INTEGRATED CARE PATHWAY
MANAGEMENT OF THE BARIATRIC DENTAL PATIENT

**DEFINITION**

A bariatric person is an individual of any age (child to adult) who has limitations in health and social care due to physical size, health, mobility and environmental access.

**CRITERIA FOR USE**

This pathway is intended as a guide to managing patients over 22stone/140kg in the dental services. 22stone is usually the safe working limit for a regular dental chair. The pathway has a multidisciplinary element. The guide refers only to issues which may arise due to the patient’s size. Professionals are encouraged to exercise their own professional judgement and consider patient management as a whole.

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OVERVIEW

Obesity levels are rising year on year in Wales. Contributing factors may be:

- Underlying health problems e.g. hypothyroidism in Down’s syndrome and eating issues such as Prader-Willi syndrome.
- A lack of healthy food choices
- Difficulty with chewing or swallowing food, or its taste or texture
- Medications that can contribute to weight gain and changes to appetite e.g. steroid medication
- Physical limitations that can reduce a person’s ability to exercise
- Pain on movement (e.g. in cerebral palsy, rheumatoid arthritis)
- A lack of energy

Or may be due to lifestyle factors, such as;

- A lack of healthy food choices
- A lack of accessible environments that can enable exercise
- A lack of resources and appropriate social support systems

Furthermore, there are links between socio-economic background and levels of obesity, with a higher prevalence within those in high need areas. Those with learning disabilities can experience weight gain, especially those living independently unless they have careful diet control.

Obesity is often associated with a number of co-morbidities, which are discussed later in this document. There may also be immunological problems, with the potential to cause a predisposition to periodontal disease. Other issues which could impact on dental health are a higher prevalence of dental caries and an increased incidence of oesophageal reflux, in particular in those having gastric banding, causing acid erosion.

There are challenges in the clinical management of the bariatric patient in the dental surgery setting, because the safe working limit of the mainstream dental equipment is likely to be exceeded. However failure to provide suitable safe facilities for bariatric patients has the potential to breach the Disability Discrimination Act (1995) and the Equality Act (2010). In addition, travel and access to medical facilities may be an issue and there may be a need for liaison with other healthcare professionals involved with the patient.

These patients may also be infrequent attenders at medical practices or have decreased access to the medical team, and may only attend the dentist when they have problems or pain.

It is therefore important that there are clear procedures for management of these patients to ensure standardisation of care across the Health Board.

OBJECTIVES OF THE CARE PATHWAY

- Maintain dignity for bariatric patients at all times.
- Cultivate an awareness of the some of the underlying health issues which might contribute to high BMI and an awareness of the chronic health conditions that can ensue from high BMI, including the implications for risk assessing the patient for the provision of dental treatment in the most appropriate venue.
- Understand the strategies being adopted by wider health teams to help patients control their weight, including healthy eating strategies and the increasing use of surgical interventions, such as gastric banding, and know how to signpost patients to these weight-management services if
they are not already aware of them.

- Identify oral health issues associated with the bariatric patient.
- Develop a standardised protocol to enable the clinical dental management of bariatric patients.
- Facilitate risk management strategies, to include considerations for both staff and patient safety, in particular in respect of patient handling and positioning for treatment.

## REFERRALS

It is essential that referrals both to and from services include information on the patient’s size, if it in any way is perceived to be an issue. A current accurate weight and/or BMI is needed. If this is not possible an indication of the patient’s bariatric status must be given.

Where referrals are received in respect of an adult of larger size with no prior indication of bariatric status, staff should consider flagging this up with the referring practitioner.

