

Learn how the process of care model can apply to dental implants and empower decisions for providing quality care for clients. Starting with assessing the need for implants, the process covers documentation, planning and implementation and finally evaluation, using evidence-based protocols to assess implants.

**Upon completion of this course the learner will have acquired:**

- An increased awareness and understanding of the consequences of edentulism
- The ability to analyze and identify opportunities for dental implants
- Increased knowledge of types of implants and implant parts with prosthodontic options
- An increased understanding of the value in applying the fundamentals of the process of care with therapeutic communication for short-term and long-term goal setting with our clients
- Increased knowledge of assessment skills required to evaluate the pre-implant client
- The ability to identify risk factors that affect implant success
- Increased knowledge of evidence based protocols in monitoring and maintaining dental implants

**The Process of Care Applies:**

**Assessment**

- We need to understand the importance of assessing for the need of implants
- Remaining current on the assessment of implants

**Documenting**

- Identify considerations and risk factors
- Use protocols and checklist to document the assessment of implants

**Planning**

- Educating, collaborating, facilitating
- Discussing expectations of procedures and outcomes

**Implement**

- Facilitating, monitoring, supporting our clients implants
- Development of client specific oral hygiene regimens and interval recommendations
- Maintaining implants via probing, radiography, instrumentation, polishing

**Evaluation**

- Evidence based protocols to assess implants
- Recognize, identify and acknowledgement of a problem
- Remaining current ourselves

Most Babies Born Today May Live Past 100 \* The trends included in the article show that many Western nations will have most people living past 100, with half of all babies born in 2007 in the U.S. likely to live to age 104. The Lancet/ABC News

What % of Canadians over age 65 are edentulous?

**Effects of Edentulism**

- Lost of bone in the first year 25% in width and 4mm in height
- Exposure of the mandibular nerve
- Thickening of the tongue
- Thinning of the soft tissue
- Deterioration of the TMJ

**Purpose of Dental Implants -to support planned prosthetics**

**Indicators for Implants**

- We are living longer
- Cracked teeth
- Edentulous client dissatisfied
- Issues of removable prosthodontics
- Documented advantages of implant supported prosthodontics
- Psycho –social stigma of tooth loss
- Increased demand from clients
- Edentulous client dissatisfied
- Improved esthetic options
- Improve digestion
- Improve self esteem
- Improve taste
- Improve speech

**What Prompts Implants**

**Crisis**

**Periodontal**

**Endodontic**

**Prosthodontics**

**Implant Discussion Points**

- Biocompatible materials
- Artificial roots
- Function and feel like your own teeth
- No dietary restrictions
- No esthetics issues like clasps showing and/or adhesives needed
- No covered palate – does not change taste and speech
- No soft tissue irritation

**Educating our clients**

**Fear**

- Pain needs to be addressed
- Discuss during the procedure there are options
- Post surgical pain management protocols that will manage your discomfort

**Cost**

- The fee(s) for treatment is based on a number of factors
- A completed examination & review of diagnostic records are required
- Creation of an individualized treatment plan with your specific needs

**Time**

- Discussing the process/time lines
- Individualized evaluation by the surgical dentist
- What prosthesis is available in the interim

### **Discussion points**

- Maintains and supports facial structure
- 95-98% success rate
- 4-8 month procedure
- Cost is comparative to a fixed tooth borne bridge
- No destruction of adjacent teeth
- Re-absorption of bone is substantially slower

### **The RDH Assessment - Assess, Evaluate, Document**

- Client expectations
- RMH -General health conditions medications
- Review dental history
- Oral health, oral hygiene
- Stress level
- Smoking
- Availability of bone
- Perio status of adjacent teeth
- Restorative status

### **Red Flags for Dental Implants**

- Heart Health
- Healing Potential
- Bone Health
- Drug interactions
- Allergies to medication
- Excessive bleeding

### **Knowing What is Possible**

#### **Types of Implants**

Root form                      Blade                      Subperiosteal

#### **Types of Prosthetic**

- Cement Retained Crown/Bridge
- Screw Retained Crown/Bridge
- Overdenture
- Superstructure

#### **Presenting Options**

- Doing nothing and leaving the space may be an option

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### **The Dental Implant Team**

#### **Client**

#### **Restorative Dentist / Denturist**

#### **Implant Manufacturer**

#### **Laboratory Technician**

#### **RDH**

- A strong understanding of rationale and protocols for treatment of lost or missing teeth
- Understand the current and future needs of your client
- Risk assessment and analysis
- Establish optimal oral health
- Set interval and oral hygiene goals
- Be knowledgeable in the area of implant assessment and documentation
- Understand the signs and symptoms of ailing implants
- Consistent evaluation, recording and monitoring of implants
- Utilize protocols for implant maintenance

