Proper Labeling Key to Digital Imaging Success

BY HEIDI SPLETE
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WASHINGTON — Develop a unique cataloging system for digital images to make tracking and retrieving patient information quicker and easier, Dr. Clinton Humphrey said at the annual fall meeting of the American Academy for Facial Plastic and Reconstructive Surgery.

A strategy to manage digital images—including video footage and illustrations—helps physicians find photos to use for preoperative planning, for reference during surgery, and for patient education, said Dr. Humphrey, an otolaryngologist at the University of Kansas Medical Center in Kansas City.

Efficient image management also makes it easier to choose photos for academic publications or presentations. And digital images can serve as legal evidence, he added.

Digital asset management involves naming files, placing them in archiving software, and categorizing them so they can be tracked and retrieved. Categorization is the most important step in the process, and the most effective way to categorize digital files is by using metadata, Dr. Humphrey said.

Metadata is information embedded in an image file or other software file. It was pioneered as a digital asset management tool by professional photographers, but it works for anyone who needs to manage a large volume of digital images.

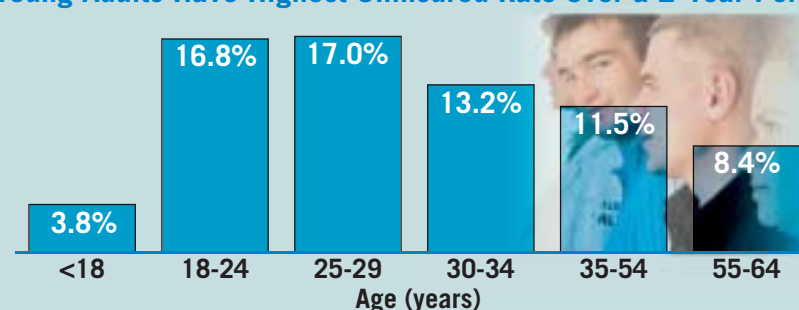**'We think metadata will make your images more accessible and retrievable and assure compatibility if you switch software programs.'**

Be sure to employ user-assigned metadata (known as IPTC), which will follow photos across different computer programs and software, Dr. Humphrey said. The IPTC metadata lets users embed information about diagnoses, procedures, and other details. IPTC stands for International Press Telecommunications Council, a European-based consortium of major news agencies that maintains technical standards for news and information exchange.

By contrast, another form of metadata, called Exif (Exchangeable Image File Format), is automatically assigned by the digital imaging software in the camera and includes the type of camera, the camera settings, and the date the photo was taken.

This information is of limited use to physicians because it doesn't allow many keywords when naming a file that has been downloaded. Also, the information may not transfer across to other software programs.

When naming a file using metadata, certain rules apply, Dr. Humphrey said.

"The file name needs to be original so you never use the same name twice," he said. In his practice, a digital image is identified by the surgeon's initials, followed by the date of the photo with the year first (to store the files sequentially), followed by text.

For an IPTC file to be universally compatible across different software platforms, it must have fewer than 36 characters. Underscores and dashes can be used to separate words, but spaces can't be used in file names. "And you want a system that makes backup automatic," he said.

"Although metadata is valuable, it is only as good as what you put in," Dr. Humphrey said. "You need to use a very closed vocabulary when you assign your keywords and use the same terms when you describe a diagnosis or procedure each time."

Scrutinize the digital imaging software. "Some of the most popular programs used in our survey don't support the IPTC standard data and so they will wipe out metadata once the files are imported," he said.

To evaluate trends in digital asset management among plastic surgeons, Dr. Humphrey and his fellow colleagues surveyed 255 practices, more than half of which were more than 10 years old. Their responses showed a steady conversion to digital photography since 1996, he said.

The results showed that the average facial plastic surgeon took more than 100 photos each week. The survey also showed that nearly one-third of respondents did not have a file management

In clinical trials, the most common adverse reactions in ≥2% of adult and adolescent patients (12 years of age and older) taking XYZAL 2.5 mg, XYZAL 5 mg, or placebo were somnolence (5%, 6%, 2%), nasopharyngitis (6%, 4%, 3%), fatigue (1%, 4%, 2%), dry mouth (3%, 2%, 1%), and pharyngitis (2%, 1%, 1%), respectively. In clinical trials 4 to 6 weeks in duration, the most common adverse reactions in ≥2% of pediatric patients (6-12 years of age) taking XYZAL 5 mg included pyrexia (4% vs 2% placebo), cough (3% vs <1% placebo), somnolence (3% vs <1% placebo), and epistaxis (2% vs <1% placebo).

strategy or were not familiar with the file management strategies in their digital imaging software programs. No single method prevailed for archiving images, and there was no standard level of image resolution.

"The biggest problems we saw in the survey were inconsistent file-naming strategies and underutilization of metadata," Dr. Humphrey said.

Based on their conducted research, the investigators recommend a digital management strategy that includes assigning metadata in the form of keywords that provide information about diagnoses and procedures.

"We think metadata will make your images more accessible and retrievable and assure compatibility if you switch software programs," he said.

For more detailed information about digital asset management, visit www.iptc.org, which includes a list of software programs that are friendly to IPTC metadata.

Another useful resource is "The DAM Book: Digital Asset Management for Photographers" (San Francisco: O'Reilly Media, 2005) by Peter Krogh, a professional photographer and recognized expert in digital asset management, Dr. Humphrey said. ∎

DATA WATCH

Young Adults Have Highest Uninsured Rate Over a 2-Year Period

Bar chart by Age (years):
- <18: 3.8%
- 18-24: 16.8%
- 25-29: 17.0%
- 30-34: 13.2%
- 35-54: 11.5%
- 55-64: 8.4%

Note: Based on data for people who were uninsured during 2004-2005.
Source: Agency for Healthcare Research and Quality

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