IMPLEMENTING FASTING GUIDANCE THROUGH NURSING LEADERSHIP

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ABSTRACT Lorch, A. (2007) Implementing fasting guidance through nursing leadership. Nursing Times; 103: 18, 30–31. This article describes how nurse leadership in an NHS trust can prevent prolonged periods of fasting in patients awaiting surgery, through the implementation of fasting guidelines. The specialist nurse and their role as an agent of change are examined, along with the use of Lewin’s force-field model of change. This is a summary: the full paper and reference list can be accessed at nursingtimes.net.

During the first six months in a new role as a specialist trauma nurse coordinator in trauma and orthopaedics, I identified a variety of problems that affected the care of patients awaiting urgent surgery. In particular, there were concerns about long periods of fasting in the very young and very old on the three wards within the unit.

A prospective snapshot study was undertaken in a three-month period during 2002. This looked at 50 patients over the age of 60 with limb fractures. The results revealed that 16 of the patients were inappropriately starved, with the average fasting period of 7–12 hours (Lorch, 2002).

REASONS FOR FASTING

The justification for requiring patients to fast is the serious and often fatal complication of aspiration of the stomach contents into the lungs, namely aspiration pneumonia or Mendelson’s syndrome. Animal studies have made it clear that the safe volume of fluid remaining in the stomach is 25ml, with a pH value above 2.5 and food particles no larger than 2mm in diameter.

The damaging effects of prolonged fasting on patients can be divided into physiological and psychosocial factors:

- Physical: dehydration, headache, hypoglycaemia, electrolyte imbalance, nausea and vomiting malnutrition;
- Psychosocial: discomfort, unpleasant experience, irritability and resentment,

confusion, social isolation of missing meals.

These factors can occur more quickly in younger and older people and be more hazardous. If dehydration is not detected early enough, the resulting imbalance of electrolytes will disrupt the equilibrium of the cardiovascular, nervous and renal systems.

The early recognition of symptoms of tachycardia, hypotension, oliguria, confusion and decreased level of consciousness is essential. This will avoid older patients being found unfit and ultimately having anaesthesia and surgery cancelled.

It is now a medical and legal requirement to starve patients in preparation for anaesthesia. Yet as long ago as 1883 surgeon Joseph Lister acknowledged the problem of unnecessarily lengthy pre-operative fasting. Fluid deprivation for excessive periods is related to an increase in the volume of gastric fluid and lowering of pH. The stomach still secretes at least 50ml of fluid an hour during the fasting period.

Research has also demonstrated that some patients are at a higher risk: the obese, diabetic, pregnant, those with peptic ulcer or gastric reflux. In addition, patients under stress or in pain, those who have taken narcotics or alcohol, experienced a difficult intubation, are taking certain drugs (bisphosphonates and steroids) or alcohol, or who have experienced trauma.

The benefits of adhering to increased fluid intake pre-operatively include a marked reduction in the feeling of thirst and therefore a decline in post-operative nausea and vomiting, with a quicker resumption of a normal diet. The administration of medication at prescribed times controls specific medical conditions such as hypertension and avoids operations being cancelled because of this.

National guidelines were introduced that emphasised the need for good practice based on evidence (RCN, 2005). They recommended the implementation of the ‘two and six rule’ for adults and the ‘two, four and six rule’ for children in the UK, which set out minimum fasting periods.

IMPLICATIONS FOR PRACTICE

The change process benefited patients through the following:

- Improved knowledge and understanding by staff and patients – an explanation is given to staff and patients to aid compliance;
- Patient comfort and safety – this minimises the risk of fatal complications and there are fewer physical and psychosocial effects;
- Uniformity of practice – the use of tailor-made, colour-coded laminated signs ensures standards are achieved. These are combined with the same colour-coded laminated cards, but with a larger version in the notes trolley, that state theatre morning/afternoon list;
- Improved communication – the use of the colour-coded signs positioned above the bed ensures patients and staff know which list the patient is scheduled on and what time they have been fasted from;
- Avoiding missed medication – clear instructions are given in the guidelines that all prescribed medication must be given the morning of surgery and during the fasting period, except oral hypoglycaemics.

