



Gordon and Paul's Top 10 Concepts, Techniques, and Products

Gordon and Paul's Clinical Bottom Line: *Clinicians Report* in-house staff, field evaluators, and owner evaluators observe hundreds of new products and concepts each year. Only about one out of every five or six of these evaluations identifies a concept, technique, or product that is faster, easier, better, or less expensive than previously available options. The following ten top concepts and techniques represent just a few of the many topics that could have been included. Gordon and Paul consider all of them to be useful for you and your patients.

Experienced clinicians have favorite products or techniques that they have seen work well in practice. When these concepts have been proven by both research and clinical observation, they become indispensable.

The following concepts will help ensure your practice is up-to-date and attractive to patients, and that you are offering optimum service to the public. Gordon and Paul would use all of the products listed in this

section. Usefulness as well as cost were considered when choosing items to include in this list.

This special CR feature identifies some of the most important concepts, techniques, and products of the recent past as observed and evaluated by Gordon with Paul Child, CEO.

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Small Diameter Implants



Digital Radiography



Class II Resin-based Composites



Bone Regeneration and/or Ridge Preservation



Whitening (Bleaching) Teeth



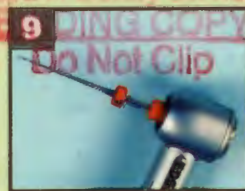
CAD/CAM



Double Arch Impression



Ceramics



Rotary and Reciprocal Endodontic Therapy



Magnification with Headlamp

Composite Polishing—State of the Art

Gordon's Clinical Bottom Line: All restorative dentists are looking for fast and easy methods to produce the smoothest possible surface on resin-based composites. Burs, disks, strips, wheels, and pastes are used depending on clinician preference. The initial finish and polish is under the control of the clinician and varies from extremely smooth and shiny to irregular and dull. The long-term retention of smoothness is the responsibility of resin manufacturers, and it varies significantly among brands.

Numerous products are currently promoted for intraoral polishing of composite restorations. Choices include disks, strips, abrasive impregnated rotary tools of various shapes, brushes with abrasive bristles, and polishing pastes. Systems may be multi-step, progressing from coarser to finer grit, or single-step using the same tool from start to finish.

Finishing generally consists of using fine diamonds or multi-fluted carbides to remove excess restorative material to contour the surface.

Polishing removes very little material in comparison to finishing and primarily smooths the surface. Some systems include both finishing and

polishing instruments. This report focuses on polishing instruments. CR conducted a clinical and laboratory evaluation of polishing systems to answer key clinical questions, including:

- Do single-step polishers work as well as multi-step systems?
- Do abrasive impregnated polishers work as well as disks?
- Is polishing paste required to achieve the highest shine?
- Which systems quickly and reliably produce a good polish?

The following report answers these questions and provides clinical tips for successful polishing.

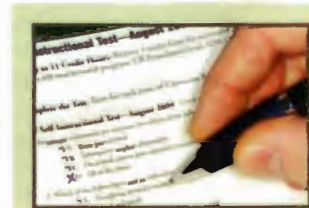
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Gordon and Paul's Top 10 Concepts, Techniques, and Products (Continued from page 1)

1. Small Diameter Implants

Root form implants have been the most important innovation in dentistry since the air rotor nearly 50 years ago. Millions of people globally have need of retention and support for removable prostheses, crowns, or fixed prostheses. However, many of them do not have adequate bone quantity in which to place root form implants 3 mm or over in diameter, and, for financial or health reasons, they cannot have bone grafting. Small diameter "mini" implants serve these patients. Small implants, ranging from 1.8 mm to 2.9 mm in diameter, have now proven themselves capable of supporting complete dentures, removable partial dentures, fixed prostheses, and even some single tooth replacements. Although criticized by some, the research is supportive of these implants with proper treatment planning and placement.

