

A resource guide for practice development through technology

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Guest Editor's note: Below is a comprehensive listing of resources to help dentists learn more about available technologies, software packages and other related information—how to take that next step toward a more technologically up-to-date dental practice.

DENTAL INFORMATICS

Articles

Schleyer TK. Digital dentistry in the computer age. *JADA* 1999;130:1713-20.

Schleyer TK. Dental informatics: an emerging biomedical informatics discipline. *J Dent Educ* 2003;67:1193-2000.

Schleyer T, Spallek H. Dental informatics: a cornerstone for dental practice. *JADA* 2001;132:605-13.

Book

Schleyer T, Spallek H, Spallek G. Computing in dentistry: "www.dental-computing.com". This soon-to-be published book serves as a comprehensive resource for anyone interested in using computers in his or her practice. The section about digital imaging is available now as an electronic Portable Document File.

Postgraduate Programs

Training program at the Center for Dental Informatics, University of Pittsburgh, School of Dental Medicine: "www.dental.pitt.edu/informatics/postgrad.html". Training program leading to an M.S./Ph.D. degree in biomedical informatics with a concentration in dental informatics.

Dental informatics fellowship at Columbia University, School of Dental & Oral Surgery: "www.cpmcnet.columbia.edu/dept/dental/Dental_Fellows.html". Training programs leading to an applied M.A., research M.A. or Ph.D. degree in biomedical informatics with a concentration in dental applications.

European Diploma/Master's Degree of Applied Informatics in Dentistry: "siso.crb.ucp.pt/ediploma". Flexible degree program leading to a European diploma after completion of five modules and a master's degree after completion of eight modules and a dissertation.

Conference

Dental Informatics and Dental Research: Making the Connection: "www.dentalinformatics.com". This conference developed strategies on how biomedical informatics can contribute most productively to the resolu-

tion of dental research problems.

ENDODONTICS

Articles

Cohen S. Challenges influencing the future of endodontics: new technologies for endodontic education. *Aust Endod J* 2001;27(3):116-8.

Loushine RJ, Weller RN, Kimbrough WF, Potter BJ. Measurement of endodontic file lengths: calibrated versus uncalibrated digital images. *J Endod* 2001;27:779-81.

ORAL AND MAXILLOFACIAL SURGERY

Articles

Bettega G, Cinquin P, Lebeau J, Raphael B. Computer-assisted orthognathic surgery: clinical evaluation of a mandibular condyle repositioning system. *J Oral Maxillofac Surg* 2002;60(1):27-34; discussion 34-5.

Loh S, Heng JK, Ward-Booth P, Winchester L, McDonald F. A radiographic analysis of computer prediction in conjunction with orthognathic surgery. *Int J Oral Maxillofac Surg* 2001;30:259-63.

Computer-Guided Surgery

Articles

Birkfellner W, Huber K, Larson A, et al. A modular software system for computer-aided surgery and its first application in oral implantology. *IEEE Trans Med Imaging* 2000;19:616-20.

Hassfeld S, Muhling J. Computer assisted oral and maxillofacial surgery: a review and an assessment of technology. *Int J Oral Maxillofac Surg* 2001;30(1):2-13.

Pernozzoli A, Burghart C, Brief J, et al. A real-time CORBA based system architecture for robot assisted craniofacial surgery. *Stud Health Technol Inform* 2000;70:253-5.

Siessegger M, Schneider BT, Mischkowski RA, et al. Use of an image-guided navigation system in dental implant surgery in anatomically complex operation sites. *J Craniomaxillofac Surg* 2001;29:276-81.

Web Site

GuideDent Image Guided Implantology: "www.guidedent.com". GuideDent Centers of America is a network of affiliated dental implant practices that promotes the GuideDent Image-Guided-Implantology system.

ORAL MEDICINE/PATHOLOGY

Articles

Aldred MJ. Oral medicine and oral pathology: the impact of electronic information. *Ann R Australas Coll Dent Surg* 2002;16:60-2.

