## Oral Assessment Guide (OAG)

Eilers, J., Berger, A.M., Petersen, M.C. (1988). Development, testing and application of the oral assessment guide. *Oncol Nurs Forum*, 15 (3), 325-30.

| | |
|---|---|
| Instrument de mesure | Oral Assessment Guide |
| Abréviation | OAG |
| Auteur | Eilers et al |
| Thème | Etat de la bouche |
| Objectif | Évaluation de l'état buccal |
| Population | Tous |
| Utilisateurs | Infirmiers et dentistes |
| Nombre d'items | 8 |
| Participation du patient | Non |
| Localisation de l'instrument de mesure | http://www.omedit-centre.fr/Voie%20orale_web_gen_web/res/Grille_OAG.pdf |

**OBJECTIF**

Il s'agit d'une grille d'évaluation de l'état de la bouche dans la population oncologique adulte.

**PUBLIC CIBLE**

Cet outil d'évaluation est conçu, dans sa version originale, pour les patient présentant un cancer et étant traitée par radiothérapie (Eilers et al., 1988). L'utilisation de l'outil est plébiscité dans la recommandation de bonne pratique du RNAO pour les secteurs de soins aigus, soins intensifs, les centres du cancer et les services de rééducations. Une version révisée par Gibson et al. a été validée pour l'adaptation de l'outil à la population pédiatrique. Une autre version révisée, le ROAG, a été développé par Andersson et al afin de s'adapter à une population plus gériatrique.

**DESCRIPTION**

Le OAG est un outil d'évaluation utilisé pour l'évaluation des différents éléments constituant la bouche (lèvres, langue, salive). L'OAG a démontré une facilité clinique pour l'évaluation, l'enregistrement et la communication autour de la santé buccale pour les adultes. L'outil a aussi démontré son efficacité pour la détection des modifications de la santé buccale et dans la guidance des interventions infirmières. Cependant, l'outil a montré des failles sur l'évaluation de l'alimentation, l'hydratation, la parole, la mastication ou la douleur.

L'utilisation est simple, consistant à attribuer un score de 1 (sain) à 3 (problème sévère) pour chaque item selon la description indiquée dans la grille. Les catégories évaluées sont la voix, la déglutition, les lèvres et les coins de la bouche, la langue, la salive, la muqueuse, les gencives et les dents. Les scores de chaque catégorie sont additionnés pour obtenir le score final. Le score minimal est de 8 et le score maximal de 24. Un score élevé indique la présence de problématiques pour l'une ou plusieurs catégories évaluées.

**FIABILITE**

L'outil montre une excellente fiabilité inter-juges (*Equivalence*) entre infirmiers de pratique clinique (r= 0.912) et une bonne adhésion à l'utilisation de l'outil. Les résultats obtenus concernant la stabilité (*Stability*) de l'instrument montre une corrélation entre le score obtenu et le nombre de jours post traitement. La consistance interne (*Internal consistency*) a été évaluée dans la version d'Andersson et est exprimée par un alpha de Cronbach supérieur à 0.87, ce qui est excellent.

**VALIDITE**

La validité du contenu (*Content Validity*) de l'instrument de mesure a été déterminée sur base de la littérature et de l'avis d'un panel d'experts. La validité a été jugée correcte.

La validité faciale (Face Validity) de l'instrument de mesure a été démontrée par Gibson, 2006 lors de l'adaptation de l'outil à la population pédiatrique.

La validité des critères (Concurrent Validity) a été montrée par une association significative entre les doses de radiothérapie reçue et les résultats de l'OAG.

**CONVIVIALITE**

Simple et facile d'utilisation, l'administration prend moins quelques minutes. L'outil peut être utilisé dans différents milieux de soins. Il n'y a pas d'entrainement de l'évaluateur nécessaire avant la passation de l'instrument de mesure, cependant, il est conseillé afin d'améliorer la corrélation inter-juges et les décisions d'interventions infirmières.

**REMARQUE**

Il existe une version révisée, incluant plus de détails dans les descriptions des catégories, pour les populations pédiatriques (Gibson et al.)

Une version modifiée du OAG a été crée par Andersson et al afin de s'adapter à une population plus âgée. L'outil est connu sous le nom de Revised Oral Assessment Guide (ROAG) . Les huit catégories reste présentent, seule la description des catégories est quelque peu modifiée.

**RÉFÉRENCES**


Eilers, J., Berger, A.M., Petersen, M.C. (1988). Development , testing and application of the oral assessment guide. *Oncol Nurs Forum*, 15 (3), 325-30.