### **Dental Implant Materials**

#### **Titanium**

Strong

Biocompatible

Osseointegrative

#### **Zirconia**

Hypoallergenic

White

Radioactive isotopes

[http://www.dentaltribune.com/articles/specialities/implantology/9139\\_zirconium\\_dioxide\\_implant\\_solutions\\_a\\_metal-free\\_option.html](http://www.dentaltribune.com/articles/specialities/implantology/9139_zirconium_dioxide_implant_solutions_a_metal-free_option.html)

### **Implant Parts**

- Implant Body -part that is within the bone
- Abutment-part that screws directly into the implant / prosthetic is attached
- Healing abutment or screw cover- seals the implant to protect and prevent soft tissue from invading the implant
- Prosthetic
  - Cement Retained Crown/Bridge
  - Screw Retained Crown/Bridge
  - Overdenture
  - Superstructure

### **Surgical Evaluation**

- Soft Tissue evaluation
  - grafting is a pre-implant procedure
- Bone Augmentation Evaluation
  - Origin of material                      Human                      Bovine                      Synthetic

### **Surgical Process**

#### **Bone Level**

- Primary choice in the esthetic zone (anywhere)
- Placed at the crest of the bone or slightly below

#### **Tissue Level**

- Most frequently done in the posterior
- Placed at the level of the crestal bone with the collar exposed to the tissue

Post Care

- Warm up post-surgical brush with warm water prior to use.
- Warm salt or baking soda rinses (1/4 to 1 tsp in 6oz.)

Osseointegration: The direct contact between living bone and a functionally loaded dental implant surface without interposed soft tissue at the light microscope level. The clinical manifestation of Osseointegration is absence of mobility.

Perimucosal seal: Junctional epithelium that separates the connective tissues from the outside environment surrounding a dental implant

Peri-implant mucositis: Reversible inflammatory reaction in the soft tissues surrounding a dental implant that can lead to bone loss.

Peri-implantitis: Inflammatory reaction in the hard and soft tissues surrounding a dental implant that results in bone loss.

**Radiographic Protocols**

- 1st Pa at prosthetic insert appt.
- 6-8 m later for comparison
- Repeat at 1 year and then yearly
- At 1 year mark up to 1.5mm of boneloss is acceptable
- Full denture cases radiographic monitoring after the first year is every 3 years

**To Probe or not to Probe?**

- Indicated if bleeding or exudate
- Radiographic changes
  - During the first year up to 1.5mm of bone loss is considered acceptable
  - .2for the next 5 years
  - If you find bone loss on an x-ray then probe

**Ultrasonics**

- All are used at a very low setting
- Specialty tips available for use around implants
- The tip should never be placed directly on the implant

**Changes from Baseline** – Indicator for investigation and collaboration

- Patient Complaint
- Inflammation, Bleeding, Exudate
- Radiographic bone loss
- Increased pocket depth
- Mobility
- Restoration that needs replacement

**Chlorhexidine Irrigation**

- Reduced biofilm significantly and BOP

Felo, E. A. (1997, Apr). *Effects of subgingival chlorhexidine irrigation on peri-implant maintenance*. Retrieved from [www.ncbi.nlm.gov/pubmed/9545899](http://www.ncbi.nlm.gov/pubmed/9545899)

### **Implant Instruments**

- Know where you are instrumenting Use dental aids if removing plaque and biofilm
- Dry area
- If using a dental implant recommended instrument place the blade at the base of the deposit
- Use short strokes
- Use overlapping strokes
- Avoid excessive pressure
- Avoid anything that will scratch (abrasive polishing paste or powder, instruments, irrigation tips, ultrasonics)
- Trauma or pressure to the perimucosal
- Avoid contact with the abutment

### **Polishing**

- Pastes must be APF-free and Pumice-free
- Polishing around the implant first will allow greater visibility to aid in the assessment of the dental implant

### **Layer Your Learning**

Periodontal and Periimplant Maintenance: A Critical Factor in Long-Term Treatment Success  
[www.parisandshumakerperio.com/editor/assets/D78FBEE7-D133-497C-B1DF-5FC3CF0044B9.pdf](http://www.parisandshumakerperio.com/editor/assets/D78FBEE7-D133-497C-B1DF-5FC3CF0044B9.pdf)

*Implant Maintenance Technique and Tools for the Effective Debridement of Artificial Anatomy*  
[www.dimensionsofdentalhygiene.com/ddhright.aspx?id=10235](http://www.dimensionsofdentalhygiene.com/ddhright.aspx?id=10235)

Implant Maintenance Checklist Hu-Friedy & ADIA  
[www.hu-friedy.com/products/index.php/mastercontrol/index/file/id/14](http://www.hu-friedy.com/products/index.php/mastercontrol/index/file/id/14)

Association of Dental Implant Auxiliaries (ADIA) a component of the ICOI