

May 2007

NURSING HOMES

Federal Actions Needed to Improve Targeting and Evaluation of Assistance by Quality Improvement Organizations





Highlights of [GAO-07-373](#), a report to the Ranking Member, Committee on Finance, U.S. Senate

Why GAO Did This Study

In 2002, CMS contracted with Quality Improvement Organizations (QIO) to help nursing homes address quality problems such as pressure ulcers, a deficiency frequently identified during routine inspections conducted by state survey agencies. CMS awarded \$117 million over a 3-year period to the QIOs to assist all homes and to work intensively with a subset of homes in each state. Homes' participation was voluntary. To evaluate QIO performance, CMS relied largely on changes in homes' quality measures (QM), data based on resident assessments routinely conducted by homes. GAO assessed QIO activities during the 3-year contract starting in 2002, focusing on (1) characteristics of homes assisted intensively, (2) types of assistance provided, and (3) effect of assistance on the quality of nursing home care. GAO conducted a Web-based survey of all 51 QIOs, visited QIOs and homes in five states, and interviewed experts on using QMs to evaluate QIOs.

What GAO Recommends

GAO recommends that the CMS Administrator (1) further increase the number of low-performing homes that QIOs work with intensively, (2) improve monitoring and evaluation of QIO activities, and (3) require QIOs to share with CMS the identity of homes assisted intensively in order to facilitate evaluation. CMS agreed with the first two recommendations, but did not specifically indicate if it agreed with the third.
www.gao.gov/cgi-bin/getrpt?GAO-07-373.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Kathryn G. Allen, (202) 512-7118, allenk@gao.gov.

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What GAO Found

Although more homes volunteered to work with the QIOs than CMS expected them to assist intensively, QIOs typically did not target their assistance to the low-performing homes that volunteered. Most QIOs' primary consideration in selecting homes was their commitment to working with the QIO. CMS did not specify selection criteria for intensive participants but contracted with a QIO that developed guidelines encouraging QIOs to select committed homes and exclude those with many survey deficiencies or QM scores that were too good to improve significantly. Consistent with the guidelines, few QIOs targeted homes with a high level of survey deficiencies, and eight QIOs explicitly excluded these homes. GAO's analysis of state survey data confirmed that selected homes were less likely than other homes to be low-performing in terms of identified deficiencies. Most state survey and nursing home trade association officials interviewed by GAO believed QIO resources should be targeted to low-performing homes.

QIOs were provided flexibility both in the QMs on which they focused their work with nursing homes and in the interventions they used. Most QIOs chose to work on chronic pain and pressure ulcers, and most used the same interventions—conferences and distribution of educational materials—to assist homes statewide. The interventions used to assist individual homes intensively varied and included on-site visits, conferences, and small group meetings. Just over half the QIOs reported that they relied most on on-site visits to assist intensive participants. Sixty-three percent said such visits were their most effective intervention. Of the 15 QIOs that would have changed the interventions used, most would make on-site visits their primary intervention. Homes indicated that they were less satisfied with the program when their QIO experienced high staff turnover or when their QIO contact possessed insufficient expertise.

Shortcomings in the QMs as measures of nursing home quality and other factors make it difficult to measure the overall impact of the QIOs on nursing home quality, although staff at most of the nursing homes GAO contacted attributed some improvements in the quality of resident care to their work with the QIOs. The extent to which changes in homes' QM scores reflect improvements in the quality of care is questionable, given the concerns raised by GAO and others about the validity of the QMs and the reliability of the resident assessment data used to calculate them. In addition, quality improvements cannot be attributed solely to the QIOs, in part because the homes that volunteered and were selected for intensive assistance may have differed from other homes in ways that would affect their scores; these homes may also have participated in other quality improvement initiatives. Ongoing CMS evaluation of QIO activities for the contract that began in August 2005 is being hampered by a 2005 Department of Health and Human Services decision that QIO program regulations prohibit QIOs from providing to CMS the identities of homes being assisted intensively.