Andersson,P., Persson, L., Hallberg,IR., Renvert,S.(1999) Testing an oral assessment guide during chemotherapy treatment in a Swedish care setting: a pilot study. *,J Clin Nurs 8: 150-8, 1999.*

Andersson,P., Persson, L., Hallberg,IR., Renvert,S.(2004) Oral Health problems in elderly rehabilitation patients. *International Journal of dental Hygiène. 2(2), 70-77*.

http://www.omedit-centre.fr/Voie%20orale_web_gen_web/res/Grille_OAG.pdf

Gibson, F., Cargill, J., Allison, J., Begent, J., Cole, S., Stone, J., Lucas, V. (2006). Establishing content validity of the oral assessment guide in children and young people. *European Journal of Cancer 42(12)* , 1817-1825.

Paulsson, G., Andersson, P., Wardh, I. , Öhrn, K. (2008) Comparison of oral health assessments between nursing staff and patients on medical wards. *European Journal of Cancer Care 17, 49–55*

Gibson, F., Auld E.M., Bryan G., Coulson S., Craig J., Glenny A-M.(2010). A Systematic Review of Oral Assessment Instruments. *Cancer Nursing* 33 (4), E1-E19

Knöös, M., Östman, M. (2010). Oral Asessment Guide –test of reliability and validity for patients receiving radiotherapy to the head and neck region. *European Journal of Cancer Care 19, 53–60*

Konradsen, H., Trosborg, I., Christensen, L., Pedersen, P.U. (2014). Evaluation of interrater reliability assessing oral health in acute care settings. International Journal of Nursing Practice 20(3): 258-264

**LOCALISATION DE L'INSTRUMENT DE MESURE**

En français : http://www.omedit-centre.fr/Voie%20orale_web_gen_web/res/Grille_OAG.pdf

En Anglais : https://www.starship.org.nz/media/172991/oral.pdf

Version pédiatrique : www.gosh.nhs.uk/file/88/download?token=tt02fDHE

**INSTRUMENT DE MESURE**

| Category | Method of administration | 1 | 2 | 3 |
|---|---|---|---|---|
| **Voice** | Converse with patient. Listen to crying. | Normal | Deeper or raspy | Difficulty talking, crying or painful. |
| **Swallow** | Ask patient to swallow. | Normal swallow | Some pain on swallowing. | Unable to swallow. |
| **Lips and corner of the mouth** | Observe and feel tissue. | Smooth and pink and moist. | Dry or cracked. | Ulcerated or bleeding. |
| **Tongue** | Observe appearance of tissue. | Pink and moist and papillae present. | Coated or loss of papillae with a shiny appearance with or without redness<br>Fungal infection | Blistered or cracked. |
| **Saliva** | Observe consistency and quality of saliva or insert depressor into mouth, touching centre of the tongue and the floor of the mouth. | Watery<br>Excess salivation due to teething | Thick or ropy | Absent |
| **Mucous Membrane** | Observe the appearance of the tissue | Pink and moist | Reddened or coated without ulceration.<br>Fungal infection | Ulceration with or without bleeding. |
| **Gingivae** | Gently press tissue with a gloved finger | Pink and firm<br>Oedema due to teething | Oedematous with or without redness, smooth. | Spontaneous bleeding or bleeding with pressure |
| **Teeth**<br>( If no teeth score as 1 ) | Visual<br>Observe appearance of teeth | Clean and no debris | Plaque or debris in localised areas (between teeth if present) | Plaque or debris generalised along gum line |

Oral Assessment Guide Adapted and reprinted from Eilers, J. Berger, A. and Petersen, M. (1988).

