SFHOH31

Design and manufacture obturators

Overview

This standard focuses on the design and manufacture, using manual or digital techniques, of obturators. Obturators are designed to replace the roof of the mouth and related areas, up to and including supporting the orbit of the eye. Obturators may include a set of complete or partial dentures within their design and also be used in the rehabilitation of individuals requiring facial prostheses.

The term 'client' is used to mean the member of the oral health care team who has prescribed the custom-made prosthesis.

The individual is the one for whom the custom-made obturator is being made or the parents/guardians/carers where appropriate. Due to the nature of the oral health problems that require the development of obturators, dental technologists will tend to work closely with clients, individuals (or their parents/guardians/carers as appropriate) and other members of the care team in their development. This requires good communication skills with all of the above and other members of the care team alike.

The design and manufacturing process may be carried out in a regulated dental laboratory within a variety of settings.

Users of this standard will need to ensure that practice reflects up to date information, policies and regulations.

Performance criteria

You must be able to:

1. communicate with the individual and key people at a pace, in a manner and at a level appropriate to their understanding, preferences and needs
2. collate and confirm accuracy of all specification information required for obturator design and manufacture with relevant others
3. interpret and analyse information captured of both soft and hard tissues in oral environment using both analogue and digital techniques
4. select the necessary components, materials and equipment and confirm that they are fit for purpose
5. set up and operate the manufacturing equipment for manual or digital methods in accordance with the specification
6. manufacture the obturator using suitable manual or digital techniques adjusting manufacturing processes as necessary.
7. monitor the manufacturing process and adjust as required
8. devest or retrieve the manufactured product using an appropriate method which releases the item without causing damage
9. ensure that the manufactured product matches the specification and make any necessary adjustments
10. clean and finish the restoration, prepare and package it safely for dispatch together with instructions for the individual and client
11. dispose of waste in accordance with all relevant legislation, guidelines, and workplace procedures
12. complete and store all documentation in accordance with relevant legislation, guidelines, and workplace procedures

Knowledge and understanding

You need to know and understand:

1. how to communicate with relevant others at a pace, manner and level appropriate to their understanding, preferences and needs
2. the importance of applying standard infection control precautions and the potential consequences of poor practice
3. the principles, uses, methods, techniques and equipment involved in digital design and manufacturing.
4. the range of equipment used in the design and manufacture of dental devices
5. the skeletal anatomy, tooth morphology, orofacial musculature including the tongue and temporomandibular joint function and movement
6. the physiological and pathological changes associated with the ageing process and trauma related to the oral environment.
7. the importance of retention of the periodontal ligament and the changes in proprioception due to loss of periodontal ligament
8. the cause of infections of the jaws and their treatment.
9. the effects of oral disease on prosthesis and appliance design and function
10. oral malignancy and the surgical and medical management of oral malignancy
11. the different methods of preoperative device design and manufacture
12. the effect of treatments on materials selection, appliance design and function, and manufacturing techniques.
13. the benefits and restrictions of immediate tissue replacement in the provision of removable prostheses
14. the physical and emotional response including functional needs of the individual in relation to soft tissue and tooth loss in the oral cavity
15. the role of obturators in the restoration and maintenance of:
16. the importance of restoring and maintaining the occlusal vertical dimension
17. the use and need for transitional removable prostheses
18. the use of resilient liners and tissue conditioners
19. the design limitations of large anterior undercuts and pre-existing dental conditions
20. the principles of obturator design
21. the classification and sub-classification of materials on the basis of chemical composition and internal structure
22. the mechanical, physical, thermal, chemical and biological properties of

materials

23. the purpose of different products used for cast and mould manufacture or digital representation

24. the purpose of different types of materials used in the manufacture of restorations

25. legal and physical implications of modifying manufacturer products and ensuring quality assurance.

26. how to effectively clean and finish the restoration, prepare and package it safely for dispatch together with instructions for the individual and client

27. different methods of waste disposal and how to apply these

28. the importance of updating documentation and storing individuals records safely and securely

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