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Abbreviations

CMS	Centers for Medicare & Medicaid Services
FTE	full-time-equivalent
HHS	Department of Health and Human Services
IOM	Institute of Medicine
MDS	minimum data set
NQF	National Quality Forum
OSCAR	On-Line Survey, Certification, and Reporting system
PARTner	Program Activity Reporting Tool
PRO	Peer Review Organization
QIO	Quality Improvement Organization
QM	quality measure
SOW	statement of work

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United States Government Accountability Office
Washington, DC 20548

May 29, 2007

The Honorable Charles E. Grassley
Ranking Member
Committee on Finance
United States Senate

Dear Senator Grassley:

The federal government plays a major role in the financing and oversight of nursing home care for individuals who are aged or disabled. Medicare and Medicaid payments for nursing home services totaled \$67 billion in 2004, including a \$46 billion federal share.¹ The Centers for Medicare & Medicaid Services (CMS) defines quality standards that the nation's approximately 16,400 nursing homes must meet to participate in the Medicare and Medicaid programs and contracts with state survey agencies to assess homes' compliance through routine inspections, known as standard surveys, and through complaint investigations. Under 3-year contracts beginning in August 2002 and referred to as the 7th statement of work (SOW), CMS directed Medicare Quality Improvement Organizations (QIO) to work with nursing homes to improve the quality of care provided to residents in the 50 states, the District of Columbia, and the territories.²

¹Medicare is the federal health care program for elderly and certain disabled individuals. Medicare may cover up to 100 days of skilled nursing home care following a hospital stay. Medicaid is the joint federal-state health care financing program for certain categories of low-income individuals. Medicaid also pays for long-term care services, including nursing home care.

²QIOs take a variety of forms. They can be for- or not-for-profit organizations and can be either sponsored by a significant number of actively practicing area physicians or have available to them a sufficient number of these physicians to assure adequate peer review. In general, QIOs cannot be health care facilities. Prior to 1999, QIOs focused on quality improvement in the hospital setting. Beginning in 1999, CMS required QIOs to also work in an alternative setting; about two-thirds selected nursing homes. The QIOs currently also work with physician offices, home health agencies, rural or underserved populations, and Medicare Advantage organizations to improve Medicare beneficiaries' quality of care. For the 7th SOW, the 53 QIO contracts, one for each state, the District of Columbia, and 2 territories (Puerto Rico and the Virgin Islands) were held by 37 organizations. We excluded the 2 territories from our study because of substantial differences in health care financing between the territories and the states.

As a condition of their contracts, QIOs were required to provide (1) information to all Medicare- or Medicaid-certified nursing homes in each state about systems-based approaches to improving resident care and clinical outcomes and (2) intensive assistance to a subset of each state's homes, typically 10 to 15 percent, that were selected by the QIOs from among those homes that volunteered for assistance.

In a series of congressionally requested studies undertaken since 1998, we have reported on the unacceptably high proportion of nursing homes providing poor care to residents.³ Based in part on our recommendations, CMS has undertaken a number of enforcement initiatives to encourage nursing home compliance with federal quality standards, including improved oversight by both state survey agencies and CMS, and tougher enforcement measures to ensure that homes correct deficiencies and maintain compliance with federal standards. For example, CMS expanded its Special Focus Facility program in which state agencies survey selected homes more frequently and terminate those that fail to improve significantly within 18 months.

CMS's decision to offer direct assistance to nursing homes that volunteer to work with QIOs represents a new strategy in the effort to help address long-standing quality problems in nursing homes. To evaluate QIO performance in improving nursing home care, CMS relied primarily on changes in nursing homes' quality measures (QM) during the contract period. QMs are numeric measures derived from resident assessments—known as the minimum data set (MDS)—that nursing homes routinely conduct and submit to CMS.⁴ The QMs were developed to permit comparisons across nursing homes of the quality of care provided to residents and have been publicly reported on CMS's Nursing Home Compare Web site since 2002.⁵

In 2005, CMS renewed the QIO contracts, including the nursing home component, for another 3-year period, with a budget of \$96 million to

³See Related GAO Products at the end of this report.

