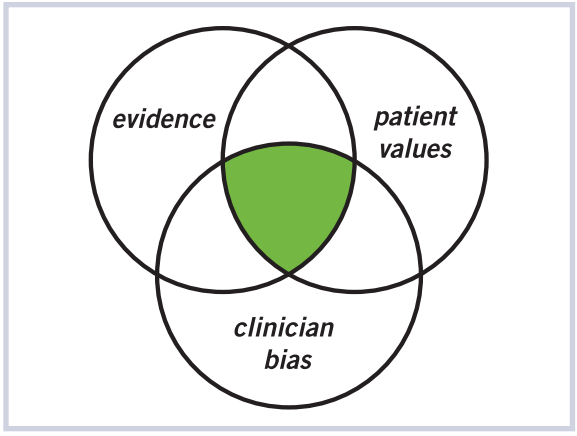


Figure 2: Evidence-based dentistry involves the integration of the best available evidence as reported in the literature (from clinical studies or reviews) tempered with clinical judgment/ bias and patient values as the Venn diagram illustrates. The green zone represents the ideal synergistic result that evidence-based dentistry strives for.[5]

consent there is absolutely no justification to continue on with the patient-dental team relationship under any circumstances. Informed consent is the green light for the journey to begin … and guess what, no difficult patients result as the dental team have clarified patient needs, wants, and real or imagined expectations.[7,8]

Part Two of The Triad Algorithm is the A,B,C's (Figure 3).

A,B,C's:

A: Pre-treatment considerations such as evaluation of patient wants, needs, and expectations must be thoroughly explored. The ability of the dental team must also be realistically evaluated. Evidence-based dentistry considerations (part one of the Triad Algorithm) usually ensure that the "A" phase is looked after adequately.

B: The actual treatment phase (i.e. the 1,2,3's of Dentistry).

C: Post treatment considerations such as maintenance (dental team and patient's responsibilities) and warranty need to be thoroughly understood.

Figure 3

"The way you see people is the way you treat them."
Zig Ziglar

The A, B, C's of The Triad Algorithm involve pre ("A") and post ("C") care strategies while the actual treatment ("B") is the 1,2,3's.[9,10] Interestingly, it becomes readily apparent that the actual physical treatment ("B"), i.e. what the patient thought they presented for, is in reality the last item to be dealt with using The Triad Algorithm. Please also note that the management of the treatment provided over the years ("C") and the preparation for care ("A") are as equally important as the actual physical treatment ("B"). Once again, if we are not satisfied with the pre and post treatment considerations then it is incumbent upon us to stop (review, reconsider, re-relate, release, retrain).

The last or third part of The Triad Algorithm is what I like to call the 1,2,3's of Dentistry.[10]

The "1" is the starting point, the "2" is the anterior limits or parameter, and the "3" defines the finishing touches. Even though to this point the dental team has worked through evidence-based dentistry, the patient has provided their informed consent, and the dental team is secure with their pre and post treatment ("A & C") observations there is still one more opportunity to stop (review, reconsider, re-relate, release, retrain). For once we begin patient care we want it to proceed methodically and predictably (the 1,2,3's of Dentistry) to everyone's satisfaction, with each detail of care meticulously carried out. From the patient to the dental laboratory, all should be content. With successful treatment results comes increased team confidence and experience which then lends itself to improved evidence-based dentistry methodology. The cycle then repeats itself. The practice of dentistry then becomes more predictable with, stated once again, no "difficult" patients.

Let's now define and explore The 1,2,3's of Dentistry. When planning the sequencing of an oral rehabilitation I like to use the distilled down concept of The 1,2,3's of Dentistry. The 1,2,3's of Dentistry defines the starting point, the parameters, and the finishing touches. All one has to do is go step by step (Figure 4). The "1" is the starting point. It is the relationship of the

mandible to the maxilla that our comprehensive care will be done at. It not only is the position of the condyle relative to the glenoid fossa but also the vertical dimension of occlusion.[1] For the former, centric relation is usually chosen but some practitioners opt for a neuromuscular position.[1,11] I like to think of the relationship of the mandibular condyle to the glenoid fossa as CR, that is a **C**onsistently **R**eproducible position.[12,13] It is, after all, the consistency of this position that must be held throughout treatment and also during the maintenance years. Whatever way the practitioner sees fit to achieve this "CR" is alright by me since it is the final result, especially over time, which counts. The more experience the practitioner has and the more successes then obviously we are going to stick with what works for us. The other point that needs to be clarified is vertical dimension of occlusion.[1] Generally speaking, common sense suggests that we should plan our oral rehabilitation at the existing vertical dimension of occlusion. However, when situations arise that clearly indicate an opening of vertical dimension would be beneficial (reduced lower facial height, deep overbites, reduced posterior crown height) then modest increases should be entertained and a significant

