Survey respondents wary of robot dentists

By Ginger Pinholster, Embry-Riddle Aeronautical University

An online survey regarding patients’ perceptions of robotic dentistry was one of many Embry-Riddle research projects to be presented during the 2018 International Symposium on Human Factors and Ergonomics in Healthcare conference, March 26-28 in Boston.

In an online survey of 502 individuals (260 female), participants were “significantly less willing to undergo more invasive procedures, such as gum surgery and a root canal, and significantly more willing to undergo procedures such as tooth cleaning or whitening performed by a robot,” reported Stephen Rice, associate professor of human factors.

Moreover, the promise of half-price dentistry increased participants’ willingness to accept dental care from an autonomous robotic dentist, Rice and his graduate students explained at the conference.

In 2017, a robotic dentist in China fitted two dental implants into a woman’s mouth. In addition, a Miami, Fla.-based company, Neocis, announced last year that it had received clearance from the U.S. Food & Drug Administration to introduce a robotically assisted dental surgical system called Yomi.

As robots become increasingly commonplace in many different settings, “It’s important to understand consumer perceptions of autonomous technologies,” said Embry-Riddle graduate student Emily Anania, the lead student author of the HFES poster presentation. “People are not always accepting of emerging technologies. We know from many different studies, for example, that driverless cars and autonomous aircraft technologies cause some people to react with fear or anger. Better insights to those perceptions will be essential in order to increase acceptance of these technologies.”

The Embry-Riddle patient-perceptions survey, completed by Rice and five students on the university’s Daytona Beach, Fla., campus, informed all participants that robotic dentistry is currently being tested. The survey then asked participants to indicate their willingness to have a robot perform 10 separate procedures: teeth cleaning, tooth extraction, root canal, teeth whitening, applying sealant, applying a cap, bonding, gum surgery, applying braces and putting in a filling.

Next, participants were asked similar questions, but with an added incentive: “Imagine that the dentist offers you a half-price discount on all dental work done by a robot in his or her office,” the survey said. “The robot will work autonomously (without human intervention).”

In general, 51 percent of the respondents were moderately or strongly opposed to robotic dentistry, the research group reported. Respondents were particularly wary of invasive procedures like extractions, root canals, and gum surgery, where 66 percent of the participants were moderately or strongly opposed. Female respondents were in general less likely to be willing to accept robotic dentistry, Anania said.

There were two procedures that participants were less negative about, including teeth cleaning and/or whitening; here, only 32 percent of the participants were opposed at full price, and 83 percent were willing to undergo the procedure if the price was cut in half.

Robotic dentists have the potential to improve the precision of different dental procedures, Rice said. Such technology could make dental care more accessible in rural or otherwise underserved areas. Finally, just as aircraft auto-pilot systems allow pilots to focus on safety, Rice added, robots could free up dentists to continuously improve health-care practices and protocols.

The research presented at the HFES conference, “Factors Affecting Consumers’ Acceptance of Robotic Dentists,” was prepared by Rice and Anania, with fellow graduate students Mattie N. Milner, Nadine Ragbir, Matt Pierce and Nathan W. Walters.
ADHA meeting headed to Columbus

Billed as the largest event dedicated to dental hygienists, the 95th Annual American Dental Hygienists’ Association Conference will be from June 20–23 in Columbus, Ohio. All events, including two days of exhibits, will be held at the Greater Columbus Convention Center.

The three-day event offers a broad and deep program featuring industry-leading keynotes and speakers, hands-on sessions and workshops and presentations exploring the most topical subjects shaping the future of dental hygiene.

Find registration and lodging details at www.adha.org/annual-conference.

Gladewell symposium is Oct. 19-20

By Gladewell Dental Staff

Gladewell Dental, a technological innovator in restorative dentistry for more than 48 years, has announced its second Gladewell Dental Symposium. Scheduled for Oct. 19-20 at the Gaylord National Resort & Convention Center in National Harbor, Md., near Washington, D.C., this event will include more than a dozen prominent educators providing two days of intensive presentations, including a keynote by Dr. Jack Hahn, legendary pioneer in dental implantology.

