In August 2009, the HSE provided GPs with details of their total spend on oral nutritional supplements, with 2008 spending attached for comparison. The document highlighted the high cost involved in oral nutritional supplementation (ONS) in the community and was the inspiration for this audit of prescribing practices in Mercer’s Medical Centre.

GPs working in the practice had become aware of increased patient requests for nutritional supplements over the previous years, and were anxious to develop a more organised approach to prescribing. There were unofficial reports in circulation that some of the products had a ‘street value’, and concern that ONS was being used as a replacement for meals rather than as a supplement by some patients and their carers.

There was agreement that it was time to assess the general area of ONS prescribing and to improve practice where possible, and that the potential for change and improvement was good if such a task were undertaken. The aims of the audit were:

• To determine if prescribing of ONS in Mercer’s Medical Centre was appropriate.
• To attempt an improvement of prescribing practices where necessary
• To measure the success of that attempt
• To improve patient care through more effective treatment of malnutrition.

Setting standards

The treatment protocol generally accepted in Ireland and the UK for nutritional supplementation is the Malnutrition Universal Screening Tool (MUST) as shown in Figure 1. This is the protocol adapted in NICE guidelines, and was the standard against which prescribing practices in the practice were measured in this audit.

A MUST score is generated from the degree of the patient’s weight loss, the patient’s BMI, and the effect of acute disease. ONS is prescribed if the patient’s score falls above the protocol’s treatment threshold.

Part of the audit process would be to determine if these essential parameters were recorded and used in the decision-making process, as these are central in determining if ONS is appropriate, and in justifying a decision to start or continue treatment.

Preparation and planning

The planned audit was discussed at a practice meeting, where GP partners in the practice were given an opportunity to air their concerns and to anticipate possible pitfalls. The issue of doctor-patient conflict arising from re-assessment of patients’ nutritional status and possible cessation of ONS, which was quite popular with a number of the patients on it, was one such concern. In the event of conflict, in order to preserve the doctor-patient relationship, it was decided to refer cases to a community dietitian for objective assessment, and this was thought to be of potential benefit to patients who might have become reliant on ONS.

The GPs agreed to play a role in rationalising and re-assessing their prescription policy, and to address individual cases highlighted in the first data collection where the indication for ongoing ONS was questionable.

First data collection

The audit involved a three-stage process. Initially, during a visit to Mercer’s Medical Centre in January 2010, a list of all patients prescribed ONS at any stage between July 1 and December 31, 2009 was generated using the practice software HELIX.

Intervention

The second stage occurred over several weeks up to April 2010. The database was provided to the practice partners and an email was circulated highlighting the preliminary findings. Patients on ONS were listed and the list divided between partners who reviewed patient charts. At this stage, a decision was made whether to stop the ONS, continue the ONS or to invite the patient for an appointment where
ongoing need for ONS was considered. In complex cases a referral to the community dietitian was considered before stopping the prescription.

Second data collection
In November 2010, similar analysis of patients prescribed ONS during the period April 1 to October 31 was undertaken, including information on BMI, weight and comorbidities of patients on ONS. At this stage two databases were available for comparison, generated before and after a simple intervention to improve prescribing practices.

Results
There was no difference between the number of males and the number of females prescribed ONS in either phase of the audit. Forty-nine patients were prescribed ONS in the first phase and 50 in the second phase, of whom 12 and 16 patients respectively were prescribed the ONS for less than one month. There was no significant difference in the mean duration of prescription between the groups, 116 days for the first group and 113 days for the second, and no significant difference in the total number of days of ONS prescribed to practice population.

Documentation
In the second phase of data collection, there were three documented reviews of ongoing necessity for ONS in the first phase and 34 such reviews in the second phase. Three dietitian referrals from general practice in the first phase rose to 12 in the second phase. These results are summarised in Table 2.

After the interim assessment, 29 patients continued to receive ONS prescriptions as before, of whom eight continued to receive prescriptions from the hospital, five continued on the basis of a dietitian’s assessment and the remaining 16 on the basis of GP assessment. GPs discontinued eight prescriptions; three patients died. Fifteen patient charts did not contain a documented review. This latter group was no longer on ONS at the time of assessment and therefore did not require assessment in this respect.

It is worth noting that 24 patients prescribed ONS in the first phase were also prescribed ONS in the second phase. Of these 24, 14 were on continuous ONS throughout both phases. Of these 14, four were coeliac; one had advanced MS; one had HIV-NHL; one had ESRF; one was cirrhotic; one had pulmonary TB; one had leg ulceration with BMI 19; one had isolated low BMI – ‘not eating’; one had Crohn’s disease; and one had severe IHD. One prescription was ‘by request’ and was stopped due to no indication.

Interpretation
This audit cycle did not result in reduced prescribing of ONS in Mercer’s Medical Centre. However, there was a significant improvement in documentation and record-keeping. The audit confirmed reasonably appropriate use of ONS in the general practice setting, if one accepts that the GP’s decision to continue ONS after due consideration was a reasonable one.

It is of interest to note that the 14 patients prescribed ONS throughout both phases of the audit mostly had highly significant comorbidities, and were appropriately prescribed ONS, and for the most part the information required to objectively assess this decision process was present in the chart.

