NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Nursing Homes 2010

Measure Number/Title: NH-024-10: Percent of Residents Who Lose Too Much Weight (Long Stay)

Description: This measure updates CMS' current QM on patients who lose too much weight. This measure captures the percentage of long-stay residents who had a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician-prescribed weight-loss regimen noted on an MDS assessment (which may be an annual, quarterly, significant change or significant correction MDS assessment) during the selected quarter (3-month period).In order to address seasonal variation, the proposed measure uses a two-quarter average for the facility. Long-stay residents are those who have been in nursing care at least 100 days. The measure is restricted to this population, which has long-term care needs, rather than the short-stay population who are discharged within 100 days of admission.

Numerator Statement: The numerator is the number of nursing home residents with an MDS assessments (which may be an annual, quarterly, significant change or significant correction MDS assessment) that indicate a weight loss of 5% or more of resident's body weight in the last 30 days or 10% or more in the last 6 months that is not a result of a physician-prescribed weight-loss regimen.

Denominator Statement: The denominator uses MDS assessments (which may be an annual, quarterly, significant change or significant correction assessments), except for residents with only an admission (OBRA) assessment and residents for whom data on weight loss is missing. Residents with only an admission (OBRA) assessment are excluded because they have not been in the facility long enough to have had weight loss assessed or attributed to care in the facility

Level of Analysis: Population: national, Facility/Agency

Data Source: Electronic clinical data

Measure developer: Research Triangle Institute International

Type of Endorsement (full or time-limited): Full

Attachments: Lose Too Much Weight Table

NATIONAL QUALITY FORUM

Measure Evaluation 4.1
December 2009

This form contains the measure information submitted by stewards. Blank fields indicate no information was provided. Attachments also may have been submitted and are provided to reviewers. The subcriteria and most of the footnotes from the evaluation criteria are provided in Word comments within the form and will appear if your cursor is over the highlighted area. Hyperlinks to the evaluation criteria and ratings are provided in each section.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:** NH-024-10 **NQF Project:** Nursing Homes 2010
MEASURE DESCRIPTIVE INFORMATION
De.1 **Measure Title:** Percent of Residents Who Lose Too Much Weight (Long Stay)
De.2 **Brief description of measure***:* This measure updates CMS' current QM on patients who lose too much weight. This measure captures the percentage of long-stay residents who had a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician-prescribed weight-loss regimen noted on an MDS assessment (which may be an annual, quarterly, significant change or significant correction MDS assessment) during the selected quarter (3-month period). In order to address seasonal variation, the proposed measure uses a two-quarter average for the facility. Long-stay residents are those who have been in nursing care at least 100 days. The measure is restricted to this population, which has long-term care needs, rather than the short-stay population who are discharged within 100 days of admission.
1.1-2 **Type of Measure:** Outcome De.3 **If included in a composite or paired with another measure, please identify composite or paired measure**
De.4 **National Priority Partners Priority Area:** Population health De.5 **IOM Quality Domain**: Safety De.6 **Consumer Care Need:**

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use aspects of the measure owned by another entity (e.g., risk model, code set)?** Yes	**A** **Y☐** **N☐**

A.2 **Indicate if Proprietary Measure** (*as defined in measure steward agreement*)**:** A.3 **Measure Steward Agreement:** Government entity and in the public domain - no agreement necessary A.4 **Measure Steward Agreement attached:**	
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. Yes, information provided in contact section	**B** **Y**☐ **N**☐
C. The intended use of the measure includes both public reporting and quality improvement. ►**Purpose:** Public reporting, Internal quality improvement	**C** **Y**☐ **N**☐
D. The requested measure submission information is complete. Generally, measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. Measures that have not been tested are only potentially eligible for a time-limited endorsement and in that case, measure owners must verify that testing will be completed within 12 months of endorsement. D.1**Testing:** Yes, fully developed and tested D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** Yes	**D** **Y**☐ **N**☐
(for NQF staff use**)** **Have all conditions for consideration been met?** **Staff Notes to Steward** (*if submission returned*)**:**	**Met** **Y**☐ **N**☐
Staff Notes to Reviewers (*issues or questions regarding any criteria*)**:**	
Staff Reviewer Name(s):	

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (evaluation criteria) **1a. High Impact**	Eval Rating
(for NQF staff use) Specific NPP goal:	
1a.1 **Demonstrated High Impact Aspect of Healthcare:** Patient/societal consequences of poor quality 1a.2 1a.3 **Summary of Evidence of High Impact:** Nursing facility residents often have chronic diseases and functional impairments that impair proper nutrition and hydration (1, 2, 3) and require interventions by facility staff.(1) Elderly individuals with weight loss are at higher risk for functional decline, hip fracture (4, 5, 6) and mortality.(7, 8, 9, 10, 11, 12, 13) Consequences of weight loss also may include: muscle wasting, infections, and increased risk off pressure ulcers. Detecting and preventing weight loss is central to ensure appropriate nutritional intake. Prevalence estimates of poor nutrition and unintentional weight loss among people in institutions vary from 2% to 41% (14); dehydration is also common.(15) Using MDS 2.0 data for April-June 2009, the national prevalence of too much weight loss in nursing facilities was 9.2%, ranging from a low of an average of 7.0% in Alaska to a high of an average of 11.4% in North Carolina.(16) The national percentage of too much weight loss fluctuated somewhat between 2003 and 2009, with a modest downward trend.(17) Preliminary testing of the MDS 3.0 using a sample of nursing facilities estimated a prevalence of too much weight loss that was virtually the same as that estimated using the MDS 2.0 (8.3% vs. 8.0%) (18). Malnutrition in nursing facilities is a problem in other	**1a** **C**☐ **P**☐ **M**☐ **N**☐

Comment [KP1]: 1a. The measure focus addresses:
•a specific national health goal/priority identified by NQF's National Priorities Partners; OR
•a demonstrated high impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

countries as well as the United States.(3)
Various chronic illnesses are associated with malnutrition, including cancer, diabetes, depression, and COPD.(19) Medications, oral health problems (such as missing teeth), dysphagia, and dementia can complicate nutrition and hydration. Between 40% and 60% of nursing facility residents have swallowing disorders, often related to dementia.(20) Medications may cause nausea, anxiety, constipation, and lack of appetite. Depression has been identified as the "most common reversible illness" associated with malnutrition.(2) Dehydration is a major factor in weight loss in perhaps 10% of nursing home residents.(21, 22, 23)
The Council for Nutritional Clinical Strategies in Long-Term Care, an expert panel of interdisciplinary thought leaders representing academia and the medical community, derived a structured approach aimed at improving management of malnutrition in long-term care settings, using literature review and consensus development. The Clinical Guide to Prevent and Manage Malnutrition in Long-Term Care is based on a best-evidence approach to the management of nutritional problems in long-term care. The recommendations were determined by consensus process by the Council for Nutritional Clinical Strategies in Long-Term Care, and clinical triggers were reviewed by an independent GSA peer-review committee. The parameters for identifying malnutrition in nursing facilities were derived from OBRA 1987 guidelines including involuntary weight loss of greater than 5% in 30 days or 10% in 180 days, which is used as the trigger in this quality measure. (24)

