

**GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY  
STANDARDS PACK FOR  
INITIAL ASSESSMENT, PREPARATION AND ADVICE  
January 2006**

**Background**

This is one of four packs containing the detailed draft Generic Occupational Standards for dental technology. They are:

1. Initial Assessment, Preparation and Advice
2. Prosthetic custom-made dental devices
3. Restorative custom-made dental devices
4. Orthodontic custom-made dental devices.

This pack contains the following:

INITIAL ASSESSMENT, PREPARATION AND ADVICE	
EDT01	Assess the feasibility of meeting client requirements for custom-made dental devices
EDT02	Prepare and maintain environments, materials and equipment for the design and manufacture of custom-made dental devices
EDT03	Produce custom-made trays to take impressions for custom-made dental devices
EDT04	Provide technical advice on the feasibility and design of custom-made dental devices
Knowledge and understanding that individuals need to develop and apply to meet the standards	

You have two main tasks to do in relation to these standards. You should do these in the order given.

1. Check the translation
  - a) Is the translation accurate?
  - b) Is it understandable in your country?
  - c) If not, what language should be used?
  - d) If unsure, check with the UK expert group, what the correct meaning is in English.
2. Verify the standards
  - a) Do the draft standards describe best practice in your country?
  - b) If not, what is best practice in your country – please provide detailed information on what should be changed and why.

We need to develop European standards that work in every country and every language. As there can only be one standard, we will all need to compromise.

## UNIT

### EDT01 Assess the feasibility of meeting client requirements for custom-made dental devices

#### Information about this unit

This unit describes the role of the worker in reviewing clients' prescriptions and instructions, identifying the client's requirements, producing primary casts and assessing the feasibility of meeting the client's requirements. The worker may be undertaking this evaluation at various stages in the manufacturing process (eg on first receipt of a prescription or request, after a try-in). The worker will be decide on the feasibility of making devices and the technical and production capacity to do this. The worker will need to communicate with the client where there is insufficient information on which to make a decision, or concern about the feasibility of meeting their requirements (in which case they should suggest options to the client). The accountability for the overall assessment and treatment planning process remains with the clinician although the worker who is assessing the feasibility of meeting their requirements is responsible for the quality of the information and advice they provide.

The worker needs to prepare environments, materials and equipment ready for reviewing client contracts whether these are on initial receipt or on return to the laboratory. Each time information is received client requirements need to be evaluated, or re-evaluated, to confirm the nature of the request, the quality of information provided, the extent to which the information is sufficient to allow the worker to proceed with the design and manufacture. Depending on the custom-made dental device that is to be made, primary casts may go on to become working casts or further casts may need to be made.

There are four elements

EDT01.1 Prepare and maintain environments, materials and equipment for reviewing client contracts

EDT01.2 Determine client requirements for custom-made dental devices

EDT01.3 Produce primary casts as the basis for manufacturing custom-made dental devices

EDT01.4 Evaluate the feasibility of producing custom-made dental devices to meet client requirements.

#### SCOPE OF THE STANDARDS

1 Impression and occlusal registration information might relate to patients with:

- a) dentate upper jaw
- b) edentulous upper jaw
- c) partially dentate upper jaw
- d) dentate lower jaw
- e) edentulous lower jaw
- f) partially dentate lower jaw
- g) deciduous dentition.

2 Primary cast:

- a) working casts
- b) opposing casts
- c) general study casts
- d) orthodontic study casts
- e) quadrant or small section casts.

3 Articulator:

- a) simple hinge

- b) adjustable
- c) fixed condylar path
- d) cast locator.

**Element**

**EDT01.1 Prepare and maintain environments, materials and equipment for reviewing client contracts**

**Performance criteria**

**The worker will need to:**

- 1 review the prescription and contract and correctly identify the materials and equipment which will be required<sup>1</sup>
- 2 assess correctly the risks to the worker and others involved in undertaking the design and manufacture of the custom-made dental device
- 3 use working methods and systems throughout the process which:
  - promote health and safety
  - reduce the risk of infection and contamination
  - 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<sup>2</sup>
- 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:
  - clean
  - in working order
  - set correctly
- 8 report to the appropriate person as soon as is possible any problems<sup>3</sup>
- 9 move and handle equipment and materials in an appropriate, safe manner that is consistent with current legal and organisational requirements
- 10 dispose of waste in a suitable container and in an environmentally safe manner.