Examples of top popular and effective brands:

- Atlas by Dentatus, www.dentatus.com
- ERA Implant System by Sterngold, www.sterngold.com
- MDI by Imtec a 3M company, www.imtec.com

2. Digital Radiography

The practice management and visualization benefits of digital radiography are numerous. The time saved during procedures such as endodontics, implant placement, and simple diagnosis allow clinicians to do more, faster. Advancements in imaging are moving toward extraoral imaging for diagnosis including extraoral bitewings and clearer panoramic images. Cone beam radiography allows accurate placement of implants and fabrication of easy-to-use surgical guides. These advantages are provided at lower radiation doses with improved patient care.

Examples of top digital intraoral imaging products:

- Dexis by Dexis, LLC, www.dexis.com
- Schick by Schick Technologies, Inc., www.schicktech.com
- Kodak by Carestream, www.kodak.com

Examples of top digital extraoral imaging products:

- Galileos by Sirona Dental Systems, www.sirona.com
- i-CAT by Imaging Sciences International, www.imagingsciences.com
- ProMax by Planmeca, www.planmecausa.com

3. Class II Resin-Based Composites

Competency in class II resin placement is a major practice need, and most patients greatly appreciate or demand tooth-colored restorations. These relatively low-revenue restorations need to be accomplished rapidly, at high quality, and with non-sensitive predictability. Materials are now available that rival the acceptability of amalgam for small to moderate sized restorations. All major resin-producing companies have acceptable resins for class II use.

Examples of top effective products for class II: (Numerous other effective and new products are available; see Clinicians Report July 2009 for full report)

- Desensitizers—
 - Gluma by Heraeus, www.heraeus-kulzer-us.com
 - MicroPrime G by Danville, www.danvillematerials.com
- RMGI liners—
 - Fuji Lining Cement by GC America, www.gcamerica.com
 - Vitrebond by 3M ESPE, www.3mespe.com
- Low sensitivity bonding agents—
 - Brush & Bond by Parkell, www.parkell.com
 - Clearfil SE by Kuraray, www.kuraraydental.com
- Matrices—
 - Composi-Tight 3D by Garrison Dental Solutions, www.garrisondental.com
 - Greater Curve Tofflemire Band by Greater Curve, www.greatercurve.com
 - V3 Ring Sectional Matrix by TrioDent, www.triodent.com
- Restorative materials—
 - Estelite Sigma by Tokuyama, www.tokuyama-us.com
 - Filtek Supreme Plus by 3M ESPE, www.3mespe.com
 - Renamel Nano by Cosmedent, www.cosmedent.com
 - Venus Diamond by Heraeus, www.heraeus-kulzer-us.com

4. Bone Regeneration and/or Ridge Preservation

The majority of simple extractions are completed by general dentists, yet the majority of ridge preservation techniques, including subsequent implant placement, are completed by specialists. This simple, revenue-generating procedure is far too often overlooked by clinicians due to a lack of knowledge about what products to use and how to complete the procedure and/or a lack of patient education. Informed consent of patient options for socket preservation is now standard of care. There are many seminars and publications (including Clinicians Report) that offer the necessary information for providing this indispensable service.

Examples of top bone substitutes:

- Bio-Oss (xenograft) by OsteoHealth, www.osteohhealth.com
- Bioplast (alloplast) by Kerr, www.kerrdental.com
- Foundation (xenograft) by J. Morita, www.jmoritausa.com
- GenMatrix (CaSO₄) by Innovative Implant Tech, www.iitweb.com
- MinerOss/Grafton DBM (alloplast) by BioHorizons, www.biohorizons.com
- OraGraft (alloplast) by LifeNet Health, www.lifenet.org

Examples of top membranes/instruments:

- Cytoplast PTFE (non-resorbable) by Osteogenics Biomedical, www.cytoplast.com
- Mem-Lok (resorbable collagen) by BioHorizons, www.biohorizons.com
- Luxators by HuFriedy, www.hufriedy.com; or by Salvin, www.salvin.com
- Proximators by Karl Schumacher, www.karlschumacher.com

5. Whitening (Bleaching) Teeth

Every dentulous patient should be offered the opportunity to elect to have tooth whitening before starting restorative treatment. Most accept the procedure as an entry into esthetic dentistry. More elective procedures follow as patients become more conscious of their smiles. At-home whitening (15% carbamide peroxide) is more popular than in-office whitening because of the minimal interruption of office activity and its effectiveness. Lights remain an ineffective adjunct to the procedure. Some dentists prefer an in-office start followed by at-home bleach.