1a.4 **Citations for Evidence of High Impact:**

1. Morley JE. Weight loss in the nursing home. J Am Med Dir Assoc. 2007;8(4):201-4.
2. Sloane PD, Ivey J, Helton M, Barrick AL, Cerna A. Nutritional issues in long-term care. J Am Med Dir Assoc. 2008;9:476-85.
3. Bourdel-Marchasson I. How to improve nutritional support in geriatric institutions. J Am Med Dir Assoc. 2010;11: 13-20.
4. Langlois JA, Harris T, Looker AC, Madans J. Weight change between age 50 years and old age is associated with risk of hip fracture in white women aged 67 years and older. Arch Intern Med. 1996;56: 989-94.
5. Langlois JA, Mussolino ME, Visser M et al. Weight loss from maximum body weight among middle-aged and older white women and the risk of hip fracture: the NHANES I epidemiologic follow-study. Osteoporos Int. 2001;12: 763-768.
6. Ensrud KE, Ewing SK, Stone KL, et al.; Study of Osteoporotic
Fractures Research Group. Intentional and unintentional weight loss
increase bone loss and hip fracture risk in older women. J Am Geriatr Soc. 2003;51:1740-57.
7. Ryan C, Bryant E, Eleazer P, et al. Unintentional weight loss in long-term
care: Predictor of mortality in the elderly. South Med J 1995;88:721-4.
8. Covinsky KE, Martin GE, Beyth RJ, et al. The relationship between clinical assessments of nutritional status and adverse outcomes in older hospitalized medical patients. J Am Geriatr Soc. 1999;47:532-8.
9. Kiely DK, Flacker JM. (2000). Resident characteristics associated with mortality
in long-term care nursing homes: Is there a gender difference? J Am Med Dir Assoc. 2000;1:8-13.
10. Sullivan DH, Morley JE, Johnson LE, et al. The GAIN (Geriatric Anorexia Nutrition) registry: the impact of appetite and weight on mortality in a long-term care population. J Nutr Health Aging. 2002;6: 275-81.
11. Wedick NM, Barrett-Connor E, Knoke JD, Wingard DL. The relationship between weight loss and all-cause mortality in older men and women with and without diabetes mellitus: The Rancho Bernardo study. J Am Geriatr Soc. 2002;50:1810-5.
12. Keller HH, Ostbye T. Body Mass Index (BMI) change and mortality in community-dwelling seniors without dementia. J Nutr Health Aging. 2005;9:316-20.
13. Amador LF, Al Snih S, Markides KS, Goodwin JS. Weight change and mortality among older Mexican Americans. Aging Clin Exp Res. 2006;18:196-204.
14. Pauly L, Stehle P, Volkert D. Nutritional situation of elderly nursing home residents. Z Gerontol Geriatr. 2007;40:3-12.
15. Amella EJ. Feeding and hydration issues for older adults with dementia. Nurs Clin North Am. 2004;39:607-23.
16. Centers for Medicare & Medicaid Services. MDS quality measure/indicator report. Available from http://www.cms.hhs.gov/MDSPubQIandResRep/02_qmreport.asp?isSubmitted=qm3&group=13&qtr=14.
17. American Health Care Association. Trends in publicly reported nursing facility quality measures. July 2009. Available from
http://www.ahcancal.org/research_data/trends_statistics/Documents/trends_nursing_facilities_quality_measures.pdf.
18. Saliba D, Buchanan J. Development and validation of a revised nursing home assessment tool: MDS 3.0.

Contract No. 500-00-0027/Task Order #2. Santa Monica, CA: Rand Corporation, Apr 2008. Available from http://www.cms.hhs.gov/NursingHomeQualityInits/Downloads/MDS30FinalReport.pdf
19. Huffman GB. Evaluating and treating unintentional weight loss in the elderly. Am Fam Physician. 2002;65: 640-50.
20. Kayser-Jones J, Pengilly K. Dysphagia among nursing home residents. Geriatr Nurs. 1999;20: 77, 82, 84.
21. Kaldy J. Clinical issues in weight loss and dehydration. J Am Med Dir Assoc. 2000;1(6 Suppl):S35-6.
22. Feinsod FM, Levenson SA, Rapp K, et al. Dehydration in frail, older residents in long-term care facilities. J Am Med Dir Assoc 2004;5(2 Suppl):S35-41.
23. Smith PA. Nutrition, hydration, and dysphagia in long-term care: Differing opinions on the effects of aspiration. J Am Med Dir Assoc 2006; 7:545-9.
24. Thomas, D., Ashmen, W., Morley, J., Evans, W., Council for Nutritional Strategies in Long-Term Care. (2000). Nutritional Management in Long-Term Care: Development of a Clinical Guideline. Journal of Gerontology: Medical Sciences. 55A(12), M725-M734.

1b. Opportunity for Improvement

1b.1 Benefits (improvements in quality) envisioned by use of this measure: This measure will enable nursing facilities to identify whether, on aggregate, residents are experiencing excessive weight loss (greater than 5% body weight lost in the past 30 days or 10% or more in the last 6 months) and engage in appropriate quality improvement programs. More residents maintaining their body weight is the expected benefit of this measure. Changes in this measure over time should indicate whether a facility has undertaken appropriate steps to ensure residents are successfully maintaining a healthy body weight.

1b.2 Summary of data demonstrating performance gap (variation or overall poor performance) across providers:
The weight loss quality measure is part of the current CMS publicly-reported quality measures for nursing facilities. In their analysis of the weight loss quality measure using MDS 2.0 data from 2006, the University of Colorado found variability across facilities.(1) The mean percentage of residents with too much weight loss was 8.5%, with a standard deviation of 5.0%. The quality measure varied from 2.7% at the 10th percentile to 14.9% at the 90th percentile; only 3.4% of facilities had no residents with too much weight loss.

See attached Table 1: Measure Variability Across Facilities.

1b.3 Citations for data on performance gap:
1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.

1b.4 Summary of Data on disparities by population group:
Although research suggests racial disparities in quality of care in nursing facilities between African Americans and whites (1, 2, 3, 4, 5) and between Hispanics and whites,(6) no analyses have been conducted specifically examining racial disparities on too much weight loss. No research has been conducted on other types of disparities (e.g., ethnicity, rural/urban, or income) specifically for this measure.

1b.5 Citations for data on Disparities:
1. Smith D, Feng Z, Fennell M, Zinn J, Mor V. Separate and unequal: racial segregation and disparities in quality across U.S. nursing homes. Health Aff (Millwood). 2007;26(5):1448-558.
2. Howard D, Sloane P, Zimmerman S, Eckert J, Walsh J, Buie V, Taylor P, Koch G. Distribution of African Americans in residential care/assisted living and nursing homes: more evidence of racial disparity? Am J Public Health. 2002;92(8):1272-7.
3. Grabowski D. The admission of blacks to high-deficiency nursing homes. Med Care. 2004;42(5):456-64.
4. Mor V, Zinn J, Angelelli J, Teno J, Miller S. Driven to tiers: socioeconomic and racial disparities in the quality of nursing home care. Milbank Q. 2004;82(2):227-56.
5. Miller SC, Papandonatos G, Fennell M, Mor V. Facility and county effects on racial differences in nursing home quality indicators. Soc Sci Med. 2006;63(12):3046-59.
6. Fennell ML, Feng Z, Clark MA, Mor V. Elderly Hispanics more likely to reside in poor quality nursing homes. Health Aff (Millwood). 2010;29(1): 65-73.

1b
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1c. Outcome or Evidence to Support Measure Focus — 1c

Comment [KP2]: 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

Comment [k3]: 1 Examples of data on opportunity for improvement include, but are not limited to: prior studies, epidemiologic data, measure data from pilot testing or implementation. If data are not available, the measure focus is systematically assessed (e.g., expert panel rating) and judged to be a quality problem.

Comment [k4]: 1c. The measure focus is:
•an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;
OR
•if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
oIntermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
oProcess – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
oStructure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
oPatient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
oAccess – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
oEfficiency – demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population*)**:** A loss of 5% or more of body weight in one month or 10% or more over 6 months is usually considered unhealthy.(1) Too much weight loss can make a person weak, change how medicine works in the body, or cause the skin to break down which can lead to pressure ulcers. Too much weight loss may mean that the resident is ill, refuses to eat, is depressed, or has a medical problem that makes eating difficult (like weakness caused by a stroke). It could also mean that the resident is not being fed properly; that their medical care is not being properly managed; or that the nursing facilities' nutrition program is poor. To help prevent unhealthy weight loss, it is important that the resident's diet be balanced and nutritious, and that staff spend enough time feeding residents who cannot feed themselves. With the increase in obesity, it may be necessary for some residents to lose weight for medical reasons. In these cases, the medical staff may plan in advance for the resident to lose weight on a special weight loss program, but the person should not lose more than 5% of body weight in one month.
The current MDS weight-loss quality indicator was found to be reliable in differentiating nursing facilities with a lower prevalence of weight loss from those with a higher prevalence. There were significantly more residents at risk for weight loss in high-weight-loss nursing facilities according to multiple measures, most notably low oral intake as measured by the MDS and direct observations by research staff. One care process that consistently differentiated care in low-weight-loss nursing facilities from that in high-weight-loss nursing facilities across all-risk group comparisons was the presence of verbal prompting or social interaction during meals. Specifically, staff in low-weight-loss nursing facilities provided verbal prompting and social interaction during meals to a significantly greater proportion of all participants and, in particular, to participants at risk for weight loss.(2)
Weight loss is also associated with increased risk of mortality, functional ability and transfer to a higher level of nursing facility care. (3, 4).

1. Thomas, D., Ashmen, W., Morley, J., Evans, W., Council for Nutritional Strategies in Long-Term Care. Nutritional Management in Long-Term Care: Development of a Clinical Guideline. Journal of Gerontology: Medical Sciences. 2000:55A(12), M725-M734.
2. Simmons, S., Garcia, E., Cadogan, M., Al-Sammarai, N., Levy-Storms, L., Osterweil, D., Schnelle, J. The Minimum Data Set Weight-Loss Quality Indicator: Does It Reflect Differences in Care Processes Related to Weight Loss? Journal of the American Geriatric Society. 2003:51:1410–1418
3. Murden RA, Ainslie NK. Recent weight loss is related to short-term mortality in nursing homes. J Gen Intern Med. 1994;9:648–650.
4. Ryan C, Bryant E, Eleazer P, Rhodes A, Guest K. Unintentional weight loss in long-term care: predictor of mortality in the elderly. South Med J. 1995;88:721–724.

