Adults with developmental disabilities need more than just better access to oral-health care

Report shows vulnerable population continues to have significant dental disease

Despite a policy focus on expanding access to care for adults with developmental disabilities, this vulnerable population continues to have significant dental disease. In the October issue of The Journal of the American Dental Association, researchers from Tufts University School of Medicine and Tufts University School of Dental Medicine report on the first large-scale survey to investigate factors influencing at-home oral care provided by caregivers to adults with developmental disabilities.

The study findings suggest that, in addition to addressing access to care, policy initiatives must improve support for caregivers. “While access to dental care is a necessary component of good oral health, it is not enough to guarantee positive oral health outcomes in this vulnerable population. Our findings highlight the need for additional training and support for caregivers in promoting oral health,” said principal investigator and corresponding author Paula M. Minihan, PhD, MPH, an assistant professor in the department of public health and community medicine at Tufts University School of Medicine.

The research team’s landmark 2012 study found that access to specialized dental care alone was not sufficient to meet the substantial oral health needs of adults with developmental disabilities. People with developmental disabilities have a high prevalence of cavities, gum disease and tooth loss. If a person with a developmental disability cannot independently brush or floss, caregivers provide assistance and support.

In the new study, the researchers surveyed 808 caregivers (family caregivers as well as paid caregivers) with extended experience providing care to adults with developmental disabilities (DD) in either family homes or supervised residential experience providing care to adults with developmental disabilities (DD) in either family homes or supervised residential environments in Massachusetts. Survey results revealed that: 85 percent of adults with DD received barrier protection is critical in dental professionals’ gloves

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A novel dental restorative material that should make life easier for dental care experts and their patients, which is based on technology developed by a team of University of Colorado Boulder engineers, was recently unveiled by the 3M Company.

Based on work by a team led by professor Christopher Bowman of CU-Boulder’s chemical and biological engineering department, a team from 3M ESPE developed the new polymer, which makes it possible for dentists to fill cavities with a single application that is then cured with light to achieve the desired strength and shape. Currently it can take up to four applications of polymer material, with each layer requiring an individual light-curing procedure, to fill a single, deep-tooth cavity, said Bowman.

The new restorative material also eliminates expensive dispensing devices, according to 3M ESPE, part of 3M Health, a business group of 3M based in St. Paul, Minn. And unlike some composite cavity-filling materials used today that can shrink or even leak at the surface of a tooth over time, the new material has been shown to have lower stress and to be more wear resistant over time.

The innovative technology development effort between CU-Boulder and 3M ESPE included the financial support of the National Institutes of Health. The new 3M restorative material, primarily for posterior teeth, is known as Fillek Bulk Fill.

“Our team is excited about seeing this process come to fruition,” said Bowman. “Hopefully there are other components of this technology that can make it easier for dentists to provide comprehensive oral health care to patients every day.”

The technology was licensed through the CU Technology Transfer Office.

(Sources: CU-Boulder, 3M ESPE)

Polymer fills cavities with a single application that is then cured light.