MEALTIME AUDIT TOOL: GUIDANCE DOCUMENT

The Canadian Malnutrition Task Force (CMTF) conducted a cohort study (2010–2013) in over 1000 adult patients, recruited from 18 acute care hospitals in 8 provinces. This Nutrition Care in Canadian Hospitals (NCCH) study identified not only the prevalence of malnutrition, but also that several hospital processes affected the ability of patients to consume adequate food for their recovery. **The NCCH study identified that food intake, regardless of nutritional status at admission, independently predicted the length of stay of a patient**. Specifically, patients who consumed **less than 50%** of food provided at meals had longer lengths of stay. As a result, food intake should be supported to promote patient recovery and quality of life.

The Mealtime Audit Tool (MAT) is a two-page form designed for hospital staff to document mealtime issues, challenges and/or barriers that patients may experience at the unit and individual level. The MAT was developed from the NCCH study results, as well as prior research on protected mealtimes. Testing of the MAT in 2014/2015 focused on enhancing usability and testing if auditors obtained the same result with the same patient. Usability results helped to improve the clarity of items and instructions and the MAT was found to be reliable when used by different auditors.

Recommendations for the use of MAT

1. MAT can be completed to:
   a) Establish a baseline on mealtime barriers patients may experience
   b) Identify differences between units, or within a unit, when staff education or other changes occur
   c) Identify priorities for change
   d) Educate staff on the needs, barriers and perspectives of their patients
2. Frequency of MAT completion will be dependent on the purpose of the audit. For example, a baseline audit may be done on several units within a hospital to identify those units with the highest need for improvement. When training or other change strategies are implemented, MAT may be completed to track progress of the improvements following training. MAT audits can also be used several months after training to determine sustainability of the change processes and if retraining is required.
3. MAT includes two **distinct** parts: **Part 1** is a global observation of the unit (e.g., type of unit, time of meal tray arrival) and **Part 2** is a list of key challenges or barriers individual patients may experience. Part 2 is completed with patients who are well enough (both physically and cognitively) to answer the questions. Patients who do not receive a meal tray are not eligible to complete MAT. Questions in Part 2 ask the patient about their meal experience (e.g., was the food hot enough?). For patients who cannot answer MAT questions, the mealtime can be observed and MAT used to focus the observation. However, it should be noted that MAT has not yet been tested in this manner and therefore, cannot be considered – at this point – to be comparable to MATs completed by asking patients these questions.
4. For the hospital to attain a sufficient understanding of mealtime activities on a unit, only a portion of eligible patients need to complete MAT. For example, on a unit with 34 beds, 10 patients at a single meal is an adequate sample to understand mealtimes in that unit.

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Recommendations for the use of MAT (cont'd.)

5. Randomly selecting patients to complete the MAT will promote variety in clinical characteristics that may influence identification of mealtime barriers and challenges. For example, patients who have difficulty self-feeding may be more likely to experience barriers. This diversity can be achieved through random selection of eligible patients.
6. MAT can also be used to audit a specific group (e.g., frail older adults). In these specific audits, results should only be compared to other audits within the same group.
7. Any member of hospital staff can be trained to be a MAT auditor – however, dietary staff (e.g., food service supervisors or diet technicians) may be especially appropriate.

Instructions for the completion of MAT

Part 1: Arriving shortly before the trays are delivered to the floor, the auditor observes the unit environment in general and comments on the unit readiness for the meal, noting any delays/challenges that might influence the patients' experience of this meal. The auditor completes the form with information regarding meal arrival time, meal description, details on when and how the tray was delivered and how the meal service was completed. In the comment box, the auditor can note any challenges observed during the mealtime. For example:

- Is unit staff focused on the mealtime?
  - Unit staff should be involved as much as possible in mealtime. For example, they can help to set up meal trays, position patients and make sure patients have everything they need to eat successfully.
  - If staff is not focused on the meal, please note what they are doing instead, e.g., transferring patients on/off the unit; performing non-mealtime activities or tasks such as charting, conducting rounds, distributing medications, completing procedures, changing linens, etc.
- Are there excessive disturbances on the unit?
  - Excessive noise on the unit can distract patients from eating and can create a negative mealtime environment.
  - If there are any excessive noises that may disturb patients, please make note of them. For example, loud/disruptive patients or staff, call bells/alarms going off, nearby construction/maintenance, etc.
  - Disturbances can also include foul odours, which may negatively affect the mealtime environment.
  - Any other disturbances that may create an environment that is not conducive to eating should be noted. For example, if housekeeping staff is cleaning patient rooms or collecting garbage during mealtimes.
- Are patients being interrupted during mealtime?
  - Interruptions that occur during a patient's mealtime may mean that the patient does not have enough time to eat their meal or the interruption has made them miss their meal.
  - Are patients being taken off the unit for medical testing/examinations during mealtime?
  - Are patients moving rooms or being transferred to/from unit during mealtime?
  - Are there visitors in patient's room? If visitors are involved in the mealtime (e.g., helping or eating with the patient), these are not interruptions. However, if the patient does not eat with visitors present, this would be considered an interruption.
  - Do physicians/physiotherapists/nurses/other clinicians visit during mealtime?

