INTRODUCTION TO THE USE OF THE NEW DIAGNOSIS AND TREATMENT PLANNING FORMS

Definitions - The Comprehensive Examination: Multidisciplinary Diagnosis and Treatment Planning

The Comprehensive Examination (axiUm code 01201) is a supervised student procedure whereby students are responsible for all aspects of patient examination, including providing a diagnosis of conditions and disorders based upon all clinical findings, and formulating a treatment plan which addresses, in a systematic manner, and as agreed upon by the patient and confirmed with completion of the informed consent form, findings of the patient examination. It is a multi-disciplinary approach to diagnosis and treatment planning.

Elements of the comprehensive examination would include the patient’s chief concern, health and medication history, recording of vital signs, dental history, extra-oral and intra-oral soft and hard tissue examination, radiographs and other diagnostic testing and specialty consultations as necessary and making a diagnosis. This would be followed by the formulation of a comprehensive treatment plan, which includes the compilation of a problem list, refers to the diagnosis, and is based upon the patient’s chief concern and findings of the examination. Treatment options are then offered and a systematic course of treatment is agreed upon by the patient. Appointment scheduling is helpful to provide an organized ‘roadmap to treatment’.

Treatment options are given in such an order that first addresses any urgent care or primary esthetic concerns required by the patient (Phase One). This is followed by the medical management of any disorders or diseases (including caries management/caries control protocol), smoking cessation counseling, immediate oral surgery procedures, stabilization of the patient’s periodontal condition (in a dentate patient), and follows by addressing basic dental needs - provision of direct restorations and non-surgical endodontic therapy. If necessary, following these initial therapy procedure, a re-evaluation of the patient’s caries and periodontal status is preformed, and if deemed stable, definitive fixed and removable prosthetic procedures can be performed (Phase Two).

Phase Two may include periodontal surgery, implant site preparation, and final restorative procedures – single and multiple indirect restorations, implant placement, fixed and removable prostheses, and habit managing appliances (e.g. bruxing guards).

If unstable, transitional forms of treatment may be necessary prior to embarking on Phase Two. No Phase Two treatment should commence if there is an unstable dentition.

Following completion of definitive treatment, the patient may be placed on a recurring schedule of examination and periodontal maintenance therapy (Phase Three).

OUTCOMES FOR ALL THREE PHASES OF TREATMENT SHOULD BE RECORDED ON THE LAST PAGE
HOW TO PROPERLY COMPLETE THE DIAGNOSIS AND TREATMENT PLANNING FORM:

PRIOR TO FILLING OUT THE FORM, THE PATIENT MEDICAL AND DENTAL HISTORY MUST BE COMPLETED IN AXIUM, AND APPROVED (SWIPE) BY AN INSTRUCTOR.

CHIEF CONCERN: In the patient’s own words, the reason(s) for the patient attending that day.

SUMMARY OF MEDICAL HISTORY: After referring to the newly entered medical history AxiUm record, a summary of significant findings, for quick reference, including medications and their implications to dentistry, oral manifestations or special precautions for dental treatment is recorded.

SUMMARY OF DENTAL HISTORY: A summary of the significant findings relating to the patient’s past dental experience, including daily oral hygiene routine, extensive rehabilitative dental treatment, periodontal surgery, etc.

SUMMARY OF SOCIAL HISTORY: Include pertinent information that may affect or has had an effect on dental treatment. Also include history of or current use of tobacco, including frequency, length of time, and whether or not the patient may be amenable to a tobacco cessation program.

EXTRA-ORAL EXAM: Indicate whether findings are within normal limits (WNL) or comment on any unusual or abnormal findings. Seek an oral pathology consult as needed. Areas to consider are head and neck, skin and extremities and lips. Then move to the TMJ to makes observations on presence of clicking/crepitus (check mark), limitation on opening (in mms.), deviation on opening/closing (to the right or left), persistent presence of pain or on palpation of (on right or left side) temporals, masseter, pterygoid (medial/ lateral). Also note the presence or suspicion of unusual habits (e.g. clenching, bruxing, nail biting), and history of the habit. Make additional comments as required, which may include presence of headaches.

INTRA-ORAL EXAM: Indicate whether WNL or comment on unusual findings of labial and buccal mucosa, palate (e.g. tori), oropharynx, floor of mouth, tongue dorsal and ventral, Gingival colour, contour, consistency as well as unusual localized or generalized gingival changes. Make additional comments as necessary.

