Health-Related Quality of Life and Functional Status Quality Indicators for Older Persons with Multiple Chronic Conditions

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Abstract

OBJECTIVES—To explore central challenges with translating self-reported measurement tools for functional status and health-related quality of life (HRQOL) into ambulatory quality indicators for older people with multiple chronic conditions (MCCs).

DESIGN—Review.

SETTING—Sources including the National Quality Measures Clearinghouse and National Quality Forum were reviewed for existing ambulatory quality indicators relevant to functional status, HRQOL, and people with MCCs.

PARTICIPANTS—Seven informants with expertise in indicators using functional status and HRQOL.

MEASUREMENTS—Informant interviews were conducted to explore knowledge about these types of indicators, particularly usability and feasibility.

RESULTS—Nine important existing indicators were identified in the review. For process, identified indicators addressed whether providers assessed functional status; outcome indicators addressed quality of life. In interviews, informants agreed that indicators using self-reported data were important in this population. Challenges identified included concerns about usability due to inability to discriminate quality of care adequately between organizations and feasibility concerns regarding high data collection burden, with a correspondingly low response rate. Validity was also a concern because evidence is mixed that healthcare interventions can improve HRQOL or

functional status for this population. As a possible first step, a structural standard could be systematic collection of these measures in a specific setting.

CONCLUSION—Although functional status and HRQOL are important outcomes for older people with MCCs, few relevant ambulatory quality indicators exist, and there are concerns with usability, feasibility, and validity. Further research is needed on how best to incorporate these outcomes into quality indicators for people with MCCs.

Keywords

multiple chronic conditions; quality indicators; quality measurement; functional status; health-related quality of life

Quality indicators are currently being widely implemented in Medicare and other government programs with the goal of improving processes and outcomes of care,[1,2] but few of these indicators relate to the population with multiple chronic conditions (MCCs): "two or more concurrent chronic conditions that collectively have an adverse effect on health status, function, or quality of life and that require complex healthcare management, decision-making, or coordination."[3] Although nearly half of Medicare beneficiaries and one-third of disabled Medicaid beneficiaries have three or more chronic conditions,[4] almost all indicators included in the quality initiatives currently being implemented in Medicare programs are disease- and setting-specific. For example, the 2011 Physician Quality Reporting System has 240 quality indicators, 202 of which apply to only one disease or setting.[5]

In addition, because persons with MCCs are more likely to experience functional decline and worse quality of life than the general population, these outcomes are important for them and for the healthcare services they receive. These outcomes often require self-report for accurate measurement, but most indicators in current use rely on claims or medical record data. The risk of incident disability in people with specific combinations of conditions is greater than expected than with a single condition, and accumulation of new chronic conditions is associated with greater disability. The presence of MCCs is also associated with lower health-related quality of life (HRQOL),[6] and some combinations of conditions (e.g., respiratory and cardiac conditions) can have a synergistic negative effect on HRQOL.[7]

For older persons with MCCs, particularly those with serious conditions and disability, traditional quality indicators of disease control (e.g., diabetes mellitus control) and survival may not be as appropriate or may need to be supplemented by indicators focusing more on patient-centered outcomes.[3] Quality of life and functional status are interrelated concepts that reflect important outcomes for persons with MCCs and could be used in quality indicators. (See Table 1 for definitions.) Information on quality of life and functional status is typically collected using patient reports, but identifying appropriate measurement tools for these quality indicators is challenging. Results from these tools collected in a group of individuals can then be used to calculate results for a quality indicator at the population level, expressed as a change over time, or compared with a benchmark goal (e.g., lack of decline, improvement, or percentage with function above a certain level). For example, a common and potentially usable general measurement tool for HRQOL is the Medical Outcomes Study 36-item Short Form Survey (SF-36), which measures physical and mental

HRQOL.[8] Many disease-specific HRQOL instruments also exist, as well as instruments more targeted toward ill or disabled populations. Although self-reported data is a promising approach to developing quality indicators that are patient-centered, these indicators may have challenges with usability and feasibility. (See Table 1 for definitions.)[9]

To inform health policy initiatives concerned with development of indicators addressing functional status and HRQOL, the literature and other sources were reviewed to search for existing indicators for these outcomes that are relevant to older persons with MCCs in the ambulatory setting. Informants were also interviewed and asked to describe current use of indicators for quality of life and functional status and what measurement tools are currently being used, focusing on questions of usability and feasibility.

