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Contemporary Orthodontic Office: A Review

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ABSTRACT

Technological changes affect most areas of our lives, and our orthodontic practices are no different. As these changes mount, orthodontists and their teams have many questions. How can we possibly adapt to these rapid changes? Is now the right time, or should we wait to see what others do who know more than me? Will something better come along? Will we be left behind if we don't jump in now? Areas currently being influenced by technology in our orthodontic practices include education, personnel management, marketing, communication, diagnosis and treatment planning, and treatment. We have chosen to use an integrated technology solution when possible to avoid many of the above problems and to provide a certain sense of comfort for my team and myself by having a single source for customer support. We will describe our choices in this article.

Key Words: Paperless orthodontic office, Computers ion orthodontics, Digital management of orthodontics, Paperless practice

INTRODUCTION

When orthodontists discuss the practice of the future, the conversation usually turns to the problem of eliminating paper from daily operations. In a busy practice, trying to keep track of patient files and treatment records is both cumbersome and difficult. Many of today's practices use computers in selected areas, but are far from "paperless". Several progressive orthodontists, however, have discovered that a paperless operation can be a reality, and that it does increase practice efficiency. This article will examine the factors involved in making such a transition towards establishing a Contemporary Orthodontic Office.

TECHNOLOGICAL CONSIDERATIONS

As a famous quote given by Bill Gates "A computer was born to solve problems that did not exist before."

"The great thing about a computer notebook is that no matter how much you stuff into it, it doesn't get bigger or heavier".

Disadvantages of conventional Orthodontic office:-

a) Maintaining records, Preserving Casts without getting damaged.
b) Space constraint due to increasing quantity of records.
c) Confusion within patients with same name

All these reduce the efficiency of the working environment. Adds stress to the doctors.

IDEAL REQUIREMENTS FOR PAPERLESS OFFICE

a) The first requirement for paperless operation is that you must be willing to change your practice into a high-tech operation.
b) Must be easy to use, Stable & compatible with other software.
c) It must also have the capacity to be upgraded and to be adaptable to work with new software and hardware.
d) The ability of a system to produce automatic letters or information that is otherwise laborious or difficult to collect will encourage the user to enter the data.

e) Ability to search for information quickly.

All paper records and manual systems must be replaced by a central, computerized practice management program. Thus, all patient records will be available at every workstation, to everyone with access to the computer system. These records include:

a) Demographic (patient information forms)
b) Diagnostic (health histories, photographs, models, x-rays)
c) Treatment (charts, plans, notes)
d) Scheduling (appointment book) Financial (ledger cards)

Ancillary tools may include imaging, cephalometrics, insurance-benefits data bases, credit reporting, scanning, inventory and electronic ordering, and CD-ROM systems for patient education, case presentations, and staff training.

All operations, including treatment delivery, are centralized around the primary computer program. Even if you do not want to go completely paperless, integrating all the practice tools into one system will enhance your efficiency.

a) The computer company entrusted to provide such a system must have: Considerable experience with paperless operations.
b) A record of providing software that keeps up with the changing needs of orthodontic practices.
c) A program that does not limit choices to the products of any one company, which may be popular today, but fail to keep up with new technology.
d) A program allowing selection of ancillary practice tools, such as imaging systems, that are compatible with present or anticipated equipment.
e) An efficient method of electronically converting existing patient data to the new format. Systems designed to minimize hardware failures and downtime. Systems designed to accommodate growth of the practice and staff.

DISCUSSION

MANAGING PATIENT DATA

A Complete database of patients and other consultants is available to be viewed from every work station.

Everything that you need to know about a patient should be neatly displayed. Allows you to communicate directly with patients automatically via sms or e-mail.

View financial summaries, appointment recalls and post-dated data immediately on patient files.
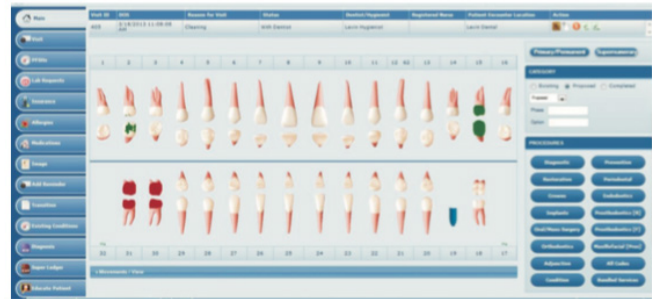
FINANCIAL CONSIDERATIONS

The initial investment in hardware and software is the first cost factor to be considered in developing a paperless office. Ongoing expenses will depend on the system selected and the size of the practice.

PHYSICAL CONSIDERATIONS

An axiom in office design is that "work patterns determine the floor plan". Therefore, the first step in designing a perfect floor plan whether the practice is paperless or not is for the doctor and staff to step back and analyze the way they work. It is important to recognize and build on efficient work patterns, but to be willing to substitute new methods in areas of weakness.

Many offices that are now using computers are actually in an intermediate stage toward becoming a paperless office. The same basic floor plan can be converted to a paperless office without much structural change. Switching to a paperless mode can be gradual, or with the right system and proper preparation, can be done immediately. When establishing a new facility, it is usually advisable to make a complete change before moving into the new office.