Kordass B. Study group for applied informatics in dentistry and oral medicine. *Int J Comput Dent* 2002;5:211-7.

Nicholson JW, Berry TG, Summitt JB, Yuan CH, Witten TM. Pain perception and utility: a comparison of the syringe and computerized local injection techniques. *Gen Dent* 2001;49(2):167-73.

Web Sites

DermIS: "www.dermis.net/index_e.htm". The Friedrich-Alexander-University of Erlangen-Nürnberg, Germany, offers a dermatology Internet service that includes an atlas with 4,500 images.

HIVdent: "www.hivdent.org/slides/index.htm". Picture gallery of oral manifestations of HIV and dental care.

Oral Pathology Image Database: "www.uiowa.edu/~oprml/AtlasHome.html". The University of Iowa provides an online image database.

Oral Pathology Review Images: "www.library.vcu.edu/tml/oralpathology/". A collection of images of the most common abnormalities.

ORTHODONTICS

Articles

Akcam MO, Takada K. Fuzzy modelling for selecting headgear types. *Eur J Orthod* 2002;24(1):99-106.

Chen YJ, Chen SK, Chang HF, Chen KC. Comparison of landmark identification in traditional versus computer-aided digital cephalometry. *Angle Orthod* 2000;70:387-92.

Edler R, Wertheim D, Greenhill D. Clinical and computerized assessment of mandibular asymmetry. *Eur J Orthod* 2001;23:485-94.

Blaskovic V, Boyd R. Orthodontic treatment of a mildly crowded malocclusion using the Invisalign System. *Aust Orthod J* 2001;17(1):41-6.

PEDIATRIC DENTISTRY

Articles

Hansel Petersson G, Twetman S, Bratthall D. Evaluation of a computer program for caries risk assessment in schoolchildren. *Caries Res* 2002;36:327-40.

Nainar SM, Redford-Badwal DA. Internet usage by pediatric dental practices in Connecticut. *Pediatr Dent* 2002;24(2):139-43.

Book

Atlas of Pediatric Dentistry: "www.atlasofpediatricdentistry.org". The Web-based sequel to the classic textbook, this atlas presents clinical images and illustrations with supporting text.

Web Site

New York Online Access to Health (adult and pediatric dentistry): "www.noah-health.org/english/illness/dental/dentistry.html". This site provides links to adult and pediatric dentistry resources.

PERIODONTICS

Articles

Breen HJ, Rogers PA, Johnson NW. Improvements in methods of periodontal probing: comparison of relative attachment level data selected by outlier reduction protocols from Florida disc probe measurements. *J Clin Periodontol* 2002;29:679-87.

Hausmann E. Radiographic and digital imaging in periodontal practice. *J Periodontol* 2000;71:497-503.

Rosenberg ES. A computer-controlled anesthetic

delivery system in a periodontal practice: patient satisfaction and acceptance. *J Esthet Restor Dent* 2002;14(1):39-46.

Rosin M, Splieth CH, Hessler M, Gartner CH, Kordass B, Kocher T. Quantification of gingival edema using a new 3-D laser scanning method. *J Clin Periodontol* 2002;29:240-6.

Staudt CB, Kinzel S, Hassfeld S, Stein W, Staehle HJ, Dorfer CE. Computer-based intraoral image analysis of the clinical plaque removing capacity of 3 manual toothbrushes. *J Clin Periodontol* 2001;28:746-52.

RESTORATIVE DENTISTRY

Articles

Benn DK. Applying evidence-based dentistry to caries management in dental practice: a computerized approach. *JADA* 2002;133:1543-8.

Christensen GJ. Computerized restorative dentistry: state of the art. *JADA* 2001;132:1301-3.

Cramer von Clausbruch S, Faust A. Advanced crown and bridge design. *Int J Comput Dent* 2003;6:293-302.