⁴The minimum data set (MDS) consists of data that are periodically collected to assess the care needs of residents in order to develop an appropriate plan of care. State surveyors use MDS data to help assess the quality of resident care, and Medicare and some state Medicaid programs also use MDS data to adjust nursing home payments.

⁵The Web site can be accessed at www.Medicare.gov/NHCompare/home.asp.

assist nursing homes.⁶ Given the decision to continue the program, you asked us to assess QIOs' work with nursing homes for the 7th SOW, covering the period August 2002 through January 2006. For this report, we assessed (1) characteristics of nursing homes the QIOs assisted intensively, (2) the assistance the QIOs provided to nursing homes, and (3) the effect of QIOs' assistance on the quality of nursing home care.

To assess the characteristics of nursing homes that the QIOs selected to assist intensively from among the homes that volunteered, we analyzed CMS data on deficiencies cited in standard surveys of nursing homes and compared the results for homes assisted intensively by the QIOs with homes that were not assisted intensively.⁷ To gather information about the QIOs' criteria for selecting homes for intensive assistance, we fielded a Web-based survey to the 37 organizations that held the 51 QIO contracts in the states and the District of Columbia, achieving a 100 percent response rate.⁸ To determine the type of quality improvement assistance QIOs provided to nursing homes, our Web-based survey collected data on the types, frequency, and perceived effectiveness of specific interventions used to assist homes both statewide and in the group assisted intensively; interventions included activities such as on-site visits, mailings, and conferences. To gather more detailed information about QIOs' work with nursing homes, we conducted site visits to five states—Colorado, Florida, Iowa, Maine, and New York—where we interviewed QIO personnel, staff from nursing homes that had received intensive assistance, and key

⁶The QIO contract is divided into tasks and subtasks; the nursing home component is subtask 1a. The amount budgeted for this component in the 8th SOW (the QIO contract covering the period from 2005 through 2008) was approximately \$10 million less than was budgeted in the 7th SOW.

⁷We ranked nursing homes as high-, moderately, or low-performing on the basis of the number, scope, and severity of the deficiencies for which they were cited (relative to other homes in their state) in three standard state surveys from 1999 through 2002. We based our classification of homes on their performance level relative to other homes in the state to take into account the inconsistency in how states conduct surveys, a problem we have reported on since 1998. A limitation of our analysis is that we did not have information about all of the homes that volunteered for intensive assistance, only those that were selected by the QIOs, and therefore did not know the extent to which low-performing homes volunteered for intensive assistance.

⁸Because a QIO is responsible for quality improvement activities in each state and the District of Columbia, we refer to the 51 QIOs throughout this report.

stakeholders.⁹ The five states accounted for 15 percent of nursing home beds nationwide in 2002 and represented a range in terms of such characteristics as number of nursing home beds, region of the country, and QIOs' performance on the nursing home component in the 7th SOW. In the five states, we interviewed staff from 28 nursing homes—4 to 8 per state; in addition, we interviewed staff from 4 homes in four other states for a total of 32 homes. We sought to select a group of homes that represented a range in terms of state survey deficiencies, improvement in QM scores during the 7th SOW, distance from the QIO, and urban versus rural location. However, the experiences of the 32 homes in our sample cannot be generalized to all homes that received intensive assistance from the QIOs nationwide. To assess the effect of QIOs' assistance on nursing home quality, we reviewed performance requirements in the QIO contracts for both the 7th and the 8th SOWs; reports on QIOs' work with nursing homes, including the 2006 report on the QIO program by the Institute of Medicine (IOM);¹⁰ and other documents. We also conducted interviews with nursing homes, CMS officials, officials from state quality assurance programs and state MDS accuracy review programs, and experts on the nursing home QMs and the MDS data on which they are based. We conducted our review from October 2005 through May 2007 in accordance with generally accepted government auditing standards. (For a more detailed description of our scope and methodology, see app. I.)