1c.2-3. Type of Evidence: Observational study, Randomized controlled trial, Systematic synthesis of research, Expert opinion

1c.4 Summary of Evidence (*as described in the criteria; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
Health services and care processes can help to prevent or alleviate excessive weight loss. However, decreased absorption and changed metabolisms may limit the effectiveness of simply increasing nutritional intake.(1) For nursing facility residents who are depressed, some antidepressants, such as mirtazapine, have been found to promote weight gain, although there are often negative side effects.(2, 3, 4) Appetite stimulants may be effective, although there is little evidence on their use with older people and they have not been approved by the Food and Drug Administration for use with the nursing home population.(5, 6)

Better quality and more palatable meals can also address unplanned weight loss. Unduly restrictive diets are associated with unintended weight loss because they often limit favorite foods and are often unappetizing.(6) In recognition of this problem, the American Dietetic Association recommends less restrictive diets in long-term care facilities in order to improve overall quality of life and nutritional status.(7)

Augmenting nutritional intake with oral supplements is common in nursing facilities.(8, 9, 10) Supplements may be less effective than theoretically possible because they are often not given as frequently as intended and staff do not spend adequate time assisting residents in taking them.(11) A Cochrane meta-analysis found that supplementation produces a small but consistent weight gain in older people.(12) Supplements may also reduce mortality in undernourished older people.

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Comment [k5]: 4 Clinical care processes typically include multiple steps: assess → identify problem/potential problem → choose/plan intervention (with patient input) → provide intervention → evaluate impact on health status. If the measure focus is one step in such a multi-step process, the step with the greatest effect on the desired outcome should be selected as the focus of measurement. For example, although assessment of immunization status and recommending immunization are necessary steps, they are not sufficient to achieve the desired impact on health status – patients must be vaccinated to achieve immunity. This does not preclude consideration of measures of preventive screening interventions where there is a strong link with desired outcomes (e.g., mammography) or measures for multiple care processes that affect a single outcome.

Positive relationships between nursing facility staff and residents, the physical environment, and overall staffing levels and training can help improve nutritional status. Communication between staff and residents, verbal prompting and positive reinforcement, and adequate time for meals increase food consumption.(13, 14, 15, 16, 17, 18, 19, 20, 21) Noisy, chaotic, and institutional dining rooms are associated with low consumption of food and drink.(14, 22, 23)

Studies find that nursing facility organizational factors affect nutritional intake. For example, facilities with higher staff/resident ratios have higher nutritional intake because staff can spend more time helping residents eat.(17, 22) Some interventions that successfully improve food and fluid intake require substantially more staff time than is typically provided.(18) Training on effective feeding techniques to aid residents, especially with dementia, is often inadequate for certified nursing assistants to know what they can do to aid the residents.(16, 21, 24, 25)

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom***):** Several reviews of the evidence on weight loss among nursing facility residents have been conducted(1, 6, 26) but they did not formally rate the evidence. The reviews cite a large number of studies that evaluate strategies to increase nutritional intake. Despite these studies, Sloane et al. (6) argue that "the evidence addressing many of these issues (concerning weight loss) is limited" (p. 476), and Morley (1) contends that "there are minimal intervention studies demonstrating a salutary effect of reversal of weight loss" (p. 201). The Cochrane meta-analysis of nutritional supplements included randomized and quasi-randomized trials, with the exception of groups recovering from cancer treatment or in critical care.(12) Although a total of 62 trials with 10,187 randomized participants were included, the authors characterized most of the studies has having poor study quality. A clinical guideline on "unintentional weight loss in the elderly" developed by the University of Texas School of Nursing rates the quality of most of the evidence as "fair" (evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes) using the U.S. Preventive Services Task Force (USPSTF) rating system.(27) They rate the strength of most of their recommendations as "B" (recommendation that clinicians provide the service to eligible patients; there is at least fair evidence that the service can improve health outcomes but concludes that the benefits outweigh harms). The American Dietetic Association (7) adopted a policy statement that calls for "liberalization of the diet prescription," but the background document, while providing numerous references, does not rate the evidence or the recommendation.

1c.6 Method for rating evidence: The rating by the University of Texas School of Nursing uses the system developed by the USPSTF.

1c.7 Summary of Controversy/Contradictory Evidence: There are at least three areas of controversy. First, some observers, such as Morley(1) stress the biological and disease basis for weight loss among older people in nursing facilities, which may limit the effectiveness of interventions designed purely to increase resident nutritional intake as a method of maintaining weight. Second, the nursing facility industry generally favors the use of "paid feeding assistants," staff who are not fully trained as certified nursing assistants, to assist at mealtimes in nursing facilities, while consumer groups prefer an increase in overall facility staffing to increase staff at mealtime (28). And, third, while noting the reluctance among nursing facility staff, families, and residents to identify individuals who are actively dying, hospice and other end-of-life experts argue that weight loss is a normal part of the dying process and contend that efforts to maintain weight during this period is not consistent with a palliative care approach.(29)

1c.8 Citations for Evidence (*other than guidelines***):**

1. Morley JE. Weight loss in the nursing home. J Am Med Dir Assoc. 2007;8(4):201-4.
2. Fawcett J, Barkin RL. Review of the results from clinical studies on the efficacy, safety and tolerability of mirtazapine for the treatment of patients with major depression. J Affect Disord. 1998;51:267-85.
3. Malone M. Medications associated with weight gain. Ann Pharmacother. 2005;39:2046-55.
4. Rigler SK, Webb MJ, Redford L, et al. Weight outcomes among antidepressant users in nursing facilities. J Am Geriatr Soc. 2001;49:49-55.
5. Bales CW, Fischer JG, Orenduff MC. Nutritional interventions for age-related chronic disease. Generations. 2004;28:54.
6. Sloane PD, Ivey J, Helton M, Barrick AL, Cerna A. Nutritional issues in long-term care. J Am Med Dir Assoc.

Comment [k6]: 3 The strength of the body of evidence for the specific measure focus should be systematically assessed and rated (e.g., USPSTF grading system http://www.ahrq.gov/clinic/uspstf07/methods/benefit.htm). If the USPSTF grading system was not used, the grading system is explained including how it relates to the USPSTF grades or why it does not. However, evidence is not limited to quantitative studies and the best type of evidence depends upon the question being studied (e.g., randomized controlled trials appropriate for studying drug efficacy are not well suited for complex system changes). When qualitative studies are used, appropriate qualitative research criteria are used to judge the strength of the evidence.