## DIRECTING

Directing a patient to appropriate clinic prior to appointment will avoid embarrassment and keep treatment consistent.

a. **New Routine Referrals**
   - Always try to make bariatric patients an appointment at a venue with appropriate facilities for their management. This may involve telephoning the patient/referrer/carer prior to initial visit querying:
     - Patient Weight or BMI
     - Mobility e.g. do they use a wheelchair? Manual or motorised?

b. **Walk-in/Emergency Patients**
   Provide emergency relief of pain treatment only, weighing up risks and benefits. Patient and staff health and safety should not be compromised. If a patient is unsuitable for your dental chair consider treating in their own wheelchair or in a bariatric wheelchair.
   Future appointments should be arranged in clinic with suitable facilities (see later)

c. **Existing Patients**
   - Patient should only be treated in a suitably equipped venue. Explain reasons to patient.
   - The clinician may be able travel to the suitably equipped clinic to treat the patient or alternatively can refer to another clinician at that clinic with explanation.

Note: Explain any changes to treatment plan/venue as a result of their weight sensitively but honestly. Patients may be quite resistant to being referred elsewhere. They may feel ashamed or upset. Remember, they may have experienced discrimination in many services because of their size. Highlight the importance of you and your patient’s safety and also the need for the best possible care in the best possible setting. Keep reasons **technical** and not personal.

Always arrange the onward referral and keep the patient informed.
ASSESSING WEIGHT

If the patient does not know their weight and is perceived to exceed 22stone/140kg an accurate weight must be obtained through weighing the patient.

Unfortunately most standard weighing scales only weigh up to 22stone.

BCUHB has higher weight scales in many local clinics and in the acute hospitals. Some of these can weigh patients in wheelchairs. Your local GP practice or dietetic service may able to advise you where such scales are available. It is recommended that all CDS clinics have means of accessing heavy weighing scales, in clinic or locally. For example, in the emergency department at Glan Clwyd Hospital there is high weight bearing weighing scale suitable for use with wheelchairs.

It may be possible to get an estimation of a bariatric patient’s weight by using two “standard” weighing scales and adding the two weights displayed together. The scales should be equally spaced apart and the patient should stand with one foot on each. This is recommended only as an interim measure and a more accurate reading should be obtained on a single scale with a higher working limit in the future.

Having an up-to-date and accurate weight ensures patient and clinician safety and aids directing the patient to an appropriate setting. Patients are usually required to disclose their weight on medical history forms but this is often an underestimation. Nevertheless bariatric patients are likely to be accessing other secondary services and often are able to provide you with an accurate weight if the rationale for this is explained.

An accurate weight is essential when considering sedation or general anaesthetic

WEIGHT LOSS MANAGEMENT

Making too much of an issue regarding a patient’s weight may only serve to make them more embarrassed and anxious when attending the dentist. This may make them less likely to re-attend.

Patients are unlikely to ask the dentist for advice regarding weight management. Most patients are more than aware of their obesity problem and are likely to be accessing services to manage this. However, obese children and patients with learning disabilities often are less aware of their high BMI and in these instances it may be appropriate to raise this issue with the patient/carers/family members. It is also appropriate to encourage and advise on weight loss if this would help patients’ access services more easily. E.g.

- prior to general anaesthetic
- to bring patient below the safe working limit of the dental chair to enable them to be treated in a clinic closer to home

If a patient does require weight management referral this should be directed to the patient’s GMP. There are a number of weight loss referral pathways within the NHS e.g. the national exercise referral scheme
EQUIPMENT

Staff may need to consider the following equipment in management of the bariatric patient.

