

# Optimizing Referral Team Collaboration Using Dynamic Visual Communication Software

*XCPT™ Patient Engagement System was developed and engineered to combine scientific research relating to the brain's ability to achieve maximum comprehension with the desire for creating personal, powerful communication solutions in the dental office. In brief, XCPT shows patients the science behind the doctor's treatment recommendations in a way that they can understand and trust, and then communicates it seamlessly from doctor to doctor. It is the objective of this paper to highlight the benefits of XCPT and its role in developing a cohesive referral team.*

Modern dental offices today work to create comfortable surroundings, safe environments, promote optimal care, create an image of understanding and display a heightened awareness of the patient's needs – in short, a patient-centered office. As dentists, we are constantly striving to make ourselves understood, whether it is with our colleagues, our staff or our patients. Ideally, our patients would understand the dentists' rationale for care and go forward appropriately with the treatment recommendations with comfort, trust and enthusiasm. Likewise, all doctors involved in the case would be on the same page, seamlessly share images and data, and communicate simply and quickly. XCPT software was designed to accomplish all these tasks.

XCPT™ software has a set of tools that skillfully captures the power of visual communication. It is common for an XCPT document to be shared many times between members of the referral team until it is finalized. The process of sequencing and creating patient options can now be done in real time, simply and quickly. The XCPT user's experience in the dental space parallels the research that has been done in academia, validating the effectiveness of this form of visual communication.

Studies have also shown that people remember 10% of what they hear and 20% of what they read, but about 80% of what is presented to them in a combined visual and oral format.<sup>1</sup> Using a dynamic visual communication tools is the next essential part of becoming a patient centric office. Recent research regarding how the brain processes reveals that visual communication reaches the brain first and influences how people interpret verbal communication. It is visual communication that “sets up our cognitive thinking, skewing it automatically toward a particular response,” reports a study by Ann Marie Barry of Boston College.<sup>2</sup>

In experiments comparing visual presentations and purely verbal presentations, researchers at the Wharton School of Business found a variety of important positive effects of visual language.<sup>3</sup>

1. Visual language aids decision making
2. Visual language shortens meetings
3. Visual language promotes group consensus
4. Visual language is persuasive
5. Presenters using visual language made a better impression

Charts, diagrams, tables, graphs and other visual interpretations of material bring together the visual and the verbal to add another dimension to the material and create an entirely new path toward understanding—or “seeing”—it's meaning.<sup>4</sup>

The dental office is an entrepreneurial setting where today's dentist is as much a business owner as a clinician. It is clear that the effects that verbal presentations have had in the experiments will resonate with the patient as well as the referring dentists. As a result, we have found in a survey of leading XCPT clinicians an increase in case acceptance and more total dentistry produced.

Creating personalized, visual presentations allow the dentist to move away from “selling” and move toward “co-discovery” with their patients.

The modern dentist is constantly evolving, improving, and upgrading. The doctors strive to learn and improve through continuing education courses and participation in groups which promote the highest standards in dentistry today. The information and techniques learned at these venues needs to be shared in order to optimize patient care. Communicating all of the collected patient data between doctors is sometimes a daunting task. Sending radiographs and clinical photographs through e-mail or mail and deciphering treatment planning letters makes the process accurate and thorough but somewhat lengthy and cumbersome. XCPT dentists can easily send, to a referring dentist, the same data and plan in a succinct well organized visual document which is simple to decipher. The XCPT file accurately displays the rationale for treatment recommendations. A picture truly is worth a thousand words.

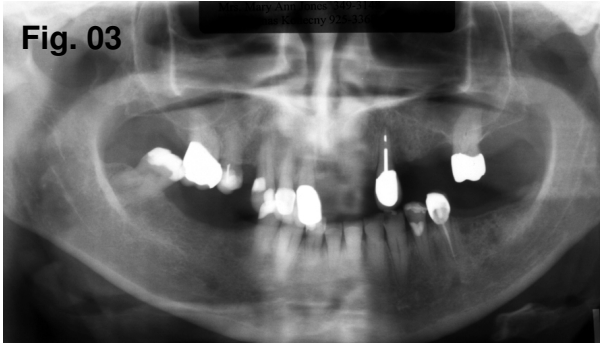
In dental practice today, before information can be passed from doctor to doctor, a strong connection between the dentist and the patient is essential. Until recently, much of the communication between the doctor and the patient has been in the form of a “conference” in a consultation room or chairside. Most, if not all, of the communication takes the form of a verbal dialogue using models, clinical photos, radiographs (analog or digital), and often educational software. Patients find it enlightening to see their problems through computer animation, but find it difficult to personalize that which is not intuitive. What is needed in current “patient education” is the ability to empower the patient to be involved in the process. The patient needs to see and feel that the dentist is working on, thinking about, and solving the challenges of their own particular case. The scientific evidence that the dentist is working with, (CT scans, digital photos, X-rays, clinical exam) needs to be easily understood by the patient. Without this, the patient may find it difficult to move forward with case acceptance.

