MetLife®

Quality Resource Guide

MetLife designates this activity for 1.0 continuing education credit for the review of this Quality Resource Guide and successful completion of the post test.

FIRST EDITION

Transitioning from Paper to Electronic Records: A Process Guide

Educational Objectives

Following this unit of instruction, the practitioner should be able to:

1. Describe the three phases of transitioning from paper to electronic dental records, as well as major considerations for each phase.
2. Identify the major hardware, software and networking components needed to implement an EDR.
3. List the direct and hidden costs of implementing EDRs.

General Considerations

Moving from paper-based to electronic dental records fundamentally changes how you manage the most important asset in your practice: information. As discussed in "Computer-based patient records in general dentistry" (a Quality Resource Guide available from http://www.metdental.com/), managing patient information on paper is quite different from doing so on the computer. The main purpose of this Guide is to help the dental practitioner plan and implement a successful transition from paper- to computer-based records, also known as "digital records" or "paperless systems."

Describing the process of "going paperless" comprehensively and in detail is difficult, if not impossible, within the space constraints of this Guide. We therefore recommend that you use the Guide only as a high-level starting point and educate yourself further through the resources we reference, conversations with colleagues who have successfully made the leap and transition planning resources available from vendors. A key ingredient to success is to use a systematic, well-planned approach supported by an appropriate change management strategy (http://www.himss.org/content/files/CHANGEMANAGEMENT.pdf).

Electronic Dental Record (EDR) technology has been and is developing rapidly. You should therefore consider your EDR implementation not as an endpoint, but rather as the first step in the continuous evolution of your office information technology (IT) infrastructure. Ideally, you will be able to upgrade this infrastructure organically and incrementally without much disruption. Occasionally, however, you may choose (or be forced) to make wholesale changes that disrupt your operations significantly.

One of the most important questions in transitioning from paper to an EDR is: Who will lead the process? It should be the dentist, supported by the practice staff, information technology staff, vendors and/or consultants as appropriate. While consultants and others can provide important perspectives for EDR implementations, it is important that the overarching vision is shared by the whole practice. The EDR affects all practice personnel. Therefore, the whole team should be involved in its implementation.

For the purposes of this Guide, the only assumption we make is that you have computerized billing already, as have 93.6% of all dental practices.[1] In addition, this Guide is mainly written for practices that transition from paper to the EDR. However, it also contains a lot of useful information for those that are switching from one system to another. (For information on digitizing radiographs and impressions, please refer to the Quality Resource Guides on digital radiographs and digital impressions, available at www.metdental.com.)

Author Acknowledgements

Titus Schleyer, DMD PhD
Associate Professor and Director
Center for Dental Informatics

Thankam P. Thyvalikakath, DMD MDS MS
Assistant Professor
Center for Dental Informatics

University of Pittsburgh
School of Dental Medicine
Pittsburgh, PA

Dr. Schleyer and Dr. Thyvalikakath have no relevant financial relationships to disclose

The following commentary highlights fundamental and commonly accepted practices on the subject matter. The information is intended as a general overview and is for educational purposes only. This information does not constitute legal advice, which can only be provided by an attorney.

Published May 2011. Expiration date: May 2014. The content of this Guide is subject to change as new scientific information becomes available.

ADA C·E·R·P® | Continuing Education Recognition Program

MetLife is an ADA CERP Recognized Provider.

ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Concerns or complaints about a CE provider may be directed to the provider or to ADA CERP at www.ada.org/goto/cerp.

Accepted Program Provider FAGD/MAGD Credit 01/01/09 - 12/31/12.

Address comments to:
dentalquality@MetLife.com
MetLife Dental
Quality Initiatives Program
501 US Highway 22
Bridgewater, NJ 08807

Implementation Phases

The process of transitioning from paper to an EDR can be divided into three phases: (1) pre-implementation, (2) implementation and (3) maintenance. The pre-implementation phase includes all steps taken prior to the "go-live" date. The "go-live date" and subsequent implementation activities make up the implementation phase. The maintenance phase begins once the system is firmly integrated into the daily routine of office operations. In the following sections, we discuss each phase and related considerations in detail.