2008;9:476-85.
7. American Dietetic Association. Liberalization of the diet prescription improves quality of life for older adults in long-term care. J Am Diet Assoc. 2005;105: 1955-65.
8. Lauque S, Arnaud-Battandier F, Mansourian R, et al. Protein-energy oral supplementation in malnourished nursing home residents: A controlled trial. Age Ageing. 2000;29: 51-6.
9. Wouters-Wesseling W, Wouters AE, Klejer CN, et al. Study of the effect of a liquid nutrition supplement on the nutritional status of psycho-geriatric nursing home patients. Eur J Clin Nutr. 2002;56:245-51.
10. Faxen-Irving G, Andren-Olsson B, af Geijerstam A, et al. The effect of nutritional intervention in elderly subjects residing in group living for the demented. Eur J Clin Nutr. 2002;56: 221-7.
11. Simmons SF, Patel AV. Home staff delivery of oral liquid nutritional supplements to residents at risk for unintentional weight loss. J Am Geriatr Soc. 2006;54: 919-24.
12. Milne AC, Potter J, Avenell A. Protein and energy supplementation in elderly people at risk of malnutrition. Cochrane Database Syst Review. 2005;2:CD003288.
13. Sanders H. Nutrition management in long-term care. J Nutr Elder. 1990;9:69-74.
14. Van Ort S, Philips LR. Nursing interventions to promote functional feeding. J Gerontol Nurs. 1995;21(10):6-14.
15. Lange-Alberts ME, Shott S. Nutritional intake. Use of touch and verbal cuing. J Gerontol Nurs. 1994;2:36-40.
16. Kayser-Jones J, Schell E. The mealtime experience of a cognitively impaired elder: ineffective and effective strategies. J Gerontol Nurs. 1997;23:33-9.
17. Amella EJ. Factors influencing the proportion of food consumed by nursing home residents with dementia. J Am Geriatr Soc. 1999;47:879-85.
18. Simmons SF, Osterweil D, Schnelle JF. Improving food intake in nursing home residents with feeding assistance. J Gerontol A Biol Sci Med Sci. 2001;56A:M790-4.
19. Simmons S, Alessi C, Schnelle J. An intervention to increase fluid intake in nursing home residents: prompting and preference compliance. J Am Geriatr Soc. 2001;49(7):926-33.
20. Altus DE, Engelman KK, Mathews RM. Using family-style meals to increase participation and communication in persons with dementia. J Gerontol Nurs. 2002;28: 47-53.
21. Pelletier C. What do certified nurse assistants actually know about dysphagia and feeding nursing home residents? Am J Speech Lang Pathol. 2004;13:99-113.
22. Durnbaugh T, Haley B, Roberts S. Assessing problem feeding behaviors in mid-stage Alzheimer's disease. Geriatr Nurs. 1996;17:63-7.
23. Reed P, Zimmerman S, Sloane P, et al. Characteristics associated with low food and fluid intake in long-term care residents with dementia. Gerontologist. 2005;45:74–80.
24. Watson R, Deary I. Is there a relationship between feeding difficulty and nursing intervention in elderly people with dementia? NT Res. 1996;1:44-54.
25. Coyne M, Hoskins L. Improving eating behaviors in dementia using behavioral strategies. Clin Nurs Res. 1997;6:275-90.
26. Bourdel-Marchasson I. How to improve nutritional support in geriatric institutions. J Am Med Dir Assoc. 2010;11:13-20.
27. University of Texas, School of Nursing. Unintentional weight loss in the elderly. Austin, TX: University of Texas, School of Nursing. 2006. (A summary of the guideline is available at the National Guideline Clearinghouse, http://www.guideline.gov/summary/summary.aspx?doc_id=9435/.)
28. Simmons SF, Bertrand R, Shier V, Sweetland R, Moore TJ, Hurd DT, Schnelle JF. A preliminary evaluation of the paid feed assistant regulation: impacts on feeding assistance care process quality in nursing homes. Gerontologist. 2007;48:184-92.
29. Teno J. Now is the time to embrace nursing homes as a place of care for dying persons. Innovations in End-of-Life Care. 2002;4(2). http://www.edc.org/lastacts.

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number***):**
The recommendation from the American Dietetic Association (1) is:
"It is the position of the American Dietetic Association (ADA) that the quality of life and nutritional status of older residents in long-term care facilities may be enhanced by liberalization of the diet prescription. The association advocates the use of qualified dietetics professionals to assess and evaluate the need for medical nutrition therapy according to each person's individual medical condition, needs, desires, and rights."

The recommendations of the University of Texas' School of Nursing clinical guideline has 41 recommendations related to non-pharmacological and pharmacological therapy.(2)

1c.10 Clinical Practice Guideline Citation: 1. American Dietetic Association. Liberalization of the diet prescription improves quality of life for older adults in long-term care. J Am Diet Assoc. 2005;105:1955-65. 2. University of Texas, School of Nursing. Unintentional weight loss in the elderly. Austin, TX: University of Texas, School of Nursing. 2006. (A summary of the guideline is available at the National Guideline Clearinghouse, http://www.guideline.gov/summary/summary.aspx?doc_id=9435/.) **1c.11 National Guideline Clearinghouse or other URL:** American Dietetic Association, http://www.eatright.org/HealthProfessionals/content.aspx?id=7353. University of Texas, National Guideline Clearinghouse, http://www.guideline.gov/summary/summary.aspx?doc_id=9435/. **1c.12 Rating of strength of recommendation (***also provide narrative description of the rating and by whom***):** A clinical guideline on "unintentional weight loss in the elderly" developed by the University of Texas' School of Nursing (1) rates the strength of most of their recommendations as "B" (recommendation that clinicians provide the service to eligible patients; there is at least fair evidence that the service can improve health outcomes but concludes that the benefits outweigh harms). They use the USPSTF rating system. 1. University of Texas, School of Nursing. Unintentional weight loss in the elderly. Austin, TX: University of Texas, School of Nursing. 2006. (A summary of the guideline is available at the National Guideline Clearinghouse, http://www.guideline.gov/summary/summary.aspx?doc_id=9435/.) **1c.13 Method for rating strength of recommendation** (*If different from* USPSTF system*, also describe rating and how it relates to USPSTF)***:** They use the USPSTF rating system. **1c.14 Rationale for using this guideline over others:** This is not applicable. Guideline is not being recommended over others.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report***, met?** **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)	Eval Rating
2a. MEASURE SPECIFICATIONS	
S.1 Do you have a web page where current detailed measure specifications can be obtained? **S.2 If yes, provide web page URL:** **2a. Precisely Specified**	
2a.1 Numerator Statement (*Brief, text description of the numerator - what is being measured about the target population, e.g. target condition, event, or outcome***):** The numerator is the number of nursing home residents with an MDS assessments (which may be an annual, quarterly, significant change or significant correction MDS assessment) that indicate a weight loss of 5% or more of resident's body weight in the last 30 days or 10% or more in the last 6 months that is not a result of a physician-prescribed weight-loss regimen. **2a.2 Numerator Time Window (***The time period in which cases are eligible for inclusion in the numerator***):** Numerator data come from MDS assessment (which may be an annual, quarterly, significant change or significant correction assessment) conducted over the last two quarters to adjust for seasonal variation.	**2a-specs** **C☐** **P☐** **M☐** **N☐**

Comment [k7]: USPSTF grading system **http://www.ahrq.gov/clinic/uspstf/grades.htm**: **A -** The USPSTF recommends the service. There is high certainty that the net benefit is substantial. **B -** The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial. **C -** The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is at least moderate certainty that the net benefit is small. Offer or provide this service only if other considerations support the offering or providing the service in an individual patient. **D -** The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits. **I -** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

Comment [KP8]: 2a. The measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. The required data elements are of high quality as defined by NQF's Health Information Technology Expert Panel (HITEP) .

2a.3 Numerator Details (*All information required to collect/calculate the numerator, including all codes, logic, and definitions***):**
Residents are counted if they are long-stay residents, defined as residents whose length of stay is greater than 100 days. Residents who return to the nursing home following a hospital discharge will not have their stay reset to zero. Residents are counted if a weight loss of 5% or more of their body weight in the last month or a weight loss of 10% or more of their body weight over the last 6 months who were not on a physician-prescribed weight-loss regimen. Nursing facility residents with this condition have K0300=2 (weight loss) checked on the MDS 3.0. The numerator counts the number of MDS assessments (which may be an annual, quarterly, significant change or significant correction assessments) that report too much weight loss over the last two quarters divided by two. The measure averages over two quarters to obtain a rate for a single quarter.

2a.4 Denominator Statement (*Brief, text description of the denominator - target population being measured***):**
The denominator uses MDS assessments (which may be an annual, quarterly, significant change or significant correction assessments), except for residents with only an admission (OBRA) assessment and residents for whom data on weight loss is missing. Residents with only an admission (OBRA) assessment are excluded because they have not been in the facility long enough to have had weight loss assessed or attributed to care in the facility.

2a.5 Target population gender: Female, Male
2a.6 Target population age range: The target population includes long-stay residents of all ages in the nursing facility.

2a.7 Denominator Time Window (*The time period in which cases are eligible for inclusion in the denominator***):**
All assessments of nursing facility residents over the last two quarters, with the exception of admission assessments and assessments with missing data.

2a.8 Denominator Details (*All information required to collect/calculate the denominator - the target population being measured - including all codes, logic, and definitions***):**
Residents are counted if they are long-stay residents defined as residents whose length of stay is greater than 100 days. Residents who return to the nursing home following a hospital discharge will not have their day count reset to zero. The denominator consists of all assessments of long-stay residents over the last two quarters, except admission (OBRA) assessments and those for which data on weight loss are missing, divided by 2. Dividing by two creates an average for a single quarter. Residents who only have an admission (OBRA) assessment are excluded because the measure is a change score that cannot be calculated until the resident has been in the facility for at least a month. Admission (OBRA) assessments are conducted within 14 days of admission. Similarly, it is not possible to assess the weight-loss experience of residents for whom data are missing. An admission (OBRA) assessment is identified by the MDS 3.0 item A0310.A=01 (type of assessment).

2a.9 Denominator Exclusions (*Brief text description of exclusions from the target population***):** An assessment is excluded from the denominator if the MDS assessment was conducted within 14 days of admission (OBRA) (A0310 = 01) or if there is missing data in the responses to K0300 (weight loss) of the MDS 3.0. Facilities with fewer than 30 residents are excluded from public reporting because of small sample size.

