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Use of an Online Photo Management and Sharing Application to Create a Searchable Digital Dental Radiograph Repository

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Use of an Online Photo Management and Sharing Application to Create a Searchable Digital Dental Radiograph Repository, John A Valenza, DDS. UTHSC-H Dental School, Cynthia L Phelps, PhD. UTHSC-H School of Health Information Sciences, Robert W Volger, DSN. UTHSC-H School of Health Information Sciences, Irmgard Willcockson, PhD. UTHSC-H School of Health Information Sciences,

Problem:
Dental radiographs generally display one or more findings/diagnoses, and are linked to a unique set of patient demographics, medical history and other findings not represented by the image. However, this information is not associated with radiographs in any type of meta format, and images are not searchable based on any clinical criteria1,2,. The purpose of this pilot study is to create an online, searchable data repository of dental radiographs to be used for patient care, teaching and research.

Methods:
In this study, diagnostic and other demographic and medical meta data was applied to a select group of de-identified dental images. A popular online photo management and sharing application serves as the pilot database for clinicians from other institutions to search and post to the database. Image “tags” analogous to meta data fields were created in the online application, and include diagnosis, age, gender, race, and a medical history finding. Following completion of the project, participants will be surveyed regarding their use of the site. The Media Richness Theory, whereby images and their associated meta data become a medium to carry new types of information, applies to this project.

Results/Evaluation:
Set up of the initial library of images is complete and participants have been contacted using existing listservs. Monitoring of the site to-date has revealed extensive activity. The follow-up survey will be sent to participants in April/May with results reported in the final presentation.

Conclusion:
An online, searchable dental image repository which associates unique informational elements to each image and organizes them in a searchable format enables providers to utilize a new and innovative technology tool. After the successful piloting of this project, an application that automates the retrieval of images and associated information from an electronic patient record into a data repository could be developed.

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