METHODS

Description of Existing Quality Indicators

To describe existing quality indicators, a targeted review was conducted of Web-based sources (Table 2) for indicators including information on functional status and quality of life in the indicator numerator that would be relevant to the population with MCCs, particularly older adults. Web-based sources that rigorously review, endorse, or implement quality indicators were searched in July 2012. These indicators are developed using multispecialty work groups and consideration of relevant clinical guidelines and evidence. Development procedures also often include public comment or other methods for evaluation of validity, development of technical specifications, and other types of testing.

The searches used terms including "functional status," "functional assessment," "quality of life," "health status," and measurement tools of interest, focusing on the SF-36, SF-12,[8] and Patient Reported Outcomes Measurement Information System.[10] Only indicators addressing ambulatory care with general functional status or quality of life were included; those addressing only specific conditions (e.g., foot and ankle functional status, stroke, angina pectoris assessment) were excluded because they would not address the broader problems affecting people with MCCs. Indicators addressing inpatient settings were excluded (e.g., inpatient rehabilitation and postacute care). U.S.-developed and tested indicators were focused on, because indicator use would be different in countries with national health systems and measurement instruments in other languages. Indicators meeting standards for development, review, or endorsement were included. Indicators were organized according to the RAND process steps of screening, diagnosis, treatment, and follow-up or outcome.[11] The indicator developer and indicator set, numerator, description of the indicator, recommended or suggested measurement tools, information on usability and feasibility, and any related indicators were summarized for each indicator.

Interviews with Informants

In-depth individual interviews were conducted with informants to determine the current use of HRQOL and functional status measurement tools as part of quality indicators. Informants were initially identified through the authors' knowledge (SD and CB) of experts in the use of measurement tools in quality indicators. Early informants were asked to suggest others

with relevant knowledge, and they were sampled until thematic saturation was reached. Interviews were requested with identified informants, enabling a snowball-sampling strategy to efficiently identify leaders in the field.

An interview guide was created as a framework on which to base the informant interviews, with customizing to the expertise of each interviewee. The guide follows a semistructured format, with the interviewer asking the informant the main questions first and then following up with the secondary questions as needed. This framework provided informants enough flexibility to speak broadly on their relevant knowledge of measurement tools for HRQOL and functional status and their use for quality indicators. Then, if particular points of interest were not covered in the informant's initial response, directed follow-up questions were asked. Finally, informants were asked to focus their responses regarding usability and feasibility of quality indicators to the population aged 65 and older. Seven interviews, lasting up to an hour, were conducted; two interviewers were present for almost all interviews (EP and SD).

RESULTS

Description of Existing Quality Indicators from Literature Review

Information on three selected ambulatory process and outcome indicators most relevant to HRQOL and functional status for older persons with MCCs is summarized in Table 3, and six other indicators that were identified are described in Appendix 1. These include descriptions, developers and indicator sets, measurement instruments used or recommended for HRQOL or functional status, information on usability and feasibility, and similar indicators. No existing structural standards or any indicators currently in use in which the denominator was persons with MCCs were found, although one proposed indicator of functional status assessment for individuals with heart failure in the proposed Centers for Medicare and Medicaid Services (CMS) electronic health record incentive indicator set is relevant to populations with MCCs (Appendix 1).