For the full version of this paper including background to and implementation of the project and full references, log on to nursingtimes.net, click NT Clinical and Archive and then Clinical Extra.
BACKGROUND

- Nurses on surgical wards have the responsibility of fasting patients before an anaesthetic for surgery.
- Studies on healthcare professionals’ knowledge and attitudes found that fasting times were lengthy due to staff being overcautious about lists changing. In reality, nursing staff exaggerated changes to scheduled lists, as in practice there were very few delays (Chapman, 1996).

Adults can ingest water up to two hours before anaesthesia and milk or solid food up to six hours before. For children the rule is water up to two hours before, breast milk up to four hours before and food up to six hours before.

THE NURSE AS AN AGENT OF CHANGE

Within this environment of trauma and orthopaedics, responsibility involves collaboration with other key members – theatre staff, ward nurses, domestics, anaesthetists, orthopaedic surgeons and junior and senior medical staff. To enable a leadership style that is appropriate for these groups of professionals, I used the democratic approach. Lewin’s force-field model was chosen as the change model. To facilitate change, the agent of change must progress through a three-step process of unfreezing, movement and refreezing.

Unfreezing

The first stage of unfreezing involves being aware that a problem exists. Data from the audit (Lorch, 2002) indicated that patients were being starved for periods of 7–12 hours before surgery. To help others realise that the current practice was poor, it was essential to determine the forces that were supporting and resisting change.

The driving forces were:
- Evidence of best practice resulting in patient well-being;
- Knowledge and awareness by patient;
- Support of manager, team leader and consultant anaesthetist.

The restraining forces were:
- Resistance from theatre staff and a few orthopaedic consultants;
- Difficulty educating the night staff;
- The rapid turnover of domestic staff;
- Fear from senior house officers and nursing staff of upsetting the orthopaedic surgeons’ routine;
- Lack of awareness by nursing staff of free space on morning elective orthopaedic list;
- Nil-by-mouth signs unclear.

Movement

The second stage of movement involves being aware of the forces present and looking at the best solutions available. The new arrangements for practice were implemented following individual group meetings with staff involved.

This proved to be more difficult than anticipated. There were problems with patients’ water jugs in the morning, either being mistakenly removed or mistakenly left, and there were also difficulties with communication with permanent night staff. Ultimately, when the trauma round took place, many patients had been fasted incorrectly. This became frustrating as it was occurring regularly and some of the consultants became very disgruntled.

This stage of the process became long and arduous, with much time spent troubleshooting. During this movement phase, time was spent working closely with the manager, team leader and consultant anaesthetist. From these discussions it was decided that there would be a choice of three fasting times that must be adhered to by all (see box). The choice would be dependent on whether the patient was young or old, whether a procedure was major or minor and when the procedure was likely to be performed (morning or afternoon).

It was also decided that two small cases of fit individuals could be fasted for morning surgery, in case there was a change to the list. This was not ideal.

Refreezing

The third and final stage of refreezing is the new stability of the group, a change of organisational culture, norms and policies. It became clear that new fasting signs were essential to replace the existing non-informative signs, following discussion with the anaesthetists. Tailor-made, colour-coded signs were designed that used the words ‘oral intake instructions’ rather than ‘nil by mouth’.

A trial was undertaken in order to explore staff views on the signs and their implementation. Feedback that was received via a questionnaire was good.

CONCLUSION

The use of Lewin’s planned approach to change is relevant in this situation. The nurse can act as an agent of change. After a long process of troubleshooting, the choice of three fasting times was developed and new colour-coded, tailor-made signs were designed. The implementation of these new fasting guidelines has resulted in improved knowledge and understanding, patient comfort and safety, uniformity of practice and better communication.

THREE FASTING TIMES

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>RED</td>
<td>(morning operation list) encourage water only until 7am, no food after midnight. Children less than three years: milk until 6am.</td>
</tr>
<tr>
<td>YELLOW</td>
<td>(afternoon operation list) encourage water only until 11am, no food after 7am. Children less than three years: milk until 10am.</td>
</tr>
<tr>
<td>GREEN</td>
<td>(emergency operation list) no water pre-op, no food pre-op.</td>
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REFERENCES

