

Importance of Telecommunication for Dentists in the Pandemic Era: A Review

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Abstract

The most rapidly growing segment of the world ecosystem is Information and Communication Technology (ICT). The practical applications of computer systems in clinical dental practice include office management, digital imaging, radiography and tele consultation. Tele dentistry is one of the new exciting areas of dentistry, which enhances the internet to provide the best health care facilities in rural areas, and includes telecommunications technology. Preventive dental care and teleconsultation with the specialists are the main areas which are improved by the Teledentistry. It also allows a dentist who is residing in a nearby community to provide easy access to patient who otherwise might not seek care. The internet has fundamentally transformed the way we communicate and interact. Both patients and dentists have adopted digital communication and social media in their interactions. Health care social media usage is increasing independent of education, race, ethnicity or access to health care. Digital tools have the potential to improve the practice efficiency, reduce administrative costs, and improve communication with other providers. Thus, this review article given an in-depth detail on using telecommunication with the help of various methods.

Keywords: Internet, Teledentistry, Telecommunication

Introduction

In a dental office, the most important person is the patient. The most rapidly growing segment of the world ecosystem is Information and Communication Technology (ICT). All the human activities such as social economic, cultural, religious, political or health care are permeated in this sector for the development. [1, 2]

A significant transformation has been seen in the health care systems of the world by the huge networking possibilities afforded by the ICT also dispersion of health care information with a lot of ease. In addition, for the remotest areas of the world, the best health care technology and expertise are easily accessible. [3]

According to Merriam- Webster's collegiate dictionary, informatics is derived from the term 'informatics science', which is the collection, classification, storage, retrieval and dissemination of recorded knowledge treated both as a pure and applied science. A common misconception is that informatics is the same as Information Technology. Informatics is focused primarily on research, development and evaluation of information models

and computing applications. IT, on the other hand, is concerned with the implementation and application of computer technology and telecommunications.

The practical applications of computer systems in clinical dental practice include office management, digital imaging, radiography and teleconsultation. The emerging discipline of dental informatics is derived from such applications and is sure to tremendously affect the practice and development of dentistry. [4]

The most important piece of equipment in the office is telephone. It is the fastest and most convenient way to transfer messages, as it is the most important communication device in the world.

The first contact in the dental office is made through a telephonic conversation for probably 90% of the patients. Telephonic management should not be handed over to inexperienced staff members as first impressions are usually the lasting ones. Verbal communication skills, high degree of self-confidence, alertness, able to make decisions and having a broad knowledge about dentistry are all the responsibilities, which should be designated to a person who has the ability to do all of the above. A

smile in the voice while speaking and being enthusiastic at the same time might not solve all the issues but speaking in a hostile manner will ensure that all the communications in the near future will be more difficult. [1]

Telecommunications in Dentistry

Teledentistry is one of the new exciting areas of dentistry, which enhances the internet to provide the best health care facilities in rural areas, and includes telecommunications technology. Preventive dental care and teleconsultation with the specialists are the main areas which are improved by the Teledentistry. It also allows a dentist who is residing in a nearby community to provide easy access to patient who otherwise might not seek care. The specialists residing many miles away also enable a proper diagnosis and treatment options that are recommended. [5]

The internet has fundamentally transformed the way we communicate and interact. Both patients and dentists have adopted digital communication and social media in their interactions. Health care social media usage is increasing independent of education, race, ethnicity or access to health care. Digital tools have the potential to improve the practice efficiency, reduce administrative costs, and improve communication with other providers. [6]

In a broader sense, telecommunications in a dental office relates to many other kinds of telephonic systems that are resulted from the use of telephone lines. Pagers, cellular phones, hands free phone, conference calls and answering machines are various types of telephone systems. [7] The teledentistry methodology described can be adapted to any model used for the emerging mid-level oral health practitioners and provides a way to participate as a digitally linked member of a complete oral health care team. The teledentistry assisted, affiliated dental practice hygiene model is easy to implement with existing technologies and helps in providing benefits to all members of the digitally linked oral health care team.[8]

In the dental practice teledentistry can be used in either of the following ways:

1. Store and forward method: This method incorporates the dentist to collect the complete information of the patient along with the images and send them forward for further consultation and treatment planning. However,
2. Real time consultation method: This method involves video conferencing between the patient and the dentist at various locations where they can communicate with each other.