Pre-implementation Phase

DEVELOPING A VISION: The "vision" for the EDR answers a basic question: "Why do we want to implement an EDR?" Answers typically mentioned by practitioners[2] include: to improve data management, e.g. through direct entry of treatment plans and appointments; enhance efficiency, e.g. through scheduling in the operatory; minimize front desk congestion; support diagnosis and treatment, for instance through digital imaging; and improve patient education. Other goals include facilitating access to charts, reducing the chances of losing/misplacing them, projecting a state-of-the-art image to patients, and improving clinical care and follow-up. The overall vision provides a strategic framework for tactical and operational decisions, such as which products/services to buy, and how and when to implement them.

SETTING MILESTONES: It is important to set milestones and deliverables for the process of implementing an EDR. Doing so provides all stakeholders with a shared understanding of the project, helps manage expectations and allows actual progress to be measured against goals.

BUDGETING: Implementing an EDR is one of the largest and most significant investments a practice can make. Being aware of the costs of both initial capital investments and ongoing maintenance, as well as whether costs are direct or hidden, allows the practice to budget and plan for necessary expenditures.

Table 1 lists major components of typical EDR implementations for a solo or small group practice, and the average costs. Please note that some items require yearly maintenance fees and/or periodic upgrading/replacement. The Table lists costs for client/server as well as ASP ("cloud") systems. Many ASP vendors claim that their systems are cheaper than equivalent client/server systems. However, direct costs are only one aspect of a system. Costs and benefits must be considered carefully, and in detail, to make an optimal choice for the practice.

Hidden costs are much more difficult to determine, but should receive equal consideration. Hidden costs include loss of production when "going live," and due to staff training, workflow changes, software problems and hardware failures.

PLANNING THE BASIC COMPUTING INFRASTRUCTURE: Implementing an EDR requires a basic computing infrastructure consisting of workstations, a server (if one of the traditional client/server EDRs is to be installed) and networking equipment. Typically, EDR vendors provide minimum specifications for the basic computing infrastructure, such as processor models and speeds, the amount of memory and hard disk space, and networking speeds. These specifications must be reconciled with other requirements, such as calculations for adequate disk space for all images generated over a defined period of time, in order to avoid any bottlenecks. Typically, it makes sense to buy only systems that meet or slightly exceed specifications, since additional capacity, such as disk space, can be bought at comparatively lower cost later.

SELECTING TECHNOLOGIES: A full discussion of all aspects of selecting an EDR and associated technologies is beyond the scope of this Guide. Some references useful for selecting software are the MetLife Quality Resource Guide "Computer Based Patient Records in General Dentistry," the ADA Technical Report No. 1004—Computer Software Performance for Dental Practice Software,[3] and several of the referenced papers [2, 4-7].

Selecting software requires a systematic and organized approach. While many dentists opt for one of the major EDR systems, such as Dentrix, EagleSoft, PracticeWorksandSoftDent, it pays to take a broad look at the market. Small companies often provide innovative products that work with the most current technologies. For instance, newer companies may have innovative solutions, written especially for the Web, to enhance communication between dental practices and patients using email, text messages and social media functions. Therefore, it may be worth to consider investing in a lesser known, but more current and innovative product.

However, startup companies may not always survive in the long run. Before committing to a product, it is important to evaluate the financial and operational stability of, as well as the prospects for, a vendor. Often, small, successful, software companies are acquired by larger companies, ensuring their survival. However, acquisitions can be a double-edged sword. Sometimes, smaller companies are only acquired to increase market share, and subsequently their products are phased out.

Evaluating systems thoroughly prior to purchase requires answering many questions: Does the system do what you want it to do? Does it do it in the way you want it to? How does it integrate with your current workflow? Is it easy to learn and use? What kinds of problems did users have who were not happy with the system? What is the company's support policy and cost? Involving your staff in the evaluation process helps generate buy-in and a shared sense of decision making. In addition, it is important that the dentist and the dental staff visit dental practices that have implemented systems in which they are interested. Doing so helps understand how the system functions in a practice context, and what works and what doesn't.