Janzen W, Strothmann H. Computer-assisted functional risk assessment for the dentist, dental technician, and patient. *Int J Comput Dent* 2003;6(1):51-6.

Rajan M, Julian R. A new method of marking dentures using microchips. *J Forensic Odontostomatol* 2002;20(1):1-5.

Tinschert J, Natt G, Mautsch W, Spiekermann H, Anusavice KJ. Marginal fit of alumina- and zirconia-based fixed partial dentures produced by a CAD/CAM system. *Oper Dent* 2001;26:367-74.

Web Site

Biomaterials Properties Database: "www.lib.umich.edu/dentlib/Dental_tables/". The Biomaterials Research Center of the University of Michigan describes the properties of materials.

Computer-Aided Design/Computer-Aided Manufacturing

Articles

Besimo CE, Spielmann HP, Rohner HP. Computer-assisted generation of all-ceramic crowns and fixed partial dentures. *Int J Comput Dent* 2001;4:243-62.

Fritzsche J. Zirconium oxide restorations with the DCS Precident system. *Int J Comput Dent* 2003;6:193-201.

Kugel G, Perry RD, Aboushala A. Restoring anterior maxillary dentition using alumina and zirconia based CAD/CAM restorations. *Compend Contin Educ Dent* 2003;24:569-79.

Otto T, De Nisco S. Computer-aided direct ceramic restorations: a 10-year prospective clinical study of Cerec CAD/CAM inlays and onlays. *Int J Prosthodont* 2002;15(2):122-8.

Raigrodski AJ. Clinical and laboratory considerations for the use of CAD/CAM Y-TZP based restorations. *Pract Proceed Aesthet Dent* 2003;15:469-76.

Reiss B. Occlusal surface design with Cerec 3D. *Int J Comput Dent* 2003;6:333-42.

Web Sites

"www.evolution4d.com". A new CAD/CAM solution that will be available soon from Henry Schein (Melville, N.Y.).

Academy of Computerized Dentistry of North America: "www.acd-us.com". Conference announcements; focus is on CEREC CAD/CAM technology.

Caries Detection And Risk Assessment

Articles

Ando M, van Der Veen MH, Schemehorn BR, Stookey GK. Comparative study to quantify demineralized enamel in deciduous and permanent teeth using laser- and light-induced fluorescence techniques. *Caries Res* 2001;35:464-70.

Bader JD, Shugars DA, Bonito AJ. Systematic reviews of selected dental caries diagnostic and management methods. *J Dent Educ* 2001;65:960-8.

Gakenheimer DC. Computer-automated caries detection tools: a big payoff is possible when user judgement is combined with the tool. *Eur J Oral Sci* 2003;111(2):179-80.

Gakenheimer DC. The efficacy of a computerized caries detector in intraoral digital radiography. *JADA* 2002;133:883-90.

Haak R, Wicht MJ, Noack MJ. Conventional, digital and contrast-enhanced bitewing radiographs in the decision to restore approximal carious lesions. *Caries Res* 2001;35(3):193-9.

Janhom A, van Ginkel FC, van Amerongen JP, van der Stelt PF. Scanning resolution and the detection of approximal caries. *Dentomaxillofacial Radiol* 2001;30(3):166-71.

Stookey GK, Gonzalez-Cabezas C. Emerging methods of caries diagnosis. *J Dent Educ* 2001;65:1001-6.

Wenzel A. Computer-automated caries detection in digital bitewings: consistency of a program and its influence on observer agreement. *Caries Res* 2001;35(1):12-20.

Wenzel A, Hintze H, Kold LM, Kold S. Accuracy of computer-automated caries detection in digital radiographs compared with human observers. *Eur J Oral Sci* 2002;110(3):199-203.

Web Sites

DIAGNOdent: "www.kavousa.com/prophylaxe/diagnodent.htm". This site describes the DIAGNOdent instrument (KaVo America, Lake Zurich, Ill.), which uses infrared laser fluorescence to detect caries.