3. Remote monitoring method: In this method the patients are monitored either from home or from the hospital.
4. Near Real Time Consultation: This method involves low resolution and lower frame product which appears to be like a jittery television.[9]

Cordless Telephone

In offices, cordless telephone systems provide an extended mobility range that further allows the staff members to leave the base and start communicating with the other areas without having the use of answering machines. [1]

Pc-Linked Telecommunications

PC-linked telecommunications systems allow the businesses to store patient information for instance all the telephone numbers, managing incoming and outgoing calls. Programming of phones through a personal computer is allowed. A database file that is an automatic pop up window on a personal computer is been displayed with this type of computer-telephone integration. This further allows the administrative assistant to address the caller by his/her name and have detailed information about the caller so that he is able to answer his questions fluently. [1]

Cell Phone

A cell phone is referred to as a portable communication device. Cellular technology is mainly used while a dentist is driving from one place to another then to maintain the contact with the central location this kind of technology is been used, which also makes it possible to use a fully functional telephone.

Hands-Free Telephone

An administrative assistant to work on the computer, manage records and performing tasks while being on the telephone is permissible by and hands free telephone. [1]

Pagers

To retrieve accurate messages instantly a pager being a telecommunication device is been used.

Facsimile (Fax) Communication System

FAX machine is also one of the other means of electronic communications. Transmitting an image of a document over standard telephones is a facsimile transmission machine. A FAX machine is also a scanning device. A machine, which acts as a

photocopy machine that sends the image as wire is referred to a FAX machine. A similar sort of machine receives a transmitted copy at the receiving end. A handwritten document, a keyboarded page or a picture can be sorts of messages that are been sent through such machines. Costing of FAX messages are same as of a telephone call as the messages are transmitted through the telephone lines. A dedicated telephone line for FAX is generally preferred in dental offices.

A stand- alone unit incorporated into the office computer can be a FAX machine. The dentists might find FAX a very useful method for transferring a patient's dental records in case of emergency. The transferring can either be local or outside the town. Signature needed documents can be transmitted via FAX machines, but mostly signing parties require to sign the original documents. [1]

Black Berry

Initiating conference calls, access directories, reply to and forward voicemails is all allowed by BLACKBERRY, a wireless, handheld Personal Digital Assistant (PDA). Users can even access e-mails, intranets and corporate data. These systems make it easy for the dentists to access the records and data is while they are travelling. [1]

Selecting a Telephone System

When an existing service is changed or it is selected for an office, then consultation with a professional of the telecommunications department is responsible for any kind of service, which the office people may require. In the purchase of telephone system several factors should be taken into consideration such as flexibility, mobility and future expansion. It would be a wise thing to carry out a task analysis to determine the present and future needs of a dental setup before consulting a telephone specialist.

For selecting a telephone system, cost is been generally considered as the primary factor. Marketing of telephone is pretty cost competitive, but the cost can be varied considerably. Examining the specifications so that one can determine the costs of standard features should be done before selecting a system.

Cost of operating and maintaining systems must be given consideration. A system, which often saves money for future maintenance, is a reliable system. Suppliers also provide maintenance contracts at insurance in some areas.

Flexibility is a major consideration. As the practice grows, expansion and updating of telephone systems are possible. It is also important to have the

ability to move telephones between systems and facilities.

One of the most important considerations is voice and data switching capabilities. A dental office must ensure that the telephone system can meet present day needs as well as the future day needs.¹

Telephone Directories

In a business office telephone directory is a vital tool. Area codes that is the STD codes are provided in the telephone directory. Generally, the front pages of the directory are provided with most important information such as the police line numbers, fire, ambulance etc.

The telephone directory consists of white pages that are generally divided in 3 sections-

- The Residence Section- consists with the alphabetical listings of the names, address and the contact numbers of the individuals.
- The Business White Pages- consists with the alphabetical listings of the name, address and the contact numbers of the businesses.
- The Blue Pages- consists with the name, addresses and the contact numbers of local, state and central government offices.

According to the type of service business provides, yellow pages consist of such people with particular businesses. Companies, which specialize in each area, are listed alphabetically. [1]

Developing Effective Telephone Etiquette

People often forget while talking over the phone that the other person is also a human being. A receptionist must always keep a smile on his/her face while talking over the phone to be effective, and also answer calls promptly, should also be very attentive and discreet in what they say and most importantly they should transfer calls very carefully and should be welly coordinated with the caller.

Receptionist's speaking voice

The four interrelated components of the speaking voice are loudness, pitch, rate and quality.