*SWL = safe working limit*

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Main Indications</th>
<th>Cautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Dental Chair (SWL = 22 stone /140kg)</td>
<td>● Patient &lt;22 stone/140kg</td>
<td>Some ‘regular’ dental chairs will bear higher or lower weights.</td>
</tr>
<tr>
<td>Higher Weight Dental chair (SWL = 32 stone /203kg)</td>
<td>● Patient less than or equal to 32 stone/203kg ● Patient mobile or can be transferred in suitable hoist</td>
<td>Patient may have to travel to an appropriate clinic</td>
</tr>
<tr>
<td>Wheelchair Recliner (DIACO) (SWL = 79 stone /500kg)</td>
<td>● Patient is a wheelchair user / patient can transfer to a high weight bearing wheelchair available in hospital ● Patient is &gt;32 stone / 203kg</td>
<td>Check wheelchair will fit in DIACO Motorised wheelchairs may not fit</td>
</tr>
<tr>
<td>Bariatric Wheelchair</td>
<td>● Usually support up to 50 stone / 318kg ● May be appropriate to treat patient in wheelchair for emergency treatment</td>
<td>This option is usually only suitable where no alternative is available. Local risk assessment required re: patient and operator positioning/posture</td>
</tr>
<tr>
<td>Heavy Weight Bearing Hoists</td>
<td>● Can be used for transfer e.g. from patient's own bariatric wheelchair to a higher weight dental chair.</td>
<td>Check Hoist specifications against patient’s weight. Operators must be suitably trained</td>
</tr>
<tr>
<td>Higher SWL Operating Table (in theatre)</td>
<td>● An average theatre table has a SWL of 28stone/178kg. Tables are available with a SWL of 40stone/254kg and sometimes higher. Please discuss with individual hospital.</td>
<td>Thorough planning is required for patients requiring GA/sedation in hospital. See below for further info.</td>
</tr>
</tbody>
</table>
LOCATION OF EQUIPMENT

The following table gives location of higher weight dental chairs and wheelchair recliners in the North Wales Community Dental Service.

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Tel/Fax</th>
<th>Higher Weight Dental Chair &lt;32stone</th>
<th>Wheelchair Recliner (DIACO) &lt;79stone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckley</td>
<td>T: 01978318329</td>
<td>✓</td>
<td>- not currently in use</td>
</tr>
<tr>
<td>Deeside</td>
<td>T: 01244 815241</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 01244 836323</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holywell</td>
<td>T: 01352 718363</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>F: 01352 718400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Llanfairfechan (Bryn Y Neuadd)</td>
<td>T/F: 01248 682551</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Rhyll</td>
<td>T: 01745 443135</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F: 01745 443147</td>
<td></td>
<td>- not currently in use</td>
</tr>
<tr>
<td>Wrexham Dental Centre</td>
<td>T: 01978 262050</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Currently no complete list of specific bariatric equipment is available by area in BCUHB. However there should be a recommendation to nursing, medical and surgery departments that such a list is produced. Purchasing of such equipment is currently the responsibility of individual departments. Staff should liaise with nursing and porter staff in their area who should be able to advise on the availability of such equipment. It is the user’s responsibility to check the safe working limit.

Appendix 3 should be completed as a useful reference for your own clinic/area

The manual handling department (manual.handling2@wales.nhs.uk) may be able to offer advice in specific instances, especially if hospital admission is required.

TRANSPORT

- Parking should be available as close to the venue as possible.
- Bariatric suitable ambulance transport may be required for patients who would normally require ambulance transfer AND their weight makes them unsuitable for standard ambulance transport. Please contact ambulance services to discuss specific requirements. Have patients BMI/weight available and include any other specific requirements e.g. oxygen cylinder carriage.

To book transport for a patient to hospital please telephone the North Wales Patient Care Service (a division of the Welsh Ambulance Service) on 03001232317

Currently, the Welsh Ambulance Service will only transfer patients to hospitals and not to health centres/clinics.
OTHER CLINIC CONSIDERATIONS

- Ensure door widths are adequate to allow patient to enter surgery if using a wheelchair etc.
- Ideally waiting rooms should have a suitable high weight bearing chair. Armless waiting room chairs are essential.
- Toilet facilities in the clinic/hospital should have suitable safe working limits or specialist bariatric surround.
- Under no circumstances should staff attempt to break the fall of an obese patient (BCUHB HS14 policy)

Appendix 3 should be completed as a useful reference for your own clinic/area

DOMICILIARY VISITS

This is rarely the first line option. However it is a useful option when patients are too large and/or too anxious to leave their home. A domiciliary visit may also be useful for initial assessment, then arranging further review in the clinic. Full risk assessment (as per any domiciliary visit) is essential.