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<sup>1</sup> The materials and equipment will include that for disinfecting impressions and for preparing casts.

<sup>2</sup> The 'preparation of the environment' will include ventilating the area appropriately (eg through using extraction systems for fumes and dust) and adjusting the lighting.

<sup>3</sup> The problems might be with: equipment, materials and supplies or the information supplied by the client.

**Element**

**EDT01.2 Determine client requirements for custom-made dental devices**

**Performance criteria**

**The worker will need to:**

- 1 record requests and specifications for custom-made dental devices:
  - as soon as they are received
  - accurately and completely in the appropriate documentation
  - in a manner which is consistent with legal and organisational requirements
- 2 disinfect the impression before it is evaluated for its suitability
- 3 assess the information received from the client for its clarity, and make clear and accurate records of:
  - patient identity, age and gender
  - prescribing client's identity
  - reason for the device
  - type of device required
  - components required
  - timescale for progress and completion
  - requirements for specific materials
  - any other specific requirements of the client<sup>4</sup>
  - radiographs and photographs if these are required
- 4 assess the quality of the impression and occlusal registration for their ability to form the basis of accurate casts
- 5 assess the technical feasibility of the client's prescription
- 6 determine a laboratory route that is capable of meeting the prescription
- 7 contact clients promptly and politely using agreed procedures when:
  - there is insufficient information to accurately identify what is required
  - the impression and occlusal registration are of poor quality<sup>5</sup>
  - there are concerns as to the technical feasibility of the prescription
- 8 discuss issues with the client in ways that promote effective working relationships, reach agreement with them on how to proceed and record the agreed changes and cost.

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<sup>4</sup> Any other specific requirements of the client would include costs.

<sup>5</sup> , Poor quality impression may relate to: insufficient coverage and depth, insufficient detail, impression distortion, use of inappropriate impression materials, or adhesion of the impression to the impression tray.

**Element**

**EDT01.3 Produce primary casts as the basis for manufacturing custom-made dental devices**

**Performance criteria**

**The worker will need to:**

- 1 confirm that the preliminary impression matches the case data
- 2 handle the impression in a manner which limits the risk of contamination, cross infection and distortion
- 3 prepare the impression appropriately to pour the primary cast material
- 4 select material for making the primary cast which is capable of meeting the technical requirements of the case
- 5 prepare material in an appropriate manner prior to mixing
- 6 mix the material:
  - in the correct ratio
  - to produce the required volume of cast material
- 7 pour the cast material into the impression and form a base, and allow it to set for a sufficient period for the cast to be separated from the impression without damage
- 8 remove the impression from the cast and check the cast to confirm that it:
  - is an accurate positive image of the impression
  - includes the detail and area that is required to manufacture the dental device
  - is dense
  - is free from voids and other visible defects
- 9 trim the cast so that:
  - bases are level
  - sides are free from extraneous material, and
  - essential anatomical detail is retained
- 10 make further appropriate adjustments to the cast<sup>6</sup> when this is necessary for the next stage of the process
- 11 correctly identify the primary cast with the patient's unique reference
- 12 confirm the quality of the cast using documented quality control procedures
- 13 store the cast in the correct location and for the correct period to meet legal and organisational requirements.

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<sup>6</sup> Adjustments to the cast may include removing any obvious inaccuracies that can be removed, trimming excess material, additions to the cast (relief).