These patients account for the majority of prescriptions and it is reasonable to conclude that the possibility of reducing the spending is more limited than was initially suspected. The audit resulted in increased numbers of consultations for nutritional status assessment and increased use of a dietitian. Despite eight patients having ONS discontinued, there was little benefit in terms of reduced ONS spending.

Limitations
Despite the significantly improved rate of documentation of weight and BMI, there were still more than half of all patients in the post-intervention group who did not have this essential information recorded. This may have been because the GPs felt they knew the patient’s case well enough to make a decision to continue ONS without the need for review to document current BMI and weight. A good example here would be the case of an elderly patient with diffuse oesophageal dysphagia with limited capacity for nutritional intake of solids, which was chronic but not progressive.

However, the lack of documentation made the conclusion that patients were appropriately prescribed ONS if their prescription was continued after review difficult to objectively assess. Not repeating measurement of weight on a regular basis for patients treated for malnutrition represents a departure from the MUST guidelines in itself.

Further audit in the area of ONS would benefit from clearer instructions at the intervention stage such that

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<tr>
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<th>July-December 2009</th>
<th>April-October 2010</th>
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<tbody>
<tr>
<td>No of patients prescribed ONS</td>
<td>49</td>
<td>50</td>
</tr>
<tr>
<td>No of patients prescribed less than one month ONS</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Mean duration of script</td>
<td>116 days</td>
<td>113 days</td>
</tr>
<tr>
<td>Total days oral nutritional supplementation prescribed to practice population</td>
<td>5,696</td>
<td>5,785</td>
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</tbody>
</table>

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<thead>
<tr>
<th></th>
<th>July-December 2009</th>
<th>April-October 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of patients with BMI recorded</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>No. of patients with weight recorded</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>% of patients with relevant documented comorbidity</td>
<td>71%</td>
<td>80%</td>
</tr>
<tr>
<td>No of cases documented reviewed re ONS indication</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Dietitian referrals from GP</td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
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analysis of the decision-making process would have greater meaning, and it is reasonable to interpret that the lack of rigour in documenting BMI in particular, is due to a failure in the preparation and planning stage when the importance of this may not have been sufficiently emphasised.

Evidence

Most of the evidence for ONS consists of small trials, applying different interventions and outcome measures to variable populations in different settings. This not only makes individual trials statistically underpowered, but also limits the possibilities for meta-analysis. It is therefore difficult to make recommendations for people in the community when most research has been conducted in hospitals. One attempt at a systematic review concluded that:

- ONS produce demonstrable clinical (including functional) benefits, but the nature and extent of these benefits varies with the underlying chronic condition;
- ONS increase total energy intake, with > 50% of the energy from ONS typically additional to that from habitual food intake;
- Improvements in body weight, total energy intake and body function following ONS appear to occur more frequently in individuals with a BMI < 20kg/m² than in those with a BMI > 20kg/m².

However, it was difficult to pinpoint subgroups of patients within trials in this analysis who might benefit from ONS, with the underlying chronic condition;

No RCTs examining the benefits of introducing community nutrition support teams were found in the preparation of the NICE guidelines covering this area, but observational work has suggested benefit, e.g. audits following the introduction of expert review for home ETF patients have suggested overall cost savings related to identification of significant numbers of such patients whose condition had improved enough to allow them to return to normal diets.

All high-quality research was conducted in hospitals, and evidence from only one RCT is potentially transferable to the community setting. This RCT included 212 patients at nutritional risk.

Three Danish hospitals participated in the study. The nutritional support team consisted of a nurse and a dietitian. Patients were randomised to receive nutrition support managed by the team (n = 108) or by usual departmental procedures (n = 104).

The team provided motivation for patients and staff, detailed a nutritional plan, assured delivery of prescribed food and gave advice when appropriate. The primary outcome was length of stay considered to be sensitive to nutrition support. Other outcomes reported were total length of stay with a maximum of 28 days, minor and major complications and quality of life. There were no statistically significant differences between the two groups in any of the outcomes.

There is some work indicating that education of primary care providers on guidelines incorporating a nutritional screening tool can be an effective method of achieving more appropriate prescribing of supplements but there is little analysis of costs, including the educational cost.

Discussion

ONS is a popular intervention, often requested by patients. It is an intervention which has minimal risk of associated harm or adverse side-effects. GPs naturally want to make their patients happy and wish them no harm, and in this context it has been suggested that there is a temptation to prescribe ONS upon patient request, as a ‘tonic’ and without sufficient heed of the high cost involved. This audit was designed to assess prescribing practices in the Mercer’s Medical Centre and to save money by restricting inappropriate prescription.

It is interesting to note that the 14 patients accounting for the majority of the ‘spend’ on ONS had for the most part serious and significant comorbidities. The prescribing for this sub-group was largely warranted as per the GPs’ assessment.

It is reasonable to assume that the coeliac patients will receive lifelong supplementation if the GMS continues to allow for doctors’ prescribing of gluten-free products. There is therefore less scope for saving money in the general area of ONS than was initially thought.

Dietitian referrals increased during this audit as a result of the greater attention on nutrition in the context of no reduction in prescribing. It is therefore arguable that the HSE cost-saving initiative which preceded the audit has led to highlighting of increased need for funding in this area. However, if the absence of any compelling evidence of benefit from ONS in any setting is considered, it is also arguable that the limited healthcare budget would be better channelled into more productive interventions.

References

2. NICE Clinical Guideline 32, Nutritional Support in Adults, February 2006

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