MEDICAL ISSUES

The following issues are more likely to occur in the obese:
- Hypertension and CVA. (Do they suffer from angina? At rest or on exertion?)
- Diabetes
- Sleep apnoea (may use a CPAP machine)
- Dyspnoea – are they able to walk comfortably without getting breathless?
- Gastro oesophageal reflex disease (GORD) – especially after bariatric surgery
- Osteoarthritis
- Depression/anxiety (often directly related to embarrassment/shame due to their size)
- Liver and gallbladder disease
- Skin conditions such as cellulitis and intertrigo (inflammation within excessive body folds)

DENTAL ISSUES

- Loss of anatomical landmarks is possible. There are access problems with large cheeks, tongue etc.
- ID blocks may be difficult. Alternative techniques may need to be considered such as the Gow-Gates or intraligamentary techniques.
- Consider use of a ‘Lax’ tongue retractor if a dental mirror is insufficient for soft tissue retraction
- Patient may have to be treated semi-supine or sitting upright – practitioners need to be careful with their posture and wherever possible treat patient in most appropriate setting (see above). Beware operator musculo-skeletal problems when working in a less than ideal position.
- Intra oral radiography can be more challenging due to increased soft tissues. Panoral radiography can be difficult or even impossible if the machine is unable to accommodate the patient’s size. An alternative technique is the lateral oblique.
- Airway management issues need consideration when supine.
- Long procedures can lead to acute leg oedemas, cellulitis and pressure sores.
- Bariatric patients are more likely to have reduced immune function leading to delayed wound healing.
- Erosive tooth wear is more likely - increased prevalence of GORD in bariatric persons.
- Bariatric patients MAY have a higher caries rate than general population as causations are interrelated (diet high in processed sugars).
Diabetic patients have a high associated risk of periodontal disease which will require appropriate management. Coagulation abnormalities may occur (e.g. due to non-alcoholic fatty liver disease).

**MEDICAL EMERGENCIES**
- Need to consider equipment needs. Wider cuff BP monitors (e.g. “thigh cuff”).
- Longer IM needles are needed (to get through fat layer).
- May be unable to get patient rapidly into supine/recovery position or physically move patient. Airway management may be more difficult.
- Resuscitation – identification of landmarks for chest compressions may be difficult.

**CONSCIOUS SEDATION**
- Inhalation Sedation: There are no specific contraindications however special care must be taken to ensure good safe airway management. This may be the most appropriate form of sedation for these patients.
- IV Sedation: There are potential difficulties in airway management and IV cannulation is likely to be more challenging. If intravenous sedation with midazolam is proposed, the overall benefit to the patient must be carefully weighed up against the increased likelihood of significant respiratory depression and the difficulties in managing a respiratory complication. IV sedation for this cohort of patients is often anaesthetist led in the acute setting.

**GENERAL ANAESTHETIC**
General anaesthesia for the bariatric patient is more challenging. Bariatric patients may be able to be seen on a ‘standard’ day case operating list with approval of the anaesthetist and sufficient planning. Very heavy patients and those with significant co-morbidities will need to be seen on the ASAIII/IV list in the CDS.
The manual handling team and theatre manager should be informed of the patient’s high BMI well in advance of the date of operation. They can then ensure suitable equipment is available for the patient’s admission.
Very heavy patients may not be suitable for day case surgery and prior risk assessment with the MaxFacs department may be required to discuss whether admission is indicated. Contingency planning for possible complications is essential e.g. in a medical emergency.

**CLINICAL RECORDS**
- All items considered in this pathway for a particular patient should be recorded in the clinical notes.
- Every patient should be encouraged to provide their height and weight on their medical history form.
- It may be useful to flag up patients with a high BMI on the front of their paper based clinical notes and through use of ‘pop-up notes’ (or similar) in an electronic clinical record system.
USEFUL CONTACTS / LINKS

- Patient Transport to Clinic: 03001232317  
  (North Wales Patient Care Service - a division of the Welsh Ambulance Service)

- Mandatory Training Team
  Can advise on manual handling issues, especially if patient requires hospital admission (e.g. for GA)
  Manual.handling2@wales.nhs.uk.