**Element**

**EDT01.4 Evaluate the feasibility of producing custom-made dental devices to meet client requirements**

**Performance criteria**

**The worker will need to:**

- 1 visually examine the casts for their quality in meeting prescription requirements
- 2 select and prepare an articulator that is appropriate for:
  - the prescription
  - the required method of articulation
  - the occlusal registration
- 3 remove any material from the casts which is likely to prevent their accurate positioning on the articulator and provide an effective means of split-cast mounting when this is required
- 4 position the casts on the articulator, fix them securely, articulate the casts consistent with the occlusal registration information supplied by the client
- 5 assess the articulated casts and make an initial evaluation of:
  - the quality of the occlusal registration information
  - the technical feasibility of meeting the prescription requirements
- 6 confirm that the casts and articulator are free of inaccuracies and debris and record on the cast:
  - the patient's details
  - the articulator employed
  - occlusal dimensions
- 7 evaluate casts and identify those custom-made dental devices that the organisation has the capability to produce given:
  - the acceptability of the cast for manufacturing purposes
  - the cost and time of producing an effective device
  - the resources available
  - possible outsourcing of cases
  - organisational commitments and directionand take them forward into the planning, design and manufacturing phase
- 8 contact the client without delay if it is not possible to produce the custom-made dental device explaining the reasons for the decision and proposing other options.

**UNIT**

**EDT02 Prepare and maintain environments, materials and equipment for the design and manufacture of custom-made dental devices**

**Information about this unit**

This unit focuses on preparing for the design and manufacture of custom-made dental devices whether they be: prosthetic, restorative or orthodontic in nature.

**Scope of the standards**

- 1 Custom-made dental devices:
  - a) removable prostheses
  - b) restorations
  - c) orthodontic appliances.
  
- 2 Materials and equipment for:
  - a) producing custom-made trays
  - b) producing and preparing working dies and casts
  - c) producing and preparing baseplates and occlusal registration rims
  - d) designing, manufacturing and positioning components
  - e) assembling and manufacturing appliances / devices / frameworks / substructures
  - f) trimming, finishing and polishing appliances / devices / frameworks / substructures
  - g) relining, rebasing, repairing and modifying devices.

## Performance criteria

### The worker will need to:

- 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 dental device
- 3 use working methods and systems throughout the process which:
  - promote health and safety
  - reduce the risk of infection and contamination
  - 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<sup>7</sup>
- 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:
  - clean
  - in working order
  - 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 that is consistent with current legal and organisational requirements
- 10 dispose of waste in a suitable container and in an environmentally safe manner.

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<sup>7</sup> The 'preparation of the environment' will include ventilating the area appropriately (eg through using extraction systems for fumes and dust), and adjusting the lighting.

**UNIT**

**EDT03 Produce custom-made trays to take impressions for custom-made dental devices**

**Information about this unit**

This unit is about producing custom-made trays to take impressions for prosthetic and restorative custom-made dental devices.

**Scope of the standards**

- 1 Custom-made dental devices:
  - a) removable prostheses:
    - simple and complex complete
    - simple and complex partial
    - cast and wrought metallic components and cast frameworks.
  - b) restorations
    - single and integral metallic restorations and copings for the application of tooth coloured materials
    - single and multiple unit restorations.
  
- 2 Materials:
  - a) self cure polymeric
  - b) light cure polymeric
  - c) thermo-formed materials
  - d) heat cure polymeric.

## Performance criteria

### The worker will need to:

- 1 evaluate the casts and the prescription to determine what needs to be incorporated into the design of custom-made trays for:
  - the patient's dentition
  - the intended impression material and technique
- 2 apply appropriate spacer materials to the cast to:
  - eliminate undercuts
  - provide the correct amount of space for the impression material selected by the client
- 3 apply a separating medium to the cast that is appropriate to the cast material and the processing method to be used
- 4 select materials that are appropriate to the nature and construction requirements of the custom-made tray and prepare them in the correct manner and quantity
- 5 form the tray material over the cast to the predetermined peripheral outline, fix appropriate handles and finger rests
- 6 process materials using the correct method for the material concerned<sup>8</sup>
- 7 separate the tray from the cast in a manner that prevents damage and remove any spacing materials that remain
- 8 smooth the periphery, handle and other surfaces of the tray and perforate the tray surface if this is prescribed
- 9 confirm that the finished tray:
  - is clean
  - is free of defects
  - conforms to the prescription
- 10 effectively clean and disinfect the custom-made tray, correctly identify it with the patient's unique reference and date of production and return it to the client at the correct time
- 11 make complete, accurate and up-to-date records relating to the identification, components and manufacture of the custom-made tray and store the records in the correct location consistent with relevant legislation.

