

## CONTINUOUS QUALITY IMPROVEMENT FOR MEALS: AN OBSERVATIONAL TOOL

Date: \_\_\_ / \_\_\_ / \_\_\_

Staff Observer: \_\_\_\_\_

Begin Time: \_\_\_:\_\_\_ am pm

End Time: \_\_\_:\_\_\_ am pm

Meal: \_\_\_ Breakfast \_\_\_ Lunch \_\_\_ Dinner      Location: \_\_\_ Dining Room \_\_\_ Room/Hall

Identify 4-8 residents who should receive feeding assistance (e.g., rated on MDS as requiring assistance to eat history of weight loss).  
Observe during the meal and record all information below.

Resident Name	1	2	3	4		5		6		7		8
	Physical Assist	Verbal Instruction	Social Stimulation	Supplement Yes Consumed	Assist Time >5 min	Assist Time <5 min	Total % Eaten >50	Total % Eaten <50	Medical Record Total % Eaten	Medical Record Assistance Provided	Comments (resident complaints about meal or staff offers of substitutions?)	
					OZ							
					OZ							
					OZ							
					OZ							
					OZ							
					OZ							
					OZ							
					OZ							

**Calculate Feeding Assistance Care Process Measures Below as a Percentage (0% to 100%) for Residents Observed During This Meal:**

1. What proportion of resident population is eating in the dining room? (total number in dining room(s) / total residents capable of oral intake) _____%																		
2. Of those who received physical assistance (column 1), how many also received verbal instruction (column 2)? _____%																		
3. Of the total number of observed residents, how many received at least one episode of social stimulation from staff (column 3)? _____%																		
4. Of those who were given a supplement (column 4. yes), how many received more than 5 minutes of assistance (column 5. > 5)? _____%																		
5. Of those who ate less than 50% (column 6. <50), how many received more than 5 minutes of assistance (column 5: >5)? _____%																		
6. Of those who ate less than 50% (column 6. <50), how many had documentation equal to or less than 60% (column 7: total % eaten)? _____%																		
7. Of those who ate less than 50% (column 6. <50), how many were offered a substitution (see comments)? _____%																		
8. Of those who had documentation assistance was provided (column 8), how many received more than 5 minutes of assistance (column 5: > 5)? _____%																		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; border-right: 1px solid black; padding: 2px;">Observational Definitions</td> <td style="padding: 2px;">Record all types of assistance provided by any type of staff during the meal (from tray delivery to tray pick up), even if it only occurs once.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Physical Assistance/Physical Guidance</td> <td style="padding: 2px;">Staff holds utensil/cup and/or helps resident to hold utensil/cup to eat or drink (e.g., Aide feeds resident or physically assists resident to feed him or herself).</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Verbal Instruction (cueing, reminders)</td> <td style="padding: 2px;">Comments made by staff specifically directed toward eating (e.g., "pick up your spoon and take a bite"; "try some more of your soup").</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Social Stimulation</td> <td style="padding: 2px;">A social comment made by staff NOT specifically directed toward eating (e.g., How are you today? It's good to see you. You look nice today").</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Supplement</td> <td style="padding: 2px;">Record any type of oral liquid nutritional supplement (e.g., Resource, High Protein Nourishment, Ensure) given with the meal and amount consumed by resident.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Assistance</td> <td style="padding: 2px;">Record estimated time spent by any type of staff (nurse aide, licensed nurse, feeding assistant) providing any type of assistance to encourage eating during the meal.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Total Percent Eaten</td> <td style="padding: 2px;">Calculate on a 0% to 100% metric using the same measurement system required of nurse aides, or other designated staff, in the facility.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Medical record</td> <td style="padding: 2px;">Documentation of total percent eaten and assistance provided by nurse aide or other staff for the same day and meal as observation.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">Comments</td> <td style="padding: 2px;">Record resident complaints about meal service or appetite, staff offerings of substitutions for served meal or other relevant observations (e.g., refusal of food or help).</td> </tr> </table>	Observational Definitions	Record all types of assistance provided by any type of staff during the meal (from tray delivery to tray pick up), even if it only occurs once.	Physical Assistance/Physical Guidance	Staff holds utensil/cup and/or helps resident to hold utensil/cup to eat or drink (e.g., Aide feeds resident or physically assists resident to feed him or herself).	Verbal Instruction (cueing, reminders)	Comments made by staff specifically directed toward eating (e.g., "pick up your spoon and take a bite"; "try some more of your soup").	Social Stimulation	A social comment made by staff NOT specifically directed toward eating (e.g., How are you today? It's good to see you. You look nice today").	Supplement	Record any type of oral liquid nutritional supplement (e.g., Resource, High Protein Nourishment, Ensure) given with the meal and amount consumed by resident.	Assistance	Record estimated time spent by any type of staff (nurse aide, licensed nurse, feeding assistant) providing any type of assistance to encourage eating during the meal.	Total Percent Eaten	Calculate on a 0% to 100% metric using the same measurement system required of nurse aides, or other designated staff, in the facility.	Medical record	Documentation of total percent eaten and assistance provided by nurse aide or other staff for the same day and meal as observation.	Comments	Record resident complaints about meal service or appetite, staff offerings of substitutions for served meal or other relevant observations (e.g., refusal of food or help).
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## CONTINUOUS QUALITY IMPROVEMENT FOR MEALS: SCORING RULES AND RATIONALE