OCCLUSION: (Angle's Classification) Using the first molars when possible and the cuspids when needed, classify the occlusion into Angle's Class I, Class II, Division I, Division II or Class III for the patient's right and left sides. Overbite: Express in millimeters of overlap of lower incisors which would be a positive measurement. Overjet: Express excessive overjet in mm (millimeters). Openbite: Express this as a negative amount. Crossbite: Stipulate which teeth are involved. Faceting: Although subjective, estimate whether the amount of occlusal and incisal wear is normal or excessive for the patient involved. Also make notations for observations of teeth involved with attrition, abrasion, and erosion. Other areas to note are centric relation
(CR) and maximum intercuspation (MI), measurement of the interocclusal distance (IOD), and significant interferences in right lateral, left lateral and protrusive excursions.

**Diagnostic Testing:** As part of diagnosis and diagnostic testing, radiographs will be prescribed depending on the patient’s needs and based upon ALARA (As Little As Reasonably Accepted) principles. Radiographs are stored in MiPacs program, but the written interpretation is done and recorded in AxiUm. As summary of pertinent findings (bone loss, impactions, possible carious lesions, unfavorable crown root ratios, pathology) is written in the spaces provided on the form. When considering bone loss for periodontal situations, the following should be considered:

**A. Bone Loss:**

- **No significant Finding (NSF):** If the bone crest appears to be about 1mm from the cemento-enamel junction on the radiograph, no evidence of bone loss can be described.

  - **Generalized:** Bone loss in 2 or more sextants.
  - **Localized:** Bone loss in one, two or three areas involving one or two teeth

- **Furcation bone loss:** Depending upon the following criteria, use symbols such as S (slight), M (moderate) or A (advanced) for furcation bone loss. **Furcation bone loss (F):** is indicated by a radiolucency in the furcation area. This may be slight (S) bone loss (less than 1/3 of the distance from the dome of the furcation to the apex of the root), moderate (M) (up to 2/3 of the distance from dome to the apex) or advanced (A) (to or beyond the apex).

- **Horizontal bone loss:** Horizontal bone loss is indicated when the bone loss interproximally on two adjacent teeth is equidistant from the cemento-enamel junction on each tooth. Use the following symbols for horizontal bone loss based on the above criteria:

  - S = Slight - includes loss of crestal cortication and/or blunting of interdental bone
  - M = Moderate < 1/3 of the root length
  - A = Advanced 1/3 or more of the length of the root
**Vertical bone loss (V):** is indicated when the crest of the bone is located more apical to the cemento-enamel junction of one tooth than to the adjacent tooth.

**B. Other Radiographic Observations:**

Record the tooth number and surface where any of the following are identified: furcation, periapical pathology, widened PDL space, poor crown to root ratio, root proximity, root morphology, impaction, caries, overhang restorations, calculus, and other.

**Other Diagnostic tests, including specialty consults (as needed):** Each specialty has provided guidelines as to the processes involved when requesting a specialty consult – determining when one is needed, and the prerequisite information that needs to be gathered prior to requesting a consult. The guidelines are posted on the faculty website at [http://umanitoba.ca/faculties/dentistry/student_resources/index.html](http://umanitoba.ca/faculties/dentistry/student_resources/index.html) under guidelines for consults. Please ensure the traditional forms/sheets are used for endo testing, all prosthodontic forms (implants, removable pros), esthetic evaluation (when a one-line comment is insufficient), and other forms that are available.

**DIAGNOSTIC RECORDS:** Please check off whether photos have been taken and casts have been made.

**SPECIALTY CONSULT:** Consultants comments, signature and date in space provided

**ADDITIONAL CONSIDERATIONS,** and comments written in space provided.

**Missing teeth must be recorded in the AxiUm odontogram as well.** This is important, as in the case of a fixed bridge replacing a missing tooth, unless the tooth is marked as missing, AxiUm will not allow the fee for a bridge to go through.

**ODONTOGRAM:** Charting to include: Existing restorations/defective restorations – open margins, overhangs, caries (visible + radiological evidence of), missing, impacted, chipped, fractured, worn teeth, etc.