Our research has found that general dentists typically equip all operatories with computers.[2] Operatory workstations are either linked to

a server, or directly to the Internet using a wired or wireless network. A wired network is often more expensive to install than a wireless one, but typically provides higher networking speeds and slightly better security.

An alternative to the traditional client/server architecture of EDRs are application service providers (ASPs), also known as "software as a service" or "cloud-based" systems.[4] While client/server-based EDRs maintain all practice data locally on a server, ASPs do so on a remote server accessible through the Internet. ASP-based EDRs only require workstations connected to the Internet, significantly lessening hardware, maintenance and operations (e.g. backup) expenses for the office. However, simplistic claims such as "ASP-based EDRs are always cheaper than client/server systems" must be looked at carefully in light of the total costs of each system. While ASP providers went out of favor during the dot-com crash in 2001, the market has revived somewhat in recent years in offerings such as Curve Dental and Dental Symphony.

The paper "The technologically well-equipped dental office"[5], provides a comprehensive overview of administrative, clinical and Internet applications that can serve as a basis for selecting EDR and other technologies for a practice. Whatever combination of technologies is acquired, their seamless integration is paramount. In "Why integration is key for dental office technology"[6], the different facets of integration and its impact on office workflow are explained.

LEGAL CONSIDERATIONS: Data in EDRs are subject to the same legal framework as those stored on paper, such as state dental board regulations about record retention. Electronic data are governed by additional laws and regulations, such as the Health Insurance Portability and Accountability Act (HIPAA). HIPAA provides a comprehensive framework for the security, confidentiality and privacy of patient data that dental practices are subject to. Compliance with HIPAA requires a well-developed technical and policy infrastructure for the practice. The ADA provides a "Practical Guide to HIPAA Compliance: Privacy and Security Kit" [American Dental Association, The ADA Practical Guide to HIPAA Compliance: Privacy and Security Kit, Chicago, IL, 2011] to assist the dental office achieve compliance.

A second, emerging framework for the use of EDRs is the 2009 HITECH Act and Meaningful Use. The HITECH ACT was passed to promote the adoption and meaningful use of interoperable health information technology (HIT) and certified electronic health records (EHR)[8] throughout the healthcare system. While it is currently unclear how dentists could qualify for up to $63,750 in incentive payments for adopting EDRs, future developments arising from the HITECH Act may have a large influence on which EDR system you should adopt.

CHOOSING IMPLEMENTATION PROCESS - "BIG BANG" OR PHASED APPROACH? Many offices transition from paper to EDR over time.[2] While this approach allows the practice team to get comfortable with the technology gradually; it has a number of drawbacks. One is that data must be maintained on two media, paper and the EDR, and kept in sync. Dual systems increase the chance of errors and inconsistencies. Using the "Big Bang" approach, on the other hand, allows the practice to transition fully (and irrevocably) to the computer at a single point in time. As a result, the full benefits of using an EDR accrue faster. While neither approach is clearly superior to the other, many EDRs have been implemented successfully using the Big Bang strategy, especially after careful planning.

DATA CONVERSION: Which data should be converted (and how far back in time) is an important question. Since digitizing paper-based records is fairly expensive, the costs must be carefully balanced with the benefits. Practices typically convert basic demographic, contact and financial (such as accounts receivable) data, as well as the latest medical history and radiographs for each patient. Digitizing much else is often not cost-effective if the information is rarely needed. Currently active patients should be prioritized for digitization. Archived paper charts should be clearly marked "read only" in order to prevent additional entries by the practice team.

TRAINING: Adequate training is essential for successful EDR implementations. An EDR is not just another software program that users can "pick up on the job." EDRs are highly complicated software applications with many thousands of functions. They play a central role in the smooth functioning of all aspects of an office. In addition, as studies by the University of Pittsburgh Center for Dental Informatics have shown[7,9], EDRs tend not to be very intuitive for the novice user. Systematic training of all EDR users is therefore essential. General training on the EDR benefits all office personnel, while focused instruction should be tailored to specific job roles.

Initial training should introduce participants to the general concepts of the EDR, how it relates to its paper predecessor and how common tasks are accomplished on a daily, weekly, monthly quarterly and annual basis. Training works best when participants have the opportunity to practice immediately what they have learned. Comprehensive and in-depth training should immediately precede the implementation phase.