- Manual handling document re: Bariatric Patients in Hospital for BCUHB (HS14)
REFERENCES


Diaco Website: http://diaco.co.uk/

Dowey P.R. (2014) Consultation on Dental Services for Bariatric Patients in North Wales CDS (Local Needs Assessment) [unpublished]


Appendix 1 – Flowchart re: Summary of Management of the dental bariatric patient.

Patient > 22stone

Name? Age? Weight? Reason for referral?

Medical

Dental

Transport
Bariatric ambulance? Bariatric wheelchair? Level access? Parking nearby?

Clinic

Decide on best setting for patient

Diaco Clinic
< 79 stone
AND
Suitable wheelchair

Domiciliary Visit
- Non-ambulatory
- Suitable treatment

Local Ground Floor Clinic - treat in patient’s wheelchair
- Non-ambulatory
- Ambulatory BUT >32 stone
- Suitable treatment/emergency treatment

Higher Weight Dental Chair
- 22-32 stone
- Ambulatory
- Suitable for hoisting

District General Hospital
- Complex dental/medical needs
AND/OR Requiring GA

Unsuitable?
Refer to Tertiary Service
Appendix 2 – Feedback Form

Please complete this form if you have:
- Suggestions for improvement
- Experienced difficulties with the guidance given in this pathway
- Used a treatment modality different from those suggested

When completed send to:
Dr Peter Dowey, Dental Department, Deeside Community Hospital, Plough Lane, Aston, CH5 1XS

Or email to peter.dowey@wales.nhs.uk

<table>
<thead>
<tr>
<th>Date</th>
<th><em><strong>/</strong></em>/__________</th>
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<tbody>
<tr>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Job Title</td>
<td></td>
</tr>
<tr>
<td>Clinic Base</td>
<td></td>
</tr>
<tr>
<td>Telephone Number</td>
<td></td>
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<tr>
<td>Email Address</td>
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<tr>
<td>Comments</td>
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</tr>
<tr>
<td>Signed</td>
<td></td>
</tr>
</tbody>
</table>
Please complete this form in BLOCK capitals and black ink. Please TICK boxes as appropriate. **SWL = safe working limit.** Please give SWL in kilograms.

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Tick if Available</th>
<th>Surgery 1</th>
<th>Surgery 2</th>
<th>Surgery 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Dental Chair(s)</td>
<td>✔</td>
<td>SWL =</td>
<td>SWL =</td>
<td>SWL =</td>
</tr>
<tr>
<td>Wide Door Widths from outside to Waiting Room</td>
<td>❑</td>
<td>SWL =</td>
<td>SWL =</td>
<td>SWL =</td>
</tr>
<tr>
<td>Level access from outside to Waiting Room</td>
<td>❑</td>
<td>SWL =</td>
<td>SWL =</td>
<td>SWL =</td>
</tr>
<tr>
<td>Bariatric Waiting Room Chair</td>
<td>❑</td>
<td>SWL =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bariatric Suitable Toilet Facilities? (e.g. disabled access &amp; toilet surround)</td>
<td>❑</td>
<td>SWL =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Weight Weighing Scales (&gt;140kg)</td>
<td>❑</td>
<td>SWL =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location (if not in clinic):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Weight Dental Chair (SWL &gt;140kg)</td>
<td>❑</td>
<td>SWL =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Located in:</td>
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<td></td>
</tr>
<tr>
<td>Door width into surgery:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheel Chair Recliner (e.g. DIACO)</td>
<td>❑</td>
<td>SWL =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Located in:</td>
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<tr>
<td>Door width into surgery:</td>
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</tbody>
</table>
ACKNOWLEDGEMENTS

This care pathway has been produced by Dr Peter Dowey, Dental Core Trainee in Dental Public Health in close collaboration with Dr J Sandra Sandham, Clinical Director and Director of Dental Public Health, North Wales Community Dental Service.

It has been compiled through extensive review of the literature and consultation with patients, staff and committees in various disciplines.

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