**Periodontal charting:** The following should be clearly indicated:

**Missing teeth:** Cross out missing teeth with a vertical line.

- e.g. 18 17 16
Pocket Bleeding Index:

(PBI): Bleeding on probing will be recorded as present if the gingival unit (pocket) bleeds within 30 seconds after initial probing (Vander-velden, 1979). The location of the bleeding is documented in red. The total number of bleeding sites (n) is divided by the total number of units probed (n ÷ # teeth X 4) to obtain the PBI.

e.g. 18 17

Probing Depth: Probing depth should be recorded for each tooth, (Buccal MBD and Lingual MLD). Record measurements of 4 mm and greater.

Recession: Apparent gingival recession should be recorded for each tooth. The extent of recession is measured from the CEJ to the free gingival margin. The greatest mm reading for the Buccal and for the Lingual is recorded.

E.g. 18 17

Furcation: Classification of furcation involvement should be recorded in the following manner:

Class I (Dip): Furcation concavity is present. Furcation concavity can be detected with the probe; however, the furcation probe cannot enter the furcation area. In many cases, this type of defect cannot be detected radiographically. Charted as I in appropriate box on diagram.
**Class II (Cave):** This lesion is essentially a cave or cul-de-sac lesion with the roof of the furcation clinically detectable. Furcation probe will enter the furcation area but cannot pass through to the opposite side of the tooth.

**Class III (Tunnel):** It is essentially a through and through or tunnel lesion. Furcation probe will pass between the roots through the entire furcation. In this type of furcation involvement, the inter-radicular bone is completely absent. A definite radiolucency in the furcation area is usually visible on the radiograph. Charted as III in appropriate box on diagram.

*Please note that this is a classification of the extent of furcation involvement. The numerals I, II, and III do not represent millimeter measurements.*

e.g.

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B   L
I   I
II  II/S
II/D III
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**Mobility:**

**Mobility is recorded for each tooth.**

- **Normal** = movement of the crown of the tooth, less than .5 mm in buccal-lingual direction
- **Class I** = movement of the crown of the tooth .5 mm to 1.0 mm in buccal-lingual direction
- **Class II** = movement of the crown of the tooth 1.0 mm to 2.0 mm in buccal-lingual direction
- **Class III** = movement of more than 2.0 mm in medial-distal or buccal-lingual direction and/or vertical depression.

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e.g. 18 17
     I II
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Plaque Control Record: (PCR): The presence of dental plaque is recorded on four surfaces of each tooth (DBML). If, after swishing with a plaque disclosing tablet, disclosed plaque in contact with the gingival margin can be removed with the explorer/probe from the tooth surface, that surface should be documented in black on the record form.

Plaque control score: the presence of dental plaque is recorded on four surfaces of each tooth (DBML). The presence is gently confirmed with the explorer/probe, if it is absent that surface should be documented in black on the record form.

The PC score is determined by dividing the total number of marked surfaces (n) by the total number of available surfaces (n ÷ # teeth X 4) present. (O’Leary, et al, 1972).

Our goal in teaching plaque control procedures is to reduce plaque accumulation until it is found on 15% or less of the available tooth surfaces. Surgical procedures should not be initiated until the patient reaches that level.

PROBLEM LISTING: This is a problem list which summarizes the patient’s needs and clinical findings of the exam. It will help to formulate the diagnoses.

Periodontal classification (circle): PSR1 PSR2 PSR3 PSR4

Periodontal Classification: Circle appropriate classification:

PSR1 = gingivitis
PSR2 = slight chronic periodontitis
PSR3 = moderate chronic periodontitis
PSR4 = advanced chronic periodontitis/aggressive periodontitis

Periodontal Screening and Recording (PS&R System)

Description:

The objective of this screening system is to examine every tooth individually. Implants are examined in the same manner as naturally occurring teeth. For screening, the dentition is divided into sextants as shown:
The use of a periodontal probe is mandatory. The recommended probe has a ball end 0.5 mm in diameter. A color coded area extends from 3.5 to 5.5 mm. A gentle probing force should be used.

The probe tip is gently inserted into the gingival crevice until resistance is met. The depth of insertion is read against the color coding. The total extent of the crevice should be explored by “walking” the probe around the crevice. At least six area in each tooth should be examined: mesiofacial, midfacial, distofacial, and the corresponding lingual/palatal areas.

For each sextant with one or more teeth or implants, only the highest score is recorded. An X is recorded if the sextant is edentulous. A simple box chart is used to record the scores for each sextant (see Fig. 1).