Examples of top effective and popular at-home and in-office products:

- Opalescence by Ultradent, www.ultradent.com
- Day White by Discus Dental, www.discusdental.com

6. CAD/CAM (Computer Aided Design/Computer Aided Manufacturing)

CAD/CAM is finally becoming an acceptable part of the dental industry with the success of chairside digital imaging and restoration fabrication. The digital revolution is reaching into almost every discipline within dentistry. However, its acceptance and use still lags far behind that of other industries such as medical, automotive, and even the dental laboratory industry. Automation and new digital technologies improve efficiency, accuracy, and patient care through improved techniques.

Examples of top effective chairside systems:

- Cerec AC by Sirona Dental Systems, www.sirona.com
- E4D by D4D Technologies, www.d4dtech.com
- i-Tero by Cadent, Inc., www.cadentitero.com
- Lava COS by 3M ESPE, www.3mespe.com

Examples of top effective dental lab systems:

- Atlantis Components by Astra Tech Dental, www.astratech.com
- Dental Wings/Envision TEC by Zahn Dental, www.henryschein.com
- Laserdenta by Laserdenta AG, www.laserdenta.com
- NobelProcera by Nobel Biocare, www.nobelbiocare.com

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7. Double-Arch Impression Techniques

Although this concept was probably criticized while you were in school, years of research have confirmed the ability of properly used double-arch impressions to produce one or two units of restorations more adequately, faster, and with fewer adjustments than impressions made with full-arch impressions. Additionally, clinical overhead is reduced by not having to make an opposing arch impression and an interocclusal record.

Requirements:

- Acceptable preoperative occlusion/removal of objectionable disharmonies
- Impression includes canine, and tray does not contact tooth structure
- Wide tray without high sides on the tray
- Thin non-water absorbent interocclusal wafer
- Thin distal connector

Examples of top effective brands:

- Premier Sideless Triple Tray by Premier, www.premusa.com
- Quad Tray by Clinicians Choice, www.clinicianschoice.com



8. Ceramics

The widespread demand for esthetic restorations with higher strength has resulted in many new innovations in chairside and laboratory fabrication of beautiful and functional restorations. Zirconia-based restorations are gaining more confidence while newer materials made of lithium disilicate and leucite-reinforced porcelain are showing great promise. Porcelain fused to metal restorations continue to dominate the dental industry, but newer technologies, improved ceramic formulations, increasing metal costs, and potential conservative preparations with onlays are driving a shift to these "all-ceramic" restorations.

Examples of top effective zirconia products:

- Cercon by Dentsply Ceramco, www.ceramco.com
- Everest by Kavo, www.kavousa.com
- IPS e.max ZirCAD by Ivoclar Vivadent, Inc., www.ivoclarvivadent.us
- Lava by 3M ESPE, www.3mespe.com
- Vita YZ by Vident, www.vident.us.com

Examples of top effective CAD/CAM or pressed products:

- IPS e.max CAD/Press by Ivoclar Vivadent, Inc., www.ivoclarvivadent.us
- IPS Empress Esthetic/CAD by Ivoclar Vivadent, Inc., www.ivoclarvivadent.us
- Noritake CZR by Zahn Dental, www.henryschein.com
- Pentron 3G/OPC by Zahn Dental, www.henryschein.com
- VITABLOCS Mark II by Vident, www.vident.us.com



9. Rotary and Reciprocal Endodontic Therapy and Endodontic Filling Materials

Endodontic therapy can be effective and predictable when accomplished well with the best materials. Although unpopular when first introduced, rotary endodontic techniques now dominate current endodontic procedures. The "crown-down" technique has made endo easier and more predictable. Gutta percha filling materials are still most popular, but bonded resin-based root canal filling materials are challenging gutta percha. Nickel/titanium files have added the advantage of fewer broken files and easier adaptation to curved root canals. However, broken files are still a challenge with rotary endo; some find that reciprocal root canal filing can reduce this threat.