Process indicators addressing routine assessment of functional status in clinical settings, mostly based on medical record review rather than patient-reported data, and a few outcome indicators for functional status and HRQOL were identified. All process assessments addressed routine assessment of functional status; none specified any particular tools. Regarding feasibility, the National Committee on Quality Assurance (NCQA) indicator for routine assessment of functional status, which relies on medical record review, is currently limited to use in special needs plans (CMS plans limited to individuals with certain chronic conditions, in institutions, or eligible for both Medicaid and Medicare) because of the burden of data collection.

The outcome indicators most relevant to persons with MCCs were the NCQA health status (mental and physical) indicators for CMS Medicare Advantage Plans (which were developed to measure quality at the health plan population level). (Other outcome measures, listed in Appendix 1, were specific to certain settings or types of care, such as physical therapy.) These indicators use the Medicare Health Outcomes Survey—which includes a version of the SF-12. These report whether population health status is better, the same, or

worse than expected. In terms of usability, the current major concern with these indicators is that they do not differentiate well between health plans using current methodology, except for a few outliers.

Challenges with Current Usability and Feasibility of Quality Indicators Identified from Informant Interviews

Specification of Measurement Tools—Informants expressed different viewpoints on tool length. Short tools (e.g., Healthy Days from the Centers for Disease Control and Prevention) have a lower physician, health plan, or patient burden for data collection and increase feasibility of implementation, although informants stated that short surveys are limited in their ability to differentiate quality of care between health plans or providers. Collecting data in conjunction with medical chart reviews adds to the amount of information available, but these are administratively burdensome, and medical records often do not routinely incorporate self-reported outcomes. Progress toward collecting more clinical data electronically and including self-reported outcomes may make data collection more feasible (Table 4).

Ability of Tools to Discriminate—Tools' usability, particularly the ability to allow indicators to differentiate quality of care between providers, was a concern. For example, indicators using the Medicare Health Outcomes survey, adapted from the SF-12, for risk-adjusted random population samples did not show differentiation of insurance plan participant health status between 2-year time points across 400 plans and 20 outliers. This raises concerns of appropriateness of the measurement tool, but new analysis techniques are being developed that identify a greater number of outliers. A technique using utility analysis has been developed that improves the ability of quality indicators using the tools to differentiate between health plans.[12] Informants stated that quality improvement interventions may affect disease-specific HRQOL measures and general measures (e.g., Healthy Days). Informants were concerned that random error is increased when available data collected for a clinical purpose (e.g., functional assessments) is used for quality assessment. Variations in clinical documentation may obscure real differences in care quality.

Constructs of Health Measured Using the Tool—A variety of tools were mentioned for measuring functional status (e.g., grip strength, gait speed) and HRQOL (e.g., Healthy Days), depending on the measurement goals and population type. If the goal is measuring outcomes of care, using general and disease-specific tools may be ideal to enable comparisons between different disease groups. Because many people with MCCs will decline in functional status over time, a tool responsive enough to identify slowing of decline is needed. Factors outside of health care may affect certain outcomes such as HRQOL, which therefore may not be sufficiently sensitive to detect differences in quality of health care.

The importance of picking a tool that measures processes of care was also emphasized. Process indicators, especially those that have been linked to clinical outcomes (e.g., falls), may enable more-proximate knowledge of clinical care. The importance of picking an

outcome that providers are able to meaningfully affect was also mentioned; providers should be held accountable only for these outcomes.

Proxy Respondents—Informants were mixed on the validity of using proxy respondents (asking caregivers or family members to answer questions), which could increase representativeness but decrease validity if the tool measures domains for which proxy responses differ from self-responses. Tools should be validated for proxy respondents when reported at the individual level. When feasible, at least some information should be gathered from proxies and self-respondents to allow for cross-validation of responses.

Clinical Usefulness of Patient-Reported Outcomes—Informants suggested a need for more research into how self-reported outcomes have been used and the depth and breadth of information they provide in determining processes of care. Providers' perceptions of the usability of information from self-reported outcomes may affect their use in clinical practice and therefore their acceptability as part of quality indicators.