The Digital Imaging Fiber-Optic Trans-Illumination, or DIFOTI: "www.difoti.com". This technique uses safe white light and takes advantage of recent advances in computer technology to detect caries (Electro-Optical Sciences, Irvington, N.Y.).

Quantitative Light-induced Fluorescence, or QLF: "www.inspektor.nl/dental/qlfmain.htm". QLF is a diagnostic tool for in vivo and in vitro quantitative assessment of carious lesions, plaque, bacterial activity, calculus, staining and tooth whitening (Inspektor Research Systems BV, Amsterdam, Netherlands).

PRACTICE MANAGEMENT

Articles

Almog DM, Devries JA, Borrelli JA, Kopycka-Kedzierawski DT. The reduction of broken appointment rates through an automated appointment confirmation system. *J Dent Educ* 2003;67:1016-22.

Bauer JC, Brown WT. The digital transformation of oral health care: teledentistry and electronic commerce. *JADA* 2001;132:204-9.

Levato CM. How to profit from computers: intangible benefits of climbing new peaks. *Dent Econ* 1998;88:90-2, 94.

Miller SA, Forrest JL. Dental practice websites: creating a Web presence. *Dent Clin North Am* 2002;46(3):463-75.

Schleyer T. Application service providers in dentistry. *Dent Clin North Am* 2002;46:477-91.

Valenza JA. Can you afford not to be computerized? *Dent Econ* 1994;84(8):71-82.

Web Sites

American Dental Association practice management resources: "www.ada.org/prof/resources/topics/dentalpractice.asp". The ADA offers various resources related to practice management.

American Dental Association: Dental Informatics Standards and Technical Reports: "www.ada.org/prof/resources/positions/standards/informatics.asp". The ADA develops standards for dental informatics through the ADA Standards Committee on Dental Informatics.

Internet Dental Forum, or IDF: "www.internetdentalforum.org". IDF has some of the largest mailing lists regarding several discussion topics.

Dentrix Dental Systems: "www.dentrix.com". Dentrix Dental Systems offers a complete solution for the practice looking for electronic services, from claims to billing, and from attachments to backup.

Electronic Patient Records/Insurance Claims

Articles

Heid DW, Chasteen J, Forrey AW. The electronic oral health record. *J Contemp Dent Pract* 2002;3(1):43-54. Available at: "www.thejcdp.com/issue009/heid/index_nlm.htm".

Walker R. The Health Insurance Portability and Accountability Act: implications for the dental profession. *Dent Clin North Am* 2002;46:553-63.

Web Sites

National Electronic Attachment: "www.nea-fast.com". This company develops, markets and supports Internet-based solutions for the health care industry.

Intelligent Computerized Oral Health Record, Uppsala University: "www.dis.uu.se/mdi/research/projects/orquest/icohr.htm". This site describes maintaining dental records via voice input.

Conference

Towards an Electronic Patient Record, or TEPR: "www.medrecinst.com/conferences/tepr". The TEPR is a leading health technology conference and trade show.

Buyers' Guides

ADA Dental Buying Guide: "www.ada.org/prof/resources/pubs/dbguide/index.asp". This Web site provides access to dental manufacturers, by name, location and product. Manufacturer listings include contact information, as well as brand-name products bearing the ADA Seal of Acceptance.

Reality Publishing: "www.realityesthetics.com/". REALITY is a full-service information resource and product-testing company.

Clinical Research Associates, or CRA: "www.cranews.com/". CRA is a nonprofit organization that evaluates dental materials, devices and concepts for efficacy and clinical usefulness. CRA has evaluated digital radiographic equipment and digital cameras.

CNet Shoppers.com: "shopper.cnet.com/2001-6451_9-0.html?tag=stbc.gp". This is CNet's digital photography and video buyers' guide section.