**IMAGE 6: ORAL ASSESSMENT GUIDE**

| Category | Method of assessment | 1 | 2 | 3 |
|---|---|---|---|---|
| **Swallow** | Ask the child to swallow or observe the swallowing process. Ask the parent if there are any notable changes. | Normal. Without difficulty | Difficulty in swallowing | Unable to swallow at all. Pooling, dribbling of secretions |
| **Lips and corner of mouth** | Observe appearance of tissue | Normal. Smooth, pink and moist | Dry, cracked or swollen | Ulcerated or bleeding |
| **Tongue** | Observe the appearance of the tongue using a pen-torch to illuminate the oral cavity | Normal. Firm without fissures (cracking or splitting) or prominent papilla. Pink and moist | Coated or loss of papillae with a shiny appearance with or without redness and/or oral *Candida* | Ulcerated, sloughing or cracked |
| **Saliva** | Observe consistency and quality of saliva | Normal. Thin and watery | Excess amount of saliva, drooling | **Thick, ropy** or absent |
| **Mucous membrane** | Observe the appearance of tissue using a pen-torch to illuminate the oral cavity | Normal. Pink and moist | Reddened or coated without ulceration and/or oral *Candida* | Ulceration and sloughing, with or without bleeding |
| **Gingivae** | Observe the appearance of tissue using a pen-torch to illuminate the oral cavity | Normal. Pink or coral with a stippled (dotted) surface. Gum margins tight and well defined, no swelling. | Oedematous with or without redness, smooth | Spontaneous bleeding |
| **Teeth** (If no teeth score 1) | Observe the appearance of teeth using a pen-torch to illuminate the oral cavity | Normal. Clean and no debris | Plaque or debris in localised areas | Plaque or debris generalised along gum line |
| **Voice** | Talk and listen to the child. Ask the parent if there are any notable changes | Normal tone and quality when talking or crying | Deeper or raspy | Difficult to talk, cry or not talking at all |

**NB if score >8 introduce pain assessment instrument**

Oral assessment guide-Adapted from Eilers et al. (1988) by the mouth care working party at Great Ormond Street Hospital for Children NHS Trust (2005).


**IMAGE 7: ORAL ASSESSMENT GUIDE FOR CHILDREN AND YOUNG PEOPLE**

| | | Numerical and descriptive rating | | |
|---|---|---|---|---|
| Category | Method | 1 | 2 | 3 |
| Voice | Converse with the patient | Normal | Deep or rasping | Difficulty talking or painful |
| Lips | Observe | Smooth and pink | Dry or cracked, and/or angular chelitis | Ulcerated or bleeding |
| Mucous membranes<br>Dentures remove | Observe<br>Use light and mouth mirror | Pink and moist | Red, dry and/or areas with coating | Blisters or ulceration with or without bleeding |
| Tongue | Observe<br>Use light and mouth mirror | Pink, moist and papillae present | Dry, red, no papillae present | Blisters or ulceration with or without bleeding |
| Gums | Observe<br>Use light and mouth mirror | Pink and firm | Edematous and/or red | Bleeding spontaneously |
| Teeth | Observe<br>Use light and mouth mirror | Clean, no plaque or debris | (1) Plaque or debris in local areas<br>(2) Decayed teeth | Plaque or debris generalized |
| Dentures | Observe | Clean and functioning | (1) Plaque or debris<br>(2) Function badly | Not used |
| Saliva | Slide a mouth mirror along the buccal mucosa | No friction between the mouth mirror and mucosa | Slightly increased friction, no tendency for the mirror to adhere to the mucosa | Significantly increase friction, the mirror adhering or tending to adhere to the mucosa |
| Swallow | Ask the patient to swallow<br>Observe<br>Ask the patient | Normal swallow | Some pain or difficulty on swallowing | Unable to swallow |

Revised oral assessment guide. Modified from Eilers *et al.* (1988) with permission from Nebraska Medical Center.

**IMAGE 8: REVISED ORAL ASSESSMENT GUIDE**

**ORAL ASSESSMENT GUIDE (OAG)**

EILERS ET AL.

| Author (year) | Setting | Sample (n) | Design | Reliability | Validity |
|---|---|---|---|---|---|
| Anderson et al, 1999 | Hospital in Sweden | 67 pairs of assessment in 16 patients | Research support | **S; E; IC** | |
| Gibson et al, 2006 | Great Ormond Street Hospital for Children NHS Trust<br><br>Health care professional (nurses, dentist and paediatric oncologists) > 5 years experience. | Items content validity = 3 oncology nurses, 3 dentists and 3 paediatric oncologists<br><br>Instrument content validity : 4 oncology nurses, 4 dentists and 4 paediatric oncologists | Validation study | | **FV** |
| Knoos et al, 2010 | University Hospital, Malmö, Sweden | Consecutive sample of adult outpatient (> 18 years of age) for radiotherapy to the head and neck region | Prospective study | **E** | **CrV** |

Betrouwbaarheid/ fiabilité: Stability (S), Internal Consistency (IC), Equivalence (E)

