Short, Sweet and Simple Solutions for Your Practice
Three Mini Courses:
“Game Changers”
“Bulk Me Up!”
“Glue So You Can Chew It”

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Mini Lecture #1
“Game Changers”
Products to Improve Your Practice
Without Breaking Your Budget

“GAME CHANGERS”
PREVENTIVE and AESTHETIC

Power of Sour and Sip All Day
www.mndental.org

• Great posters from the Minnesota Dental Association
• Excellent discussion points for young patients and their parents
• Frame and hang in your hygiene ops

Sheer White Strips
www.caogroup.com

• 20% Carbamide Peroxide
• Ultrathin film
• Exceptional fit and stability
• Multiple outlets: Henry Schein, Amazon, individual dental office websites, etc…
SuperSmile Toothpaste
www.supersmile.com

- Contains no silica...uses Calprox which is a proprietary formula of calcium and peroxide
- Excellent for tough, challenging extrinsic stains such as chlorine from swimmers...
- Online, through your office, boutiques and spas, QVC, etc...

Aligning of Teeth

- Full orthodontics
- Six Month Smiles
- Invisalign
- ClearCorrect
- Smile Direct Club
- Minor Tooth Movement (MTM)

Minor Tooth Movement (MTM)
www.essix.com

- A solution for the “social six”
- Moving a limited number of teeth – usually 1 to 4 teeth – a distance of 2-3mm within the arch. Plus more involved cases as well.
- Requires space within the arch for the teeth to move into
- Done using clear aligners
- No “bumpers” or composite on teeth
- Two options: Can be fabricated in-office or using their treatment planning team and MTM Service Center!
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“GAME CHANGERS” POTPOURRI OF PRACTICE BUILDERS

1 ½” Indianhead Mirror
www.miltex.com
• 1 ½” front face mirror (twice the size of a normal mirror)
• Amazing expanded view
• Especially great for maxillary arch – can see canine-to-canine without moving the mirror
• Available through most dental dealers

Mini Lecture #2
“Bulk Me Up!”
Using Bulk Fill Composite Materials and Techniques for Predictable Posterior Results

So much to choose from!
• Cast Alloy
• Lithium Disilicate
• PFM
• Feldspathic Porcelain
• Pressed Ceramic
• Aluminous Oxide
• Foil Crown
• Giomer
• Zirconia
• CAD/CAM
• Milled
• Fiber-reinforced
• Amalgam
• Composite
• Alkaline Glass
• Glass Ionomer
• Compomer
• Bioactive

Stress vectors created during light cured polymerization

Shrinkage of the composite is a volumetric change and places stress within the resin material and at the bond interface during polymerization.
**C-factor**

- "Configuration Factor"
- Relation of bonded to unbonded surfaces
- The greater the number of bonded surfaces the greater are the effects of polymerization shrinkage stress

Feilzer et al., 1987

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**Traditional and Resin Modified Glass Ionomers as Liners/Bases**

- Serves as a dentin replacement
- Coefficient of thermal expansion similar to dentin
- Bonds to dentin, enamel, and composite
- Minimizes technique sensitivity questions associated with Total-Etch technique
- Examples: Fuji II LC, Fuji Filling LC, Vitrebond, ChemFil Rock
- Use with a "Sandwich Technique"

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**Closed Sandwich Technique**

- Composite resin
- Glass-ionomer
- (enamel remaining at gingival margin)

From Hewlett ER and Mount GJ, J Calif Dent Assoc, 2003

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**Open Sandwich Technique**

- Composite resin
- Glass-ionomer
- (no enamel at gingival margin)

"Most secondary caries occur at the gingival margin, regardless of whether it's Class II, III, IV or V."


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**How do the bulk fills “stack up”?**

- An ADA study tested 12 composites for various physical properties:
  - Depth of cure
  - Volumetric shrinkage
  - Polymerization shrinkage stress
  - Flexural strength and flexural modulus
  - Fracture toughness and fracture work
  - Water sorption and solubility
  - Shade and color stability
  - Radiopacity


**“Recipe for Success” Posterior Techniques**

- **“CLASSIC” SEMI-BULK FILL**
- **“CONTEMPORARY” SEMI-BULK FILL**
- **“TOTAL” BULK FILL**

**Mini Lecture #3**

“Glue It So You Can Chew It”
Finding the Best Cementation Choices for Today’s Indirect Restorations
Indirect Ceramic Material Options

- Glass
- Pressed Glass
- Leucite-reinforced Glass
- Lithium Disilicate
- Alumina (Aluminous Oxide)
- Zirconia (Zirconium Oxide)

Flexural Strength of Ceramic Materials

- Feldspathic (60-70 MPa)
- Leucite Reinforced (120 MPa)
- Lithium Disilicate (360-500 MPa)
- Glass-Filled (160-650 MPa)
- Alumina (800-700 MPa)
- Zirconia (1100-1200 MPa)

Occlusion

Amount of tooth left

Scope of restorative

Cement or bond

Esthetics

How do I decide what material to use???

Cementation Selection

There are more than 100 permanent cement brands available on the market...

- Conventional
- Adhesive
  - Zinc Phosphate
  - Resin
  - Glass-Ionomer
  - Polycarboxylate
- Self-Adhesive
- RMGI Cements
- ZOE

Categories of Cements

Adhesive Cements

Self-Adhesive Cements

Conventional Cements
CASE ONE: “Terri”

- 40 year old female
- Medical hx: Non-contributory
- Dental hx: Mx retrognathic growth pattern corrected by Mn advancement with rigid fixation
- TMJ/TMD: Normal
- Periodontal: WNL
- Soft tissue and oral mucosa: WNL
- Current status: In the process of finishing orthodontic tmt. Anterior teeth exhibit severe wear.
- Patient’s chief concern: “I want to have a nice smile!”

CASE TWO: “Molly”

- First visit to our office at 3 ½.
- Med Hx: Non-contributory
- Dental Hx: Noted 1st right lateral congenitally missing and X-bite on right side.
- Monitored growth and referral to orthodontist – #7 and #10 also congenitally missing.
- Ortho tmt completed at age 12.
- Current status: In retention. Seeking options for transitional restoration until growth completed and dental implants can be placed.

CASE THREE: “Elisabeth”

- 25 year old female
- Medical hx: Heart murmur/pre-med Amox. Allergic to Augmentin and shell fish
- Dental hx: Trauma to teeth # 8 and 9 eight years prior with endodontic treatment.
- TMJ/TMD: Normal
- Periodontal: Gingival recession Mx left - # 11 and # 12 specifically.
- Soft tissue and oral mucosa: WNL
- Current status: External resorption of both # 8 and # 9
- Patient’s goal: Evaluate options to replace both central incisors

CASE FOUR: “Joe”

- 59 year old male
- Medical hx: Non-contributory
- Dental hx: Lingual and incisal erosion of Mx anteriors; has been seeing us regularly for years, but only “patching” as needed
- TMJ/TMD: Normal
- Periodontal: Recession Mx/Mn arches, uneven gingival heights
- Soft tissue and oral mucosa: WNL
- Current status: Anterior teeth exhibit severe erosive wear, some on posteriors, worn restorations
- Patient’s goal: “It’s time to fix my teeth and improve my smile”

This is what they are looking for!

THANKS!
Email me at ddssmile@aol.com for the complete slide deck