Completeness of Data—Informants raised concerns about completeness of data; in particular, low response rates for particular sites might indicate cherry-picking of results. Using a structural standard, such as collecting data on all eligible respondents, rather than achieving a particular benchmark, was suggested as a first step in quality measurement for self-reported outcomes. Precautions that informants suggested included using a data validation or auditing process to ensure that the data reported for quality initiatives are accurate and reflect the population.

Population for Sampling—Consideration should be given to the type of sampling procedure (e.g., random sampling, stratified sampling) when evaluating interventions or comparing providers or health plans. Random sampling at the population level may dull the ability to detect differences for people with MCCs, because they are a heterogeneous population with different levels of functioning and HRQOL. Stratified or targeted sampling may be more suitable for addressing the most-appropriate population or providing useful information regarding which population benefits most from particular interventions or whose care differences in health plan or provider quality affect most.

Suggestions for Next Steps—Informants had suggestions regarding development of indicators. Some felt that indicators should not specify which measurement tool should be used, but rather suggest possible tools. For example, an indicator could state that a HRQOL tool should be used but not specify that it should be the SF-36. It was also mentioned that use of the same measurement tool is necessary for comparisons between providers, although this can be problematic because many tools are proprietary (e.g., the SF-36). Second, tools that need medical chart reviews to gather information are cumbersome and costly for plans, although ongoing projects are being used to build infrastructure for collection of electronic clinical data, which could potentially ease this burden. Third, assessment of functional status can be useful as a quality indicator and for clinical care, although for some individuals, slowing the decline in function may be a more-realistic measure in this population than functional improvement. Fourth, if the indicator is self-reported, the indicator ideally should account for the possibility of proxy respondents in this population. Fifth, the question of risk

adjustment should be carefully considered for outcome measures. Finally, informants were concerned that systematic reviews have not identified strong evidence for healthcare interventions that improve self-reported functional status and HRQOL outcomes, and further systematic reviews may be needed to evaluate evidence on use in quality indicators.[13,14] Systematic reviews may also be helpful to evaluate usability of specific measurement tools in this population.

DISCUSSION

Although functional status and HRQOL are important outcomes for older persons with MCCs, few current ambulatory quality indicators addressing functional status and HRQOL are relevant for general populations with MCCs. Current indicators are used for specific populations or settings and have problems with feasibility and usability. Informants cited usability concerns, including the ability to differentiate quality of care and improvements in functional status and HRQOL, in a population in which function is naturally declining over time. Feasibility concerns were related to tool length, need for proxy respondents, and ability to maximize response rates. A potential alternative to the challenges of implementing process quality indicators, suggested by informants, is a first step of a structural quality standard for development of an infrastructure to collect HRQOL or functional status data routinely in selected populations.

There are a number of other challenges for these types of indicators for persons with MCCs, including problems with validity, or whether these types of indicators can adequately reflect quality of care for this population. Little evidence is currently available that addresses whether measuring HRQOL and functional status, or implementing quality indicators using these tools, affects outcomes.[13,14] Although functional status and HRQOL are important outcome measures for people with MCCs, particularly older adults, influencing functional status and HRQOL in people with MCCs is challenging to achieve and to measure, and recent systematic reviews on this topic have found mixed results of healthcare interventions.[13,14] The evidence base may not be sufficiently robust for endorsement of indicators that hold providers accountable for preventing or reversing functional decline in populations of older adults with MCCs in the ambulatory setting. General HRQOL tools, such as the SF-36, have advantages for use in older adults with MCCs, such as wide use and satisfactory psychometric properties in older adults, but testing in older adults with chronic conditions has found measurement bias in some scales, ceiling or floor effects in other scales, and problems with response rates.[15] One approach to traditional measures of function (e.g., activities of daily living and physical performance) is a focus on self-directed functional goal attainment.[16] Measures of functional goal achievement have been shown to be highly linked with satisfaction and functioning in individuals undergoing rehabilitation, although these measures may be too complex and burdensome for implementation in quality indicators, and further evaluation is needed.