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<sup>8</sup> Some of the materials may need to be processed and others may not.

## UNIT

### EDT04 Provide technical advice on the feasibility and design of custom-made dental devices

#### Information about this unit

This unit focuses on the contribution which oral health workers make to the planning of programmes of oral healthcare by providing specialist technical advice to clinicians (eg general and specialist dentists) on the feasibility and design of custom-made dental devices (prostheses, restorations or orthodontic appliances). This unit is designed to cover situations where a clinician seeks specialist advice from those skilled in designing and manufacturing dental devices. This may occur when patients present complicated design problems (eg due to aesthetics, function or retention), where a non-standard device is required, or where there are different options for meeting the patients' needs and the clinician needs advice on those which are likely to be most effective.

The accountability for the overall assessment, decision-making and treatment planning processes remains with the clinician. The worker from whom specialist technical advice is sought is responsible for the quality of the information and advice they provide to the clinician.

There are three elements

- EDT04.1 Provide chairside advice to clients on the design options for custom-made dental devices within individual treatment plans
- EDT04.2 Contribute to the design of custom-made dental devices for patients
- EDT04.3 Monitor and coordinate the progress of custom-made dental devices through the manufacturing process.

#### Scope of the standards

- 1 Advice on:
  - a) type of device
  - b) type of materials
  - c) solutions to patient allergies
  - d) feasibility of particular course of action
  - e) preparation needed<sup>9</sup>
  - f) how design can be changed in response to the progress of the treatment.
  
- 2 Design options:
  - a) type of device
  - b) any modifications to standard device design
  - c) materials to be used
  - d) techniques and processes to be used<sup>10</sup>.
  
- 3 Processes:
  - a) preparing casts
  - b) manufacturing components
  - c) assembling and joining components
  - d) finishing devices.

<sup>9</sup> The preparation needed may include the need to remove teeth as part of a programme of orthodontic treatment.

<sup>10</sup> Techniques and processes to be used will include those for: joining components, processing polymeric and ceramic materials used within the dental device.

**Element**

**EDT04.1 Provide chairside advice to clients on the design options for custom-made dental devices within individual treatment plans**

**Performance criteria**

**The worker will need to:**

- 1 agree with clients:
  - the worker's role in contributing to treatment planning
  - the way in which the assessment and planning is to be carried out
- 2 obtain sufficient and appropriate background information on the case prior to interacting with clients and patients
- 3 interact with the client and patient in ways which:
  - are appropriate to the individuals concerned
  - are designed to encourage confidence in the worker and in the assessment and planning process overall
  - respect the patient's privacy and dignity
  - are consistent with the worker's role and relevant legislation and practice guidelines
- 4 obtain appropriate and sufficient information from the patient as to the functional and aesthetic requirements of the device
- 5 identify in discussion with the client:
  - the purpose of the treatment programme
  - how this will meet the needs of the patient
  - the aesthetic and functional requirements of the device
- 6 balance the additional information gained throughout the assessment process against the overall picture of the patient's needs to confirm or reject possible design options
- 7 follow reasoning processes which are:
  - capable of justification given the information available at the time
  - are likely to result in the optimum outcome for the patient
- 8 seek advice and support from an appropriate source when the needs of the patient and the complexity of the case are beyond the role and capability of the worker
- 9 offer alternative design options to the patient and client and discuss with them their benefits and limitations
- 10 agree with the client how any further work should be taken forward and the timing of it
- 11 make complete, legible, accurate records of the process and the advice offered<sup>11</sup>, and structure them in a way which allows others to use them easily.