The following two (2) examples demonstrate how doctors rapidly and easily communicate changes in treatment plans through emailing XCPT files. When the patient is comfortable and the plan is tentatively approved, then the XCPT document is immediately e-mailed in front of the patient to the restorative dentist to be evaluated and modified. It is very common for the documents to be passed back and forth until finalized. These examples are typical and consistent with our survey of beta testers and end user surgeon’s experiences

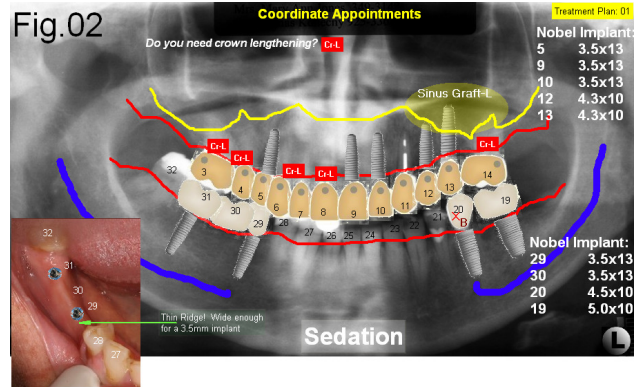
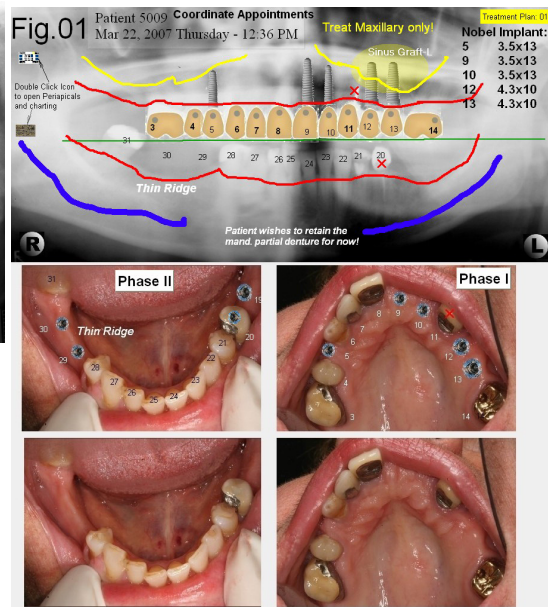
## **Case #1: Referred for treatment on the maxillary arch only.**

Fig.01 and Fig.03:

The chief complaint was the failure of the maxillary anterior fixed prosthesis and a desire to replace her removable partial dentures. The patient and spouse express financial concerns and wished to go forward with the maxillary care, which was urgent, and wait to treat the mandibular needs later. The patient wanted to convert, eventually, all her removable prosthesis’ to fixed crown and bridge via implants. The initial panoramic radiograph was taken after the bridge was sectioned and an office temporary was about to be fabricated. The mandible arch was functioning with a removable partial denture with an asymptomatic abutment #20 showing signs of mobility from fractured and widened PDL. The remaining teeth were periodontally within normal limits. Fig.01 and Fig.03 were the initial files emailed, beginning the collaborative process. Five maxillary implants were recommended in conjunction with a metal based provisional extending from #3 to #14, as proposed by the restorative dentist.

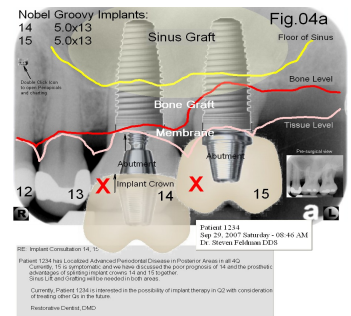


**Fig.02:**  
 The patient was examined the next day in our office and I concurred with the restorative dentist's findings. Through XCPT software, using the LOOK tool and creative editing, I was able to show the patient the need to place implants in the already thin ridge (clinical photo provided by the referring dentist) area of #29 and #31. It was explained that delaying the implantation could cause the edentulous ridge to thin further, necessitating a block graft surgery. Presently 3.5mm diameter implants could be placed in these sites safely, avoiding further surgeries. The patient, with spouse present, accepted the revised treatment plan with the additional four (4) mandibular implants.