Validiteit/ validité: Face Validity (FV), Content Validity (CtV), Criterion Validity (CrV), Construct Validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR), Area Under the Curve (AUC)

| Results reliability | Results validity | Commentary |
|---|---|---|
| **S**: *Stability :* Correlation coefficient : 0.41 p < 0.05. Total OAG score is related to the number of days that had elapsed since the last course of chemotherapy.<br><br>**E:** *Equivalence :* Inter rater reliability between dental hygienist and registered nurses: good for saliva and swallow (81-92%); moderate for voice and gums (75-81%), and fair for teeth/dentures (63%-75%), lips and mucus membranes (50-75%).<br><br>**IC:** *Internal consistency:* Cronbach's $\alpha$ : Nurses: 0.87 ; Dental hygienists: 0.88 | ***Ct V:*** *Content Validity:*<br><br>Review of literature for instrument development | |
| | ***FV:*** *Face Validity:* Consensual judgments by subject matter experts working independently. All eight categories of oral health revealed excellent content validity index with 0.05 level of significance. Experts felt that terminology should be change to child. | Child version |
| **E:** *Equivalence :* Inter rater reliability<br><br>Pearson's correlation coefficient: r=0.828 | ***CrV:*** *Concurrent Validity*<br><br>*Sensitivity between dose of radiation and side effects: For nurses: r= 0.543 [CI 0.408-0.654]. For oncologists: r=0.545 [CI 0.410-0.656].* | |

Betrouwbaarheid/ fiabilité: Stability (S), Internal Consistency (IC), Equivalence (E)

Validiteit/ validité: Face Validity (FV), Content Validity (CtV), Criterion Validity (CrV), Construct Validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR), Area Under the Curve (AUC)

**REVISED ORAL ASSESSMENT GUIDE (ROAG)**

ANDERSSON ET AL.

| Author (year) | Setting | Sample (n) | Design | Reliability | Validity |
|---|---|---|---|---|---|
| Anderson et al., 2002 | geriatric rehabilitation ward of a hospital in the south of Sweden. | A consecutive sample of 140 patients. Oral assessments were performed by a registered nurse (RN) at the beginning of the hospital stay for I33 patients, 48 men and 85 women. | Research support | **E** | **CtV** |
| Konradsen et al, 2014 | University hospital in Danemark. | 251 patient fulfilled inclusion criteria.<br><br>148 patients are included (97 men; 81 woman) | Research support | **E** | |

Betrouwbaarheid/ fiabilité: Stability (S), Internal Consistency (IC), Equivalence (E)

Validiteit/ validité: Face Validity (FV), Content Validity (CtV), Criterion Validity (CrV), Construct Validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR), Area Under the Curve (AUC)

| Results reliability | Results validity | Commentary |
|---|---|---|
| **E:** *Equivalence :* Inter-rater agreement between a dental hygienist (DH) and a registered nurse (RN) calculated using percent and Cohen's Kappa coefficient (n=66) : Percentage agreement was highest for assessment of voice and swallowing (91%). According to the Kappa coefficient, voice was 0.45 and swallowing 0.84. Assessment of teeth/dentures had a Kappa value of 0.46 which was the lowest percentage agreement (58%). | **Ct V**: *Content Validity*<br><br>Review of the literature, followed by suggestions expressed by an expert panel. | |
| **E:** *Equivalence:* Inter-rater agreement Cohen's kappa coefficient in the overall categories from k=0.070 to 0.302 | | |

Betrouwbaarheid/ fiabilité: Stability (S), Internal Consistency (IC), Equivalence (E)

Validiteit/ validité: Face Validity (FV), Content Validity (CtV), Criterion Validity (CrV), Construct Validity (CsV)

Sensitivity (Sen), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Receiver Operating Curve (ROC), Likelihood Ratio (LR), Odds Ratio (OR), Area Under the Curve (AUC)

*Comment citer ce rapport ?*

Tricas-Sauras S. ; Filion N ; Piron, C ; Verhaeghe S ; Van Durme Th ; Karam, M ; Darras, E. (2016) Inventaire et mise à disposition de recommandations pour la pratique infirmière. Les projets BeST et Guidelines III. Bruxelles : Politique Scientifique Fédérale & Service Publique Fédéral Santé Publique, Sécurité de la Chaîne alimentaire et Environnement.

Ce projet a été commandité conjointement par la Politique Scientifique Fédérale et le Service Public Fédéral Santé Publique, Sécurité de la Chaîne alimentaire et Environnement. Il est le fruit d'une collaboration entre l'Université catholique de Louvain et de l'Universiteit Gent.