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<sup>11</sup>'Complete records' means that the records should be signed, dated and contain all the relevant information.

**Element**

**EDT04.2 Contribute to the design of custom-made dental devices for patients**

**Performance criteria**

**The worker will need to:**

- 1 develop realistic, justifiable design options for addressing the patient's needs and make recommendations as to how to proceed
- 2 evaluate the identified design options and discuss with the client those which are most likely to achieve the best possible balance between:
  - aesthetics
  - function
  - cost
- 3 contact the client without delay if:
  - further information is needed from them
  - it is not possible to meet all of their requirements, proposing options for the design of the device
- 4 evaluate the selected design and make an accurate and realistic assessment of:
  - the sequencing of activities
  - the length of time that will be needed to manufacture the device
  - the people who will need to be involved
  - other work demands
- 5 provide the client with an accurate and realistic assessment of the time that a trial and a finished device will be available
- 6 make complete, legible, accurate records consistent with statutory and organisational requirements of:
  - the device to be constructed
  - the materials and processes to be used
  - the agreed timescales.

**Element**

**EDT04.3 Monitor and coordinate the progress of custom-made dental devices through the manufacturing process**

**Performance criteria**

**The worker will need to:**

- 1 schedule the manufacture of the custom-made dental device consistent with:
  - other work demands
  - the patient's treatment plan
  - client requirements
  - statutory obligations
- 2 develop plans for the manufacture of the custom-made dental device which can be monitored for the quality of outcomes and processes
- 3 check the availability of other people to contribute to the production and agree with them how the work will be organised
- 4 record and explain clearly to those involved in the production process:
  - the planned design
  - the materials to be used
  - the processes to be used
  - the functional and aesthetic requirements of the device
  - the work to be undertaken and the roles and responsibilities of those involved
  - the timescales within which the work is to be completed
- 5 monitor the progress of the device through the manufacturing process, identify correctly any problems and take any remedial action that is required
- 6 evaluate the finished device and confirm that it:
  - is effective
  - is free of defects
  - meets the requirements of the planned design
  - complies with the prescription
  - is fit for purpose
- 7 ensure that organisational records relating to the identification, components, materials and manufacture of the device are accurate, up-to-date and stored in the correct location.

**KNOWLEDGE AND UNDERSTANDING FOR STANDARDS EDT01, EDT02, EDT03 AND EDT04 RELATING TO INITIAL ASSESSMENT, PREPARATION AND ADVICE**

The table below shows the knowledge and understanding that is needed to be able to reach the required standards The code of the different standards is given in the horizontal axis and items of knowledge and understanding are shown in the vertical column. The proposed relevance of the individual items to the different standards is shown using a 'X' in the relevant cells of the table.

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
A	Anatomy, physiology, pathology and microbiology				
1	relevant anatomy and physiology of the head, neck and mouth sufficient to allow for the identification of anatomical features on the cast and for its further analysis	X			X
2	the skeletal anatomy and physiology of the head and neck		X	X	
3	structure of the oral tissues related to casts and the design and manufacture of custom made dental devices	X			X
4	the nature and function of hard and soft oral and related tissues	X			X
5	distortion of oral tissues during impression taking	X			X
6	occlusal relationships, what they are, their classifications, methods of recording occlusal registration and how this is used in the design and manufacture of custom-made dental devices	X			X
7	tooth morphology (both deciduous and permanent) including crowns and roots, and the form of the anterior and posterior teeth		X (Ortho)	X (Ortho)	X
8	growth and eruption patterns of both deciduous and permanent teeth		X (Ortho)	X (Ortho)	
9	the physiological changes related to tooth movement		X (Ortho)	X (Ortho)	
10	the aetiology and classifications of malocclusions		X	X	
11	the structure, function, and movement of the oro-facial musculature (including the tongue) and temporomandibular joint		X	X	X
12	growth and development of maxilla and mandible		X (Ortho)	X (Ortho)	
13	disorders and diseases affecting the oral cavity		X	X	
14	disorders and diseases affecting the oral cavity (eg angular cheilitis and denture stomatitis candidiasis, erosive lichen planus and chronic aphthous ulceration and dry mouth)				X
15	the broader factors (sociological, behavioural, environmental and economic) that contribute to oral health and illness.	X	X	X	X