**Code 0:** Colored area of probe remains completely visible in the deepest crevice in the sextant. No calculus or defective margins are detected. Gingival tissues are healthy with no bleeding after gentle probing.

**Code 1:** Colored areas of probe remains completely visible in the deepest probing depth in the sextant. No calculus or margins are detected. There is bleeding after gentle probing.
**Code 2:** Colored area of probe remains completely visible in the deepest probing depth in the sextant. Supra- or subgingival calculus and/or defective margins are detected.

**Code 3:** Colored area of probe remains partly visible in the deepest probing depth in the sextant.

**Code 4:** Colored area of probe completely disappears, indicating probing depth of greater than 5.5 mm.

The examiner may pass to the next sextant whenever Code 4 is recorded or the sextant is completely examined.

In addition to these scores, the symbol * should be added to the sextant score whenever individual findings indicate clinical abnormalities.

**Code*: Denotes clinical abnormalities including but not limited to:

- a) furcation involvement
- b) mobility
- c) mucogingival problems
- d) recession extending to the colored area of the probe (3.5 mm or greater)

The management of patients according to their sextant scores should be at the discretion of the examining dentist. The practitioner’s clinical judgment will determine the need for consultation with a periodontist. The following guidelines for patient management are suggested:

**Code 0:** Appropriate preventive care.

**Code 1:** Oral hygiene instruction (OHI) and appropriate therapy, including subgingival plaque removal.

**Code 2:** OHI and appropriate therapy, including subgingival plaque removal, plus removal of calculus and correction of plaque-retentive margins of restorations.

Patients whose scores for all sextants are Codes 0, 1, and 2 should be screened in conjunction with every oral examination.

**Code 3:** A comprehensive periodontal examination and charting of the affected sextant is necessary to determine an appropriate treatment plan. This
examination and documentation should include but not be limited to identification of probing depths, mobility, gingival recession, mucogingival problems, and furcation invasions as well as appropriate radiographs. If two or more sextants score Code 3, a comprehensive full mouth examination and charting is indicated. Should therapy be indicated and performed, a comprehensive examination is necessary to assess the results of therapy and need for further treatment.

**Code 4:** A comprehensive full mouth periodontal examination and charting is necessary to determine an appropriate treatment plan. This examination and documentation should include but not be limited to identification of probing depths, mobility, gingival recession, mucogingival problems, and furcation invasions as well as appropriate radiographs. It is probable that complex treatment will be required. Should therapy be indicated and performed, a comprehensive examination is necessary to assess the results of therapy and need for further treatment.

**Code *:** If an abnormality exists in the presence of Codes 0, 1, 2, specific notation and/or treatment for that condition is warranted. If an abnormality exists in the presence of Code 3 or 4, a comprehensive periodontal examination and charting is necessary to determine an appropriate treatment plan.

**Prosthodontic classification (circle) ACP1  ACP2  ACP3  ACP4** – the ACP classification system by McGarry et al can be found by following this link:


**Caries risk assessment (from completed form):** LOW  MEDIUM  HIGH -

**DIAGNOSES, INCLUDING DIFFERENTIAL DIAGNOSES:** - for every problem listed, please offer a diagnosis or differential diagnosis and relate it directly to the problem.

**TREATMENT OPTIONS AND COSTS:** For each problem, offer every reasonable treatment option, with alternatives, available, including no treatment. For each option, propose a prognosis, either good, fair or poor, (perio also adds questionable and hopeless), and an estimated cost range for each option offered. It is helpful to use a worksheet at this stage to formulate your treatment options prior to recording on the form.

**FINALIZED SEQUENCED TREATMENT PLAN, COSTS AND DATE COMPLETED:** Treatment plans are divided into three broad phases, 1, 2 and 3.