SYSTEM CHECK: In collaboration with technical personnel, you should perform a full system check immediately before the EDR is put into operation. This system check should exercise all EDR functions that are important, frequently performed or both. In addition, it should verify that all ancillary functions, such as backup and submission of electronic claims, are working. Special care should be exercised to ensure that all data migrated or imported into the EDR are valid. For instance, records for patients scheduled for the immediate future should be checked to make sure that all information about them is available and correct.

BACKING UP AND DISASTER RECOVERY: Planning a solid backup strategy and developing a disaster recovery plan is essential before system implementation. For the vast majority of us, the question is not if disaster will strike, but when and how. Recovering from events ranging from a simple hard drive crash to the complete destruction of the office should not be a nerve-racking event, but a well-planned process that achieves predetermined results. The impact of hard drive failures can be mitigated by implementing technologies such as a Redundant Array of Inexpensive Disks (RAID array)[10], in which a failed hard drive can simply be unplugged and replaced without interrupting the system. The backup strategy should include daily, weekly, monthly and yearly backups. Key backups should be stored in an off-site location, because some catastrophic events, such as explosions and intensive fires, can destroy locally stored backup media.

A disaster recovery plan (DRP), often part of a business continuity plan, helps the office recover from a wide range of adverse events. A disaster recovery planning process should perform a risk assessment and audit ("Which systems and/or components are exposed to what kind of risk?"), establish priorities for applications and networks (e.g. "How long can we operate without a connection to the Internet?"); develop recovery strategies; and document, verify and implement the plan. DRPs typically include procedures to restore lost or corrupted data, replace system components and operate using a remote computer setup.

The importance of data privacy and security when implementing an EDR can not be overstressed. After the transitioning to the computer, electronic data are your most important asset. Everything is replaceable – except data. Keeping your data secure and private is, therefore, of utmost importance.

Implementation Phase

THE "GO-LIVE" DAY: On the "go-live" day, several months of planning and preparation come to fruition. From that day on, practice personnel use the EDR to perform designated functions in daily routine. You may want to choose a day/week with a relatively light schedule for the "go-live" date to compensate for the inevitable startup problems. Any consultant/IT personnel who helped during the pre-implementation phase should be present or, at least, easily reachable. The same applies to technical support for the EDR. Alternate procedures for performing tasks, such as scheduling and taking radiographs, should be specified in case they cannot be performed using the EDR.

RETRAINING: Periodic retraining of EDR users after the go-live day is beneficial. As users become familiar with the system in daily use, questions about the "best" way to do things inevitably arise. At that point, trainers can demonstrate shortcuts, efficient workflows and more advanced functions. Retraining should be offered within several weeks to several months after the go-live date, depending on how quickly team members move through the learning curve. In addition, periodic retraining should be conducted during the maintenance phase.

TEMPORARY LOSS OF PRODUCTIVITY: Many newly implemented technologies, especially in healthcare[11-13], cause a temporary loss of productivity. Reasons include the EDR's learning curve; changes in tasks, processes and workflows; difficulties in distinguishing idiosyncratic program behavior from real bugs; and poorly defined problem resolution procedures (e.g. "Is this a software, hardware or compatibility problem? Who should I call for help?"). While a loss of productivity is annoying at best and financially damaging at worst, careful planning, systematic training and conscientious system implementation can mitigate it. Over time, the loss of productivity should transform into a gain.[13]

Maintenance Phase

TRANSITION: Over time, the implementation phase transitions into the maintenance phase. During the maintenance phase, the intensive energy previously spent on implementation should be devoted to keeping the system running smoothly.

MONITORING FOR UNINTENDED ADVERSE EVENTS: Studies in medicine have shown that implementing new systems can cause unintended adverse consequences.[14-17] These include failing to enter complete information, ordering wrong medications and not responding to a patient's needs in a timely manner. Therefore, frequent checks should be performed to ensure all essential data are entered accurately and maintained in a timely manner, and no adverse events occur that negatively impact patient care.