Many specific needs of the practice must be determined when making a transition within an existing facility:

a) Number and location of work stations Location of the file server Operating system requirements. Present and future software requirements

b) The number and location of work stations becomes important in the determination of the computer hardware and the capacity required. Automated records should be available for access at the following locations:

c) Front desk Financial/business areas Key areas throughout the operatory Chairside units Satellite offices Doctor's home

When practical, the main server should be located near the center of the office, thus reducing the distance to the work stations. If the server is placed in a closet, as is often done, the closet must be well ventilated. A vent in the door is acceptable, because a server does not make enough noise to interfere with clinical operations. If the server is located in a mechanical room, it should be mounted on a wall rather than placed on the floor, to avoid water contamination from the suction, compressor, or other equipment.

A myriad of practice management software programs are available, including everything from electronic scheduling to computerized time clocks and payroll systems. The management system should have the ability to link branch offices if necessary. In addition, if the doctor has access to patient information at home, it will eliminate the need to take patient charts out of the office, with the potential of lost or misplaced records. Office work can then be done at home on a laptop computer.

INSTALLATION AND WIRING

If the building is under construction, the cable or conduit should be installed during framing, before the walls are finished or concrete is poured. Wiring from the server can pass upward into the ceiling space and be threaded down between walls to the various work-station sites. It is often efficient and economical to route the wiring through concrete or wooden floors, but if you have a concrete floor and are on the ground level, trenching will be required to gain access to chairside units or to central islands in an open-bay operatory. The computer-wire conduit can be placed in the same trench used to supply operatory units with air, water, and electricity. The design should allow ready access to conduits or wires, since future technological advances may require changing the wiring.

PATIENT FLOW

The floor plan should indicate the primary location Problems that can interrupt patient flow include inability to locate patients, questions about treatment status, and lost records or charts.

An effective paperless practice carefully controls patient flow and keeps doctors and staff fully informed of each patient's location and treatment status. Upon arrival, the patient checks in the reception area. This information is instantly relayed to the on-deck screen, which displays patients in the order they are normally taken-first by appointment time, and second by check-in time. The patient may be seated in the reception room, as is often done with adults, or may proceed to an on-deck area in view of the assistants in the operatory. Any screen can be checked to determine whether a patient is early or late, or to find out who is seated in which chair. Thus, the doctor always knows which chairs require his or her presence, and in what order.

RECORDS STORAGE

Traditional office designs allot considerable space to paper product storage and filing cabinets, increasing the practice's rental costs. As storage space fills up, many large practices have to purge their files two to three years into retention. With more practices prescribing long-term retention, however, records must legally be kept longer than in the past. In a paperless office, the scanning system stores all patient records in the computer. The storage problem is eliminated, and long-term retention information can be instantly retrieved. Scanned records can be transferred to off-site storage on a regular schedule, or whenever computer disk capacity is reached.

The doctor or a designated staff member can leave the office each day with a backup copy of all the patient records in the practice an important security advantage. In case of a disaster such as fire or flood, the complete practice records can be available for use within hours.

Orthodontists using paperless systems report backing up their patient records every month and storing them off-site at archiving services. While alteration of traditional paper records can be a legal issue, this electronic system prevents any entries on treatment charts from being altered after storage.
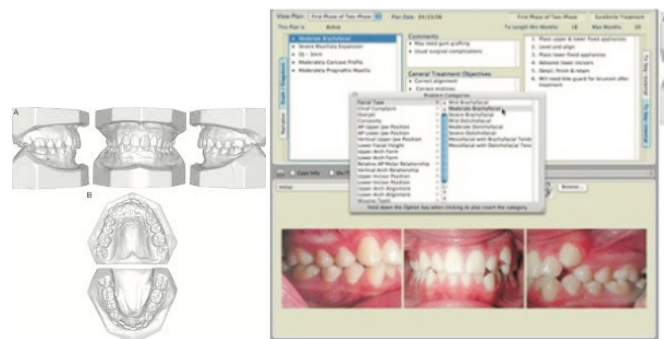
REDUCING STRESS

As with any major change, a few problems will arise during the transition to a paperless operation, and a learning curve will be experienced. Nevertheless, those who have made this transition report that any initial apprehension is quickly overcome by the reduced stress of treating patients.

Instant access to patient data by any staff member, at work stations throughout the office, will be a welcome improvement over past routines.

Now, pictures of pretreatment casts or changes in facial profiles could be instantly flashed on the chairside screens. Increased interaction and communication with patients and parents naturally occurred, especially in explaining treatment progress. CD-ROM educational materials on brushing techniques and the like could be used routinely.

Paperless records also offer advantages outside the office. Some of the doctors have found it convenient to update patient records at home, at night and on weekends. They feel this gives them an unhurried time in which to review treatment plans or enter notes regarding treatment and progress.

One way to do this is to connect a home computer to the office system via modem. Another method is to take the entire office data base home on a laptop computer. After changes are made, the revised data is simply loaded back into the office system.

SHORTFALLS OF THIS PAPERLESS OFFICE

Since everything is computer based, we also need to have proper back-up facility for all the records. All the computers are prone to virus attacks and loss of data due to crashing of the system should be avoided. Hence ideal back-up plan should be kept and should be periodically updated with necessary changes.

CONCLUSION

A permanent conversion to paperless office is a significant change. Doctors and staff members who have made the change, however, believe it increases practice efficiency, enhances patient communication, and reduces stress in the practice. The computer system actually elevates the level of personal contact with patients, instead of reducing it.

Advantages being, hassle free record maintenance, patient follow-up becomes easier, which are two main laborious process in an Orthodontic office. Before choosing a company or system, you should be certain that it can be integrated with all your other electronic tools, such as imaging. Only the proper hardware and software will make it possible to achieve the ultimate goal of the paperless practice.

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