Volume of the voice is referred to as Loudness. It might be uncomfortable for the caller if the receptionist is too loud. Situation if opposite would also be unpleasant. If the voice is low and the caller asks the receptionist to repeat that means the receptionist is lacking in confidence.

If the person is able to understand nicely then that determines the rate of speaking. Receptionist may tend to speak rapidly if discussing familiar procedures, forgetting for the fact that all this

is new to the patient. There is no as such ideal rate but a general rule is to speak in such a manner that does not detract from the message clarity and as well as it is easy and comfortable to listen for a suitable period.

The tone of the voice is referred to as pitch. Once, the pitch has been developed it is more difficult to change, to alter it persistent discipline is required. A low voice as well as a very high voice might sound unpleasant to the caller. For improving voice pitch, many exercises are available from the local telephone companies and reference libraries. [9] A combination of physical and psychological factors is referred to as quality of voice. The effectiveness of speaking voice is altered if changes occur in each of these. This quality is often affected by daily experiences and utmost care should be taken to withhold depression, excitement and most importantly anger from the voice when speaking on a dental office telephone.

As the receptionist talk over the phone, it would be a very good idea to keep a mirror so that he/she can look at himself when they talk. Both smile and frown can be heard as well as seen, and the attitude of the receptionists can make a huge difference in how the patient perceives on the telephone line of the dental office. To the unseen patient a mirror would be the best judge for the receptionist to realize how he/she is coming across with such a patient. Quite a lot of companies and organizations offer training programs on telephone etiquettes and techniques, and a dentist should definitely enrol hi key telephone personnel for such programs. The time and cost involved in such programs would be worth it. For effective telephone techniques following are the few tips- When the phone calls are answered by the staff members, specifically in offices where more than one person is involved in doing so then he/she must always address themselves by their first name only to the caller. For instance, "Good morning, Doctor.... (Name) office... (receptionist's name) speaking." An immediate personal rapport is been built through such a situation and also helps in further confusion.

Whenever possible the name of the dentist should be used. One of the best ways to gracefully market the practice is this and it does not cost anything. [10]

Creating a Good Image

To make the best impression and to achieve good voice qualities, the receptionist must be able to choose the apt word or phrase. Receptionist should use short, simple and descriptive words in the appropriate situations to promote better

understanding. Information should be given very slowly and distinctively while using technical dental terms such as formulas, dictated material, name and numbers.

If at all patient wants a time, which is currently unavailable, then the receptionist will have to offer a call if an opening occurs. The word "cancellation" should not be used in such a case. It will be better to say "Mr. /Mrs... (Name), I will call you if DR... (Name) has a change in his/her schedule rather than saying that "I will call you if at all the doctor has any sort of cancellation." It should not be shown that cancellations are a common occurrence in the office. [10]

The emergency call

Some of the emergencies in the dental practice are fractured tooth, traumatic injury, bleeding or loosened tooth. In situations like these the receptionist must be completely aware of the location in which the patient is residing, and also be aware of recording his/her contact number. Asking many questions at such point of time will not impart any sort of concern. Usage of words like "Drive Safely" and "Take Care" can give psychological benefits to the patients and also shows that the dentists person are pretty much concerned for their patients.[11]

Managing incoming Calls

To address some of these challenges Open Access Scheduling has been introduced in the past decade. A fraction of patients are been asked to call for appointments instead of booking a well ahead. The patient is scheduled immediately if the appointment slots are available, thus further avoiding the delay in advance bookings.

Therefore, a unique situation is presented by each call, which goes from the dental office. Certain conditions may remain constant but most calls are place in specific categories. Because of which, the receptionist will be able to formulate questions and answers for each situation. It is very important in situations of training new training personnel who are unfamiliar with the day-to-day situations that may arise in the dental office.[12]

Telephone Etiquette for Incoming Calls

- Calls should be answered promptly
- Conversations should be distinctive, clear and slow
- Slangs should be avoided
- Attentive listening without any interruption
- Avoid talking to other people while being on the phone
- Directly speaking on the transmitter

- If one has to attend another call then kindly excuse
- There are many situations in the office when a caller can be kept on "Hold". This is frustrating; music should be played as soon as the phone is kept on hold button. Consideration of such type of music should be done very carefully.

When a receptionist puts a call on hold then within every 1 minute she should respond the caller and tell he/she that the doctor is still busy on other call. [11]

Managing Outgoing Calls

The following tips are helpful for making such calls:

1. Plan ahead: Telephone numbers should be written correctly. If you are calling a patient then you should preferring addressing by their names.
2. When the call is answered, one should identify then and the dentist name for whom the receptionist might be calling.
3. State reason for calling: If there is a change in patient's appointment then it should be indicated as to why there has been a change, as it may cause a disruption in the patient's plans.
4. In case of a wrong number, apologize for the inconvenience, and recheck the number before redialling.