Dental Products.net: "www.dentalproducts.net". This site provides a sophisticated site search to find articles about various product categories that have appeared in Dental Products Report, Dental Practice Report, Dental Lab Products and Dental Products Report Europe.

The Dental Advisor: "www.dentaladvisor.com/". This site provides clinical and scientific information and product news. An archive of back issues covering such topics as direct digital radiography can be accessed.

Dental Portals

Article

Schleyer T, Spallek H. An evaluation of five dental Internet portals. *JADA* 2002;133:204-12.

Web Sites

ADA.org: "www.ada.org". With seven of 10 U.S. dentists being ADA members, the organization's portal probably is the most accessed Web site for dental professionals.

DentalTown: "www.dentaltown.com/". With 33,000 members claimed, this is one of the largest online communities in the dental profession.

dentalxchange.com: "www.dentalxchange.com". This Web site emphasizes product purchasing, online continuing education and practice management services.

E-Dental.com: "www.e-dental.com/". This Web site focuses on online purchasing and recruiting.

Net32: "www.net32.com/". This Web site primarily is devoted to online purchasing, allowing account setup for easier reordering.

CONSUMER HEALTH INFORMATION

Articles

Corbin SA. To net or not to net: confessions of a 'tweener. *J Am Coll Dent* 1999;66(2):40-2.

Crocco AG, Villasis-Keever M, Jadad AR. Analysis of cases of harm associated with use of health information on the internet. *JAMA* 2002;287:2869-71.

Eysenbach G, Kohler C. How do consumers search for and appraise health information on the World Wide

Web? Qualitative study using focus groups, usability tests, and in-depth interviews. *BMJ* 2002;324:573-7.

Gagliardi A, Jadad AR. Examination of instruments used to rate quality of health information on the Internet: chronicle of a voyage with an unclear destination. *BMJ* 2002;324:569-73.

Jadad AR, Gagliardi A. Rating health information on the Internet: navigating to knowledge or to Babel? *JAMA* 1998;279:611-4.

Stephens CD. The impact of communication technology on dental services and dental education. *Dental Update* 2002;29:504-6, 508-12.

Web Sites

Dental Health from MedlinePlus: "www.nlm.nih.gov/medlineplus/dentalhealth.html". The National Library of Medicine provides consumer health information regarding dentistry.

Guidelines for the Clinical Use of Electronic Mail With Patients: "www.amia.org/pubs/other/email_guidelines.html". These guidelines are presented by the American Medical Informatics Association. The intent is to provide guidance concerning communications between clinicians and patients.

DIGITAL RADIOGRAPHY

Articles

Analoui M, Buckwalter K. Digital radiographic image archival, retrieval, and management. *Dent Clin North Am* 2000;44:339-58.

Carmody DP, McGrath SP, Dunn SM, van der Stelt PF, Schouten E. Machine classification of dental images with visual search. *Acad Radiol* 2001;8:1239-46.

Fan X, Qiu W, Zhang Z, Mao Q. Comparative study of clinical manifestation, plain-film radiography, and computed tomographic scan in arteriovenous malformations of the jaws. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2002;94:503-9.

Guerrant GH, Moore WS, Murchison DF. Diagnostic utility of thermal printed panoragrams compared with corresponding computer monitor images. *Gen Dent* 2001;49(2):190-6; quiz 197-8.

Heo MS, Lee SS, Lee KH, Choi HM, Choi SC, Park TW. Quantitative analysis of apical root resorption by means of digital subtraction radiography. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2001;91:369-73.

Khocht A, Janal M, Harasty L, Chang KM. Comparison of direct digital and conventional intraoral radiographs in detecting alveolar bone loss. *JADA* 2003;134:1468-75.

Kim TS, Benn DK, Eickholz P. Accuracy of computer-assisted radiographic measurement of interproximal bone loss in vertical bone defects. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2002;94:379-87.

