PROFILE

Robert R. Winter, DDS

Current Occupation
Private practice limited to prosthodontics
Laboratory owner—Esthetics by Design

Education
Marquette University School of Dentistry, Milwaukee, WI, May 1981, DDS
Prosthodontic specialty residency at the Veterans Administration Medical Center, Milwaukee, WI, 1983, Certificate in Prosthodontics

Academic and Other Affiliations
Associate professor of clinical dentistry—primary oral health care, University of Southern California (2005–Present)
Affiliate assistant professor of graduate prosthodontics, University of Washington School of Dentistry, (1997–Present)
Clinical associate professor, Department of Comprehensive Care, Case Western Reserve University School of Dental Medicine (2005–Present)

Professional Memberships
American College of Prosthodontics (1983–Present)
The American Academy of Restorative Dentistry (1991–Present)
The American Academy of Esthetic Dentistry (1991–Present)
The Pierre Fauchard Academy (1985–Present)

Positions Held
Executive Council Member, American Academy of Esthetic Dentistry (2007)
General chair, American Academy of Esthetic Dentistry Annual Meeting (2007)
Essay committee chair, American Academy of Restorative Dentistry Annual Meeting (2006–2007)
Program cochair, American Academy of Esthetic Dentistry Annual Meeting (2005)

Honors/Awards
Marquette University School of Dentistry Distinguished Alumni Award (2005)
Inducted in the Canadian Dental Technology Hall of Fame (2002)
The Gordon Christensen Lecturer Recognition Award (1991)

Publications
Chapter in the 3rd edition of *Textbook and Color Atlas of Traumatic Injuries to Teeth* by Andraesen and Andraesen (Munksgaard)
"Analyzing natural dentition"—*Journal of Esthetic and Restorative Dentistry*
"The use of magnification in dental technology"—*Journal of Esthetic and Restorative Dentistry*
"Restorative and periodontal considerations for the treatment of cervical lesions"—*Advanced Esthetics and Interdisciplinary Dentistry*
"A new evolution: glass ceramic for metal"—*Dental Dialogue*

Hobbies/Personal Interests
Professional Ski Instructor of America (Alpine Level 3 certified), bicycling, golf, photography

Notable Contribution(s) to Dentistry
Codeveloped the d.SIGN dental ceramic for Ivoclar-Vivadent, Schaan, Liechtenstein
Has given over 500 continuing education programs in 37 countries for dentists and technicians

Other Items of Interest
Membership in the advisory boards of the following publications:
The International Journal of Periodontics & Restorative Dentistry (current)
Journal of Esthetic and Restorative Dentistry (current)
Advanced Esthetic and Interdisciplinary Dentistry (current)

Masters of Esthetic Dentistry

Interdisciplinary Treatment Planning: Why Is This Not a Standard of Care?

ROBERT R. WINTER, DDS*

Interdisciplinary treatment gives the dental team the opportunity to change, shape, or develop an individual's appearance, character, or self-image, and at the same time provide a restoration that is functional and enduring. Too often, both general dentists and specialists are doing procedures without looking at the big picture, fully understanding the possible complexities of the case, and visualizing the final outcome. It is important that practitioners are able to identify the patient's needs and concerns, recognize if they lack an understanding of or expertise to handle the problem, and seek assistance from specialists when it is in the best interest of their patient. The key to a successful outcome is to use a logical step-by-step process to fully understand potential treatment options before you begin, and to develop interdisciplinary relationships to provide planning or procedural support when needed.

THE EVOLUTION OF INTERDISCIPLINARY DENTISTRY

In the early stages of modern dentistry, we approached patient care in a disciplinary fashion. Diagnosis and treatment planning were not integrated, there was an ignorance of other disciplines' training and skills, and there was minimal collaboration. As time evolved, we began to develop a more multidisciplinary approach. We were aware of the benefits other disciplines could provide, but collaboration was unstructured and separate treatment goals were usually established. As the complexity of dental care increased, many practitioners began to develop interdisciplinary associations. Groups of both general and specialty dentists started to share common knowledge early in the treatment planning process, there was some structured collaboration, and common goals were established. Unfortunately, even though the goals of treatment were recognized, a true vision of the outcome was not necessarily part of the equation. Today, we see many examples of interdisciplinary teams with truly symbiotic relationships. All the members of these teams share a common working knowledge, similar values and goals, and have a clear vision of the outcome.

DIAGNOSIS AND TREATMENT PLANNING

There are four main phases to the treatment planning process:

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DOI 10.1111/j.1708-8240.2007.00120.x

1. Assessment
2. Planning
3. Implementation
4. Evaluation

Assessment

A comprehensive assessment is an essential part of the planning process and leads to the formulation of your diagnosis. During the assessment phase, you gather both subjective and objective information. Subjective information is based on the patient's opinions, desires, or perceptions rather than on facts or evidence. It includes the patient's description of the problem and the answers to specific clarifying questions when they are unable to verbalize their concerns. You need to listen carefully and observe nonverbal cues in order to determine the patient's expectations. Objective information is based on facts and is free of bias or personal opinion. It includes information gathered through a thorough clinical evaluation, including facial, skeletal, occlusal, and oral components, dental history, radiographs, photographs, diagnostic casts, and, at times, articulation and a diagnostic wax-up (Figure 1). Critical evaluation of both types of information is essential to determine if there is a realistic treatment outcome that coincides with the patient's expectations. Immediate treatment may not be possible if a patient exhibits signs of body dysmorphic or somatoform disorders. In those instances, a referral to the proper medical or psychiatric specialist may be in order before beginning treatment.