Results in Brief

Although QIOs generally had a choice of homes to select for intensive assistance because more homes volunteered than CMS expected QIOs to assist, QIOs typically did not target the low-performing homes that volunteered. Most QIOs reported in our Web-based survey that their

⁹To assist in the development of our site visit interview protocols, we also interviewed personnel from three other QIOs. On each of our five site visits, we interviewed officials from three stakeholder groups: (1) the state survey agency; (2) the local affiliate for the American Health Care Association, which generally represents for-profit homes; and (3) the local affiliate for the American Association of Homes and Services for the Aging, which represents not-for-profit homes.

¹⁰IOM of The National Academies, Committee on Redesigning Health Insurance Performance Measures, Payment, and Performance Improvement Programs, Board on Health Care Services, *Medicare's Quality Improvement Organization Program: Maximizing Potential* (Washington, D.C.: The National Academies Press, 2006). The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, Pub. L. No. 108-173, §109(d), 117 Stat. 2066, 2173-74, directed the Secretary of Health and Human Services to ask the IOM to conduct an evaluation of the QIO program administered by CMS. In 2006, the IOM issued a report that examined performance within the entire QIO program, including the nursing home component, during the 7th SOW.

primary consideration in selecting homes was their commitment to working with the QIO. CMS did not specify selection criteria for intensive participants but contracted with a QIO to develop guidelines, which encouraged QIOs to select homes that appeared committed to quality improvement and to exclude homes with a high number of survey deficiencies, high management turnover, or QM scores that were too good to improve significantly. Consistent with the guidelines, only 2 percent of the QIOs that responded to our survey cited a high level of survey deficiencies among their top three considerations in choosing among homes that volunteered for assistance, and eight QIOs explicitly excluded such homes. QIOs reasoned that these homes might be more focused on improving their survey results than on committing time and resources to quality improvement projects that might target other care areas. Our analysis of state survey data showed that, nationwide, intensive participants were less likely to be low-performing than other homes in their state in terms of the number, scope, and severity of deficiencies for which they were cited in standard surveys from 1999 through 2002. This result may reflect the nature of the homes that volunteered for assistance, the QIOs' selection criteria, or a combination of the two. Most of the stakeholders we interviewed who expressed an opinion said that QIOs' resources should be targeted to low-performing homes. CMS has directed a small share of QIO resources to low-performing homes in the current 8th SOW. Specifically, each QIO is required to provide intensive assistance to up to three "persistently poor-performing homes" identified in consultation with the state survey agency.

The 7th SOW contracts allowed QIOs flexibility in the QMs they focused on and the interventions they used. While the majority of QIOs selected the same QMs and most used the same interventions to assist homes statewide, the interventions used to assist intensive participants and staffing to accomplish program goals varied. Of eight possible QMs, most QIOs and intensive participants worked on chronic pain and pressure ulcers.¹¹ While intensive participants were supposed to have a choice of QMs to focus on, some intensive participants told us that the QIO made the selection and that chronic pain and pressure ulcers were not necessarily their greatest quality-of-care challenges. The interventions

¹¹A pressure ulcer is an area of damaged skin and tissue that results from constant pressure due to an individual's impaired mobility. The pressure results in reduced blood flow and eventually causes cell death, skin breakdown, and the development of an open wound. Pressure ulcers can occur in individuals who are bed- or wheelchair-bound, sometimes after only a few hours.