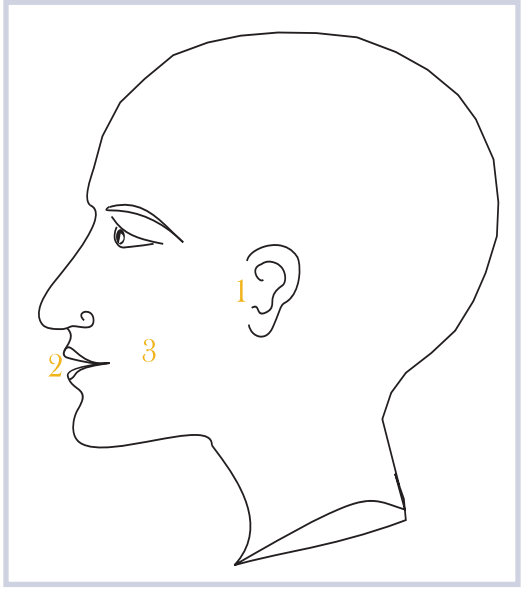


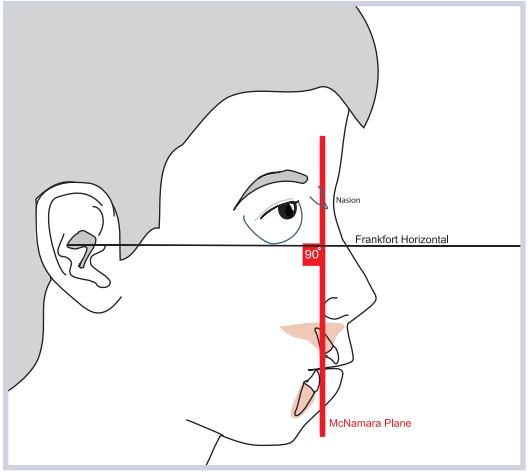
Figure 4: The 1,2,3's of Dentistry. The starting point, the parameters, and the finishing touches.

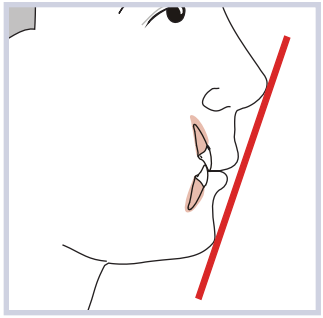
Figure 5: Establishing vertical dimension with direct composite.

provisional phase planned for.[14,15] If orthotics are not going to be utilized to facilitate this then provisional restorations for this phase can be created from our diagnostic wax-up(s) or, for example, direct composite restorations can be bonded to the occlusal surfaces of existing restorations (Figure 5).

Once we have our starting position then we have to define the parameters. Two of the parameters are the temporomandibular joints (already discussed

McNamara Plane: perpendicular plumb line to Frankfort Horizontal at nasion. Maxillary central incisors should be on the line or slightly anterior while the mandibular incisors should be slightly posterior.





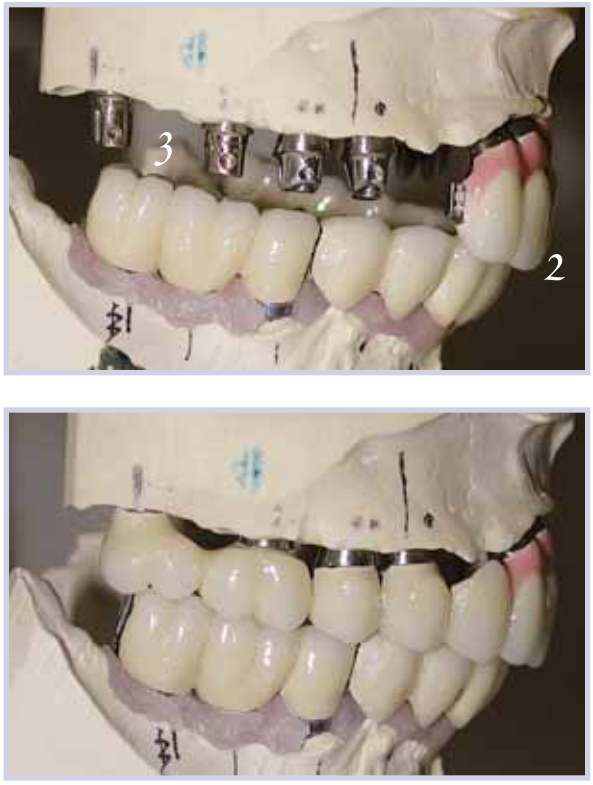
Esthetic Plane: Line drawn to connect the tip of the nose and chin. The lips should be slightly posterior.