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
<b>B</b>	Prescriptions and specifications for custom made dental devices				
1	the range of information that is needed from clients and why each item is required	X			
2	the nature and purpose of impressions and the correct methods of handling them including the importance of correct identification of received impressions and the implications of not doing this	X			
3	how to assess the acceptability of impressions, casts and occlusal registration data with or without an articulator and common problems that are found	X			
4	organisational systems for recording patient impression details	X			
5	how to interpret the requests for various designs and hybrids/modifications to standards designs	X			
6	sources of information related to various aspects of the design process.	X			
<b>C</b>	Making primary casts				
1	how to prepare equipment and materials for the manufacture of primary casts	X			
2	types of cast materials and how they are used to make primary casts	X			
3	methods of manufacturing primary casts for different purposes and from different materials (eg dentate, partially dentate upper and lower, edentulous upper and lower, variations in materials)	X			
4	how to select the most effective materials for the identified work requirement in line with operating procedures and laboratory policy	X			
5	methods of trimming primary casts and how these might need to vary to meet special requirements	X			
6	the importance of checking the surface accuracy of the prepared cast prior to further work	X			
7	factors affecting the accuracy of casts and the actions to be taken if cast inaccuracies are identified, how to skilfully modify the cast if minor inaccuracies are identified	X			
8	how to record essential information on the cast to enable ongoing design, manufacture, modification and location including methods of marking casts with patient identity, and reasons why primary casts may need to be retained and the importance of their correct storage	X			
9	the physical and chemical processes used in the manufacture of cast materials and the ideal properties of the materials used	X			
10	methods for achieving suitable material consistency and eliminating defects	X			
11	setting reactions, working times and dimensional changes	X			
12	how to judge setting times for different mixes	X			
<b>D</b>	Articulating primary casts				
1	the different kinds of articulators, the purpose of face bows and jigs, what each are used for and how to	X			

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
	select the most appropriate ones to use for the case concerned				
2	how to mount casts on articulators with and without occlusal registrations, adjust and use the different kinds of articulator	X			
3	methods of manipulating articulating plaster.	X			
E	Materials – general				
1	the classification and sub-classification of materials on the basis of chemical composition and internal structure		X		
F	Materials – for cast and mould manufacture				
1	manufacturing processes of gypsum materials	X			
2	physical and chemical properties of cast materials and their nature	X			
3	the nature and importance of manufacturers' instructions and working procedures for cast materials	X			
4	the nature and type of occlusal registration materials and factors affecting accuracy	X			
5	the requirements of products used in the manufacture of casts and moulds for restorations		X	X	
6	the composition of products used in the manufacture of casts and moulds		X	X	
7	the manipulation and setting characteristics of products		X	X	
8	the properties of the set materials used in the manufacture of casts and moulds		X	X	
G	Materials – waxes				
1	the requirements of wax pattern and base materials		X		
2	the composition of dental waxes used in the manufacture of removable prostheses		X		
3	the properties of dental waxes used in the manufacture of removable prostheses		X		
4	the essential differences between baseplate waxes and casting pattern waxes		X		
5	the relevance of the coefficient of thermal expansion (CTE) in the use of baseplate and pattern waxes		X		
6	the importance of maintaining the physical, mechanical and aesthetic properties of baseplate waxes		X		
H	Materials – dental polymers				
1	the term polymerisation		X		
2	the activation mechanisms that can be used in the polymerisation of polymers		X		
3	the initiation processes that can be used in the polymerisation of polymers		X		
4	the processes by which termination occurs in dental polymers		X		
I	Materials – impression, duplicating and disinfection materials				
1	the constituents and uses of different impression materials		X	X	