IT SYSTEM MAINTENANCE: Both the basic computing infrastructure, consisting of hardware, operating system and networking equipment, as well as the EDR software itself, should be upgraded regularly. Hardware upgrades may be beneficial to take advantage of faster processors, higher screen resolutions and more storage space. Servers and workstations should be continually updated with security patches and enhancements in order to lessen the likelihood of downtime due to virus or other attacks. New networking equipment can take advantage of higher connection speeds. Original and extended warranty services, either on-site or offsite with defined response times, are helpful to keep problems to a minimum.

Upgrading the EDR will allow the office to take advantage of redesigned/new functions, or to comply with legal requirements, such as electronic records certification. Periodically, vendors will phase out support for older versions of software or hardware, forcing an upgrade or a switch to a different vendor.

That said, upgrades should be evaluated carefully before they are made. New system versions can introduce program bugs not present previously. Sometimes, a system's "improvements" do not appear as such to its users. Applications in which user interface and functional paradigms shift completely may require significant adjustment and training. Depending on the number and nature of changes, retraining of office staff may be necessary.

Most importantly, all data must be maintained in a secure fashion and backed up consistently, safely and securely on a regular basis as determined in the office's original planning.

Conclusion

This guide provides a highly condensed description of a complex process: moving your practice from paper to electronic records. As the discussion has made clear, this shift is more than a change in storage media for patient information. Implementing an EDR affects any and all office operations. Ensuring a successful implementation requires a careful and well-planned approach that takes into account the needs of patients and office staff; processes; and the technologies to be introduced. Only then can the full benefits of an EDR can be realized.

A last thought to keep in mind is that EDRs are a relatively young, immature technology. The last 20 years have seen significant advances in the functionality and capabilities of EDRs, and this evolution is expected to continue and even accelerate in the future. It is important that you become an active participant in helping improve EDRs, even if it is only by sending suggestions for improvement to your vendor. Only by taking users' needs fully into account will EDRs mature into a technology that is a true asset for the profession and its patients.

References

1. American Dental Association Survey Center. 2006 Technology Survey. Chicago, IL: American Dental Association; 2007.
2. Schleyer TK, Thyvalikakath TP, Spallek H, Torres-Urquidy MH, Hernandez P, Yuhaniak J. Clinical computing in general dentistry. J Am Med Inform Assoc 2006;13(3):344-52.
3. American Dental Association. ADA Technical Report No. 1004—Computer Software Performance for Dental Practice Software: 2004 [Internet]. 2011 [cited 2011 Feb 18]; Available from: http://www.ada.org/805.aspx#1004 Archived at: http://www.webcitation.org/5wb2cw4Bp
4. Schleyer T. Application service providers in dentistry. Dent Clin North Am 2002;46(3):477-91.
5. Schleyer TK, Spallek H, Bartling WC, Corby P. The technologically well-equipped dental office. J Am Dent Assoc 2003 Jan;134(1):30-41.
6. Schleyer TK. Why integration is key for dental office technology. J Am Dent Assoc 2004 Oct;135 Suppl:4S-9S.
7. Thyvalikakath TP, Monaco V, Thambuganipalle HB, Schleyer T. A usability evaluation of four commercial dental computer-based patient record systems. J Am Dent Assoc 2008 Dec;139(12):1632-42.
8. Centers for Medicare and Medicaid Services, US Department of Health and Human Services. EHR incentive programs: meaningful use [Internet]. 2010 December 17 [cited 2011 Feb 8]; Available from: http://www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp#TopOfPage Archived at: http://www.webcitation.org/5wLc7e8mz
9. Thyvalikakath TP, Schleyer TK, Monaco V. Heuristic evaluation of clinical functions in four practice management systems: a pilot study. J Am Dent Assoc 2007;138(2):209-18.
10. Scheible JP. A survey of storage options. Computer 2002 Dec;35(12):42-6.
11. Walji MF, Taylor D, Langabeer JR, Valenza JA. Factors influencing implementation and outcomes of a dental electronic patient record system. J Dent Educ 2009 May;73(5):589-600.
12. Cheriff AD, Kapur AG, Qiu M, Cole CL. Physician productivity and the ambulatory EHR in a large academic multi-specialty physician group. Int J Med Inform 2010 Jul;79(7):492-500.
13. Dolan PL. EMR not boosting productivity? It could be a mismatch between system and specialty: a study highlights how technology doesn't guarantee results if the system isn't right for the practice [Internet]. 2011 January 17 [cited 2011 Feb 18]; Available from: http://www.ama-assn.org/amednews/2011/01/17/bil20117.htm Archived at: http://www.webcitation.org/5wb3EWLHW
14. Ash JS, Berg M, Coiera E. Some unintended consequences of information technology in heath care: the nature of patient care information system-related errors. J Am Med Inform Assoc 2004 Mar;11(2):104-12.
15. Ash JS, Sittig DF, Campbell EM, Guappone KP, Dykstra RH. Some unintended consequences of clinical decision support systems. AMIA Annu Symp Proc 2007;26-30.
16. Campbell EM, Sittig DF, Ash JS, Guappone KP, Dykstra RH. Types of unintended consequences related to computerized provider order entry. J Am Med Inform Assoc 2006;13(5):547-56.
17. Koppel R, Metlay JP, Cohen A, Abaluck B, Localio AR, Kimmel SE, et al. Role of computerized physician order entry systems in facilitating medication errors. JAMA 2005 Mar 9;293(10):1197-203.