2a.10 Denominator Exclusion Details (*All information required to collect exclusions to the denominator, including all codes, logic, and definitions***):**
If the MDS is an admission (OBRA) assessment (A0310 = 01) or there are missing data on the MDS 3.0 for item K0300 (weight loss), then the assessment is excluded.

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
The measure is limited to long-stay residents for two reasons. First, many short-stay residents were admitted to the nursing home directly from the hospital; some of the weight loss of short-stay residents may be associated with the conditions and services associated with the hospitalization and not as a result of the care provided by the nursing home. Second, the measure cannot be calculated on short-stay nursing home residents in a way that is comparable to long-stay residents. Short stay nursing home residents are residents who are discharged within 100 days of admission. The measure captures the percentage of residents who had a weight loss of 5% more in the last month OR 10% or more in the last 6 months. None of the short-stay residents will

Comment [k9]: 11 Risk factors that influence outcomes should not be specified as exclusions.
12 Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

have been in the facility for 6 months.

2a.12-13 Risk Adjustment Type: No risk adjustment necessary

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15-17 Detailed risk model available Web page URL or attachment:

2a.18-19 Type of Score: Ratio
2a.20 Interpretation of Score:
2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps***):**
Step 1: Determine the number of long-stay nursing facility residents who have lost too much weight over the last two quarters (K0300 = 2 on the MDS 3.0). Divide the number by two.
Step 2: Determine the number of nursing home assessments over the last two quarters, excluding admission (OBRA) assessments (A0310 = 01) or where data on weight loss are missing (K0300 on the MDS 3.0). Divide the number by two.
Step 3: Divide the result of Step 1 by the result of Step 2.

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Because the computed scores are not estimates, but include all residents who meet the measure criteria, in terms of discriminating performance, the computed scores can be used to make valid comparisons.

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate)*:
This is not applicable.

2a.24 Data Source (*Check the source(s) for which the measure is specified and tested)*
Electronic clinical data

2a.25 Data source/data collection instrument (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.***):**
Nursing Home MDS 3.0

2a.26-28 Data source/data collection instrument reference web page URL or attachment: URL
http://www.cms.hhs.gov/NursingHomeQualityInits/25_NHQIMDS30.asp#TopOfPage

2a.29-31 Data dictionary/code table web page URL or attachment: URL
http://www.cms.hhs.gov/NursingHomeQualityInits/25_NHQIMDS30.asp#TopOfPage

2a.32-35 Level of Measurement/Analysis (*Check the level(s) for which the measure is specified and tested)*
Population: national, Facility/Agency

2a.36-37 Care Settings (*Check the setting(s) for which the measure is specified and tested)*
Nursing home (NH) /Skilled Nursing Facility (SNF)

2a.38-41 Clinical Services (*Healthcare services being measured, check all that apply*)

TESTING/ANALYSIS

2b. Reliability testing

2b.1 Data/sample *(description of data/sample and size)***:** Four studies addressed reliability of the weight loss measure. First, testing of the reliability of MDS 3.0 data items underlying the too much weight loss quality measure as well as a comparison with the MDS 2.0 quality measures was conducted by RAND as part of the MDS 3.0 development process.(1) A representative sample of for-profit and not-for-profit facilities and hospital-based and free-standing facilities was recruited for the study, which included 71 community nursing facilities in 8 states, 19 Veterans Affairs (VA) nursing facilities, and 1,390 nursing facility residents for the weight-loss quality measure.

2b
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Comment [KP10]: 2b. Reliability testing demonstrates the measure results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

Second, the University of Colorado used national facility-level quality measure data from 2003 Quarter 3 (Q3) through 2006 Q3 which came from the Quality Improvement and Evaluation System (QIES) MDS Express Reports on the CMS intranet; Online Survey, Certification, and Reporting (OSCAR) data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench.(2) A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records. Analyses were based on complete MDS data from January 2005 through March 2006, as well as nearly complete data for April 2006 and partial data for May and June 2006.

Third, the MDS 2.0 measure item and the existing measure were tested by the Data Assessment and Verification (DAVE 2) Project, which used a nationwide sample of randomly selected nursing homes using MDS assessments for the period April 1 to December 31, 2006.(3) DAVE 2 performed 173 two-stage reviews.

Fourth, the study by Simmons et al. (4) included 16 skilled nursing facilities from Southern California: 11 nursing facilities in the lower quartile (25th percentile or lower) and 5 nursing facilities in the upper quartile (75th percentile or higher) on the weight loss quality measure. A total of 400 long-term residents were included.

1. Saliba D, Buchanan J. Development and validation of a revised nursing home assessment tool: MDS 3.0. Contract No. 500-00-0027/Task Order #2. Santa Monica, CA: Rand Corporation, Apr 2008. Available from http://www.cms.hhs.gov/NursingHomeQualityInits/Downloads/MDS30FinalReport.pdf.
2. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
3. Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. Data Assessment and Verification (DAVE 2) project—MDS two-stage discrepancy findings, April–December 2006. Cambridge, MA: Abt Associates, Inc, 2007.
4. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*:

Four studies assessed the reliability of the weight loss measure. First, the national test of MDS 3.0 items examined agreement between assessors (reliability).(1) Quality Improvement Organizations (QIOs) were employed to identify gold-standard (research) nurses and recruit community nursing facilities to participate in the national evaluation. The gold-standard nurses were trained in the MDS 3.0 instrument and in turn trained a facility nurse from each participating nursing facility in their home states. Residents participating in the test were selected to capture a representative sample of short- and long-stay residents. Quality measures using the MDS 2.0 and the MDS 3.0 were calculated and then compared, with correlations and Kappas calculated.

Second, in terms of measure stability, which is not exactly the same reliability, but is a related concept, the University of Colorado examined the percentage of facilities that had a change in ranking from one quarter to the next of at least three deciles.(2) This indicator of stability was computed for each of the twelve pairs of adjacent quarters for which data were available (2003 Q3 through 2006 Q3).

Third, the DAVE 2 Project used a two-stage cluster sample design to examine the reliability of MDS 2.0 reporting.(3) Trained nurse reviewers selected a current resident with a recent assessment performed by the nursing facility within the last 14 days. In the first stage of this review, the nurse reviewer conducted a blind reassessment of the resident using standard MDS assessment and coding procedures (examination of the medical record, observation of the resident, interview of staff, resident, and family, and use of coding criteria). In the second stage of this assessment (Stage 2), the DAVE 2 nurse reviewer's assessment was compared to the corresponding nursing facility assessment and each discrepancy was reconciled, with the nursing facility assessor and the nurse reviewer agreeing on the appropriate response. In addition to data entering the facility MDS code, the DAVE 2 code, and the reconciled code into the MDS-QC data entry software, the DAVE 2 nurse reviewer entered a "reason code" to attribute the cause of the discrepancy, per MDS item reviewed, to an established list of reasons.

As part of the DAVE 2 project, Abt Associates used two methods to assess the reliability of the MDS 2.0 quality measures. First, for each MDS data element, the discrepancy rate between the reconciled and original facility assessments was assessed. Second, Abt reported the rate of discrepancies between each quality measure

Comment [k11]: 8 Examples of reliability testing include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing may address the data items or final measure score.

computed from facility data and its counterpart computed from reconciled data. Discrepancies in the weight loss quality measure computation occur when the facility and reconciled data generate different results with regard to (1) the triggering/nontriggering of the measure or (2) the inclusion/exclusion of a case from computation of the measure.

Fourth, in Simmons et al. (4), research staff calculations of weight loss were compared with MDS documentation of weight loss and Kappa statistics calculated.

1. Saliba D, Buchanan J. Development and validation of a revised nursing home assessment tool: MDS 3.0. Contract No. 500-00-0027/Task Order #2. Santa Monica, CA: Rand Corporation, Apr 2008. Available from http://www.cms.hhs.gov/NursingHomeQualityInits/Downloads/MDS30FinalReport.pdf.
2. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
3. Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. Data Assessment and Verification (DAVE 2) project—MDS two-stage discrepancy findings, April–December 2006. Cambridge, MA: Abt Associates, Inc, 2007.
4. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:

Four studies assessed the reliability of the weight loss measure. First, in their testing of the MDS 3.0, RAND compared the results on the nursing facility quality measures using the MDS 3.0 and the MDS 2.0, both at the individual resident level and at the facility level.(1) At the resident level, the rate for weight loss using the MDS 2.0 was 8.3% and using the MDS 3.0 was 8.0%, with 96.1% agreement; the Kappa was 0.74, and the correlation was 0.74. Kappa is a statistical measure of inter-rater agreement ranging from 0.0 to 1.0. A rating of 0.74 is considered "substantial agreement." At the facility level, the MDS 2.0 rate was 8.6% and the MDS 3.0 rate was 8.3, with a correlation of 0.87.