Another major problem with feasibility is defining the denominator, or the MCC population. Identifying individuals and targeting indicators only to people with MCCs may be challenging in research and practice. A systematic review of studies on the Assessing Care of Vulnerable Elders (ACOVE) quality indicators[17] found that most studies that used

ACOVE did not distinguish, as intended by the specifications, between vulnerable elderly adults (defined using age, self-rated health, physical function limitations, and disability) and the general elderly population. Evaluating broad populations may be a problem with some current measurement efforts; indicators should ideally target those most likely to benefit from functional assessment and most at risk of preventable decline, but definitions of persons with MCCs are not standardized, and defining this population can be challenging. One option for starting to define indicators for this population, as in the proposed electronic health record incentive program listed in Appendix 1, would be indicators based on common chronic conditions that have already been well specified in existing indicators, such as the Physician Quality Reporting System. An indicator could specify a denominator that has at least two well-specified chronic conditions, such as heart failure and chronic obstructive pulmonary disease. Another option would be to use administrative data and include only persons with baseline disability or poor functional status, but using administrative data for process and clinical quality of care indicators may be challenging.

Unintended consequences must be considered in the implementation of quality indicators. One potential unintended consequence is that accountability for function or HRQOL outcomes could serve as a disincentive to care for highly complex patients at greater risk of declining functional status. This could potentially be addressed with careful denominator definitions, exclusions of individuals at high risk for decline, or adequate risk adjustment. These solutions may help these indicators be more acceptable to providers concerned that their patients are sicker and therefore their quality scores will be worse, but significant numbers of exclusions and complex risk adjustment can reduce usability by decreasing sample size, outcome variability, interpretability, and the ability to compare across providers.

Although this study has a number of limitations, it provides a useful basis for consideration of the application of self-reported outcomes in quality indicators for this population. The study was limited to ambulatory indicators, and some other areas that may have provided relevant information, such as inpatient rehabilitation, were not included, but a number of important concerns that may be more widely applicable were identified. Interviews with informants were limited but addressed a variety of health systems and clinical areas. This study was also limited to the United States and does not address countries with integrated health systems, such as the United Kingdom, that are now using self-reported outcomes more routinely in quality measurement.

In summary, although functional status and HRQOL are important outcomes for people with MCCs, few ambulatory quality indicators exist that address functional status and HRQOL that would be relevant for populations with MCCs. The indicators that exist are used for specific populations or settings and have problems with feasibility and usability. Little evidence is currently available that addresses whether measuring HRQOL and functional status, or implementing quality indicators using these tools, affects patient status or quality of care. Measurement tools for functional status may not capture the effect of interventions aimed at preventing or ameliorating functional decline. Furthermore, the evidence base may not be sufficiently robust for endorsement of indicators that hold providers accountable for preventing or reversing functional decline in populations of older adults with MCCs in the

ambulatory setting. Promoting the development of policies and structures within organizations to periodically collect information systematically on functional status and HRQOL may be a good initial step that would not need risk adjustment and for which providers could be held accountable. Dedicated research is needed to develop and evaluate measurement tools targeted to this population or ways to best target quality indicators to appropriate populations; to systematically evaluate usability and feasibility of implementing quality indicators; and to evaluate alternative measurement approaches, such as stratified sampling, to target this population.

Acknowledgments

APPENDIX 1: ADDITIONAL QUALITY INDICATORS RELEVANT TO SELF-REPORTED FUNCTIONAL STATUS AND HEALTH-RELATED QUALITY OF LIFE

Developer	Indicator Set	Quality Indicator Numerator	Description	Tools and Instruments	Information on Usability and Feasibility and Other Similar Measures
Screening or assessment					
CMS	EHR Incentive Program	Functional status assessment for complex chronic conditions	Percentage of patients aged 65 with heart failure and two or more high-impact conditions who completed initial and follow-up (self-reported) functional status assessments		Proposed as a core measure for CMS EHR Incentive Program
RAND	ACOVE	ALL vulnerable elders new to a primary care practice should receive the elements of a Comprehensive Geriatric Assessment	Includes assessment of medications, cognitive status, functional status, and others		

