First class care for the obese patient
An update on quality initiatives
BARTNA : SOBA at the RCN 3.10.14
Pat Smedley BARTNA Education
Focus on:

**Obesity endemic – surgical provision**

**Quality agenda : what is in place to ensure quality?**

**Nurses/ODP’s : role in providing first class care**

**How can we support nurses in the above?**
OBESITY is no laughing matter

Obesity is today's principal neglected public health problem

- Nearly two thirds of men and half of women are overweight or obese
- 18 million sick days and 40,000 lost years working life
- Direct cost to the NHS - £1/2 billion (indirect costs £2 billion)
- Partnership and action required now to tackle this serious medical condition
- Obesity is the 2nd largest cause of cancer after smoking
- Obese people live on average nine years less

Telephone: 0115 8462109
www.nationalobesityforum.org.uk

The National Obesity Forum is a medical group committed to addressing the problem of obesity across the U.K.
### What do we mean by obese?

<table>
<thead>
<tr>
<th>BMI range [kg/m²]</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Under 18.5</td>
<td>Underweight</td>
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<tr>
<td>18.5 to less than 25</td>
<td>Normal</td>
</tr>
<tr>
<td>25 to less than 30</td>
<td>Overweight</td>
</tr>
<tr>
<td>30 to less than 40</td>
<td>Obese</td>
</tr>
<tr>
<td>40 and over</td>
<td>Morbidly obese</td>
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<tr>
<td>25 and over</td>
<td>Overweight including obese</td>
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Classification of adults according to BMI value [NHS Information Centre 2010]

- Bariatric surgery offered to those with BMI of 40 plus -- or a BMI of 35-40 with serious health condition needing weight reduction.
- Important not to limit discussion to WLS. **Obesity in all patients undergoing any surgery** is now an increasing problem as:
  - ‘Being overweight is becoming normal as the majority of our population is overweight or obese’ Dame Sally Davies : Chief Medical Officer : March 2014
  - BARNA audit respondent : ‘35-40 BMI now seems to be a bit overweight – obese patient becoming the norm – healthy range now being too thin or very thin’
Obesity crisis endemic

- NHS and IHAS move fast to meet obesity challenge to its services / medical and surgical

- Provision of weight loss surgery [WLS] a key short term solution to nations weight problem

- Service provision in place now -- but has perioperative quality care been insured?

- And importantly, how can we continue to provide quality in the future........?
'Half of UK obese by 2030’ if trends continue……..

- Obesity will weigh heavily on UK economy and health budget
- NHS costs due to obesity and overweight projected to reach £9.7 billion by 2050
- Resultant tight budgets in perioperative care could make the pursuit of excellent standards a major ongoing challenge
Quality programme ‘safe, effective, caring, positive patient experience’
Plethora of reports/guidelines/recommendations

All valuable documents but:
• Focus on Weight Loss Surgery
• Focus on anaesthetic/surgical care
• Lack detail on specifics of care
• Little insight into nursing care
• No information on problem areas/poor or unsafe practice
Safe, effective, caring ……at operational level, the NURSE plays a vital role in assuring quality

**Safe, effective QUALITY care**

- **Leadership**
  - Raise OBESITY profile
  - Co-ordinate
  - Trouble shoot
  - Communicate
  - Innovate

- **Quality agenda**
  - Identify problems
  - Develop clinical pathways
  - Set standards/guidelines
  - Audit performance
  - Implement change

- **Research**
  - Evidence based practice
  - Best practice solutions

- **Fund & Resource**
  - Raise OBESITY profile
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- **Staffing**
  - Staffing numbers and skill mix adequate

- **Clinical competencies**
  - Education and in service training

- **Equipment**
  - Service
  - Replace
  - State of the art
  - In–service training

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MDT: Multi-disciplinary team


ALL contribute to holistic QUALITY CARE along the perioperative pathway

How do nurses/ODPs add value in delivering quality care?
Risk: understanding, appraisal and management: name of the game

- Understanding risk, taking steps to diminish/eliminate risk in order to plan care to prevent complications
- Guiding principles to safe, effective nursing along perioperative pathway
- Key ingredient to quality performance
---Theatre nurse---
Position on table: skin / soft tissue / joint / muscle protection

Nurse assessor

Induction:
Relaxation:
---TRIAD---
Hypnosis
Narcosis

Transfer:
Lifting & handling

Maintenance phase

Reversal:

---Anaesthetic nurse---
ABC: temperature: fluid balance: pain - Maintain homeostasis

PACU
Delayed emergence
Obstructed airway
Respiratory depression
Hypertension
Hypotension
Disordered fluid balance
PONV
Pain
Hypothermia