Telephone during lunch hours

The telephone should be answered in the lunchtime as it is done during the working hours. Auxiliaries are to be given alternate lunch hours, so that someone or the other is always available at the phone. In addition, if the above is not possible then the below given two methods should be opted:

1. Electronic answering device
2. Extension to dentist's home

Personal Telephone Calls: A telephone, which is installed at a dental office, is a service to the dental patients and should be maintained as one. Subsequently, the staff members should be avoided from using the telephone for personal calls only in case of emergency that phone should be used.^[11]

Telegrams: However, the dentist as well as the staff at the dental office uses telephone as their primary source of communication, the need to use the telegram arises only in case of an emergency.

A receptionist must be well versed with the preparation of telegrams and its services and the chargeable words and characters used in it. [1]

Computers and Dental Office

In earlier times, the typewriter served as a central piece of equipment in the dental offices. With the

advancement of the technology in today's times the most important equipment used in the dental practices are computers. Computers have made a huge impact on the profession of dentistry in not only in clinical examinations but also in the business related applications. [13]

Social media marketing is essential in today's times. Most dental practices will be considering this tool in the near future. A blog is a social media tool that can educate and inform the patients and attract new patients to the dental practice. It is inexpensive, effective and well worth the time and effort required to create a presence. [14]

As we know, that the world of business has been in constant competition and information remains its most important tool for the decision process in order to gain more clients or consumer satisfaction. Facing this reality, information technology has been improving technologies and promoting changes in the way the information is been maintained or created regarding any individual. In this context, there are various application systems accounting for the collection, retrieving and processing of information and data. Various application systems are present in the market that facilitates the work of the dentist. However, due to lack of technical knowledge, the profession is subjected to dissatisfaction with the product chosen, for not meeting the needs because of its complexity and improper access. The management of the dental practice has become easy and accessible with such practice management software's that are available and have user friendly interface. [15]

Applications of Technological Advances in the Business Office [1]

Provide a means for continuing education, telemarketing with WebPages' e-mail staff and patients' computerized scheduling' electronic charting, add progress notes to online records, online office procedures manuals, automated insurance claims, allow for "virtual group practices" where solo practitioners share one set of records consult with experts from all over the world and buying supplies from online supply warehouses.

Advantages of computer system in dental practice

Elimination of considerable amount of manual paper work, keeping control of the practice, doing detailed practice analysis, facilitate a smoother transition if there is a change of personnel, facilitation or internal and external marketing, control of insurance nightmare, efficient collection and accurateness of record keeping

Software's in Dental Office

There are various dental software's that are available for the dental practice management. Some of them are:

1. **Dent software:** It is a leading customizable software program for dental practice management. This software helps in scheduling of appointments, reception management, oral examination and planning, billing, dental charting, dental insurance, lab work management, orthodontic management and dental imaging.[16]
2. **Dentrix :** This was the first management system for window that was developed in 1989 and approved for windows 98. This software helps in maintaining automatic data backups, electronic claims, payment card processing, automatic billing statements, website development tools, appointment reminders, and voice recognition software's etc.[17]
3. **Smart dentist:** It is complete dental practice management software which comprises of setting of complete digital dental office, hospital management or dental clinic, dental x-rays along with dental patient motivation software. The software has advanced features like reporting, scheduling, billing, searching, insurance etc. In addition, the software is reasonably priced with no hidden costs and unlimited users/appointments.[18]
4. **Pappyjoe :** This software can be used online or offline. The software helps in scheduling appointments, managing inventories, store data regarding diagnosis, treatments, x-rays and photographs and produces efficient reports.[19]
5. **Practo:** One of the commonly used dental practice management software's. It helps the patients to find the doctors easily, get their answers online for their queries if any and sharing of knowledge with the doctors etc.[20]

Conclusion

The dentists must be knowledgeable about and keep up with the latest developments to make informed choices to improve patient care. Dentists must be clinically effective; i.e., they must ensure that their specific clinical interventions, when implemented for a particular patient or population, do what they are intended to do—improve and maintain health and achieve the greatest possible health gain from the available resources. Thus, in the pandemic times, telecommunication has become an essential part for the clinicians. [1, 2, 5].

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