Koch S, Wagner IV, Schneider W. Effective and quality-controlled use of digital radiology in dental practice. *Int J Comput Dent* 2000;3(2):107-18.

Lehmann TM, Troeltsch E, Spitzer K. Image processing and enhancement provided by commercial dental software programs. *Dentomaxillofac Radiol* 2002;31:264-72.

Li G, Yoshiura K, Welander U, Shi XQ, McDavid WD. Detection of approximal caries in digital radiographs before and after correction for attenuation and visual response: an in vitro study. *Dentomaxillofac Radiol* 2002;31(2):113-6.

Parks ET, Williamson GF. Digital radiography: an overview. *J Contemp Dent Pract* 2002;3(4):23-39. Available at: "www.thejcdp.com/issue012/williamson/williamson.pdf".

Welander U, Yoshiura K, Li G, Sallstrom P, McDavid WD. Correction for attenuation and visual response in digital radiography. *Dentomaxillofac Radiol* 2002;31(2):117-25.

Book

Miles D. *Go digital: The digital X-ray guidebook*. American Fork, Utah: Dentrix Dental Systems.

Digital Imaging and Communications in Medicine Standard

Article

Chen SK. Integration of the digital imaging and communications in medicine standard into an oral and maxillofacial image management and communication system. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2001;91:235-8.

Web Site

DICOM and Dentistry: An Introduction to the Standard: "ddsdx.uthscsa.edu/DICOM.html". Dr. Dove describes the digital imaging and communications in medicine, or DICOM, standard, including how it will change formatting and exchanging of images.

DIGITAL IMAGING

Articles

Gallegos AG. Enhancing interprofessional communication through digital photography. *J Calif Dent Assoc* 2001;29:752-7.

Lewis C. WinID2 versus CAPMI4: two computer-assisted dental identification systems. *J Forensic Sci* 2002;47:536-8.

Pantera EA. DentalEye 3 image management software. *J Dent Educ* 2003;67:1055-7.

Book

Bengel W. *Mastering dental photography*: "www.amazon.com/exec/obidos/tg/detail/-/3876523834". This book offers practical tips for dental photography.

Web Site

Dental Products Learning Center: "www.kodak.com/global/en/health/dental/lc/lcPho.jhtml". The Kodak Dental Products Learning Center (Eastman Kodak, Rochester, N.Y.) offers articles about dental photography.

Product Reviews

Digital Camera Reviews: "www.imaging-resource.com/DIGCAM01.HTM". Reviews of the latest digital cameras are combined with sample photographic galleries, detailed feature lists, prices and manufacturers' descriptions.

INFORMATION RETRIEVAL

Articles

Bickley SR, Glenny AM. The Cochrane Oral Health Group Trials Register: electronic searching and beyond. *J Dent Educ* 2003;67:925-30.

Dumbrigue HB, Esquivel JF, Jones JS. Assessment of MEDLINE search strategies for randomized controlled trials in prosthodontics. *J Prosthodont* 2000;9(1):8-13.

Feuerstein P. How dental practitioners can benefit from the Internet. *J Mass Dent Soc* 2001;50(2):14-7.

Finley-Zarse SR, Overman PR, Mayberry WE, Corry AM. Information-seeking behaviors of U.S. practicing dental hygienists and full-time dental hygiene educators. *J Dent Hyg* 2002;76(2):116-24.

Spallek H. Information retrieval on the Internet: a guide for dental practitioners. *Dent Clin North Am* 2002;46:435-62.

Strother EA, Lancaster DM, Gardiner J. Information needs of practicing dentists. *Bull Med Libr Assoc* 1986;74:227-30.

Web Sites

American Medical Informatics Association Dental Informatics Working Group. Internet Dental Resources: "di.dental.pitt.edu/resources/index.html". This site provides a list of resources and facilitates submission of additions to the list, as well as dental mailing lists.

