Web site setup for pediatric dentists: a framework

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Abstract

The objective of this paper is to describe a framework for the development of a simple web site for pediatric dentists. The four steps—domain name registration, web site hosting, web site design and web site publishing—are detailed. A pediatric dental web site can be created and maintained for less than $300 per annum. (Pediatr Dent 22:405-407, 2000)

The advent of the World Wide Web has made the Internet a user-friendly medium with unsurpassed potential for information. A recent survey of primary caretakers of pediatric patients reported that the web is accessible to almost three-quarters of them.[1] Further, the web had been used specifically for obtaining medical information by one-third of the sample.[1] The egalitarian nature of the web has led to questionable credibility of some of the purveyors of health information. Therefore, patients ranked "information from my own doctor's office" as the type of online health information they desired most.[2] Pediatric dentists need to have a web site "to enhance their relationships with patients."[3] The objective of this paper is to describe a framework for the development of a simple web site for pediatric dentists. (Web sites, companies, and products mentioned in this paper are for illustrative purposes only and do not constitute endorsement of any kind.)

Domain name registration

A domain name (Uniform Resource Locator or URL) for the web site address must be coined. It is advisable that this name be a dotcom, as that designation apparently implies Main Street in cyberspace. Once the name has been decided, it is advisable to do a search engine (e.g., http://www.altavista.com) review for the term to peruse the web sites that will be indexed along with on web searches. For example, the word "pedo" shows up with pedophile web sites in some search engine reviews. Next, it must be verified that the name has not been already registered. Also, it is prudent to avoid similar sounding names to those already registered. Otherwise, it might lead to undesirable arbitration before the Internet Corporation for Assigned Names and Numbers (ICANN). Domain name screening and registration can be done at the same web site (Table). It costs $70 for a two-year registration for the domain name. Domain name registration may entitle the registrant to immediately float a free basic web site (also known as "business card") at the computer server of the registering company. It takes only a few minutes to accomplish this basic web site

for a token presence on the Web. However, to leverage the medium to advantage, it is better to extend beyond this basic presence into a regularly updated multi-page web site.

Web site hosting

The web site has to be placed on a computer server with constant access (24 hours/7 days) to the Internet. It is pragmatic to outsource the technical nuts-and-bolts aspects of the web site management to a web hosting company. These companies run large "server farms" resulting in economies of scale. They handle the "behind-the-scenes" technical operations, and ensure that the site always remains online, and provide protection by firewalling against web site abuse by hackers. Further, the web hosting companies provide basic analysis of the web site traffic and technical assistance. There are two additional advantages to this arrangement:

- free web site designing software
- multiple distinctive web-mail accounts at your domain name (e.g., dds@yourwebsiteaddress.com). (Regular e-mail is stored on a local computer while web-mail is stored on the web site and can be easily accessed from any computer hooked up to the web).

Selection of the web hosting company is the most critical decision in the entire process and will require some shopping around. There is cutthroat competition in this market with numerous shady operators. It is better to select a company based on personal referrals or endorsements by trade magazines such as *Macworld, PC World,* or *Wired* (Table). There are numerous web site hosting packages available based on memory required, site traffic (data transfer), and other features. It is advisable to start with the basic package—usually around $15-25 per month—and then upgrade as needed.

Web site design

Pediatric dentists designing their own web sites will enjoy three distinct benefits:

- understanding of the technology involved; an advantage as a dental practice is likely to be reconfigured incorporating web-based technologies
- a design of one's own creation with limitless potential for expansion
- ease of regular updates once the web site is in service.

Recent advances in technology preclude the need to learn technical language to design web sites. Current web designing packages (e.g., Microsoft FrontPage, Trellix Web) are

WYSIWYG (what you see is what you get) web authoring tools and allow anyone with word processing skills to create professional web sites. The web designing packages come pre-loaded on new computers or can be downloaded for free if one has signed up with a web hosting company. If downloading the software it should be noted that it is licensed and should be downloaded to the machine which will be used to publish the web site. Licensed software, whether downloaded or pre-loaded on the computer, may utilize "cookies" on registration and may not work with other computers (Cookie files are automatic files created by "behind-the-scene" communication between your computer and external servers).

Ideally, one should begin the web site design with the wizard and go through the prompt-driven menu to get started. A simple multi-page web site for a pediatric dental office will consist of a home page and six additional pages. Each page can have more than one screen of information viewed by scrolling down the cursor; however, no page should preferably have more than two or three screens of information. If there is more than two screens of information on a page, additional pages can be created and uplinked to that page in a hierarchical manner. Navigational aids are automatically provided by the software to move between the pages and should not be deleted.