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
2	the nature and type of disinfection materials and solutions and the effect of these on impressions, casts, occlusal registrations, bacteria, viruses and operators.	X			
3	the compatibility of impression materials with disinfection procedures		X	X	
4	the term viscoelasticity and its relevance to the handling of certain types of impression materials		X	X	
5	the term elastomeric and the essential characteristics of the materials in this category		X	X	
<b>J Manufacturing custom-made dental devices - retention and stability</b>					
1	the importance of custom trays in the development of working impressions for removable prostheses manufacture		X		
2	the role of the baseplate in the retention and stability of removable prostheses		X		
3	the role of the polished surfaces in the retention and stability of removable prostheses		X		
4	the importance of occlusal rims in establishing tooth position in the manufacture of removable prostheses		X		
5	the importance of establishing and maintaining the occlusal table on the stability of removable prostheses		X		
6	the effect of skeletal form and ridge relationships upon the function, design and manufacture of complete and partial removable prostheses		X	X	
<b>K Manufacturing custom-made dental devices - aesthetics and phonetics</b>					
1	the effect of the ageing process on natural tooth form and colour		X	X	
2	the importance of tooth material selection on the maintenance of aesthetics		X	X	
3	the compromises sometimes necessary between aesthetics and function in the provision of custom-made dental devices		X	X	
4	the importance of base material selection on the appearance of custom-made dental devices		X	X	
5	the importance of baseplate design in the development of good phonetics		X	X	
6	the relevance of the existing natural dentition in the creation of custom-made dental devices		X	X	
7	the importance of metal alloy selection on the appearance of restorations		X	X	
<b>L Manufacturing custom-made dental devices - articulation</b>					
1	the selection of a suitable dental articulator for the type of removable prosthesis		X	X	
2	the benefits and restrictions of the various types of dental articulator		X	X	
3	the various methods of transferring clinical information to the dental articulator		X	X	
4	the use and need for kinematic relators (facebows, earbows and pantograph tracings etc.)		X	X	

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
5	the importance of hinge axis for the partially dentate mouth or where parafunctional function of the temporomandibular joint exists		X	X	
6	the purpose of split mounting and re-articulation procedures		X	X	
7	the need to make adjustments to the various components parts of dental articulators based on the type and form of the patients existing or intended anterior tooth arrangement and occlusion		X	X	
M	Providing specialist technical advice				
1	the type of background information which is necessary to undertake the role properly				X
2	the potential difference between the patient's views of the services they need and those of people working in the team				X
3	the particular requirements which different clients and patients may have and how these can be managed within the planning process				X
4	the different purposes which oral health treatment programmes may have for different patients				X
5	how the services the worker is able to offer are affected by service contracts and resource limitations in the agency in which the worker is placed				X
6	why final decisions should be recorded and disseminated to the appropriate people				X
7	the role of other workers who are providing specialist technical advice and the particular benefits and strengths which each brings				X
8	from whom advice and guidance should be sought when the worker has concerns about the needs of patients, the complexity of the case or the role and capability of the worker				X
9	the range of services that are available to patients and which members of the team lead on which services				X
10	the principles of interdisciplinary working				X
11	the disagreements which might arise between those involved in the planning and ways of negotiating with others so that a working agreement can be reached				X
12	how to present views and suggestions constructively and effectively				X
13	principles of, and methods, materials and techniques used in the design and manufacture of dental devices				X
14	methods to identify and evaluate the feasibility and likely effectiveness of potential design options				X
15	rationale for the provision of removable prostheses				X
16	the manufacture of removable prostheses; retention and stability, aesthetics and phonetics;				X