HealthWeb: Dentistry: "healthweb.org/browse.cfm?subjectid=34". The HealthWeb project contains sites about many health subjects created by medical librarians.

Martindale's Health Science Guide: Dental Center: "www.martindalecenter.com/Dental.html". List of online dental resources categorized by journals, overviews, cases and teaching, and atlases.

Dental Icon: "www.dentalicon.com". Dental Icon is an Internet directory oriented toward the business side of dentistry. Two categories are products and services.

Dental-Related Internet Resources: "www.dental-resources.com". Comprehensive list of online dental resources categorized into several areas such as clinical information and dental care.

Online Course

Information Retrieval for Dental Professionals: "di.dental.pitt.edu/ir". This course is intended to increase effectiveness and efficiency when searching for information.

LASERS IN DENTISTRY

Articles

Brosky ME, Pesun IJ, Lowder PD, Delong R, Hodges JS. Laser digitization of casts to determine the effect of tray selection and cast formation technique on accuracy. *J Prosthet Dent* 2002;87:204-9.

Harazaki M, Hayakawa K, Fukui T, Isshiki Y, Powell LG. The Nd-YAG laser is useful in prevention of dental caries during orthodontic treatment. *Bull Tokyo Dent Coll* 2001;42(2):79-86.

Malmstrom HS, McCormack SM, Fried D, Featherstone JD. Effect of CO₂ laser on pulpal temperature and surface morphology: an in vitro study. *J Dent* 2001;29:521-9.

Research, Science and Therapy Committee of the American Academy of Periodontology. Lasers in periodontics. *J Periodontol* 2002;73:1231-9.

Stabholz A, Zeltser R, Sela M, et al. The use of lasers in dentistry: principles of operation and clinical applications. *Compend Contin Educ Dent* 2003;24:935-48; quiz 949.

Walsh LJ. The current status of laser applications in dentistry. *Aust Dent J* 2003;48:146-55; quiz 198.

Web Sites

Academy of Laser Dentistry: "www.laserdentistry.org". This Web site offers a wide range of information for professionals regarding the use of lasers in dentistry.

Millennium Dental Technologies: "www.millenniumdental.com". In addition to being a distributor of the PerioLase MVP-7, Millennium Dental Technologies offers educational material about lasers.

CONTINUING DENTAL EDUCATION

Articles

Schleyer TK. Online continuing dental education. *JADA* 1999;130:848-54.

Schleyer T, Johnson L, Pham T. Instructional characteristics of online continuing education courses. *Quintessence Int* 1999;30:755-61.

Spallek H, Berthold P, Shanley DB, Attstrom R. Distance education for dentists: improving the quality of online instruction. *Am J Distance Educ* 2000;14(2):49-59.

Spallek H, Pilcher E, Lee J, Schleyer T. Evaluation of Web-based dental CE-courses. *J Dent Educ* 2002;66(3):393-404.

Registries for Traditional and Online Continuing Dental Education

ADA Continuing Education Course Listing: "www.ada.org/members/ed/courselisting/index.asp". ADA members can access the Continuing Education, or CE, Course Listing free of charge. The database provides information about more than 1,000 CE courses to be presented by ADA CERP recognized providers.

Annotated List of Online Continuing Medical Education, or CME: "www.cmelist.com/list.htm". This site provides an annotated list of links to more than 270 online CME sites offering more than 12,000 courses.

JADA Online Continuing Education Program

"www.ada.org/prof/resources/pubs/jada/ce.asp". Licensed U.S. dentists can earn up to two CE credits each month through the JADA Online Continuing Education program.

CLINICAL DECISION SUPPORT

Articles

Beers AC, Choi W, Pavlovskaja E. Computer-assisted treatment planning and analysis. *Orthod Craniofacial Res* 2003;6:117-25.

Davenport JC, Hammond P, Hazlehurst P. Knowledge-based systems, removable partial denture design and the development of RaPiD. *Dent Update* 1997;24:227-33.