Recovery nurse
Pre-empt complications

Theatre nurse
ABC: temperature: fluid balance: pain - Maintain homeostasis

Planned care
The obese patient: add-on risks in perioperative care

**PSYCHO-SOCIAL**
- Low self esteem
- Altered emotional, social, psychological needs

**AIRWAY**
- Difficult to intubate
- Jaw support / chin lift
- Obstructive breathing pattern

**BREATHING**
- Lung compliance
- Hypoventilation
- Rib movement
- FRC – airway closure
- Co-existing bronchitis + asthma
- Sleep apnea
- Pickwickian syndrome
- Hypoxia / hypercapnia

**DRUG METABOLISM**
- Distribution/absorption affected
- Long elimination half lives

**CIRCULATION**
- Circulating blood volume
- Cardiac output
- Hypertension – cardiomegaly
- Cardio-vascular disease
- Hyperlipidaemia
- Right ventricular dysfunction

**ENDOCRINE/METABOLIC**
- Glomerulosclerosis/renal failure
- Gout
- Hyperlipaemia
- Diabetes

**GASTRO-INTESTINAL**
- Higher volume gastric acid
- Risk of aspiration
- Electrolyte imbalance: dieting

**MUSKULO-SKELETAL**
- Osteoarthritis

**THROMBO-EMBOLIC**
- Hypercoagulability
- Risk of DVT / pulmonary embolism

**THERMOREGULATORY**

**TIME : STAFF : EQUIPMENT : TRAINING : PLANNED CARE**
‘Competency based nursing care essential to ensure the safety of patients and staff’ Mulligan [2005]

Preoperative Assessment: Risk assessment/appropriate pathway

Anaesthesia: Moving/handling Clinical decision making

Intraoperative: Moving/handling Risk assessment Positioning

Post operative: Moving/handling Positioning Clinical decision making

Discharge & transfer on: Assess ward/facility

‘Those who care for patients with severe obesity should complete a competency-based orientation that enable them to identify potential complications and prevent adverse outcomes. Core curriculum to cover physiological and psychological effects of severe obesity, comorbidities’ Mulligan [2005]
Knowledge and skills = COMPETENT SAFE CARE

Core Knowledge
- Anatomy and physiology of body systems
- Anaesthesia + surgery
- Obesity : co-morbidities

Pre-assessment: Risk analysis:
- VS / history / examination
- Clinical testing
- Refer to anaesthetist
- Clinical Decision Making

Anaesthesia
- Reassures patient
- Monitoring systems
- Fluids
- Intubation
- Transfer
- Set up patient on table
- Warming
- Drugs : fluids
- Drugs : fluid : warming
- Thromboprophylaxis

Post Anaesthetic Care Unit
- Observation
- Monitoring
- Risk assessment
- Prioritising care ABC
- Warming
- Pain control
- Fluids
- Pre-empting complications
- Intervention as required
- Assess discharge

Quality Care
- Planned, safe care
- Patient arrives in PACU
- Warm, stable, comfortable
- No skin/soft tissue /bone injury

Theatre
- Transfer : lifting and handling
- Patient positioning
- Checking, maintaining and setting up equipment
- Warming
- Pre-empt injury to patient : skins/muscles/bones/joints
- Protecting nurse from injury

Patient safe/comfortable to transfer on to appropriate facility
What about leadership/equipment/staffing/research/quality agenda?

**Leadership**
- Raise awareness
- Coordinate training
- Budget for resources
- Lead quality cycle
- Instigate – monitor research
- Update on evidence based practice
- **Obesity specialist nurse**
- Regular meetings to update/innovate/plan

Nurses well fitted to fulfill this role and lead the perioperative multi-disciplinary team

**Quality cycle**
- Identify problem areas
- Set standards for performance/staffing /equipment and service provision
- Clinical pathways
- AUDIT
- Make changes
- Evaluate
- Repeat as necessary

Leadership is the key to maintaining quality care now and in the future as funding tight

**Staffing provision**

**Equipment provision**
IHAS: bariatric surgical pathway

- Standard activity breakdown [BOMSS / IFSO standard for facility]
- Model for more non bariatric surgical pathways
- Incorporating detail of nurses / ODP standard activity
- Guidelines/standards need to be specific to nursing role to nursing role
**ANAESTHESIA FOR THE OBESE PATIENT: BMI>35KG/M²**

### Preoperative Evaluation

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<tbody>
<tr>
<td>Stomach: Do you make bulky indigestion than taking 1000kcal without a full meal?</td>
<td>Times: Do you feel hungry after a full meal?</td>
<td>Obese: Are you aware of your weight?</td>
<td>Blood Pressure: Are you on any anti-hypertensive medications?</td>
<td>BMI: 40+kg/m²</td>
<td>Age: 50+yr</td>
<td>Neck: back circumference &gt;46cm (16 inches)</td>
<td>Gender: male</td>
</tr>
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- Central Obesity (waist > height): Difficult airway / ventilation problems more likely, greater risk of CVS disease, thrombosis.
- Risk of metabolic syndrome: Central obesity plus hypertension, dyslipidaemia, insulin resistance.