Table. Internet Links Relevant to Web Site Setup	
Web sites	**Web site addresses (Uniform Resource Locator or URL)**
Domain name registration:	
Network Solutions	http://www.nsi.com
Register.com	http://www.register.com
Web hosting companies:	
Concentric Network Corporation	http://www.concentrichost.net
EarthLink	http://www.earthlink.net
HostPro	http://www.hostpro.net
Microsoft bCentral	http://www.bcentral.com
Verio	http://www.verio.com
Healthcare information:	
American Academy of Pediatric Dentistry	http://www.aapd.org
American Academy of Pediatrics	http://www.aap.org/family
American Dental Association	http://www.ada.org/tc-cons.html
American Medical Association	http://www.ama-assn.org/consumer.htm
Centers for Disease Control and Prevention's Oral Health Program	http://www.cdc.gov/nccdphp/oh
Consumer Product Safety Commission	http://www.cpsc.gov
Food and Drug Administration	http://www.fda.gov
Healthfinder	http://www.healthfinder.gov
National Library of Medicine	http://www.nlm.nih.gov
National Maternal and Child Oral Health Resource Center	http://www.ncemch.org/oralhealth
National Oral Health Information Clearinghouse	http://www.nohic.nidcr.nih.gov

i. The home page is the first page that will download when somebody accesses the web site. This page should bear the name of the dental office, business address and a description identifying the specialty nature of the practice. Images and graphics should be avoided on this page as that might delay the download of the homepage. The average person waits only eight seconds for a web page to load before giving up in frustration.[4] Also some individuals disable graphics on their web browser for faster download and then the homepage with images and graphics makes a poor presentation.

ii. The Dental Team page should provide a biographical sketch of the dentist and auxiliary staff.

iii. The New Patient page must provide all the relevant information normally given out to new patients.

iv. The FAQ (frequently asked questions) page should provide information on common topics in a simple question and answer format.

v. The Community page should provide links to the web sites of the following:
   - Referring pediatricians and dentists
   - Specialists to whom you refer patients such as the oral surgeon, endodontist, etc.
   - Local medical and dental societies

Providing links to other web sites is simple and accomplished by highlighting the name on the page, selecting the "link" function on the pull-down menu and then typing in the web site address in the pop-out window.

vi. The Healthinfo page should assist patients to obtain healthcare information by providing links to information from diverse sources (Table).

vii) The final Legal page should provide a disclaimer that information on the web site is no substitute for professional consultation and that visiting the web site does not initiate a dentist-patient relationship.

The above simple design provides a utilitarian web site. This site can then be individually developed prior to publishing on the web. The following points should be considered:
   - The urge to create pizzazz on the web site with a melange of striking color schemes, animations, videos, images and other so-called "rich media" should be carefully considered due to different web browsers with differing results and the potential slowing of the download time. Also such "eye candy" might annoy repeat visitors and detract from the professional nature of the web site.

- Photographs can be added to the Dental Team page by posting a thumbnail sketch next to the description. This thumbnail sketch should be linked to an enlarged photograph on a different page which can be viewed on demand. The New Patient page can be enhanced by the addition of a map providing directions to the clinic and also a tour of the clinic based on a slide presentation. These features should be on different pages but linked to the New Patient page and to be viewed on demand. Addition of these photographic embellishments can be done by a professional in a couple of hours.
- Use of interactive tools for feedback such as electronic mail and guestbooks should be governed by explicit privacy policies as "among Internet users who seek medical information, personal privacy was ranked as their most important concern."[5] The recently issued "Guidelines for Medical and Health Information Sites on the Internet" from the American Medical Association must be reviewed prior to publishing the web site.[5]
- The legal page must be reviewed with legal counsel before the site goes online.

Web site publishing

Once the web site has been designed, the file should be saved and backed-up on the disk. Publishing the web site to its location on the computer server is accomplished by selecting "publish" on the pull-down menu. The site must be reviewed at regular intervals, at least once a month, to update the contents and check for continued viability of the external links provided.[3] In conclusion, a pediatric dental web site can be created and maintained for less than $300 per annum.

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ABSTRACT OF THE SCIENTIFIC LITERATURE

EFFICIENT FLUORIDE PROGRAMS WITH REDUCED CARIES LEVELS

This paper reviewed articles regarding the efficiency of fluoride programs in a society where dental motivation is high and caries levels in young children are low. As the prevalence of caries has declined, community-based fluoride programs, such as water fluoridation, mouth-rinsing programs in schools, or free fluoride tablets, have become less efficient. The decline in caries today may have little to do with the professional preventive measures provided in dental clinics. In societies with a high standard of living, water fluoridation may have little effect, let alone efficiency.

Comments: This paper points out how we differ in our evaluation of fluoride in the water. Which is less costly, fluoride toothpaste or fluoridated water? **LHS**

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Efficiency of fluoride programs in the light of reduced caries levels in young populations. Forss, H. Acta Odontol Scand 57(6):348-51,1999.

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ABSTRACT OF THE SCIENTIFIC LITERATURE

MEDICAID COST FOR CHILDREN WITH RESTORATIONS UNDER GENERAL ANESTHESIA

The purpose of this paper was to examine the cost to the Iowa Medicaid program of hospitalizing young children for restorative dental care under general anesthesia (GA). Claims files from 1994 were used to evaluate the number of children under age 6 years who received dental care under GA. The average cost per child under age 6 for a GA was $2,009 (includes hospital, dental and anesthesia allowable charges). The average cost per child not treated in a hospital for GA was $105 (allowable charges). The 272 children who needed GA used about one-fourth of the Medicaid resources. The most frequent type of procedures were stainless steel crowns.

Comments: The ability to identify "early" these children at risk for dental care is critical to prevent the high cost of GA. This cost of $2,009 is certainly higher is other States. **LHS**

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Medicaid costs associated with the hospitalization of young children for restorative dental treatment under general anesthesia. Kanellis, M., Damiano,P., Momany, E. J Public Health Dent 60(1):28-32,2000

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clinical section