TABLE 1 General overview of the budget for an EDR implementation for a solo or small group practice may vary depending on individual needs and circumstances)

Equipment/service	Typical cost	Comments
Hardware		
Server	$2,000-$5,000	only needed for a traditional client/server EDR; should be upgraded/replaced every 3 to 5 years
Workstation	$800-$2,000/unit for client/server system; $300-$600 for ASP system	typically, budget for one computer/ operatory; should be upgraded/replaced every 3 to 5 years
Networking	wired: cost of wiring the office (up to several $1,000s) and router ($100-$300); wireless: wireless local area network router and access points: $500-$1,000	
Software		
Operating system, such as Windows		often bundled with hardware
EDR	client/server: $2,000-$5,000; yearly maintenance/support fee of several $100s-$2,000; Application Service Provider: $200-$1,000/month	
Patient education software	$100-$2,000,	often bundled with EDR; free options available
Internet access	installation costs ($100-$500) plus $40-$100/month	typically provided through Cable, Digital Subscriber Line (DS) or Fiber Optic Service (FiOS)
Digital radiology equipment		
image acquisition	direct digital radiology systems (charge-coupled device sensors): $2,000-$5,000/sensor, yearly maintenance fee; indirect digital radiology systems (photostimulable phosphor plates): $2,000-$10,000 plus consumables	
image management software	freestanding versions: $500-$3,000	sometimes included in the equipment purchase
Intraoral camera	$1,000-$5,000	
Extraoral camera	$300-$2,000	
Training	$800-$2,000/day	EDR purchase sometimes includes a certain amount of training; typically, 5-8 days of training needed in first year, less thereafter
IT consulting/managed services	$50-$200/hour	
Onsite/offsite data backup	$100s-$2,000/year	
Data conversion	free to several $1,000s	only required if migrating data from an existing system

POST TEST:

Internet Users: This page is intended to assist you in fast and accurate testing when completing the "Online Exam." We suggest reviewing the questions and then circling your answers on this page prior to completing the online exam.

(1.0 CE Credit Contact Hour) Please circle the correct answer. 70% equals passing grade.

1. What of the following are reasons for dentists to adopt electronic dental records?
   a. enhance efficiency
   b. support diagnosis and treatment
   c. use digital imaging
   d. improve patient care and patient education
   e. all of the above

2. Which activities precede the "go-live" day of your electronic dental record implementation?
   1) setting milestones and budgeting
   2) planning the basic computing infrastructure & selecting technologies
   3) checking for unintended adverse events
   a. 1 only b. 3 only c. 1 & 2 only d. 2 & 3 only e. 1, 2 & 3

3. Which of the following are true regarding application service providers?
   1) Hardware, maintenance and operations expenses for ASP systems are typically lower than those for client/server systems.
   2) ASP-based EDRs are overall cheaper than client/server systems.
   3) All data are stored locally on a server.
   a. 1 only b. 3 only c. 1 & 2 only d. 1 & 3 only e. 1, 2 & 3

