# Problem-Oriented Orthodontic Record

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Orthodontic records often fail their purpose of clear communication, education, and rapid retrieval of information. Poorly written treatment plans and incomplete, illegible progress notes can make it impossible for patients to be well-informed participants in the planning of their care or for other professionals to help provide that care.

The problem-oriented medical record was devised by Weed[1-4] in response to a similar situation in medicine. Few specialties adapt as well as orthodontics to the use of such records. The lack of urgency in most orthodontic treatment allows careful diagnosis, problem listing, and treatment formulation before presentation to the patient.

Although problem-oriented records have previously been advocated for orthodontists,[5] their use has seldom gone beyond the mere listing of problems and solutions. From this starting point we have developed a record system that has improved both our office communication and our staff morale.

## Problem List and Therapeutic Plan

Records that use narration, analysis summaries, or checklists tend to include many normal findings. The problem list, on the other hand, focuses on abnormal findings that require correction, thus giving order and priority to the patient's needs.

A good problem list—indeed, the ultimate value of a problem-oriented record—depends on complete and accurate data collection. A careless examination will result in faulty data, no matter how clearly the results are recorded. Subjective findings such as the patient's self-image and reasons for seeking orthodontic care are as important as objective findings in creating the problem list.

Once the patient's problems have been listed, priorities must be established. Decisions about which problems can or should be treated are based on cost-benefit or risk analysis of the problems' severity, benefits to the patient of correcting them, and—most important—the patient's desires.

The next step is to formulate a therapeutic plan that lists a solution for each problem. A tentative list, with several possible solutions for each problem, may be a good way for the less experienced orthodontist to consider treatment alternatives.[5] When the best solutions have been selected, a master list is made with a specific therapeutic plan for that patient (Fig. 1).

As more information about a problem becomes available, the therapeutic list can be updated. In the example, the original finding of "radiolucency" was clarified as "globulomaxillary cyst" after examination by an oral surgeon.

Other problems, like No. 7 in the example, can be added to the list as they are detected. Some, such as possible airway obstruction, may be deleted after a negative finding by another professional. Tentative dates, as in No. 3, are written in pencil until a final date is entered. The form's flexibility allows thoughtful revision as treatment progresses.

## Pretreatment Consultation

Our case presentation can be divided into three parts: discussion, discovery, and decision.

The problem list and therapeutic plan serve as a guide for the discussion portion. This allows information to be presented in a

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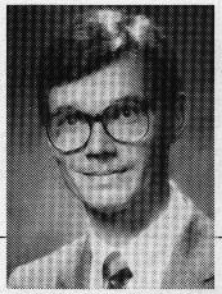
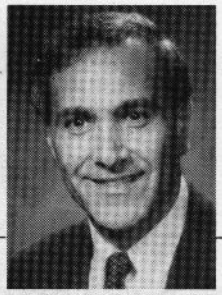


Dr. Hershey



Dr. Bayleran

PATIENT _____ Age _____

Parent or spouse _____ Dentist _____

Telephone: Home _____ Business _____

| DATE RECORDED | PROBLEM | THERAPEUTIC PLAN | DATE RESOLVED |
|---|---|---|---|
| 1-16-85 | 1. Radiolucency: apex maxillary right cuspid | 1. Referral to Oral Surgeon | 1-18-85 |
| 1-22-85 | Globulo-maxillary cyst | Surgical removal | 1-22-85 |
| 1-16-85 | 2. Upper lip fullness: maxillary dental protrusion | 2. Orthodontic incisor retraction with headgear | |
| 1-16-85 | 3. Mandibular retropositioning | 3. Surgical mandibular advancement | 3-86 |
| 1-16-85 | 4. Maxillary constriction: bilateral posterior crossbite | 4. Rapid palatal expansion | 5-1-85 |
| 1-16-85 | 5. Maxillary and mandibular anterior spacing | 5. Orthodontic space closure | |
| 1-16-85 | 6. Mandibular right first molar missing | 6. Post-orthodontic prosthetic replacement | |
| 8-10-85 | 7. Periodontal abscess: mandibular left second bicuspid | 7. Endodontic therapy (post-orthodontic crown) | 8-12-85 |

**Fig. 1 Therapeutic Plan.**

logical sequence, avoiding repetition yet insuring that all important areas are covered. A copy of the list can be given to the patient, assuming that we have been careful to avoid wording with pejorative connotations.

The discovery portion involves finding out whether the patient agrees with the problem list and the priorities we have assigned. The patient's responses may result in amendments or indicate the need for fuller explanation of some areas. This often improves the patient's insight into the health significance of various problems. The patient thus participates directly in the formulation of the treatment plan and becomes an ally in implementing it.

A decision may be made at the conclusion of the consultation or at a later date. With the problem list as a reference, the patient can reread and reflect on the planned therapy before making the decision. The problem list also serves as a record of what options were given the patient, should treatment be declined.

