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Comments to the House Committee on Health and Human Services (HB 2079)

My name is Dr. Becky M. Smith. I am an Associate Clinical Professor at the University of Missouri-Kansas City School of Dentistry. I am on a team of faculty teaching the curriculum for the Extended Care Permit III in the state of Kansas. Throughout this document, I am speaking as an individual.

This is a great opportunity for Kansas as they are leading the way with the extended care permit license for their hygienists. The licensing includes additionally trained hygienists, under general supervision, to perform such procedures as: identify and removing of decay with hand instruments, placing temporary restorations, adjusting dentures, placing soft relines, checking for sore spots, labeling dentures, smoothing sharp teeth with a slow speed handpiece, and extracting primary teeth that are partially exfoliated with “class 4” mobility (as the law states). These procedures are to be performed in youth shelters, foster care homes, schools, as long as the children are dentally underserved. Other locations include longer-term care units, adult care homes, state institutions or community senior services.

One of the duties of the ECP III hygienists is to perform decay removal with hand instruments and place temporary fillings. This procedure is known as “Atraumatic Restorative Treatment” or “ART”. It began approximately 25 years ago in Tanzania, as a concept to manage decay in areas that had little to no access to dental care. In the 1990’s, decay was excavated and temporized using glass ionomers (Frencken, Leal and Navarro 2012).

ART is an example of Minimally Invasive Dentistry (MID). This concept is ultraconservative in the approach for treatment of cavitated lesions. MID preserves as much sound tooth structure as possible and with hand instrumentation, more dental tissue can be preserved. The main difference between ART and MID is that ART uses hand instruments only (Frencken and Leal 2010).

In 2010, Frencken stated “the ART approach have been investigated extensively and outcomes have shown that it can be considered an economical and effective method for preventing and controlling carious lesion development in vulnerable populations.” A study by Carvaloho, Sampiao, Diniz, Bonecker and van Amerongen in 2010 concluded that there are similar survival rates in ART of class II with and without isolation techniques.

Studies have shown success rates ranging from 43.4% to 96.7% for class I restorations and 12.2% to 83.3% in class II restorations. Failures in Franca’s 2011 study included lost or partially lost restorations or gross marginal defects. The lost or partially lost fillings were 40% of all failures in the first year and 92% in the second year. These studies were performed in China, Syria, Kuwait, Turkey, Suriname and Kenya (Franca, Colares, and Amergoren 2011). The United States has yet to publish studies in the ART technique.

A systematic review, from Mickenautsch and Yengopal in 2012, compared 18 trials of ART and conventional amalgam restorations. The results were very positive in using the ART technique. They concluded that the failure rate of ART was *similar to that of amalgam* after periods longer than one year (Mickenautsch and Yengopal 2012).

While the United States has yet to publish the outcomes of the ART technique, studies outside of the US have demonstrated positive results. A study from Oliverira in 2016 demonstrated that a majority of their

US respondents agree that ART is an effective caries treatment. It is with best evidence practices that I believe that ART will be effective in the access to care issues in the state of Kansas.

References:

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