The information generated by the observational tool can be reported as feeding assistance care quality indicator scores (e.g., proportion of residents within a facility who had low oral intake but who did not receive assistance from staff during a particular meal) and used for quality improvement purposes. There are two primary advantages of a quality indicator (QI) score. First, a QI score has the potential to highlight care areas in need of improvement. Second, a QI score efficiently summarizes the data into understandable quality categories for which feeding assistance can be scored as either “passing” or “failing” for individual residents and mealtime periods. The percentage of residents who receive a “pass” or “fail” score provides a summary measure of the quality of care provision, which is useful for making comparisons within a facility over time (e.g., staff shifts, meals). These types of comparisons inform quality improvement because it provides an objective and specific way to track changes in staff behavior and identify problems with care delivery (e.g., specific meals or days of the week wherein there are quality issues). The rules and rationale that guide the scoring of 8 feeding assistance care QIs are presented below. These QIs are operationalized into specific nursing home staff behaviors that can be reliably observed during meals. The focus on care processes under the direct control of nursing home staff is critical to any quality improvement effort, because it is possible for poor clinical outcomes to occur (e.g., unintentional weight loss) in the context of optimal care quality. This observational tool is not intended to comprehensively assess all issues relevant to nutritional care; rather, it provides a tool that supervisory-level staff can use to monitor the quality of feeding assistance provided to residents as well as the accuracy of corresponding medical record documentation. Supervisory-level staff should conduct observations during one to three meals (breakfast, lunch, and dinner) per week to effectively monitor the adequacy and quality of daily feeding assistance care provision. The scoring rule for each of the QIs listed next reflects a liberal approach that maximizes the opportunity for staff to “pass.”

### *Feeding Assistance Care Quality Indicators for Meals*

#### *1. Staff ability to get residents out of bed and to the dining room for meals.*

**Scoring Rule:** Score as “fail” if less than half of the resident population, as defined by those residents capable of oral food and fluid intake (exclude residents who are bed-bound, tube-fed and/or on hospice) is eating the meal in the dining room, or other common location. Count all dining rooms and other common eating area(s).

**Rationale:** Residents eating in the dining room are more likely to receive help to eat from staff, social interaction during the meal, and accurate documentation of their percent eaten. Residents are often allowed to eat meals in their rooms in bed, not necessarily due to their own preference but because it is easier for staff. Moreover, residents who eat in their beds are often not positioned properly for eating (semi-reclined), which places them at greater risk for choking. Finally, social isolation during meals may contribute to low oral intake and depressive symptoms.

#### *2. Staff ability to provide verbal instruction to residents who receive physical assistance at mealtimes.*

**Scoring Rule:** Score as “fail” any resident who receives physical assistance to eat from staff without also receiving at least one episode of verbal instruction directed toward eating (e.g., “Please try your beans”).