Recommendations for the use of MAT (cont'd.)

- Are there delays in meal delivery?
  - Does the meal arrive on time or is the meal truck late? Are there meal trays/items missing?
  - Are there obstacles/disturbances in the hallway that may delay meal delivery or prevent the meal truck from passing? For example, beds, furniture, housekeeping carts, etc.

These are examples of some common challenges that can affect the mealtime. MAT should also note any other observations of the environment that may have impacted the mealtime.

Part 2: This page is completed by the auditor who interviews the patient and records their responses after the patient has finished their meal. This part of MAT captures individual-level challenges that patients may face during their meal.

Identifying eligible patients and inviting them to complete MAT

1. Patients must be able to answer questions. Patients who are experiencing delirium, excessive pain or who have cognitive or memory problems are not good informants for MAT. If it becomes clear to the auditor once they begin that the patient is having considerable difficulty answering questions, it is best to stop and thank them for their time.
2. Patients who are not receiving meal trays should not be asked the MAT Part 2 questions.
3. The auditor should introduce themselves to the patient and explain the purpose of the audit and what will be required of the patient. Let the patient know that their feedback is confidential and will be used as a way of improving care in the hospital. Explain that it will only take a few minutes.

Completing MAT with patients

4. Answers for two patients can be completed on a single sheet of MAT. Make more copies of page 2 Part 2, as needed, for a single meal audit. The patient's name or room/bed number can be recorded for the audit.
5. Start the patient interview by asking a general question (e.g., How was your meal?). Brief phrases or single words can be used to capture this answer in the box provided.
6. Ask the patient to rate, on a scale of 1–10 (where 1 is low and 10 is high), how important food and fluid intake are to their recovery, as well as how much importance they thought staff placed on their food and fluid intake. Provide the numerical rating in the appropriate 'self' and 'staff' rating boxes.
7. Each of the 17 questions in Part 2 captures a different individual-level barrier. The auditor will ask the patient to answer each question with either a 'Yes' or 'No' and the appropriate column is ticked.
8. Some questions have a potential Not Applicable (N/A) response; question items may identify when N/A is a plausible option. Where the N/A column is shaded, N/A is **not** an option and the auditor should attempt to get a 'Yes' or 'No' response.

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Recommendations for the use of MAT (cont'd.)

9. If a patient answers 'No', this indicates that the patient encountered that issue or barrier. For example, if a patient answers 'No' to the question, 'Did you get the food that you ordered?' this indicates that the patient did not receive the food he/she ordered and thus, encountered this challenge during the meal.
10. Comments can be written beside each question.
11. Some questions have a part A) and B); the columns have been split to allow both answers to be recorded (e.g., Question 3A and 3B).
12. Remember that these are the perceptions of the patient, and your opinion – as the auditor – does not factor into the answering of these questions.

Obtaining the MAT score for each patient

13. The 'Total of NO responses' row below the 17 questions will be a sum of all of the questions in which the patient answered 'No'. This value represents the number of issues/barriers this specific patient had during his/her meal.
14. Finally, the last row asks for any patient input on how their mealtime experience could be improved; this can also be recorded in brief phrases or single words.

Interpretation of MAT

1. The higher the score, the more barriers experienced by the patient.
2. If a patient has indicated an issue with his/her meal, especially if this has significantly influenced food intake (e.g., not being able to eat because no assistance was provided), the auditor should identify the patient and communicate his/her challenge to the unit dietitian or nursing staff for follow-up and intervention.
3. If a patient asks for specific food preferences during the audit, the auditor should communicate these preferences to a food services supervisor (or another appropriate member of hospital staff).
4. The average number of barriers for the unit and meal being audited is calculated by adding the scores for all audits (at the meal) and then dividing this by the number of patients who completed Part 2.
5. Trends in MAT audits can be tracked by using line graphs, which note the average score for a given unit at specific time points (e.g., y-axis is the average number of barriers per meal and x-axis is the date of the audit).

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