## Post-Treatment Consultation

At this point we review the original problem list with the patient and emphasize what was accomplished during treatment. We note any remaining problems that have not been dealt with or that have required compromise. Reasons for nonintervention, incomplete correction, or discontinuation of treatment are also discussed. This puts the patient in the position of responsibility for any compromises that resulted from lack of cooperation.

The post-treatment consultation provides a mechanism for continuing care. For example, the need for general dental work may be emphasized, and the schedule for return appointments and long-term retention outlined. Notes are made on the original problem list, and the patient is given a new copy, which again serves as a written record of the consultation.

## Sharing Patient Records

Once the patient has made a decision on treatment, copies of the updated problem list and therapeutic plan are sent to the family dentist and any specialists who may participate in the patient's care.

If the patient is evaluated by another professional, the record may need revision. It is important to make other professionals aware of the value of clear communication, which means taking time to discuss this approach to record keeping. Any outside consultant should detail what information has been given to the patient; this helps prevent the embarrassing and destructive situation of the patient saying, "But Dr. J. told me yesterday that . . . and now you are saying . . ."

The problem-oriented record also allows easy review of what has been accomplished and what remains to be done for transfer patients, whether they are entering or leaving the practice. If a patient enters our practice without a problem-oriented record, we first identify all remaining problems, record the supporting data for each, and thereafter maintain the record as described above. A working problem list is made at the patient's first visit, and a master list is completed after review of the initial and transfer records.

## Patient Education Plan

We use a separate page for recording instructional information given to the patient (Fig. 2). This assures both that the patient receives the necessary information and that all staff members are aware of it, thus minimizing conflicting instructions.

The plan should be concise, but detailed enough that an orthodontic assistant can glance at it and repeat the instructions given by the orthodontist if necessary. The staff member can then reinforce the patient's education, and the orthodontist can also reassess the instructions later.

Items in the plan include instructions on oral hygiene, nutrition, extra- or intraoral

NAME _____

**PATIENT EDUCATION PLAN**

| Date | | Entered by |
|---|---|---|
| 1-22-85 | Surgical removal: Globulo-maxillary cyst: Tylenol #3 prn for pain. | J. Mcinney |
| 2-14-85 | Orthodontic consult: Rapid palatal expansion followed by full fixed appliances. Headgear required 6 months: estimated treatment time 18-24 months: 12 months pre-surgical orthodontics. | S. Hershey |
| 2-16-85 | Surgical consult: Mandibular advancement: Sagittal split: St. Joseph Hospital (5 days): 8-10 weeks intermaxillary fixation. | CHN Kaden |
| 3-11-85 | Rapid palatal expansion: 1 turn in morning: 1 turn in evening for 2 weeks. | S. Hershey |
| 5-1-85 | Banding and Bonding: Standard oral hygiene and diet instructions: daily home fluoride rinse. | J McClinton |
| 8-12-85 | Endodontic treatment: Mandibular left second bicuspid: patient informed of need to have tooth crowned following orthodontic treatment. | R. BROWN |
| 8-26-85 | Maxillary highpull headgear: To archwire distal to lateral incisors 14-16 hours per day. | S. Hershey |

**Fig. 2 Patient Education Plan.**

NAME _____

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| 2-16-85 | Surgical consult: Mandibular advancement: Sagittal split: St. Joseph Hospital (5 days): 8-10 weeks intermaxillary fixation. | Jan Kachan |
| 3-11-85 | Rapid palatal expansion: 1 turn in morning: 1 turn in evening for 2 weeks. | S. Hershey |
| 5-1-85 | Banding and Bonding: Standard oral hygiene and diet instructions: daily home fluoride rinse. | J McClynder |
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**Fig. 2 Patient Education Plan.**

force, removable appliances, and retention; progress reports; and tentative dates given for surgery or debanding. This is also the place for recording instructions given to the patient by other professionals—for example, an oral surgeon's remarks on the duration of intermaxillary fixation.

Each note must be signed by the person who entered it. It is also helpful, when appropriate, to specify the problem to which the instruction relates, thus tying the education plan to the problem list and therapeutic plan.

## Treatment Flow Sheet

The problem-oriented approach allows the use of a simple flow sheet for recording treatment progress. Because other portions of the patient's chart are used to enter instructions and active problems, we can avoid the clutter that otherwise tends to occur in this section. The flow sheet contains brief narrative notes about what was done at each visit and what is expected to be accomplished at the next appointment.

Temporary setbacks such as broken appliances, missed or cancelled appointments, or treatment-induced problems can be color-coded and entered here. When such problems are recurrent or no longer self-limiting, they are entered on the master problem list. For example, poor oral hygiene resulting in decalcification or caries should be added to the master list and a therapeutic plan made to correct it.

We have found that the flow sheet works well with computerized patient-tracking programs.

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