Developer	Indicator Set	Quality Indicator Numerator	Description	Tools and Instruments	Information on Usability and Feasibility and Other Similar Measures
		within 3 months			
PCPI/PQRS	Dementia	Patients for whom an assessment of functional status is performed and the results reviewed at least once within a 12-month period	Direct examination of the individual or knowledgeable informant; at a minimum, evaluation of individual's ability to perform IADLs and ADLs	Examples include, but are not limited to Lawton IADL Scale, Barthel ADL Index, Katz Index of Independence in ADL	Proposed as part of optional measures for CMS EHR incentive program
PCPI	Osteoarthritis	Assessment for level of function and pain documented	No details given	May include the use of a standardized scale or the completion of an assessment questionnaire, such as Medical Outcomes Study 36-item Health Survey, American Academy of Orthopedic Surgeons Hip and Knee Questionnaire	Arthritis Foundation has a similar measure; does not specify any tools; some measures for knee and hip replacement also
PCPI/PQRS	Rheumatoid arthritis	Patients for whom a functional status assessment was performed at least once within 12 months	Using a standardized descriptive or numeric scale, standardized questionnaire, or notation of assessment of the effect of rheumatoid arthritis on patient activities of daily living	Examples of tools include: HAQ, Modified HAQ, HAQ-2; American College of Rheumatology's Classification of Functional Status in Rheumatoid Arthritis; list of potential ADLs to assess	Arthritis Foundation includes functional status in a similar measure; does not specify any tools; proposed as part of optional measures for CMS EHR incentive program
Follow-up or outcome					
CareConnections Outcomes System		Average percentage change in functional status from initial to discharge visit among patients receiving outpatient rehabilitation services	Quality improvement tool for therapists	Measured using the CareConnections Outcomes System Functional Index	Information on psychometrics of the instrument but not the indicator; similar indicator from American Physical Therapy Association uses Outpatient

Developer	Indicator Set	Quality Indicator Numerator	Description	Tools and Instruments	Information on Usability and Feasibility and Other Similar Measures
					Physical Therapy Improvement in Movement Assessment Log Home care measures (OASIS) with similar construct (e.g., stabilization in transferring – percentage of individuals whose function did not worsen, measured using OASIS tool); variety of other indicators for stabilization or improvement in other ADLs (e.g., dressing) (pay-for-performance for home care) Similar indicator in Australia

NQF = National Quality Forum; CMS = Centers for Medicare and Medicaid Services; EHR = Electronic Health Record;

PCPI = Physician Consortium for Performance Improvement; PQRS = Physician Quality Reporting System;

IADL = Instrumental Activity of Daily Living; ADL = Activity of Daily Living; HAQ = Health Assessment Questionnaire;

OASIS = Outcome Assessment and Information Set; ACOVE = Assessing Care of Vulnerable Elders.

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Table 1

Definitions for Terms Used in Quality Measurement for Functional Status and Health-Related Quality of Life

Term	Definition
Quality indicator (process and outcome)	An agreed-upon process or outcome measure used to assess quality of care at the population level. Process includes health services that are provided, including screening, assessment, treatment, and follow-up; outcomes are end results for patients. Expressed as a percentage of the population, with a specified numerator and denominator.
Structural standard	A specific manner of organization-level activities that, when executed effectively, leads to improved outcomes. Referred to as Preferred Practice by National Quality Forum.
Measurement tool	Structured, specified instrument to collect information on a care process or outcome at the level of the individual, usually self-reported—can be used as information for a quality indicator at the population level. Example: Quality of life instrument (Medical Outcomes Study 12-item Short Form Survey).
Usability	Extent to which intended audiences can understand the results and find them useful for decision-making; meaningfulness of information. Sufficient variation in care is an important element so that indicators can differentiate between organizations.
Feasibility	Extent to which required data are readily available or can be captured without undue burden and can be implemented. Requires data to apply measure specifications and adequate sample size at the health plan or organizational level.
Validity	Correctly reflects quality of care provided, accurately identifying differences. Includes the need for specifications consistent with supporting evidence and statistically significant or clinically meaningful differences in performance.