### Intra Operative Management

**Suggested Equipment**
- Suitable bed/trolley & operating table
- Gel pad, wide strap, table extensions/ arm boards
- Forearm cuff or large BP cuff
- Ramping device, step for anaesthetist, difficult airway equipment, ventilator capable of PEEP and pressure modes.
- Hover mattresses or equivalent.
- Long spinal, regional and vascular needles.
- Ultrasound machine.
- Depth of anaesthesia and neuromuscular monitoring.

**Ramping**
- Ear level with sternum. Reduces risk of difficult laryngoscopy, improves ventilation.

**Anaesthetic Technique**
- Consider premed antacid & analgesia, careful glucose control & DVT prophylaxis.
- Selftitrate on operating table.
- Prophylaxis & intubation in ramped position + CPAP. Minimize induction to ventilation interval to avoid desaturation. Commence maintenance anaesthesia promptly.
- Tracheal intubation is recommended.
- Avoid spontaneous ventilation. Use PEEP.
- Use short-acting agents e.g. desflurane or propofol infusion. Short-acting opioids. Multimodal analgesia. Consider BUPV prophylaxis. Ensure full NMB reversal.
- Extubate and recover in head up position.

### Drug dosing: what weight to use?
- Induction agents: titrate to cardiac output. This equates to lean body weight in a fit patient.
- Competitive muscle relaxants: use lean body weight.
- Suxamethonium: Use adjusted body weight to a maximum of 200mg.
- Nefopam: Increase dose.
- TCI propofol: IBW plus 40% excess weight.

**If in doubt, titrate and monitor effect!**

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<th>Lean Body Weight</th>
<th>Adjusted Body Weight</th>
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<tr>
<td>Male (30-50 kg)</td>
<td>Female (20-40 kg)</td>
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### Post Operative Management

- PACU discharge: Usual discharge criteria should be met. In addition, SpO₂ should be maintained at pre-op levels with minimal O₂ therapy, without evidence of hyperventilation.
- OSA or Obesity Hypoventilation Syndrome: Sit up. Avoid sedatives and post-op opioids. Reintroduce CPAP if using it pre-op. Additional time in recovery is recommended, only discharge to the ward if free of apneas without stimulation. Patients untreated or intolerant of CPAP who require postoperative opioids are at risk of hyperventilation and require continuous oxygen saturation monitoring. Level 2 care is recommended. Effective CPAP reduces this risk to near normal.
- Ward care: Escalation to Level 1, 2 or 3 care may be required based on patient co-morbidity, the type of surgery undertaken and issues with hyperventilation discussed above. General ward care includes multimodal analgesia, caution with long-acting opioids and sedatives, early mobilisation and extended thromboprophylaxis.

See www.SOBAuk.com for references

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**SOBA : Anaesthesia for the obese patient : BMI>35kg/m²**

- Right at hand
- User friendly
- Clear
- Concise
- Gives key information
- A very useful document in all Anaesthetic rooms

Suggest a similar document to outline key points to post anaesthetic care.
How can we ensure ongoing delivery of quality care?

- There is currently a lack of evidence/data to identify problems in nursing management of the obese patient
- [i.e. not just WLS patient]

- BARNA: results of mini survey on this problem have proved interesting

- National audit needed for the above – this could be ongoing as obesity pandemic continues

- Ongoing data collection specific for accidents/mistakes involving nurses resulting in harm to patient/nurse
National perioperative associations collaborate on initiatives to ensure quality care of obese patients as follows:

- Curriculum development
- Clinical competencies: skills and knowledge base
- Guidelines: Clinical pathways / use principles for bariatric surgery to fit all obese patients for any surgical speciality
- Audit recipes
- Management and leadership strategies
- Awareness campaign to keep this on the management agenda
No easy fix to nations obesity problem..........

- Quality care initiatives to manage obesity in perioperative practice should be inbuilt into management systems from now...
- Nurse / ODP role is crucial to delivering quality care
- Professional perioperative associations need to take the lead
Thank you

Any questions?

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RESOURCES


- Rowan et al [2012] Managing Obese Patients in the OR, Nurse

- Bennicoff, G [2010] Perioperative Care of the Morbidly Obese Patient in the Lithotomy Position, AORN 92 3 pp 297-312

- Drake, D & McAuliffe M [ ] Postoperative Nursing Care of Patients after Bariatric Surgery, *Perspectives*, Saxa Healthcare Communications, Burlington pp 5-7