**ALL PLANNED TREATMENT MUST BE ENTERED INTO AXIUM AS ‘P’**
Phase 1, management of diseases and disorders, includes, in order and as necessary:

- Consultation with the patient’s physician
- Other necessary treatment considerations for systemic disease, such as premedication needs, stress and fear management.
- Acute treatment – addressing urgent care needs for pain or infection
- Treatment of urgent chief complaint
- Disease management – patient education re: caries and periodontal disease; caries risk assessment; medical management of caries; address parafunntional and other habits
- Removal of hopeless teeth
- Caries control, provisional direct restorations
- Remove/replace defective restorations
- Initial periodontal therapy – scaling and root planning
- Oral Hygiene instructions – OHI
- Occlusal adjustment
- Endodontic therapy in cases of pulpal pathology
- Placement of definitive direct restorations (alloy, composite, GIC)
- Placement of other provisional restorations (partial or full coverage) to allow for stabilization of teeth

**REASSESSMENT OF PHASE ONE TREATMENT IS MANDATORY TO DETERMINE SUCCESS AND FEASIBILITY OF PROCEEDING TO PHASE 2.**

Phase 2 – Major Rehabilitative Procedures: Following the evaluation of Phase one, and after determining the success of initial therapy and the stability of the patient’s dentition, phase two can be addressed. Often times, procedures planned in Phase two will be dependent on the successful outcome of phase one treatment. Less successful results in phase one will dictate less complex treatment, if any at all, to be performed in phase two.

Major rehabilitative procedures are carried out in phase two. This is in the form of definitive treatment, which includes, in order and as necessary:

- Periodontal surgery and other advanced periodontal therapy
- Occlusal stabilization through various means
- Orthodontic or orthognathic treatment
- Elective removal of asymptomatic teeth
- Elective Endodontic treatment
- Definitive restoration of individual teeth – endodontically treated and other key teeth prioritized
- Fixed and removable prosthodontics for replacement of missing teeth, including esthetic dentistry.

**POST-TREATMENT ASSESSMENT OF PHASE TWO PROCEDURES.**
Phase 3 – Maintenance: Determination of type and frequency of periodic recall visits, including examinations and supportive periodontal therapy. It is important that a recall schedule be established, and that the patient understands the obligation of continued care. For new patients, or for those that require new comprehensive treatment plans, for perio purposes, NPP (New Periodontal Patients) (Previously called PSR Patients)

CLASSIFICATION OF NPP

- NPP0, NPP1, NPP2, NPP3, NPP4
  - Based on Periodontal Scoring Record (PSR) Classification
  - Fee to include Initial Therapy and 1 mo re-evaluation
  - When re-eval exam & treatment is completed, disposition options include:
    - NPP Additional Appointment (additional charges to apply)
    - Put on SPT (at designated monthly interval 1, 3, 6, 9, 12 mo)
    - Refer to Graduate Periodontics

- SPT (Supportive Periodontal Therapy) Patients
  - New and existing patients who require ongoing SPT to maintain periodontal health
    - SPT0, SPT1, SPT2, SPT3, SPT4 , based on PSR Classification
    - SPT INTERVALS - 1 mo, 3 mo, 6 mo, 9 mo, 12 mo
      - Individualized according to treatment needs
      - Interval is determined on day that SPT treatment is completed
      - Interval is entered into Axium when SPT scaling is complete
      - Axium dropdown menu options will include:
        - SPT0-1mo, 3mo, 6mo, 12mo (12 mo default)
        - SPT1-1mo, 3mo, 6mo, 12mo (6 mo default)
        - SPT2-1mo, 3mo, 6mo, 12mo (6 mo default)
        - SPT3-1mo, 3mo, 6mo, 12mo, NPP3, Refer Grad Perio (3 mo default)
        - SPT4-1mo, 3mo, 6mo, 12mo, NPP4, Refer Grad Perio (3 mo default)

INFORMED CONSENT: Although a treatment plan has been formulated and the procedures with costs has now been signed by the patient, the process of informed consent must be formalized to ensure that there is a clear understanding by the patient of the proposed treatment risks and costs involved. It is suggested that the patient completes the informed consent document in their own words, as it is often surprising to discover that there is not a clear understanding of the situation by the patient. If the patient cannot complete the form on their own or in their own handwriting, the dental student may assist with this. Only then should treatment be commenced.

APPOINTMENT SCHEDULE: This provides the both the student and the patient a roadmap for treatment – that there is a clear understanding of the steps involved in treatment and the time
needed for treatment. This way, the patient will have a clear understanding of what is required in the process, and will hopefully not have any unrealistic expectations in the timeline.

**TREATMENT EVALUATION:** As each phase of treatment is completed, a reflection on and an evaluation of the finished treatment should be recorded. This is not only good record keeping policy, but is a requirement of the accreditation process.