Examples of top effective products:

- Rotary endodontic devices and instrumentation—
 - ♦ Aseptico Endo DTC by Dentsply Tulsa, www.tulsadental.com
 - ♦ EndoSequence by Brasseler, www.brasseler.com
- Reciprocal endodontic systems and instrumentation—
 - ♦ Endo-Eze AET by Ultradent, www.ultradent.com
 - ♦ SafeSider System by Essential Dental Systems (EDS), www.edsdental.com
- Root canal filling materials other than gutta percha—
 - ♦ EndoRez by Ultradent, www.ultradent.com
 - ♦ Epiphany by Pentron Clinical Technologies, www.pentron.com
 - ♦ MetaSEAL by Parkell, www.parkell.com
 - ♦ RealSeal by Kerr, www.kerrdental.com



10. Magnification with Headlamp

Dentistry without loupes and a headlamp is hard to imagine! Most dentists appreciate the benefits that magnification provides and are passing those benefits on to their patients through enhanced and more conservative dentistry. Headlamps augment visibility and illumination of the entire oral cavity and are now lightweight. Magnification with a headlamp is a "must have" accessory.

Examples of top effective magnification products:

- Designs for Vision, www.designsforvision.com
- Orascoptics, www.orascoptics.com
- SurgiTel, www.surgitel.com

Examples of top effective headlamps:

- Feather Light by Ultralight Optics, www.ultralightoptics.com
- LED DayLite by Designs for Vision, www.designsforvision.com
- Solaris by PeriOptix, www.perioptix.com

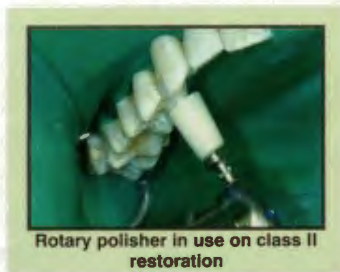


Composite Polishing—State of the Art (Continued from page 1)

Clinical Evaluation

Method: 16 polishing systems were clinically tested by 60 CR Evaluators and compared to each other and the study control (*Enhance Composite Finishing and Polishing System, Dentsply Caulk*).

Results: All systems evaluated produced clinically acceptable polish when using proper techniques and sufficient time. Overall, the Astropol/Astrobrush system (*Ivoclar Vivadent*) received the highest ratings.



Rotary polisher in use on class II restoration

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Highest Rated Products in CR Evaluator Clinical Use Survey

(Percentages reflect responses from CR Evaluators)

Would recommend to a colleague:	<ul style="list-style-type: none"> • FlexiDisc/FlexiPoints/FlexiCups, Cosmedent (94%) • Enhance with PrismaGloss, Dentsply Caulk (85%) • Astropol/Astrobrush, Ivoclar Vivadent (84%)
Would purchase product:	<ul style="list-style-type: none"> • Astropol/Astrobrush, Ivoclar Vivadent (74%) • Enhance with PrismaGloss, Dentsply Caulk (73%) • FlexiDisc/FlexiPoints/FlexiCups, Cosmedent (71%)
Acceptable cost:	<ul style="list-style-type: none"> • Jazz Supreme, SS White (94%) • KerrHawe Polishing Kit, KerrHawe (90%) • Jiffy Polishing Kit, Ultradent Products (89%)
Overall highest rated polishing systems:	<ul style="list-style-type: none"> • Astropol/Astrobrush, Ivoclar Vivadent (94%) • FlexiDisc/FlexiPoints/FlexiCups, Cosmedent (94%)