The symposium is for dentists, hygienists and chairside and front-office auxiliaries. Attendees enrolled for both days can earn up to 12 C.E. credits. Tuition for Day 1 is $195 and Day 2 is $250, with special early bird pricing of $125 and $155, respectively, when registering by July 31.

For a complete agenda and to register, you can visit gladewell symposium.com or call (866) 791-9539.
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By Designs for Vision Staff

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The new LED DayLite® Micro HDi™ uses the new high-definition imaging in an ultra-lightweight headlight in combination with the new Micro power pack. According to the company, the Micro is the market’s lightest and smallest power pack. The complete unit includes two power packs, and each power pack can run up to 10 hours.

Designs for Vision also has added high-definition imaging to the LED DayLite WireLess Mini HDi, providing a lightweight cordless solution with light intensity comparable to many corded headlights. You can choose high-definition imaging with either a wired or wireless design to meet your preference, and either HDi headlight will illuminate the entire oral cavity.

Building on an established award-winning design, the newest addition to the Micro Series line is the Micro 4.5EF Scopes, which reduce both the size and weight of the telescopes by 44 percent.

Designs for Vision has expanded into a new 67,500-square-foot location at 4000 Veterans Memorial Highway in Bohemia, N.Y. You can visit www.DesignsForVision.com/move.htm to check out some photos of the new facility.

You can see the Visible Difference® yourself by visiting the Designs for Vision’s booth (No. 113) at the American Dental Hygienists’ Association Annual conference in Columbus, Ohio, and/or booth No. 802 at the Academy of General Dentistry annual meeting in New Orleans.

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While caring for their patients, dental and health care professionals are constantly exposed to bodily fluids that may carry viruses and other infectious agents. It is therefore critical that the gloves these professionals use provide the best possible barrier protection.

Many types of gloves are available today, but it is important to know that not all gloves have the same barrier capability, depending on the type of material used. For example, natural rubber latex gloves have long been acknowledged for their very effective barrier properties, while non-latex gloves, such as vinyl (polyvinyl chloride), have inferior barrier capability as shown by numerous studies.

Other synthetic gloves, such as nitrile and polyisoprene, perform much better than vinyl but are more costly, especially polyisoprene gloves. Using gloves with inferior capability could expose both the patient and user to harmful infections.

Malaysia is the world’s largest medical gloves exporter (latex and nitrile). Both quality and users’ safety are of top priority to the nation’s glove industry. To this end, a quality certification program (the Standard Malaysian Glove, or the SMG) has currently been formulated for latex examination gloves.

All SMG-certified gloves must comply with stringent technical specifications to ensure the gloves are high in barrier effectiveness, low in protein and low in allergy risks, in addition to having excellent comfort, fit and durability — qualities that manufacturers of many synthetic gloves are trying to achieve.

Latex gloves are green products, derived from a natural and sustainable resource, and are environmentally friendly. (You can learn more online by visiting www.smgonline.biz or www.latexgloves.info).

The use of low-protein, powder-free gloves has been demonstrated by many independent hospital studies to markedly reduce the incidence of latex sensitization and allergic reactions in workplaces. More important, latex-allergic individuals donning non-latex gloves can now work alongside their coworkers wearing the improved low-protein gloves without any heightened allergy concern. However, for latex-allergic individuals, it is still important they use appropriate non-latex gloves, such as quality nitrile and polyisoprene gloves, which provide them with effective barrier protection.

Selecting the right gloves should be an educated consideration to enhance safety for both patients and users. For decades, gloves made in Malaysia have been synonymous with quality and excellence, and they are widely available in an extensive array of brands, features and prices. They can be sourced either factory direct (www.mrepc.com/marketplace) or from established dental products distributors in the United States and Canada.

(Source: MREPC)
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