4. Which law(s) govern(s) the security, confidentiality and privacy of electronic patient data?:
   a. state dental board regulations
   b. Health Insurance Portability and Accountability Act (HIPAA)
   c. Health Information Technology for Economic and Clinical Health (HITECH) Act
   d. all of the above

5. Training on EDR system should be provided during which phase?
   1) pre-implementation phase
   2) implementation phase
   3) maintenance phase
   a. 1 only b. 3 only c. 1 & 2 only d. 2 & 3 only e.1, 2 & 3

6. What is the "Big bang" approach to implementing electronic dental records (EDR)?
   a. The transition from paper to EDR happens over time.
   b. Patient data is maintained on two media, paper and the electronic dental record.
   c. The practice transitions fully and irrevocably to the computer at a single point in time.

7. Which factors should be considered when digitizing paper-based patient records?
   1) It is best to convert all information about all patients in case it is needed.
   2) Prioritize digitizing records of currently active patients.
   3) Mark archived paper patient records "read only" to prevent additional entries.
   a. 1 only b. 3 only c. 1 & 2 only d. 2 & 3 only e. 1, 2 & 3

8. Reasons for the temporary loss of productivity during the implementation phase can include:
   a. learning curve when using EDRs.
   b. changes in tasks, processes and workflows.
   c. difficulties in distinguishing between an EDR's idiosyncratic behavior from real bugs.
   d. all of the above

9. How would you minimize the temporary loss of productivity when going live with an electronic dental record?
   a. careful planning
   b. systematic training
   c. diligent system implementation
   d. all of the above

10. What are important tasks for the maintenance phase?
    1) backing up data
    2) upgrading system components
    3) developing a disaster recovery plan
    a. 1 only b. 3 only c. 1 & 2 only d. 2 & 3 only e. 1, 2 & 3

REGISTRATION/CERTIFICATION INFORMATION (Necessary for proper certification)

Name (Last, First, Middle Initial): _____
PLEASE PRINT CLEARLY

Street Address: _____ Suite/Apt. Number _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

Date of Birth: _____ Email: _____

State(s) of Licensure: _____ License Number(s): _____

Preferred Dentist Program ID Number: _____ ❑ Check Box If Not A PDP Member

AGD Mastership: ❑ Yes ❑ No

AGD Fellowship: ❑ Yes ❑ No Date: _____

Please Check One: ❑ General Practitioner ❑ Specialist ❑ Dental Hygienist ❑ Other

FOR OFFICE USE ONLY

Quality Resource Guide: Transitioning from Paper to Electronic Records: A Process Guide

Providing dentists with the opportunity for continuing dental education is an essential part of MetLife's commitment to helping dentists improve the oral health of their patients through education. You can help in this effort by providing feedback regarding the continuing education offering you have just completed.

Please respond to the statements below by checking the appropriate box, using the scale on the right.

	1=Poor 1	2	3	4	5=Excellent 5
1) How well did this CE offering meet its stated objectives?	☐	☐	☐	☐	☐
2) How relevant was the course material to your practice?	☐	☐	☐	☐	☐
3) How would you rate the quality of the content?	☐	☐	☐	☐	☐
4) Please rate the effectiveness of the instructor/author.	☐	☐	☐	☐	☐
5) Please rate the written materials and visual aids used.	☐	☐	☐	☐	☐
6) Please rate the administrative arrangements for this course.	☐	☐	☐	☐	☐
	Never				Absolutely
7) Would you recommend this offering to a colleague?	☐	☐	☐	☐	☐

8) Did this educational offering meet your expectations? Circle: Yes / No
Why or why not?

_____

_____

_____

9) Please identify future topics that you would like to see:

_____

10) Your comments are important to us and will be considered in planning future educational offerings.
Thank you for your time and feedback.

_____

_____

To Complete Program Traditionally, Please Mail Your Post Test and Evaluation Forms To:

MetLife Dental Quality Initiatives Program
501 US Highway 22
Bridgewater, NJ 08807

You will be notified of your test results within 10 days of receipt of all forms.

www.metdental.com