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
	articulation				
17	<p>materials used in the manufacture of custom-made dental devices including casts and mould materials, waxes, dental polymers, artificial tooth materials, dental alloys, refractory, impression, duplicating and disinfection materials:</p> <ul style="list-style-type: none"> <li>- the classification and sub-classification of materials on the basis of chemical composition and internal structure</li> <li>- the mechanical, physical, thermal, chemical and biological properties of materials</li> <li>- the effects of storage on the properties of the materials used in the manufacture of custom-made dental devices</li> <li>- the properties of materials during manipulation</li> <li>- the properties of materials during setting</li> <li>- the effects of processing on the properties of the materials used in the manufacture of custom-made dental devices</li> <li>- the selection and management of materials to meet client requirements, functional requirements and aesthetic requirements</li> </ul>				X
N	Health and safety and the control of infection				
1	methods of protection against contamination and cross-infection when handling received impressions and other items which may have been in the mouth, or which are intended to be placed in the mouth; why it is important to do so	X	X		
2	the importance of hygiene and maintenance of a clean working environment and equipment	X	X		
3	personal hygiene and the use of personal protective equipment	X	X		
4	disposal of waste, how to assess and minimise the environmental impact of waste disposal	X	X		
5	the requirements and procedures of the worker's employing organisation in relation to health and safety and the control of infection.	X	X		
6	methods for the safe moving, handling and storage of materials and equipment		X (ortho)	X (ortho)	
7	location, function and use of emergency equipment		X (ortho)	X (ortho)	
O	Effective communication and relationships				
1	the importance of establishing effective working relationships with clients, both in terms of future orders for work and in improving the quality of service to patients	X			X
2	methods of maintaining and improving communication and information relating to the provision of	X			X

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
	custom-made dental devices				
3	methods of reporting problems with impressions to clients in a manner which shows genuine concern for the client and an understanding of the difficulties in achieving appropriate impressions.	X			
4	the importance of discussing cases with, and providing technical advice to, clients in constructive ways and methods of doing this				X
<b>P Quality assurance</b>					
1	the reasons for maintaining records throughout the process and of clearly identifying the products during the manufacturing process		X	X	
2	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	X	X	X	
3	quality audit systems: their purpose, nature and procedures; impact of the Medical Devices Directive on the recording of incoming work, the detailed design and manufacturing specification and the recording of materials and processes	X	X	X	
4	principles of quality assurance (including effective recording and sampling); processes and procedures for quality assurance in the worker's workplace		X	X	
5	methods of setting and calibrating equipment and of testing that this is correct		X	X	
6	the effects of modifying manufacturers' products to meet laboratory requirements on the physical properties of products, on quality assured products and the legal implications (eg of inaccurate mixing, inadequate processing).		X	X	
<b>Q Legislation, policies and procedures</b>					
1	the requirements of the Medical Devices Directive in monitoring the progress of devices through the production process		X	X	X
2	legal requirements of the contract of employment, confidentiality and employers' regulations	X	X	X	X
3	legislation relating to health and safety at work, environmental protection, and control of hazardous substances, and related procedures and liability; principles of, and how to apply, legislation and regulations	X	X	X	X
4	legal requirements relating to third party insurance.	X		X	X
<b>R Statutory registration</b>					
1	other members of the oral healthcare team (and the wider health and social care team) and their respective roles	X	X	X	X

GENERIC OCCUPATIONAL STANDARDS FOR DENTAL TECHNOLOGY

Items of knowledge and understanding		EDT01	EDT02	EDT03	EDT04
2	regulatory functions relating to the oral healthcare team in the country in which one is working	X	X	X	X
3	legal and ethical obligations of regulated members of the oral healthcare team	X	X	X	X
4	the need for lifelong learning and professional development and responsibilities in relation to this for regulated members of the oral healthcare team	X	X	X	X
5	the oral healthcare team's wider responsibility to the community as a whole.	X	X	X	X
S Work role and boundaries					
1	the role, responsibilities and remit of each member of the oral healthcare team				X
2	the purpose of clarifying own role and that of others when working with different patients				X
3	the purpose of keeping records of the assessment process				X
4	the worker's responsibility to keep records				

## GLOSSARY

Cast	is a dimensionally accurate positive form of areas of the oral cavity produced from a negative impression.
Client	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 (eg within a dental hospital).
Die	is a section of a cast of an individual tooth.
Patient	is the individual for whom the custom-made prosthesis is being made and/or the parents/guardians of the patient when s/he is a new-born child