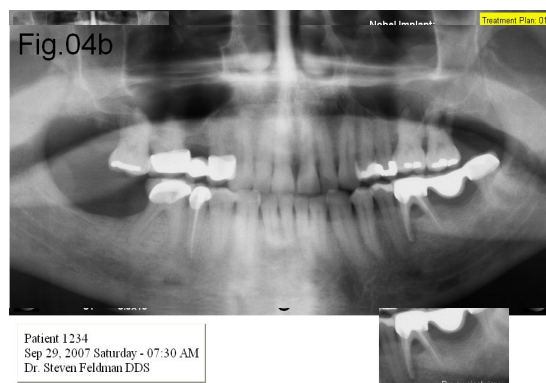


**Case #2: Referred for implants in #14 & #15 sites only.**  
**Fig.04a, Fig.04b & Fig.04 Fig.05 & Fig.06:**

The patient presented himself with a history of a left side facial swelling (treated with antibiotics) emanating from a periodontal abscess #15, and a periapical lesion on #14. Patient knew that there were other "problems", but was adamant, and wished to "deal with the upper left side first before attempting any care elsewhere". This issue was expressed in the note (**Fig.04a**) accompanying his XCPT file referred by email from his restorative dentist.

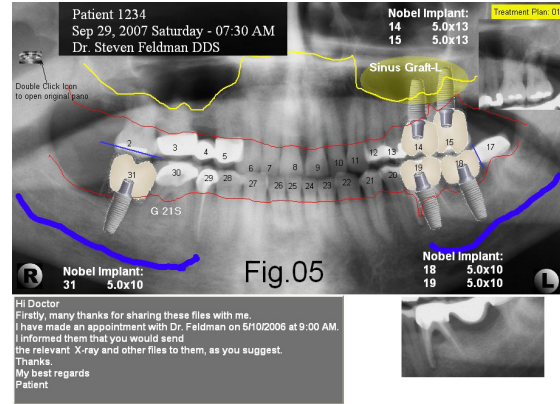


The examination in our office concurred with the restorative dentists findings. By showing the patient his other "problems" that were similar to the maxillary left, he was able to go forward with the appropriate and complete care. We were able to show (**Fig.04b & Fig.04**) him the extensive bone loss around #19, the decay mesial #17 and the furcation (class II) #30. It was explained to him, using the LOOK magnification tool, Scribble tool, crowns, abutments and implants that he would not be functioning on the left side for



as long as one (1) year and he should seriously consider placing the implants on the lower left as well. The placement of single implant behind treated #30 would allow him full function (in approximately 2-3 months) while he was waiting for the left side implants to integrate. Using XCPT treatment sequencing button (Tx ++), the final prosthesis was able to be demonstrated. **(Fig.05)** This method of communicating was logical and allowed the patient to shift his unilateral position to one of complete care. Six (6) days later full mouth surgery with sinus grafting and implantation was achieved. The case was fully restored in eight (8) months. **(Fig.06)**

Fig.06



As we move deeper into the 21<sup>st</sup> century, technology will continue to play a greater role in the way dentists communicate. The typical patient is more educated, more concerned with their appearance and more technologically savvy. The XCPT™ Patient Engagement System was developed to take the visual cues one step further. By making the visual images PERSONALIZED, the patient can put the words the dentist is speaking and the images together for the first time.....because they are finally looking at something they know, recognize and understand.....THEMSELVES. This is consistent with all the research on visual communication regarding the human brains ability to retain and recall information. Greater patient understanding will lead to greater commitment toward the necessary treatment and a more honest and open relationship between the dentist, patient, and the entire referral team. By combining these elements, a powerful shift in the patient experience will inevitably begin to evolve.

## Notes

1. Paul Martin Lester, "Syntactic Theory of Visual Communication," California State University at Fullerton, 1994-1996
2. \*\*"Visual Communication Diversity", [www.expertclick.com](http://www.expertclick.com)
3. \*Effectiveness of Visual Language Presentations," MacroVU, Inc., [www.macrovu.com](http://www.macrovu.com)
4. "The Power of Visual Communication," [www.hp.com](http://www.hp.com)