Second, in terms of measure stability, the University of Colorado examined the percentage of facilities that had a change in ranking from one quarter to the next of at least three deciles.(2) This indicator of stability was computed for each of the twelve pairs of adjacent quarters for which data were available (2003 Q3 through 2006 Q3). For weight loss, 35.4% of facilities had a change of three deciles or more from one quarter to the next quarter. The range of stability measures across the 12 comparisons was small (i.e., the difference between the maximum and minimum values), indicating that the level of measure stability is quite constant over time. For too much weight loss, the minimum percentage was 34.2%, and the maximum percentage was 36.1%.

Third, as part of the DAVE 2 project, Abt Associates used two methods to assess the reliability of the MDS 2.0 quality measures.(3) For each MDS data element, the rate of discrepancies between the reconciled and original facility assessments was calculated. For too much weight loss, the two-stage review discrepancy rate was 3.6%. In addition, Abt reported the rate of discrepancies between each quality measure computed from facility data and its counterpart computed from reconciled data. Discrepancies in the too much weight loss quality measure computation occurred when the facility and reconciled data generated different results with regard to the measure or the inclusion/exclusion of a case from computation of the measure. For weight loss, the two-stage discrepancy rate was 23.9%. Nurse reviewers reportedly found some nursing facility staff were not using the instructions from the MDS manual to calculate weight loss correctly. Reported weight had accuracy problems because some staff were not aware that weights should be rounded upward to the nearest whole pound. Other observers have suggested that poor calibration of the scales may have contributed to the problem.

Fourth, in the study by Simmons, the calculations of weight loss by research staff and recorded in the MDS showed good agreement across all nursing facilities (Kappa = 0.64, P<.001). Kappa is a measure of inter-rater agreement, ranging from 0.00 to 1.00; 0.64 is considered "substantial agreement." There was higher agreement within nursing homes with a low prevalence of weight loss than in nursing homes with a high prevalence of weight loss.

1. Saliba D, Buchanan J. Development and validation of a revised nursing home assessment tool: MDS 3.0.

Contract No. 500-00-0027/Task Order #2. Santa Monica, CA: Rand Corporation, Apr 2008. Available from http://www.cms.hhs.gov/NursingHomeQualityInits/Downloads/MDS30FinalReport.pdf.
2. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
3. Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. Data Assessment and Verification (DAVE 2) project—MDS two-stage discrepancy findings, April–December 2006. Cambridge, MA: Abt Associates, Inc, 2007.
4. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2c. Validity testing

2c.1 Data/sample *(description of data/sample and size)***:** Yes, the validity testing was based on the MDS 2.0.

Two studies addressed the validity of the weight loss quality measure. First, the analyses conducted by the University of Colorado use national facility-level quality measure data from 2003 Q3 through 2006 Q3 came from the QIES MDS Express Reports on the CMS intranet; OSCAR data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench.(1) A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records. Analyses were based on complete MDS data from January 2005 through March 2006, as well as nearly complete data for April 2006 and partial data for May and June 2006.

Second, the study by Simmons et al. (2) used 16 skilled nursing facilities from Southern California: 11 nursing facilities in the lower quartile (25th percentile or lower) and five nursing homes in the upper quartile (75th percentile or higher) on the weight loss quality measure. A total of 400 long-term residents were included.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
2. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2c.2 Analytic Method *(type of validity & rationale, method for testing)***:**
Two studies evaluated the validity of the weight loss measure. First, Brega et al. assessed the correlation of the weight loss quality measure with other nursing facility quality measures.(1) Correlation of the weight loss quality measure with other quality measures is a measure of validity. Second, Simmons et al. assessed whether the weight loss quality measure discriminates among providers who use certain process activities thought to be consistent with maintaining weight among nursing home residents (2).

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
2. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)***:**
A substantial weight loss in a relatively short period of time has face validity as a problem in care processes because it strongly suggests that residents are not eating enough; thus, the measure has strong face validity. Two studies evaluated the validity of the too much weight loss measure. First, the weight loss measure is modestly correlated with other measures of nursing facility quality. In an analysis by the University of Colorado, the weight loss quality measure had correlations of 0.12 or less with most other publicly reported nursing home quality measures.(1) The highest correlation was 0.20 with pressure ulcers (high risk). Second, in the Simmons (2) study of 16 nursing facilities in Southern California found that the weight loss quality measure identified some care differences among nursing facility. While there was little difference between high weight loss and low weight loss nursing facilities in terms of medical record charting, levels of verbal prompting or social interaction during meals were different in low weight loss and high weight loss facilities. Staff in low weight loss nursing facilities provided verbal prompting and social interaction during meals to a significantly greater proportion of all residents and, in particular, to participants at risk for weight

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M ☐
N ☐

Comment [KP12]: 2c. Validity testing demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

Comment [k13]: 9 Examples of validity testing include, but are not limited to: determining if measure scores adequately distinguish between providers known to have good or poor quality assessed by another valid method; correlation of measure scores with another valid indicator of quality for the specific topic; ability of measure scores to predict scores on some other related valid measure; content validity for multi-item scales/tests. Face validity is a subjective assessment by experts of whether the measure reflects the quality of care (e.g., whether the proportion of patients with BP < 140/90 is a marker of quality). If face validity is the only validity addressed, it is systematically assessed (e.g., ratings by relevant stakeholders) and the measure is judged to represent quality care for the specific topic and that the measure focus is the most important aspect of quality for the specific topic.

loss than staff in high weight loss facilities (53% vs. 16%). In both high weight loss and low weight loss facilities, most residents needing feeding assistance did not receive it.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
2. Simmons SF, Garcia ET, Cadogan MP et al. The Minimum Data Set weight-loss quality indicator: does it reflect differences in care processes related to weight loss? J Am Geriatr Soc. 2003;51(10):1410-18.

2d. Exclusions Justified

2d.1 Summary of Evidence supporting exclusion(s):
The measure excludes admission assessments and assessments for which data on weight loss are missing. The exclusion of residents with only an admissions assessment is because the measure is a change score which cannot be calculated until the resident has been in the facility for at least a month. Admission assessments are conducted within 14 days of admission. Similarly, it is not possible to assess the weight loss experience of residents for whom data are missing. An admission assessment is when the MDS 3.0 at A0310 = 01 (type of assessment). Missing data is determined if there are no data on the MDS 3.0 for K0300 (weight loss).

2d.2 Citations for Evidence:
This is not applicable.

2d.3 Data/sample *(description of data/sample and size)***:** This is not applicable.

2d.4 Analytic Method *(type analysis & rationale)***:**
This is not applicable.

2d.5 Testing Results *(e.g., frequency, variability, sensitivity analyses)***:**
This is not applicable.

2d
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P ☐
M ☐
N ☐
NA ☐

2e. Risk Adjustment for Outcomes/ Resource Use Measures

2e.1 Data/sample *(description of data/sample and size)***:** The analyses conducted by the University of Colorado use national facility-level quality measure data from 2003 Q3 through 2006 Q3 came from the QIES MDS Express Reports on the CMS intranet; OSCAR data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench.(1) A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records. Analyses were based on complete MDS data from January 2005 through March 2006, as well as nearly complete data for April 2006 and partial data for May and June 2006.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.

2e.2 Analytic Method *(type of risk adjustment, analysis, & rationale)***:**
Multivariate logistic regression

2e.3 Testing Results *(risk model performance metrics)***:**
Attempts by the University of Colorado to develop a risk adjustment methodology were unsuccessful; the risk adjustment model had an R-square of less than 1% at the facility and resident levels, meaning that the model explained virtually none of the variance in the weight loss measure.(1)

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.

2e.4 If outcome or resource use measure is not risk adjusted, provide rationale: The measure is not risk adjusted, although the measure partitions nursing home resident assessments into short-term or post-acute care and long-stay assessments. Attempts by the University of Colorado to develop a risk adjustment

2e
C ☐
P ☐
M ☐
N ☐
NA ☐

Comment [KP14]: 2d. Clinically necessary measure exclusions are identified and must be:
•supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;
AND
•a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
AND
•precisely defined and specified:
–if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Comment [k15]: 10 Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, sensitivity analyses with and without the exclusion, and variability of exclusions across providers.

Comment [KP16]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:
•an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care;[Error! Bookmark not defined.] OR
rationale/data support no risk adjustment.

Comment [k17]: 13 Risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences.

methodology were unsuccessful; their risk adjustment model had an R-square of less than 1% at the facility and at the resident levels, meaning that the model explained virtually none of the variance in the weight loss measure.(1) Weight loss is common among people who are dying, but prospective identification of those residents is difficult and unreliable (2, 3, 4, 5).

