The authors tested the efficacy of an intermittent use, dental unit waterline (DUWL) cleaner, containing 0.12% chlorhexidine, in a proprietary formulation, to reduce bacterial levels in three functioning dental units with independent water reservoir systems. Baseline water samples were taken from six units. Two ounces of the undiluted test product was run through lines, left overnight, and flushed out the next morning. This was repeated for six nights initially, and once a week thereafter for 12 weeks. Three control dental units did not have chemicals added. Weekly samples were collected in bottles containing sodium thiosulfate on the afternoon before overnight treatment, plated on R2A agar, and incubated at room temperature for seven days. Mean colony-forming units per millimeter (CFU/mL) in treatment units declined from 23,389 (+/- 20,085) at baseline, to 6 (+/- 10) in week 4, and to 5 (+/- 2) in week 12. Statistical analysis showed a significant difference between treatment and control units. **Intermittent treatment of dental unit waterlines with 0.12% chlorhexidine gluconate (CHX), in a proprietary formulation, resulted in significantly reduced bacterial counts to levels that were consistently below the American Dental Association’s goal of 200 CFU/mL for eight weeks.**

**DIS Comment:** It is well documented that microorganisms colonize and multiply on the interior surfaces of DUWL resulting in the formation of biofilms. The levels of bacteria in water from untreated dental units often exceed 100,000 CFU/mL of water. Current dental-unit water systems cannot deliver water of optimal microbiologic quality without some form of intervention (e.g., use of a cleaner). The commercial product used in this study was BioBlue, which is no longer available, however two other chlorhexidine-based dental unit water treatment products are currently available-Lines (Zenith/Micryllium) and Mint-A-Kleen (Anodia Systems). DIS has clinically evaluated Lines and Mint-A-Kleen is currently under evaluation. Since this study was conducted, new levels of acceptable water quality for dental units have been published. The Centers for Disease Control and Prevention (CDC) now recommends that dental offices use water that meets EPA regulatory standards for drinking water (i.e., ≤500 CFU/mL of heterotrophic water bacteria) for routine dental treatment output water. Clinical monitoring of water quality can ensure that procedures are correctly performed and that devices are working in accordance with the manufacturer's previously validated protocol. Because of unknown long-term effects, the authors recommend monitoring chemically treated dental unit water. In the absence of manufacturer instructions, USAF personnel should monitor dental unit water quality at least quarterly.