**Rationale:** Graduated prompting protocols using verbal instruction increase residents’ independent eating behaviors and oral food and fluid intake. Staff often provides excessive physical assistance to residents who could otherwise eat independently with just verbal instruction. Ideally, the verbal instruction should precede physical assistance to encourage independence in eating; but, the scoring rule for this indicator allows staff to “pass” if verbal instruction is provided at any point during the meal (before, during or after physical assistance).

#### *3. Staff ability to provide social interaction to all residents during mealtimes.*

**Scoring Rule:** Score as “fail” any resident who does not receive at least one episode of social interaction (i.e., verbal interaction that does *not* include a specific instruction to eat, “how are you today?”) during the meal.

**Rationale:** Social interaction has been shown to enhance oral food and fluid intake in residents. Social interaction during meals is also important to residents’ quality of life and should not be limited to those with low oral intake.

#### *4. Staff ability to provide adequate feeding assistance to residents who receive an oral liquid nutritional supplement during mealtimes.*

**Scoring Rule:** Score as “fail” any resident who receives an oral liquid nutritional supplement and less than five minutes of staff assistance to eat during the meal.

Rationale: Oral liquid nutritional supplements are most effective in increasing daily caloric intake when provided between regularly-scheduled meals as opposed to with meals. Supplements are often inappropriately given with meals and may be used as a substitute for quality feeding assistance. Thus, residents should not be given a supplement during the meal unless staff has provided assistance to encourage the resident to eat the served meal.

*5. Staff ability to provide assistance to at-risk residents.*

Scoring Rule: Score as “fail” any resident who consumes less than 50% of the food and fluid items on his or her meal tray based on direct observation and who receives less than five minutes of assistance from staff during the mealtime period.

Rationale: If a resident who consumes less than 50% of a meal also receives less than five minutes of feeding assistance from staff, then the staff is providing potentially substandard feeding assistance, failing to recognize an oral intake problem, or both. Residents who receive less than five minutes of assistance typically receive only tray delivery and set-up with no additional help; whereas, those who receive more than five minutes receive, on average, 15 to 20 minutes of staff attention.

*6. Staff ability to accurately identify residents with clinically significant low oral food and fluid intake during meals.*

Scoring Rule: Score as “fail” any resident who consumes less than 50% of the food and fluid items on his or her meal tray based on direct observation, but who is identified by staff (i.e., medical record documentation of percentage intake for the same meal as the observation) as consuming equal to or greater than 60%.

Rationale: The federal criterion for low oral intake is defined as “leaves 25% or more of food uneaten,” or consumes less than 75% of most meals. Recent evidence, however, suggests that residents who consistently consume less than 50% of most meals are at a significantly higher risk for weight loss. Thus, if staff document that a resident consumed more than 60% of a meal when, in fact, the resident ate less than 50%, it is likely staff is failing to identify a clinically significant oral intake problem for that resident.

*7. Staff ability to offer meal alternatives to residents who do not like the served meal.*

Scoring Rule: Score as “fail” any resident who eats less than 50% of the food and fluid items on his or her meal tray based on direct observation, and who is not offered a meal alternative (i.e., substitution) at any point during the meal by any staff member.

Rationale: Residents often do not like the served meal or certain items on the meal tray; however, most residents will not complain directly to staff about the meal service or request something else. Thus, it is important for staff to notice if a resident is not eating well and offer him or her alternatives to the served meal or individual foods or fluids (e.g., sandwich, fruit, orange juice instead of apple juice, sausage instead of bacon).

*8. Staff ability to accurately document feeding assistance care provision.*

Scoring Rule: Score as “fail” any resident who receives less than five minutes of assistance from staff but who has medical record documentation for the same day and meal that feeding assistance was provided.

Rationale: Studies have shown that feeding assistance is documented in the medical record as provided for all residents at risk for weight loss (those rated on the MDS as requiring assistance to eat and/or those with a history of weight loss), even though most of these residents actually receive less than five minutes of assistance. Thus, medical record documentation related to feeding assistance care provision is not accurate or specific enough to be useful for quality improvement efforts. Supervisory-level staff needs to be aware of the inaccuracy of this documentation to inform improvement efforts.