Figure 6: Cephalometrics allows us to analyse tooth relationships, especially incisor position, to assess accuracy of position. Useful guides such as the McNamara Plane or the Esthetic Plane quickly and effortlessly can be employed.

with "1") while the other is the front teeth, specifically the central incisors. It's like doing complete dentures. We have our consistently reproducible position, i.e. "1", then we set the front teeth for speech and esthetics.[16] Conceptualizing what we would do if this was a denture case helps visualize where we want the front teeth. This is hard to do when we have teeth in bone rather than in wax but the exercise is worth the effort.[17] Practically speaking, there are other tools to use such as cephalometrics and Andrews Plane (Figure 6).[18,19]

With cephalometrics the McNamara Plane is a practical approach. It is a plumb line from nasion in which the maxillary central incisors are ideally in

Figures 7 & 8: Articulator and after picture showing central incisor positioning or the "2" position.



Figures 9 & 10:
Articulated case showing the definitive establishment of the occlusal plane or "3" position.

front of whilst the mandibular incisors are on or slightly behind. The Andrews plane uses a forehead analysis to aide in central incisor positioning. The main message with central incisor positioning is that we want to be respectful of the envelope of function and minimize fremitus.[1,20] We also want the central incisors to be esthetically pleasing in repose, in normal conversation, in laughter as well as to functioning properly in speech and chewing.[15,20] The "2" concerns itself with accurate incisor positioning that is comfortable for the patient and esthetically unobtrusive.[21] The "2" is completed with smile design and also preferentially provides for a cuspid/incisor protected occlusion (Figures 7 & 8).[22]

The "3" is like filling in the blanks or setting denture teeth. The "3" details the posterior occlusion in harmony with the posterior determinants of occlusion and protects the anterior dentition.[15,23] A mutually protected occlusion is the result. We want occlusal planes with minimal or little Curve of Spee that are parallel to the horizon and sharp crisp anatomy that is easy to equilibrate and optimizes function. All the while we are maintaining the "1" (consistently reproducible position and the established vertical dimension) (Figures 9 & 10).

Hence, The 1,2,3's of Dentistry is a simplified, step by step approach to oral rehabilitation. We identify our starting position, set the parameters, and finalize the details.

I believe that comprehensive patient evaluation and management can be satisfied by following The Triad Algorithm in a facially generated treatment planning manner as will be discussed in the ensuing Basic Rules of Facially Generated Treatment Planning. Understanding the dynamic nature of our patients allows us to treat the whole person, gnathologically speaking; their dentition is handled in harmony with their overall anatomy, physiology and personalities with one major byproduct being a stable occlusal state.

Further Suggested Reading and References:

1. The glossary of prosthodontic terms. J Prosthet Dent 2005;94:1-92.
2. Racich MJ. The basic rules of oral rehabilitation. Markham: Palmeri Publishing; 2010. p. 43-5.
3. Racich MJ. Dental occlusion evaluation: 10 essential steps. Can J Restor Dent Prosthodont 2012;5:40-9.
4. Racich MJ. The basic rules of occlusion. Markham: Palmeri Publishing; 2012. P. 12-6.
5. Sackett DL, Rosenberg WM, Gray JA, et al. Evidence-based medicine: what it is and what it isn't. Brit Med J 1996; 312:71–2.
6. Racich MJ. The basic rules of oral rehabilitation. Markham: Palmeri Publishing; 2010. p. 26-30.
7. Irving AV. Twenty strategies to reduce the risk of a malpractice claim. J Med Pract Manage. 1998;14:130-3.
8. Lang NP, Nyman SR. Supportive maintenance care for patients with implants and advanced restorative therapy. Periodontol 2000 1994;4:119-26.
9. Merijohn GK. Advances in clinical practice and continuing education "the precautionary context clinical practice model: a means to implement the evidence-based approach". J Evid Based Dent Pract 2005;5:115-24.