

## High-risk cardiac conditions and oral health

Infective endocarditis (IE) is a rare, but life-threatening condition where bacteria colonize on tissues within the heart. The bacteria often associated with this condition are from the viridans group streptococci, which are also commonly found in the oral cavity. It was once thought that dental procedures, such as tooth extraction or dental scaling may provide an entry for these bacteria into the bloodstream and allow them to infect susceptible heart tissues. Historically, patients with suspected susceptibility to IE were prescribed an antibiotic prior to dental procedures in an attempt to prevent these infections. A thorough review of available research was done in 2007 by the American Heart Association, the American Dental Association, the Infectious Disease Society of America and the American Academy of Pediatrics to determine the true risks for IE and recommended use of preventive antibiotics.<sup>1</sup> The group developed a new set of evidence-based guidelines that defined the highest-risk conditions where the use of prophylactic antibiotics was still considered prudent and supported by the available evidence.

The first conclusion coming out of this review was the greatest risk for bacteremia that could lead to IE was due to routine daily activities, such as tooth brushing, flossing, use of toothpicks, use of water irrigation devices and chewing food. Their conclusion stated that “maintenance of optimal oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of IE.” The evidence supported that emphasis on maintaining good oral health and eliminating oral disease would decrease the frequency of bacteremias from these daily routine activities.

This review also more clearly defined those conditions associated with a higher risk of IE as being the presence of a prosthetic cardiac valve, a history of previous IE, congenital heart disease, unrepaired cyanotic heart disease including palliative shunts and conduits, repaired congenital defects where a prosthetic material is used, repaired congenital heart disease where residual defects still occur, and cardiac transplant recipients. These conditions still warrant the use of prophylactic antibiotics prior to dental procedures and also identify individuals where maintenance of good oral health is especially important.

Maintaining good oral hygiene and eliminating oral disease are important for reducing the risk of IE in at-risk individuals. The most effective way to improve and maintain oral health is through more frequent recall and reinforcement.

### **EBICP benefits for persons with high-risk cardiac conditions**

With an indicator for high-risk cardiac conditions, a participant is eligible for up to two additional dental visits in a benefit year for adult prophylaxis or periodontal maintenance. Coverage will be at the group-contracted benefit level, with the additional frequency allowance being the only change. There is no end date on this additional coverage. There is no age requirement and the patient may be the subscriber, spouse or other covered dependent.

<sup>1</sup>. Prevention of infective endocarditis: Guidelines from the American Heart Association: A guideline from the American Heart Association Rheumatic Fever, Endocarditis and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young, and Council on Cardiovascular Surgery and Outcomes Research Interdisciplinary Working Group. Wilson W, Taubert KA, Gewitz M, Lockhart PB, Baddour LM, Levison M, Bolger A, Cabell CH, Takahashi M, Baltimore RS, Newburger JW, Strom BL, Tani LY, Gerber M, Bonow RO, Pallasch T, Shulman ST, Rowley AH, Burns JC, Ferrieri P, Gardner T, Goff D, Durack DT. J Am Dent Assoc 2007;138(6):739-60.

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