Finkeissen E, Weber R, Hassfeld S, Koke U, Wetter T. AIDA: experiences in compensating the mutual weaknesses of knowledge-based and object-oriented development in a complex dental planning domain. *Methods Inf Med* 2002;41(2):168-76.

Kawahata N, MacEntee MI. A measure of agreement between clinicians and a computer-based decision support system for planning dental treatment. *J Dent Educ* 2003;66:1031-7.

Mendoca EA. Clinical decision support systems: perspectives in dentistry. *J Dent Educ* 2004;68:589-97.

Persson GR, Mancl LA, Martin J, Page RC. Assessing periodontal disease risk: a comparison of clinicians' assessment versus a computerized tool. *JADA* 2003;134:575-82.

Schleyer TK. Clinical decision-making and the Internet. *J Am Coll Dent* 1999;66(2):29-39.

Schleyer TK, Forrest JL, Kenney R, Dodell DS, Dovgy NA. Is the Internet useful in clinical practice? *JADA* 1999;130:1502-11.

Umar H. Capabilities of computerized clinical decision support systems: the implications for the practicing dental professional. *J Contemp Dent Pract* 2002;3(1):27-42. Available at: "www.thejcdp.com/issue009/umar/index_nlm.htm".

Active Decision-Support System

Oral Radiographic Differential Diagnosis: "www.orad.org". This program assists clinicians in generating a differential diagnosis for radiographic lesions of the jaws.

Passive Decision-Support System

PubMed: "www.ncbi.nlm.nih.gov/entrez/query.fcgi". PubMed, a service of the National Library of Medicine, includes more than 14 million citations for biomedical articles. These citations are from MEDLINE and additional life science journals.

Evidence-Based Dentistry

Articles

Iqbal A, Glennly AM. General dental practitioners' knowledge of and attitudes towards evidence based practice. *Br Dent J* 2002;193:587-91.

Sutherland SE. The building blocks of evidence-based dentistry. *J Can Dent Assoc* 2000;66:241-4. Available at: "www.cods.edu/cebd-i/articles/The%20Building%20Blocks%20of%20Evidence-based%20Dentistry.htm".

Web Sites

ADA Policy on Evidence-Based Dentistry: Available at: "www.ada.org/prof/resources/positions/statements/evidencebased.asp".

Centre for Evidence-based Dentistry: "www.ihs.ox.ac.uk/cebd". The Centre for Evidence-based Dentistry is an independent body whose aim is to promote evidence-based dentistry worldwide.

Cochrane Oral Health Group: "www.cochrane-oral.man.ac.uk". The Cochrane Oral Health Group aims to produce systematic reviews of randomized control trials of oral health.

TECHNOLOGY INTEGRATION

Articles

Chambers DW. Technology innovation. *J Am Coll Dent* 2001;68(2):41-5.

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Dental Technology Consultants: "www.thedigitaldentist.com". Assists dental offices in all phases of technology upgrades, providing consulting services and installation and integration of multiple hardware and software systems.

High Tech Innovations: "www.hticonsultants.com". A full-service, dental technology integrator serving more than 200 dental practices.

TECHNOLOGY JOURNALS (AND JOURNALS WITH TECHNOLOGY SECTIONS)

Web Sites

Dental Economics: "de.pennnet.com". Articles about technology in the dental office and practice management.

Journal of Dentistry: Educational Technology Section: "www1.elsevier.com/homepage/sab/jdentet/". This section is aimed at promoting the development and use of educational technology through peer-reviewed information about dental education software and Web sites.

International Journal of Computerized Dentistry: "www.quintpub.com/journals/jcd/gp.htm". The official publication of the International Society of Computerized Dentistry offers information about innovations in the emerging field of computerized dentistry.

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Dr. Spallek is the co-author and publisher of "Computing in Dentistry," a soon-to-be published book listed in this resource guide.

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