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The Kayser-Jones Brief Oral Health Status Examination (BOHSE)

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WHY: Oral health is an important contributor to the health and well-being of older adults. Recent associations between oral health and systemic disease have led to renewed interest in oral health and its contribution to health outcomes. A growing emphasis, therefore, has been placed on the inclusion of an oral health assessment as part of routine medical checkups. Part of this success relies on a valid and reliable oral health assessment tool.

BEST TOOL: While there are several tools available to assess oral health status, the Kayser-Jones Brief Oral Health Status Examination (BOHSE) has been tested and used in nursing literature. The 10-item examiner-rated BOHSE reflects oral health status and a higher score indicates more problems identified. The BOHSE assessment begins with observation and palpation for enlarged lymph nodes in the neck and ends with oral cavity evaluation. Using a pen light, tongue depressor, and gauze, the conditions of the oral cavity, surrounding tissues, and natural/artificial teeth are examined and graded on three descriptors. It has been primarily used in long-term care and community settings.

TARGET POPULATION: The BOHSE was specifically designed to evaluate the oral health of nursing home residents, with and without cognitive impairment, by varied nursing personnel. The BOHSE has been employed in a variety of populations including community-dwelling elders, nursing home residents, and individuals with cognitive impairment (Blanco & Chalmers, 2001; Chen, et al, 2005; Lin, et al, 1999).

VALIDITY AND RELIABILITY: Statistically significant test-retest reliability ($r=.83-.79$), inter-rater reliability ($r=.68-.40$), and content validity have been established by six field experts (Kayser-Jones, et al, 1995).

STRENGTHS AND LIMITATIONS: The BOHSE is a simple tool that could be used by nursing personnel in residential settings with demonstrated reliability and validity. It should be noted that the BOHSE is a screening tool and should not be used to diagnose dental diseases and should not be used in lieu of objective assessments such as clinical oral examinations and dental radiographs.

FOLLOW-UP: Although the cumulative score is important, individuals who scored on items with an asterisk that are underlined should be referred for a dental evaluation and exam and follow-up immediately. In general, an annual checkup is recommended for oral health assessment.

MORE ON THE TOPIC:

Best practice information on care of older adults: www.ConsultGerIRN.org.

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Dietrich, T., & Garcia, R.I. (2005). Associations between periodontal disease and system disease: Evaluating the strength of the evidence. *Journal of Periodontology*, 76(11-s), 2175-2184.

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The Kayser-Jones Brief Oral Health Status Examination (BOHSE)

Resident's Name _____

Date _____

Examiner's name _____

TOTAL SCORE _____

CATEGORY	MEASUREMENT	0	1	2
LYMPH NODES	Observe and feel nodes	No enlargement	Enlarged, not tender	<u>Enlarged and tender*</u>
LIPS	Observe, feel tissue and ask resident, family or staff (e.g. primary caregiver)	Smooth, pink, moist	Dry, chapped, or <u>red at corners*</u>	<u>White or red patch, bleeding or ulcer for 2 weeks*</u>
TONGUE	Observe, feel tissue and ask resident, family or staff (e.g. primary caregiver)	Normal roughness, pink and moist	Coated, smooth, patchy, severely fissured or some redness	<u>Red, smooth, white or red patch; ulcer for 2 weeks*</u>
TISSUE INSIDE CHEEK, FLOOR AND ROOF OF MOUTH	Observe, feel tissue and ask resident, family or staff (e.g. primary caregiver)	Pink and Moist	<u>Dry, shiny, rough red, or swollen*</u>	<u>White or red patch, bleeding, hardness; ulcer for 2 weeks*</u>
GUMS BETWEEN TEETH AND/OR UNDER ARTIFICIAL TEETH	Gently press gums with tip of tongue blade	Pink, small indentations; firm, smooth and pink under artificial teeth	<u>Redness at border around 1-6 teeth; one red area or sore spot under artificial teeth*</u>	<u>Swollen or bleeding gums, redness at border around 7 or more teeth, loose teeth; generalized redness or sores under artificial teeth*</u>
SALIVA (EFFECT ON TISSUE)	Touch tongue blade to center of tongue and floor of mouth	Tissues moist, saliva free flowing and watery	Tissues dry and sticky	<u>Tissues parched and red, no saliva*</u>
CONDITION OF NATURAL TEETH	Observe and count number of decayed or broken teeth	No decayed or broken teeth/roots	<u>1-3 decayed or broken teeth/roots*</u>	<u>4 or more decayed or broken teeth/roots; fewer than 4 teeth in either jaw*</u>
CONDITION OF ARTIFICIAL TEETH	Observe and ask patient, family or staff (e.g. primary caregiver)	Unbroken teeth, worn most of the time	1 broken/missing tooth, or worn for eating or cosmetics only	<u>More than 1 broken or missing tooth, or either denture missing or never worn*</u>
PAIRS OF TEETH IN CHEWING POSITION (NATURAL OR ARTIFICIAL)	Observe and count pairs of teeth in chewing position	12 or more pairs of teeth in chewing position	8-11 pairs of teeth in chewing position	<u>0-7 pairs of teeth in chewing position*</u>
ORAL CLEANLINESS	Observe appearance of teeth or dentures	Clean, no food particles/tartar in the mouth or on artificial teeth	Food particles/tartar in one or two places in the mouth or on artificial teeth	Food particles.tartar in most places in the mouth or on artificial teeth

Upper dentures labeled: Yes _____ No _____ None _____ Lower dentures labeled: Yes _____ No _____ None _____

Is your mouth comfortable? Yes _____ No _____ If no, explain: _____

Additional comments: _____

Underlined* -refer to dentist immediately

Kayser-Jones, J., Bird, W.F., Paul, S.M., Long, L., & Schell, E.S. (1995). An instrument to assess the oral health status of nursing home residents. *The Gerontologist*, 35(6), 814-824. Figure 2, p. 823.

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