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Clinical Paper

American Association of Oral and Maxillofacial Surgeons

Statement by the American Association of Oral and Maxillofacial Surgeons Concerning the Management of Selected Clinical Conditions and Associated Clinical Procedures

Indications for Radiographs

Section 1: Parameters of Care as the Basis for Clinical Practice

Introduction

This statement is intended to summarize the procedures used in the management of patients presenting for care by oral and maxillofacial surgeons. The definitive guide to the management of such patients is *Parameters of Care: AAOMS Clinical Practice Guidelines for Oral and Maxillofacial Surgery (AAOMS ParCare) Sixth Edition 2017*. Any references used in the development of this statement can be found in *AAOMS ParCare 2017*. This statement is not intended as a substitute for *AAOMS ParCare 2017*, but rather as a synopsis of the information contained in *AAOMS ParCare 2017*.

Section 2: Indications for Radiographs

The intent of the "Indications for Radiographs" is to explain their usage in the diagnosis, treatment planning and care of the oral and maxillofacial surgery patient. Recent advances in diagnostic imaging have enabled oral and maxillofacial surgeons to more effectively diagnose and treat conditions encountered within the patient populations of their practices.

The American Association of Oral and Maxillofacial Surgeons (AAOMS) wishes to provide third-party carriers with information regarding the use of radiographs within the scope of oral and maxillofacial surgery practices as it related to appropriate patient care.

Indications for Usage

The use of radiographs in the oral and maxillofacial surgery practice is based on the medical history and clinical examination of the patient. As such, they are Necessary to evaluate conditions detected by history and clinical examination. In addition, they are essential to detect, diagnose and treat conditions that otherwise may be impossible to identify until signs and symptoms appear and serious damage may have occurred. Such conditions include, but may not be limited to:

- Carious teeth.
- Bone loss secondary to periodontal disease.
- Impacted or embedded teeth.
- Congenitally absent teeth in children who have not yet lost their primary teeth.
- Supernumerary teeth that can crowd or block the permanent teeth from eruption.
- Abnormalities of jaw growth or tooth eruption.
- Broken or retained root fragments that may lead to infection and/or difficulty wearing a prosthesis.
- Abnormal morphology of tooth roots or position in relation to associated structures that could alter routine treatment.
- Infections of the teeth, jaws or associated structures.
- Fractures of the teeth, alveolar processes, jaws or facial bones.
- Disorders of the temporomandibular joint.
- Facial deformities.
- Cysts, benign or malignant tumors or other pathological entities of the jaws and/or associated structures.
- Bone patterns characteristic of diseases affecting other parts of the body (i.e., including metastatic disease).

In addition, radiographs are useful and necessary in the assessment of satisfactory treatment, such as:

- Determining resolution of periodontal lesions and arresting of bone loss.
- Following the eruptive pattern of previously embedded teeth.
- Following the resolution of osseous infections.

- Follow-up care to assure resolution of pathologic conditions, whether benign or malignant and to ascertain that there is no recurrence.
- To assure implants, grafts and transplants to the jaws and associated structures are functioning appropriately.
- Follow-up of surgical treatment of congenital or developmental deformities.

Conditions treated in oral and maxillofacial surgery are dynamic in nature and can potentially change within a short period of time. When surgical treatment is based either partially or entirely on radiographic findings, the radiographs must reflect the current situation to assure the treatment is appropriate. The placement of limitations on radiographs taken for "screening" purposes only, when no disease is suspected, is reasonable. Limitations are not appropriate, however, when there is reason to suspect abnormal findings based on the symptoms, history or clinical examination of the patient.

AAOMS does not believe there should be a specific limitation on the frequency of radiographs and that the individual situation with regard to diagnosis, treatment or follow-up care should be the determining factor as to the necessity of radiographs. AAOMS believes certain procedures require current radiographs and cannot be based on images that may not be appropriate for accurate diagnosis and treatment, such as:

- Traumatic injuries.
- Pathologic conditions such as cysts and tumors of the jaws.
- Impacted teeth. Radiographs over 1 year old may not be adequate to ascertain the position or degree of impaction of the tooth, its relationship to adjacent structures (i.e., sinus, adjacent teeth, neurovascular bundle) and possible damage it may have caused. This is especially true in the patient where ongoing growth and development is occurring; older images may indicate a higher degree of impaction, or less risk to vital structures.
- Implants, grafts, etc., require images that are current to assure the best possible results.
- Infectious processes.

Conclusion

In determining studies to be performed for imaging purposes, principles of ALARA (as low as reasonably achievable) should be followed. AAOMS does not condone the unnecessary use of radiographs and feels it is the responsibility of the oral and maxillofacial surgeon to prevent unnecessary radiation exposure and assure that techniques and equipment used will give the most diagnostic information with the least radiation exposure to the patient. Radiographs should be utilized when the clinical judgment of the oral and maxillofacial surgeon dictates they are in the best interests of the patient.