The measure applies only to long-stay assessments. The exclusion of residents with only an admission (OBRA) assessment is because the measure is a change score which cannot be calculated on only one weight assessment.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.
2. Brega A, Goodrich G, Nuccio E, Hittle D. Transition of publicly reported nursing home quality measures to MDS 3.0—draft. Denver: Division of Health Care Policy and Research University of Colorado at Denver, 2008.
3. Brega A, Levy C, Kramer A, Eilertsen T, Hittle D, Goodrich G. Limited clinical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver, 2007.
4. Lynn J. Living long in fragile health: the new demographics shape end-of-life care, improving end-of-life care: Why has it been so difficult? Hastings Center Rep Spec Rep. 2005;35(6):S14-8.
5. Lynn J, Adamson DM. Living well at the end-of-life: Adapting health care to serious, chronic illness in old age. RAND health white paper WP-137. Arlington, VA: The Washington Home Center for Palliative Care Studies, 2003.

2f. Identification of Meaningful Differences in Performance

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)*: Brega et al. used data came from national facility-level quality measure data from 2003 Q3 through 2006 Q3 came from the QIES MDS Express Reports on the CMS intranet; OSCAR data related to facility characteristics (e.g., state, resident census, number of beds, staffing) and certification survey results were downloaded from QIES Workbench.(1) A 10% random sample of all Medicare-certified nursing facilities was also downloaded from MDS assessment records. Analyses were based on complete MDS data from January 2005 through March 2006, as well as nearly complete data for April 2006 and partial data for May and June 2006.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.

2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)*:
Step 1: Determine the number of long-stay nursing home residents who have lost too much weight over the last two quarters (K0300 = 2 on the MDS 3.0). Divide the number by two.
Step 2: Determine the number of nursing facility assessments over the last two quarters, excluding admission (OBRA) assessments (A0310 = 01) or where data on weight loss are missing (K0300 on the MDS 3.0). Divide the number by two.
Step 3: Divide the result of Step 1 by the result of Step 2.

2f.3 Provide Measure Scores from Testing or Current Use *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)*:
An analytical team at the University of Colorado Health Sciences Center examined the triggering rates for the measure at the facility level.(1) The measure scores from testing or current use (Description of scores, e.g., distribution by quartile, mean, median, standard deviation, etc.; identification of statistically significant and meaningfully differences in performance) are attached. For 13,836 facilities, the mean rate was 8.5% with a standard deviation of 5.0%. The attached Table 1: Measure Variability Across Facilities, reports the full results of the analysis.

1. Brega A, Hittle D, Goodrich G, Kramer A, Conway K, Levy C. Empirical review of publicly reported nursing home quality measures. Denver: Division of Health Care Policy and Research University of Colorado at Denver; Abt Associates, Inc, 2007.

2f
C☐
P☐
M☐
N☐

Comment [KP18]: 2f. Data analysis demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful differences in performance.

Comment [k19]: 14 With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74% v. 75%) is clinically meaningful; or whether a statistically significant difference of $25 in cost for an episode of care (e.g., $5,000 v. $5,025) is practically meaningful. Measures with overall poor performance may not demonstrate much variability across providers.

2g. Comparability of Multiple Data Sources/Methods

2g.1 **Data/sample** *(description of data/sample and size)*: This is not applicable.

2g.2 **Analytic Method** *(type of analysis & rationale)*:
This is not applicable.

2g.3 **Testing Results** *(e.g., correlation statistics, comparison of rankings)*:
This is not applicable.

2g C☐ P☐ M☐ N☐ NA☐

Comment [KP20]: 2g. If multiple data sources/methods are allowed, there is demonstration they produce comparable results.

2h. Disparities in Care

2h.1 **If measure is stratified, provide stratified results** *(scores by stratified categories/cohorts)*: The measure is not stratified by race, ethnicity, income, or rural/urban location. As noted above, it is limited to long-stay residents.

2h.2 **If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans:**
While MDS 3.0 collects data on the resident's race, there are no current plans to stratify the measure by race or any other characteristic.

2h C☐ P☐ M☐ N☐ NA☐

Comment [KP21]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender);OR rationale/data justifies why stratification is not necessary or not feasible.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*

2

Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, **met?**
Rationale:

2 C☐ P☐ M☐ N☐

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

Eval Rating

3a. Meaningful, Understandable, and Useful Information

3a.1 **Current Use:** In use

3a.2 **Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*):
The excessive weight loss measure is available on Nursing Home Compare
http://www.medicare.gov/NHCompare/Include/DataSection/Questions/SearchCriteriaNEW.asp?version=default&browser=IE%7C6%7CWinXP&language=English&defaultstatus=0&pagelist=Home&CookiesEnabledStatus=True

3a.3 **If used in other programs/initiatives (***If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):**
CMS expects that the weight loss quality measure will be used by nursing facilities as a tool to improve quality of care by maintaining the weight of nursing facility residents. Quality measure data are also used by surveyors to identify problem areas when they inspect nursing homes.

Testing of Interpretability (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*)

3a C☐ P☐ M☐ N☐

Comment [KP22]: 3a. Demonstration that information produced by the measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives). An important outcome that may not have an identified improvement strategy still can be useful for informing quality improvement by identifying the need for and stimulating new approaches to improvement.

3a.4 Data/sample *(description of data/sample and size)*: A recent study by Castle examined whether consumers could accurately interpret the quality of care information given for all the measures reported by Nursing Home Compare.(1)

An initial sample of 8,000 family members with elders living in one of 200 randomly selected nursing facilities was used.(1) In each facility one family member (or significant other) was identified as the family contact person for each of 40 residents by nursing home staff. A total of 615 facilities were approached before the target of 200 participating facilities was achieved, giving a facility participation rate of 33%. From these 200 facilities, a total of 4,754 surveys were returned (i.e., family response rate = 59%).

1. Castle, N. (2009) The Nursing Home Compare report card: consumers' use and understanding. Journal of Aging and Social Policy. 21(2), 187-208.

3a.5 Methods *(e.g., focus group, survey, QI project)*:
A comprehension index was developed to examine whether the information contained in Nursing Home Compare for each quality measure was understood by family members.(1)

1. Castle N. The Nursing Home Compare report card: consumers' use and understanding. J Aging Soc Policy. 2009;21(2), 187-208.

3a.6 Results *(qualitative and/or quantitative results and conclusions)*:
The study found that 31% of the consumers used the Internet in choosing a nursing facility; 12% recalled using Nursing Home Compare; and, in general, the consumers' comprehension index scores indicated good understanding.(1) The comprehension index for the too much weight loss measure was 5.28 on a scale of 0.00 to 8.00, indicating good understanding.

1. Castle N. The Nursing Home Compare report card: consumers' use and understanding. J Aging Soc Policy. 2009;21(2), 187-208.

3b/3c. Relation to other NQF-endorsed measures

3b.1 NQF # and Title of similar or related measures:
This measure is intended to replace NQF #0191 Residents who lose too much weight, because the data source has changed; the MDS 2.0, the data source for NQF #0191, is being replaced with the MDS 3.0.

(for NQF staff use) **Notes on similar/related** endorsed **or submitted measures:**

3b. Harmonization — **3b**

If this measure is related to measure(s) already endorsed by NQF (e.g., same topic, but different target population/setting/data source or different topic but same target population):
3b.2 Are the measure specifications harmonized? If not, why?

C☐ P☐ M☐ N☐ NA☐

3c. Distinctive or Additive Value — **3c**

3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:
The current measure is being retired due to the change in the data source. This proposed measure will replace it.

5.1 If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), Describe why it is a more valid or efficient way to measure quality:

C☐ P☐ M☐ N☐ NA☐

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability*? — **3**

Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?** — **3**
Rationale: C☐

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

Comment [KP23]: 3b. The measure specifications are harmonized with other measures, and are applicable to multiple levels and settings.

Comment [k24]: 16 Measure harmonization refers to the standardization of specifications for similar measures on the same topic (e.g., *influenza immunization* of patients in hospitals or nursing homes), or related measures for the same target population (e.g., eye exam and HbA1c for *patients with diabetes*), or definitions applicable to many measures (e.g., age designation for children) so that they are uniform or compatible, unless differences are dictated by the evidence. The dimensions of harmonization can include numerator, denominator, exclusions, and data source and collection instructions. The extent of harmonization depends on the relationship of the measures, the evidence for the specific measure focus, and differences in data sources.

Comment [KP25]: 3c. Review of existing endorsed measures and measure sets demonstrates that the measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare, is a more valid or efficient way to measure).

