Malnutrition in Older People: calculating MUST scores, must we do better?

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Introduction

- Malnutrition is a key contributor to both frailty and sarcopenia which are associated with multiple adverse outcomes including disability, morbidity and mortality.
- Malnutrition is associated with increased frequency of hospital admissions, longer hospital stay and greater healthcare needs in the community.
- This is especially important in older patients living with frailty, where nutrition may be adversely affected by other comorbidities.
- The Malnutrition Universal Screening Tool (MUST) (Figure 1) is a five step screening tool to identify adults who are malnourished, at risk of malnutrition or obesity.
- It requires:
  - Body Mass Index (BMI) assessment
  - Degree of recent weight loss
  - Effect of acute disease on nutrition
- MUST provides a risk score which guides the degree of intervention.
- Guidelines state that this score should be calculated within 24 hours of admission.

Aims and Objectives

- The intention of this audit was to assess compliance with this guideline across several wards specific to Medicine for Older People.

Method

- Patient records were assessed on Friday 16th December 2016 across three acute wards for older people wards (84 beds).
- Of these, sixty-five records (77.3% coverage) were reviewed to identify date of admission, presence of a MUST score and the time in days between admission and calculation of the score.
- Notes were not reviewed if the patient was dying, had passed away, not present on the ward or if the bedside notes were not found at the end of the bed or at the nurses station.
- The date of admission was taken as the date admitted to the current ward.

Results

Figure 1: The MUST screening tool, endorsed by the British Association for Parenteral and Enteral Nutrition (BAPEN)²

Figure 2: MUST score calculation within 24-48 hours of admission – by ward

Of the 65 patients assessed, 72% had a MUST score calculated during admission. 46% had this calculated within 24 hours (range 35-52%) and 58% had this calculated within 48 hours (range 48-62%).

Figure 3: MUST score calculation within 24-48 hours of admission – by day of admission

Patients were further assessed as a global cohort by the day of admission (Monday-Sunday). MUST assessment at 24 hours ranged from 23% (Friday) to 88% (Tuesday).

Figure 4: Percentage of admissions with no MUST score calculated by admission day

18 patients had no MUST score, ranging from 0% (Sunday) to 46% (Monday). Data analysis was on a Friday and included 6 patients within 24 hours of admission. When the analysis was amended to include those with a stay greater than 24 hours, there was a reduction in numbers on Thursday and Friday but a clear peak on Saturday (40%).

Conclusions

- There is a clear discrepancy between the extent to which MUST scores are calculated across different wards and by differing day of admission.
- However, it has been demonstrated that it is rare to achieve a 100% assessment rate within 24 hours of admission.
- This audit is limited by a small sample size which limits the power of the analysis; however there is data to suggest that there is a variable degree of success in meeting this guideline when grouped by ward or day of admission.
- Delays in detection of malnutrition have the potential to increase admission times and impact response to intervention.
- This audit will be repeated after discussion with relevant teams and implementation of agreed solutions in order to assess response.

What has been learned?

- After discussion with pharmacists and dieticians, anecdotally there is a perceived lack of awareness of MUST scoring and its role in treating malnutrition by doctors.
- Informal discussions with doctors of varying grade/speciality has revealed a wide variety in awareness of MUST and where the score can be found in patient notes.
- It is not clear to what extent abnormal MUST scores are translated into active management (documentation of dietary intake or dietician referral).
- There is a small proportion of patients who had an admission under the MUST form but who did not have a complete MUST score documented – the reasons for this are unclear.

MUST there be a solution?

1. Education – of all members of staff regarding MUST scoring and alternative methods of assessment of BMI/weight loss.
2. Equipment – ensure each ward area has access to appropriate and dedicated weighing equipment.
3. Scheduling – regular review of MUST status of all new patients could be performed on alternate days. This would create a regular check at a point close to 24 hours after admission for all patients and would increase awareness of patients with absent scores.
4. Recording – MUST scores could be included on electronic lists/record systems. This may be effective at flagging up patients who require scoring or specialist referral in a timely manner. A similar system is used to assess chest radiographs and ECGs in acute admissions and appears to be effective anecdotally.

References