Planning

During the planning phase, it is necessary to thoroughly review all information gathered during the patient interview and clinical examination, along with the diagnostic records you have obtained. This leads to the formulation of your diagnosis and includes the following components:

1. Development and prioritization of a problem list
2. Identification of the etiology
3. Development of treatment goals and options for each problem
4. Visualization of the final biologic and esthetic outcome

Once you have identified all the mentioned components, you are able to utilize the information to outline the following:

1. The ideal or optimal comprehensive treatment plan for that patient
   - the least-invasive procedures to accomplish the desired outcome are suggested first
   - it is not driven by the practitioner's financial needs or expectations
2. Alternatives to the optimal treatment
   - if limitations exist, compromises to the outcome are listed
3. The sequencing of treatment
4. Whether or not other specialists need to become involved in order to best meet the patient's needs

Not all treatment plans require a team approach, but for those that do, the teams must be formed during this early phase. You need to obtain all necessary team member consultations, assessments, and ideas *before* the plan is completed and implementation of the treatment begins. The individual controlling the definitive aspect of the treatment coordinates the overall plan and sequencing of care. In some cases, emergency or palliative treatment may need to be provided before the definitive treatment plan is finalized.

Informed consent is an important component of presenting any treatment plan. You should present the ideal or optimal treatment whether or not it is what the patient requested or appears financially able to complete, followed by the alternatives. Potential complications and compromises to the outcome for each option are outlined and carefully explained to the patient, and fees are clearly stated. The consequences of elective cosmetic procedures are made clear, as these options can require extensive

Figure 1. Preoperative Photographic Series. The preoperative photographic series is an important part of the objective information gathered during the clinical evaluation and is necessary for interdisciplinary communication and treatment planning.

Prioritized problem list:
1. Congenitally missing teeth—maxillary lateral incisors
2. Malpositioned/malaligned teeth—maxillary arch
3. Previously restored teeth—maxillary anterior teeth
4. Biologic width invasion—maxillary canines
5. Unesthetic tooth proportions—maxillary anterior teeth

dentistry that may require a lifetime of maintenance as opposed to more conservative alternatives. An example of this would be the use of porcelain veneers rather than orthodontic movement to create the appearance of straightened teeth. Although many offices have a designated coordinator to present the treatment plan, remember that you as the dental professional are legally responsible for ensuring that all questions posed by the patient have been thoroughly answered.

Implementation

During the implementation phase, all dentistry performed should be based on the clinical standard of care following the agreed-upon treatment, with the person responsible for the definitive care generally coordinating the timing and sequencing of the plan. All aspects of care should take into consideration the patient's needs, expectations, and physical, psychological, or financial constraints.

Dental technology support is critical when any indirect restorative procedures are performed. Their support may be needed early in the treatment if a diagnostic wax-up is required or if they fabricate the provisional restorations. Dentists need to recognize and explain to the patient that the esthetic quality of the outcome is based on the knowledge and artistic skill of the dental technician or technologist (Figure 2).

Evaluation

The evaluation phase is just as critical as any other component of the treatment planning process. It is always ongoing and includes:

1. An immediate and long-term critical appraisal of the completed treatment
2. Consideration of changes or additions that may improve the outcome
3. Future needs or follow-up

Failure to achieve the visualized outcome should be the basis for further dialogue within the team, or possibly for presentation and discussion at study club meetings.

A team concept to patient treatment is essential to develop a successful long-term outcome. A comprehensive oral–facial analysis and diagnosis will enable the clinical team and technician or technologist to develop a treatment plan that can be successfully executed. The ultimate goal and key to success is to provide a treatment that is highly esthetic, biologically acceptable, and functionally enduring.

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Figure 2. Postoperative Photographic Series. The postoperative photographic series documents the completed treatment and is useful for the immediate critical appraisal of the outcome.

Treatment sequence:
1. Restorative: provisionalization of maxillary anterior teeth
2. Orthodontics: initiation of therapy
3. Oral surgery: dentoalveolar distraction osteogenesis (DDO)
4. Orthodontics: tooth positioning/alignment
5. Restorative: new provisionals
6. Periodontics: functional/esthetic crown lengthening maxillary arch
7. Restorative: new provisionals
8. Restorative: definitive restorations

Interdisciplinary team members:
Orthodontist: Richard D. Roblee, DDS, MS
Maxillofacial surgeon: Scott L. Bolding, DDS, MS
Periodontist: Edward P. Allen, DDS, PhD
Prosthodontist: Robert R. Winter, DDS
General dentist: Brad Jones, DDS
Technologist: Martin Vojtus