## RELATED PUBLISHED RESEARCH STUDIES

1. Simmons SF & Reuben D. (2000). Nutritional intake monitoring among nursing home residents: A comparison of staff documentation, direct observation, and photographs. Journal of the American Geriatrics Society, 48(2):209-213.
2. Simmons SF, Alessi C & Schnelle JF. (2001). An intervention to increase fluid intake in nursing home residents: Prompting and preference compliance. The Journal of the American Geriatrics Society, 49(7):926-933.
3. Simmons SF, Osterweil D & Schnelle JF. (2001). Improving food intake in nursing home residents with feeding assistance: A staffing analysis. Journal of Gerontology: Medical Sciences, 56A (12): M790-M794.
4. Simmons SF, Lim B & Schnelle JF. (2002). Accuracy of Minimum Data Set in identifying residents at risk for under nutrition: Oral intake and food complaints. Journal of the American Medical Directors' Association, May/June: 140-145.
5. Simmons SF, Babinou S, Garcia E & Schnelle JF. (2002). Quality assessment in nursing homes by systematic direct observations: Feeding assistance. Journal of Gerontology: Medical Sciences, 57A (10):M665-M671.
6. Simmons SF, Lam H, Rao G & Schnelle JF. (2003). Family members' preferences for nutrition interventions to improve nursing home residents' oral food and fluid intake. Journal of the American Geriatrics Society, 51(1):69-74.
7. Simmons SF, Garcia EF, Cadogan MP, Al-Samarrai NR, Levy-Storms LF, Osterweil D & Schnelle JF. (2003). The Minimum Data Set weight loss quality indicator: Does it reflect differences in care processes related to weight loss? Journal of the American Geriatrics Society 51(10):1410-1418.
8. Simmons SF, Walker K, Osterweil D. (2004). The effect of Megestrol Acetate on oral food and fluid intake in nursing home residents: A pilot study. Journal of the American Medical Directors' Association, 5(1):24-30.
9. Schnelle JF, Simmons SF, Harrington C, Cadogan MP, Garcia E & Bates-Jensen B. (2004). Relationship of nursing home staffing to quality of care. Health Services Research, 39(2):225-250.
10. Schnelle JF, Bates-Jensen B, Chu L & Simmons SF. (2004). Accuracy of nursing home medical record information about care process delivery: Implications for staff management and improvement. Journal of the American Geriatrics Society, 52(8):1378-1383.
11. Simmons SF & Schnelle JF. (2004). Individualized feeding assistance care for nursing home residents: Staffing requirements to implement two interventions. Journal of Gerontology: Medical Sciences, 59A (9):966-973.
12. Schnelle JF, Osterweil D & Simmons SF. (2005). Improving the quality of nursing home care and medical record accuracy with direct observational technologies. The Gerontologist 45(5):576-582.
13. Simmons SF & Levy-Storms L. (2006). The effect of dining location on nutritional care quality in nursing homes. Journal of Nutrition, Health, & Aging, 9(6):434-439.
14. Simmons SF & Levy-Storms L. (2006). The effect of staff care practices on nursing home residents' preferences: Implications for individualizing care. Journal of Nutrition, Health, & Aging, 10(3):216-221.
15. Simmons SF, Schnelle JF. (2006). Feeding assistance needs of long-stay nursing home residents and the staff time to provide care. Journal of the American Geriatrics Society, 54(6):919-924.
16. Simmons SF, Patel AV. (2006). Nursing home staff delivery of oral liquid nutritional supplements to

residents at risk for unintentional weight loss. Journal of the American Geriatrics Society, 54(9):1372-1376.

17. Simmons SF, Schnelle JF. (2006). A continuous quality improvement pilot study: Impact on nutritional care quality. Journal of the American Medical Directors' Association, 7(8):480-485.
18. Schnelle JF, Ouslander JG, Simmons SF. (2006). Direct observations of nursing home care quality: Does care change when observed? Journal of the American Medical Directors Association, 7(9):541-544.
19. Simmons SF, Bertrand R, Shier V, Sweetland R, Moore T, Hurd D, Schnelle JF. (2007). A preliminary evaluation of the Paid Feeding Assistant regulation: Impact on feeding assistance care process quality in nursing homes. The Gerontologist, 47(2):184-192.