Table 2

Internet Resources Searched for Indicators in the Review

Agency for Healthcare Research and Quality National Quality Measures Clearinghouse (www.qualitymeasures.ahrq.gov)
National Quality Forum (www.qualityforum.org)
AQA Alliance (www.aqaalliance.org)
Physician Quality Reporting System (physician ambulatory care indicators)
Outcome Assessment and Information Set (home health agency indicators)
Accountable Care Organization programs
Independence at Home Demonstration Program
Community-Based Care Transitions Program
Electronic Health Record incentive program (Meaningful Use Stage 2)
American Medical Association Physician Consortium on Performance Improvement (www.ama-assn.org)
National Committee for Quality Assurance
RAND Assessing Care of Vulnerable Elders indicator set

Table 3

Examples of Existing Quality Indicators Relevant to Self-Reported Functional Status and Health-Related Quality of Life

Developer	Set	NQF Endorsement	Quality Indicator Numerator	Description	Measures and Instruments	Information on Usability and Feasibility[a]	Other Similar Measures
Screening and assessment: NCQA HEDIS 2012	Prevention and Screening[18]	NQF-endorsed 2009	Percentage of adults aged 66 who had medication review, functional status assessment, and pain screening during the measurement year	Medical record review	Measurement tool is not defined; NCQA lists suggestions only, does not state that using a standardized tool is needed.	Burdensome, costly for plans; currently only applied to Medicare special needs plans. Good face validity for quality: variation among plans, improvement over time	Related measures in ACOVE and in Physician Consortium on Performance Improvement/ Physician Quality and Reporting System for dementia and osteoarthritis
Treatment and management: RAND	ACOVE[19,b]		IF a vulnerable elder receives the elements of a CGA that identifies a problem, THEN the problem should be addressed within 3 months	Medical record review	Functional status one element in CGA; not collected with self-reported outcomes		
Follow-up and outcome: NCQA	HEDIS[18]		Percentage of members whose health status was "better than expected," "the same as expected," or "worse than expected" at the end of a 2-year period	Separate measures for physical and mental health status. Proxy respondents are allowed.	Collected using survey (random sample); Health Outcomes Survey, variant of Medical Outcomes Study 12-item Short-Form Survey; NCQA currently reconsidering measurement instrument	For Medicare Advantage organization level; risk-adjusted for participant characteristics, including age and comorbidity; does not differentiate well between health plans: few outliers	Related measures for functional status for home health care (Outcome and Assessment Information Set)—some measure improvement, some stability, some not worsening

No existing relevant structural standards were identified.

[a] Usability and feasibility refer to how the indicator can be applied, and usefulness for evaluating quality, in actual use.

[b] Defined as vulnerable elder if scored 3 points on survey of physical functioning and age.

HEDIS = Healthcare Effectiveness Data and Information Set; NCQA = National Committee for Quality Assurance; NQF = National Quality Forum; CGA = Comprehensive Geriatrics Assessment; ACOVE = Assessing Care of Vulnerable Elders.

Table 4

Problems Identified from Informant Interviews

Problem	Details
Choice and specification of measurement tools	
Length	Shorter tools decrease feasibility but may also limit power to differentiate
Usability	Ability to allow indicators to discriminate quality of care among providers
Measuring constructs of health	Self-report vs objective measures (e.g., gait speed)
Data collection problems	
Proxy respondents	Increase representativeness but decrease validity
Clinical usefulness	Usability for providers
Completeness of data	Low response rates, representativeness
Population for sampling	Targeting population with multiple chronic conditions important, but challenging to define