OH15 2012 Produce specific custom-made devices for the design and manufacture of removable prostheses

OVERVIEW

This standard focuses on preparations for the design and manufacture of complete and partial removable prostheses. You will need to prepare and maintain environments, materials and equipment for the design and manufacture of the prosthesis; produce working casts and custom made trays, bleaching trays, stents, baseplates and occlusal registration rims.The term 'client' is used to mean the member of the oral health care team who has prescribed the custom-made prosthesis. Clients may be external to the organisation (such as other laboratories, dental practitioners, training schools) or internal (within a dental hospital). The patient is the individual for whom the custom-made prosthesis is being made.Users of this standard will need to ensure that practice reflects up to date information and policies.Version No2

KNOWLEDGE AND UNDERSTANDING

You will need to know and understand:

1. the skeletal anatomy, physiology of the head and neck and tooth morphology
2. the aetiology and classifications of malocclusions
3. the effect of skeletal form and ridge relationships upon the function, design and manufacture of complete and partial removable prostheses
4. the broader factors (sociological, behavioural, environmental and economic) that contribute to oral health and illness
5. retention and stability
6. design of bleaching trays or stents
7. aesthetics and phonetics
8. articulation
9. the classification and sub-classification of materials on the basis of chemical composition and internal structure
10. cast and mould manufacture
11. the principles and use of digital design and manufacturing
12. waxes and similar materials used in the manufacture of removable prostheses
13. dental polymers
14. impression, duplicating and cleaning materials
15. methods of developing, maintaining and improving communication and information relating to the provision of custom-made dental devices
16. the importance of communicating with individuals at a pace, in a manner, and at a

level appropriate to their understanding, needs and preferences, whilst maintaining their dignity and choice
17. methods of infection control when handling received impressions and other items which may have been in the mouth, or which are intended to be placed in the mouth
18. the purpose of personal protective equipment
19. the range of equipment used in the design and manufacture of dental devices; methods of using equipment and materials safely including the use of chemicals and other hazardous substances; methods of storing different equipment and materials safely and securely; methods of cleaning and maintaining different types of equipment and your role in this
20. the reasons for maintaining records throughout the process and of clearly identifying the products during the manufacturing process
21. organisational procedures and requirements for the recording of information about incoming work, work in progress and work delivered to clients, and the purpose of this
22. principles of quality assurance including effective recording and sampling; processes and procedures for quality assurance in your workplace
23. methods of setting and calibrating equipment and of testing that this is correct
24. the effects of modifying manufacturers' products to meet laboratory requirements on the physical properties of products and on quality assured products, and the legal implications of poor manufacturing
25. legal requirements of the contract of employment, confidentiality and employers' regulations
26. health and safety at work legislation and related procedures and liability; principles of and how to apply, legislation and regulations relating to the manufacturing of devices
27. the role and obligations of members of the dental team and the regulatory functions of the General Dental Council

PERFORMANCE CRITERIA

You must be able to do the following:

1. review the prescription and contract and correctly identify the materials and equipment which will be required
2. assess correctly the risks to the worker and others involved in undertaking the design and manufacture of the custom-made prosthesis
3. use working methods and systems throughout the process which:
    1. promote health and safety
    2. reduce the risk of infection and contamination
    3. are consistent with the assessed risks
4. confirm that the environment in which the work is to be undertaken is in a fit state ready for use and if it is not, take any necessary remedial action
5. use suitable personal protective equipment and take the necessary precautions
6. select the correct type and quantity of materials that will be required
7. confirm that the required equipment is:
    1. clean
    2. in working order
    3. set correctly
8. report to the appropriate person as soon as is possible any problems with equipment

and materials
9. move and handle equipment and materials in an appropriate, safe manner which is consistent with current legal and organisational requirements
10. dispose of waste in a suitable container and in an environmentally safe manner
11. select material and make cast which is capable of meeting the technical requirements of the case
12. evaluate the casts or digital information to determine what needs to be incorporated into the design of occlusal registration rims, custom-made trays, stents or bleaching trays
13. apply appropriate spacer materials to the cast or create digital information to:
    1. eliminate undercuts
    2. provide the correct amount of space for the impression material or method of use in a stent or bleaching tray as selected by the client
14. apply a separating medium to the cast that is appropriate to the cast material and the processing method to be used
15. select materials that are appropriate to the nature and construction requirements of the specific custom-made device
16. prepare the specific custom-made device in the correct manner and to the specified design, quantity and quality
17. process materials using the correct method for the material concerned
18. confirm that the specific device conforms to the prescription
19. make complete, accurate and up-to-date records relating to the identification, components and manufacture of the manufactured device and store the records in the correct location consistent with relevant legislation
20. on receipt of the custom tray impression or appropriate digital information, correctly determine the prescription requirements from the information available
21. ensure the received impression has been effectively cleaned, confirm that it is free of voids or defects which render it unacceptable and prepare it appropriately to receive the cast material
22. inform the client in an appropriate manner if the impression is not of sufficient quality and obtain a replacement impression
23. correctly prepare and cast the impression
24. correctly trim the cast to prescription requirements
25. identify the casts with a unique patient reference
26. survey the cast to identify the position and size of undercuts, determine an appropriate path of insertion for the planned prosthesis and block out any unsuitable undercuts
27. check the completed specific custom-made device to confirm it is fit for purpose
28. effectively clean the specific custom-made device, correctly identify it with the patient's unique reference, prescription request and date of production, prepare and package it safely for despatch to the client at the agreed time
29. store the specific custom-made device in an appropriate safe manner and place when they are not in use
30. provide Statement of Manufacture for the device as appropriate as required under current regulation

ADDITIONAL INFORMATION

This National Occupational Standard was developed by Skills for Health. It replaces DT03.This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):Dimension: HWB9 Equipment and devices to meet health and wellbeing needs