

## QUESTION:

## What are the keys to predictable treatment outcomes?

By Robert J. Chapman, DMD | Frederic J. Norkin, DMD | Michael R. Sesemann, DDS

## Dr. Chapman



Predicting outcomes of care is important for the peace of mind of both our patients and ourselves. Additionally—and unfortunately—predictable outcomes

are also of great import in our litigious society. There are four major factors influencing predictable outcomes: risk, experience, literature, and communication.

Determining risks associated with treatment begins with findings. Not only will findings lead to a diagnosis, but will also help determine what types of treatment would be appropriate. The types and severity or chronicity of diseases and how to manage the risks associated with them can help in predicting outcomes of treatment.

More experience enhances our skills; better diagnostic, treatment planning, and technique skills lead to more predictable outcomes. However, no one ever has enough experience in all areas of patient care. Learning one's limitations is a big part of "successful" experience and, therefore, of being able to predict outcomes. Referring care to those who have specialty training and/or skills for specific treatments can also better predict outcomes. Staying within the boundaries of what one knows and is capable of most often is a good predictor of outcomes.

Documented treatment outcomes in the literature are one excellent way to help predict specific patient outcomes. Predictability is especially high if there are large numbers of patients monitored over long periods of time so that statistical analyses of carefully documented treatments can be made. Retrospective studies provide excellent information but their value is somewhat limited as, by their very nature, they are uncontrolled and treatments

are not standardized. Prospective studies are the most helpful in predicting the results of patient care. The best research studies are prospective, blinded, randomized trials. These studies often require many years of evaluation; thus they are expensive and consequently not done as often as could be wished for.

Clinical outcomes related to evidence-based dentistry are sometimes shunned by many of us as perhaps validating unrealistic, inappropriate, or not relevant, types of care. But if EBD is looked at as good advice from the experiences of our close friends and colleagues, or as substitutes for our own lack of experience, they are excellent guides for how, or how not, to treat patients.

One of the best sources for all dental and medical literature is the US National Library of Medicine's search engine, [pubmed.gov](http://pubmed.gov). It provides, free of charge, available abstracts (and some free complete articles) on the most recent and a substantial amount of past literature. Google, Yahoo!, and other search engines also are ways to find many articles for all levels of evidence. Claims that are not published in refereed journals should be taken with a grain of salt; just because something is written by a well-known person or celebrity does not always mean that it is right.

Information about outcomes is exceedingly important to share with the patient. Care is never successful unless our patients understand the predictable risk of a treatment as it applies to them specifically. Possible outcomes may be obvious to us as caregivers, but if a negative or unexpected outcome occurs and the patient was not aware of that possible outcome, it could be disastrous for the entire treatment process. Outcome predictability is only as good as its communication to the patient.

Some of us are excellent communicators; some of us are not. Framing

the dialogue using parameters in which patients are interested can go a long way to bettering communication. Communication about the risks of treatment and possible outcomes within the above parameters are easy to grasp and easy to communicate. Such discussions should be summarized both in the record and by letter as an informed-consent document.

## Dr. Norkin



Successful outcomes in dentistry are predicated upon repeatable precision and accuracy. This holds true in all aspects of practice ranging from operative

dentistry to complex prosthetic restorations to non-surgical periodontal therapy to advanced dentoalveolar surgery. Despite the array of procedures and care provided by dentists, one key remains constant in achieving predictable outcomes: meticulous treatment planning. Much like an experienced airplane pilot uses a series of checklists and algorithms to ensure a safe flight, predictable outcomes in our field require similar attention to detail regardless of how many times the doctor has performed a procedure.

For example, on the surface, placing an endosseous dental implant is a rather simple procedure. However, a lack of detailed preparation can lead to failure of integration or outright harm to the patient such as a nerve parasthesia, not to mention esthetic and restorative complications and failures. Yet, with sufficient preparation, the use of dental implants to replace failing and missing teeth is among the most predictable procedures in medicine and dentistry.

When clinicians integrate readily available tools such as CBCT with appropriate models and wax-ups along with implant-planning software, a CAD/CAM surgical guide can be accurately fabricated. The milled surgical guide takes into account esthetic and restorative considerations along with anatomic limitations. The result is a well-planned guided surgical procedure using a template that reflects the desired outcome, making the process predictable for the doctor and patient.

Similar meticulous planning can be used in other facets of dentistry such as placing porcelain laminate veneers. As in the case of dental implants, simply preparing teeth for veneers without sufficient preliminary work can lead to esthetic and restorative failure. Cosmetic procedures warrant meticulous planning. Predictable esthetic and functional outcomes in these cases depend on taking accurate preliminary impressions, fabricating a wax-up of the proposed restorations that is in harmony with the patient's esthetic desires, along with analyzing the occlusion, tooth dimension, gingival heights and contours, and overall symmetry using mounted study models. Given this level of planning, the restorative dentist can determine if the patient is in fact a good candidate for porcelain laminate veneers or would be better served by full coronal coverage. Additionally, the dentist can determine if there is a need for esthetic crown lengthening, orthodontics, or even pulpectomy depending on the amount of tooth reduction necessary to achieve the desired outcome.

Regardless of the procedure and the clinician's experience, predictable outcomes rest upon the shoulders of meticulous planning.

## Dr. Sesemann



Having graduated and opened my practice in 1981, I can remember the days when "heroic" treatment was acceptable to both patients and clinicians alike. But

thankfully, those days have been replaced by an approach that can allow predictable outcomes based on science. The keys to



predictable outcomes in patient care are systems, knowledge, and teamwork.

Setting up a system of predictability starts at "hello" (the doctor/patient introduction) and ends with the patient being seen at future recall exams requiring little to no further treatment. Such a protocol focuses on the essential parameters necessary for making critical decisions in treatment planning, integrating individual clinical expertise with the best available external clinical evidence from systematic research. At the forefront of this approach is gathering data to make assessments of future risks concerning any unhealthy presenting conditions and to predict with relative certainty what the future holds if the condition is left untreated, or whether a specific treatment can be rendered that would affect the forecast in a positive manner.

A comprehensive examination is essential. A new patient in our office will spend the first hour with me, beginning with a new patient interview, continuing with clinical data collection, and ending with a new patient consultation. The consultation outlines an approach for patient care based on the patient's needs and wants. In some cases it also lends itself for identification that further data collection is necessary for a complete diagnosis and treatment plan. Things like a complete photographic series for esthetics and polyvinylsiloxane impressions/facebow/bite registration for functional analysis are only done if a patient's needs and/or presenting conditions dictate that they are necessary.

The second key encompasses the possession of knowledge the practitioner must have to accurately interpret any collected data. As an editorial statement, I would have to say that if a clinician is not scheduling, attending, and absorbing ~100 hours or more of continuing education (CE) per year, they are falling behind. Individual state requirements for re-licensure are ridiculously low, averaging 10 to 20 CE hours per year and they should never be confused of being a metric for optimal competence. Knowledge in four critical areas of diagnosis and treatment is essential. Those four areas of expertise include periodontics, biomechanics, occlusion/function, and dentofacial.

The final key for me in my 30 years of practice was to gather committed people on my staff who chose to work

at our office as a career, not a job. When committed individuals are working together toward common goals with synergistic dedication, it is an incredible experience to be part of. And, when staff members are mentally keyed in to the methods and goals of predictable treatment, the approach benefits the patient,

the clinician, and the staff, allowing everyone to be involved in the practice of dentistry on an enjoyable level.

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