	P☐ M☐ N☐
4. FEASIBILITY	
Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)	Eval Rating
4a. Data Generated as a Byproduct of Care Processes 4a.1-2 **How are the data elements that are needed to compute measure scores generated?** Data generated as byproduct of care processes during care delivery (Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition), Coding/abstraction performed by someone other than person obtaining original information (E.g., DRG, ICD-9 codes on claims, chart abstraction for quality measure or registry)	4a C☐ P☐ M☐ N☐
4b. Electronic Sources 4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*) No 4b.2 **If not, specify the near-term path to achieve electronic capture by most providers.**	4b C☐ P☐ M☐ N☐
4c. Exclusions 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** No 4c.2 **If yes, provide justification.**	4c C☐ P☐ M☐ N☐ NA☐
4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences 4d.1 **Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.** As part of the DAVE 2 project, Abt Associates assessed the reliability of the MDS 2.0 quality measures.(1) Nurse reviewers reportedly found some nursing home staff were not using the instructions from the manual to calculate weight loss correctly. Reported weight had accuracy problems because some staff were not aware that weights should be rounded upward to the nearest whole pound. Other observers have suggested that difficulties obtaining accurate weights may exist because of poor calibration of the scales. 1. Abt Associates, Inc.; Stepwise Systems, Inc.; Qualidigm. Data Assessment and Verification (DAVE 2) project—MDS two-stage discrepancy findings, April–December 2006. Cambridge, MA: Abt Associates, Inc, 2007.	4d C☐ P☐ M☐ N☐
4e. Data Collection Strategy/Implementation 4e.1 **Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:** The general data collection method for the MDS 2.0 is currently in use. However, the MDS 3.0 will be a	4e C☐ P☐ M☐ N☐

Comment [KP26]: 4a. For clinical measures, required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery. (e.g., BP recorded in the electronic record, not abstracted from the record later by other personnel; patient self-assessment tools, e.g., depression scale; lab values, meds, etc.)

Comment [KP27]: 4b. The required data elements are available in electronic sources. If the required data are not in existing electronic sources, a credible, near-term path to electronic collection by most providers is specified and clinical data elements are specified for transition to the electronic health record.

Comment [KP28]: 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

Comment [KP29]: 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

Comment [KP30]: 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

implemented starting in October 2010. 4e.2 **Costs to implement the measure** (*costs of data collection, fees associated with proprietary measures*)**:** Data are collected as part of an existing, legally-mandated process with no additional cost expected. 4e.3 **Evidence for costs:** This is not applicable. 4e.4 **Business case documentation:** The proposed measure relies on data from the MDS 3.0. As there is no change in the data collection method for the MDS 3.0 as compared with its predecessor, the MDS 2.0, we do not anticipate any additional burden to nursing facilities. MDS 2.0, and soon to be MDS 3.0, data are collected as part of an existing, federally mandated process used for payment and quality monitoring purposes.	☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility*?	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, **met?** **Rationale:**	**4** **C**☐ **P**☐ **M**☐ **N**☐
RECOMMENDATION	
(for NQF staff use) **Check if measure is untested and only eligible for time-limited endorsement.**	**Time-limited**☐
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐

CONTACT INFORMATION

Co.1 **Measure Steward (Intellectual Property Owner)**
Co.1 **Organization**
Centers for Medicare & Medicaid Services, 7500 Security Boulevard , Mail Stop S3-02-01, Baltimore , Maryland, 21244-1850

Co.2 **Point of Contact**
Judith, Tobin, PT, MBA, Judith.Tobin@cms.hhs.gov, 410-786-6892-

Measure Developer If different from Measure Steward
Co.3 **Organization**
RTI International, 1440 Main Street, Suite 310, Waltham, Massachusetts, 02451-1623

Co.4 **Point of Contact**
Roberta, Constantine, RN, MBA, PhD, rconstantine@rti.org, 781-434-1711-

Co.5 **Submitter If different from Measure Steward POC**
Roberta, Constantine, RN, MBA, PhD, rconstantine@rti.org, 781-434-1711-, RTI International

Co.6 **Additional organizations that sponsored/participated in measure development**

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development
Ad.1 **Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.**

See Table 2: Nursing Home Quality Measures Technical Expert Panel (January 2009). This technical expert panel met during 2 days in January 2009 to review an environment scan of the current quality measures and make recommendations regarding their transition from MDS 2.0 to MDS 3.0.
Ad.2 If adapted, provide name of original measure: This measure was adapted from the measure of the same name derived from MDS 2.0 data. **Ad.3-5 If adapted, provide original specifications URL or attachment** http://www.cms.hhs.gov/NursingHomeQualityInits/downloads/NHQIQMUsersManual.pdf
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6 Year the measure was first released:** 2002 **Ad.7 Month and Year of most recent revision:** 02, 2010 **Ad.8 What is your frequency for review/update of this measure?** Every 3 years. **Ad.9 When is the next scheduled review/update for this measure?** 02, 2013
Ad.10 Copyright statement/disclaimers:
Ad.11 -13 Additional Information web page URL or attachment: Attachment Lose Too Much Weight tables_FINAL.doc
Date of Submission (*MM/DD/YY*)**:** 07/12/2010

Project Name: NQF Nursing Home Project

Measure Title: Percent of Residents Who Lose Too Much Weight (Long Stay)

Planned Date of Measure Submission: March 19, 2010

Steward Name:

Point of Contact
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Developer/Submitter Name:

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Table 1. Measure Variability Across Facilities

Quality Measure (QM)	N of Facilities[1]	Mean	Std Dev	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	Facilities with QM = 0%
Weight Loss	13,836	8.5%	5.0%	2.7%	5.0%	7.9%	11.3%	14.9%	3.4%

Table 2. Nursing Home Quality Measures Technical Expert Panel (January 2009)

Name	Title	Affiliation
Barbara Anglin, RN	Program Services Consultant	American Association of Nurse Assessment Coordinators (AANAC)
Bonnie Burak-Danielson, MSM, EXP, LPTA	Rehab Manager of Reimbursement	Spaulding Rehab Network
Sarah Burger, MPH, RN	Senior Advisor and Coordinator	Coalition of Geriatric Nursing Organizations The John A. Hartford Institute for Geriatric Nursing
Diane Carter, MSN, RN, CS	President	AANAC

Kate Dennison, RN, RAC-MT	Minimum Data Set (MDS) Coordinator	The Cedars
Mary Ellard, RN, MPA/H, RAC-CT	Clinical Assessment Specialist	Five Star Quality Care, Inc.
Sandy Fitzler, RN	Senior Director of Clinical Services	American Health Care Association
David F. Hittle, PhD	Assistant Professor	Division of Health Care Policy and Research University of Colorado Denver, School of Medicine
Steve Levenson, MD, CMD	Multi-Facility Medical Director, Baltimore, MD	
Carol Maher, RN-BC, RAC-CT	Director of Clinical Reimbursement	Ensign Facilities Services
Barbara Manard, PhD	Vice President, Long Term Care/Health Strategies	American Association of Homes and Services for the Aging
Debra Saliba, MD, MPH	Anna and Harry Borun Chair in Geriatrics and Gerontology at UCLA Research Physician VA GLAHS GRECC Director of UCLA/JHA Borun Center for Gerontological Research Senior Natural Scientist RAND Health	University of California, Los Angeles (UCLA), Veterans Affairs (VA), RAND Corporation
Eric Tangalos, MD	Professor of Medicine	Mayo Clinic
Jacqueline Vance, RNC, CDONA/LTC	Director of Clinical Affairs	(American Medical Directors Association) AMDA
Mary Van de Kamp, MS/CCC-SLP	Vice President, Clinical Rehabilitation	People*first* Rehabilitation
Charlene Harrington, PhD, RN, FAAN*	Professor Emeritus	University of California, San Francisco Fellow in the American Academy of Nursing

Measure #/Title/Steward

NH-024-10: Percent of Residents Who Lose Too Much Weight (Long Stay)
(Centers for Medicare & Medicaid Services)

Description: This measure updates CMS' current QM on patients who lose too much weight. This measure captures the percentage of long-stay residents who had a weight loss of 5% or more in the last month or 10% or more in the last 6 months who were not on a physician-prescribed weight-loss regimen noted on an MDS assessment (which may be an annual, quarterly, significant change or significant correction MDS assessment) during the selected quarter (3-month period). In order to address seasonal variation, the proposed measure uses a two-quarter average for the facility. Long-stay residents are those who have been in nursing care at least 100 days. The measure is restricted to this population, which has long-term care needs, rather than the short-stay population who are discharged within 100 days of admission.

Initial In-Person Vote:

Recommended for endorsement with conditions – 19
Not present - 1

Steering Committee Questions/Conditions for Measure Developer:	Response from Measure Developer
• The definition of long-stay residents needs to be clarified	• Long-stay residents are defined as those greater than 100 days. Residents who return to the nursing home following a hospital discharge will not have their stay reset to zero.