3-Appointment Dentures: Impressions, Jaw Relations/Esthetic Preview, Delivery

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I. Identifying and Managing Patient Expectations
   - understanding, modifying, accepting conditions (patient priorities, education, finances, oral hygiene)
   - listen, respond and encourage (removable prosthodontics is the most reversible service we can offer)
   - use photography to record existing conditions, communicate esthetics, plan the case
   - be able to capture diagnostic casts and assemble casts on an articulator using Craddoch mounting
   - “Quick Six” esthetic preview; record mould, shade & photograph

II. Single-visit, PolyVinylSiloxane (VPS) impressioning (Massad Trays, Metal Trays, Wagner Trays)
   - Super Fast Set Aquasil Ultra: Rigid [for borders], Monophase, Low Viscosity and XLV
   - Splash Max Fast-Set, Rigid, Medium, Low, Ultra Low Viscosity
   - Palpate/probe the vibrating line, identify landmarks and record tissue displacement

III. Casting & Trimming Master Models, Creating Record Bases
   - Type III Stone (Laboratory Buff); avoid inverting during setting, create land areas
   - Carve posterior palatal seal in master model
   - Construct wax record bases (Type IV Trubyte Baseplate Wax with Bite Rim)

IV. Mounting Master Models using Bonwill’s Triangle (Craddoch mounting)
   - Midline matched to mounting table
   - Foixline matched to mounting table
   - Occlusal Plane consistent with ala-tragus line
   - Incisal pin set to neutral allowing plus or minus 2 mm
   - Trial OVD (base of the nasal midline to submental midline should equal sum width of knuckles 1-4)
   - Use sibilant sounds to confirm closest-speaking space, use fricative sounds for maxillary anteriors
   - Registration of mandibular position (tongue-guided centric)
   - Capture Maxillo-mandibular relationship (MMR) at the vertical dimension of occlusion (+/- 2 mm)
   - Mount models in office or call lab for pick-up; do not mail wax MMR

V. Trial Insertion vs Use of Templates
   - Confirm MMR prior to evaluating anterior esthetics
   - Confirm closest speaking space, anterior tooth position
   - Evaluate anterior esthetics (mould, position, shade, customization, high-smile line (minimal pink)
   - Wax trial dentures/templates can be mailed to lab, on master models, removed from articulator
   - Portrait IPN with Linguinalized Occlusion 33/10
   Template Examples (with patient photos at lip rest, full smile and profile):
     “quick six”, paper or acetate tooth forms on wax rim, Visionaire Dental Shells, wax pre-forms set
     10 mm off the HIP plane & incisors 5mm facial to incisive papilla, rapid prototype mock up with
     anterior teeth set in wax
   Templates are very good for communicating esthetics however they are less reliable than record bases for
   registering and verifying occlusal vertical dimension (OVD) and maxilla-mandibular relations (MMR)

VI. Delivery
   - Evaluate fit (intaglio) and adjust pressure spots
   - Evaluate border extensions
- Mark and equilibrate occlusion (maintain lingualized occlusion), focus on mandibular teeth
- Advise patient that ‘retention’ evaluation requires at least 24 hours wearing

VII. **Post-delivery instructions**
- Is it OK for patients to sleep in dentures? (Yes, if they’re clean and well fitting)
- Is it OK to advise use of denture adhesives? (Yes, 2-3 pea sized drops, Zinc is OK)
- Have you discussed implant stabilization of complete dentures (risks and benefits)?
- Is brushing better than soaking? (Yes, soft bristle brush; microwave for 30 sec in 8 oz bleach solution)
- Have you discussed homecare (1 part household bleach in 10 parts water, 45 minute soak)
- Distilled white vinegar (full strength) 1X/week, 45 minute soak, removes calculus
- Do you include an extra maxillary 1X6 card of teeth with each delivered case?

VIII. **Digital Dentures**
- AvaDent (single appointment impressioning with MMR, try-in(?), delivery of milled-base denture)
- DENTCA (single appointment impressioning with MMR using cut-back impression, try-in of digital mock-up, processed denture is copy of mock-up

My experience with digital dentures: fit is good, NOT NECESSARILY BETTER than press pack (conventional) dentures, OCCLUSION NOT AS GOOD as conventional denture, ESTHETICS NOT AS GOOD as conventional denture, digital denture price is HIGHER than conventional denture.

Illustrations:

“Quick Six” Portrait IPN denture teeth arranged on wax archform for esthetic preview

Visionaire Dental Shells for esthetic preview

Rapid prototype, anterior teeth arranged in wax (Glidewell Lab) for combining try-in with MMR
Lip-meter helps determine tooth length & size

A wax 'template' using denture teeth planned for use in the final prosthesis. Teeth were arranged using lip meter measurement, HIP plane, and midline, prior to maxillo-mandibular relation records (MMR).

A Craddoch mounting eliminates need for a facebow. The midline, occlusal plane and incisors establish the relationship of the models to the rotational axis of the articulator. On average the hammular notches and incisive papilla lie 10 mm above and parallel to the occlusal plane.

AvaDent AMD device used to assess anterior tooth position and record MMR for digital dentures can also be used for conventional dentures by using the device with master models.
Impressions, Model Work, Articulation

Single appointment complete denture impressioning in perforated stock plastic tray, border molded with high viscosity VPS followed by medium viscosity VPS and washed with low viscosity VPS.

A two pour technique is used. First the impression is cast and left inverted until stone begins to set, then each impression is inverted onto a model base. Sufficient base extension assures a land area reference.

Trimmed master models, hard, extra-tough baseplate wax record bases, contoured soft wax rims. Minimal information needed to mount models includes anterior occlusal plane (Fox line), midline, and tongue-guided, repeatable closure position at the occlusal vertical dimension. Wax baseplate MMR is accurate for a limited time. This technique requires mounting on the articulator immediately.