QIOs relied on most for homes statewide were conferences and the distribution of educational materials; for intensive participants, they relied most on on-site visits, conferences, and small group meetings.¹² Although the interventions QIOs used with intensive participants varied, most QIOs (63 percent) considered on-site visits the most effective, and some would make on-site visits their primary intervention if they had the opportunity to change the interventions they used during the 7th SOW. Insufficient experience or expertise and high turnover among QIO personnel negatively affected homes' satisfaction with the program and the extent of their quality improvements. Turnover was particularly high at 24 of the 51 QIOs, where one-quarter or more of the QIO personnel who assisted nursing homes worked less than half of the 36-month contract. One intensive participant home had four QIO principal contacts over the course of the 3-year contract.

The impact of QIOs on the quality of nursing home care cannot be determined from available data, but at most nursing homes we contacted, staff attributed some improvements in the quality of resident care to their work with QIOs. Nursing homes' QM scores generally improved enough for all of the QIOs to meet—and some to surpass widely—the modest targets set by CMS for improvement among homes both statewide and in the group assisted intensively. However, the overall impact of the QIOs on the quality of nursing home care cannot be determined from these data because of the shortcomings of the QMs as measures of nursing home quality and because confounding factors—including homes' participation in other quality improvement efforts and any preexisting differences between homes that volunteered and were selected for intensive assistance and other homes—make it difficult to attribute quality improvements solely to the QIOs. Multiple long-term care professionals we interviewed stated that QMs should not be used in isolation to measure quality improvement, but combined with other indicators, such as state survey data. In addition, the effectiveness of the individual interventions QIOs used to assist homes cannot be evaluated with the limited data CMS collected from the QIOs. CMS planned to enhance evaluation of the program during the 8th SOW, but a determination by the Department of Health and Human Services (HHS) Office of General Counsel that the QIO program regulations prohibit QIOs from providing to CMS the identities of

¹²In our survey of the QIOs, we asked them to identify the interventions they relied on most and the interventions that were most effective in improving the quality of nursing home care; we allowed the QIOs to define these terms.

the homes they are assisting has hampered the agency's efforts to collect the necessary data. Although we cannot determine the overall impact of the QIOs on the quality of nursing home care, over two-thirds of the 32 nursing homes we interviewed attributed some improvements in care to their work with the QIOs.

We are recommending that the CMS Administrator increase the extent to which QIOs target intensive assistance to low-performing homes and also direct QIOs to focus intensive assistance on the quality-of-care areas on which homes most need improvement. We are also recommending that the CMS Administrator improve monitoring and evaluation of the QIO program by revising program regulations to require QIOs to provide to CMS the identities of the nursing homes they are assisting, collecting more complete and detailed data on QIO interventions, and identifying a broader spectrum of measures than QMs to evaluate changes in nursing home quality. In commenting on a draft of this report, CMS concurred with but did not indicate how it would implement our recommendations to increase the number of homes that QIOs assist intensively and collect more complete and detailed data on the interventions QIOs use to assist homes. CMS did not specifically indicate if it agreed with our recommendation to revise program regulations to allow QIOs to reveal to CMS the identity of the nursing homes they are assisting, but did indicate that it continues to explore options which would allow access to such data in order to facilitate evaluation. CMS did not comment on the remaining two recommendations.

Background

Beginning in the late 1990s, CMS took steps to broaden the mechanisms in place intended to help ensure that nursing home residents receive quality care. To augment the periodic assessment of homes' compliance with federal quality requirements, CMS contracted for the development of QMs and tasked QIOs with providing assistance to homes to improve quality. CMS used QMs both to provide the public with information on nursing home quality of care and to help evaluate QIO efforts to address quality-of-care issues, such as pressure ulcers. During the 7th SOW, organizations other than QIOs were also working with nursing homes to improve quality.

Indicators of Nursing Home Quality

Two indicators used by CMS to assess the quality of care that nursing homes provide to residents are (1) deficiencies identified during standard surveys and complaint investigations and (2) QMs. Both indicators are publicly reported on CMS's Nursing Home Compare Web site.

Survey Deficiencies

Under contract with CMS, state agencies conduct standard surveys to determine whether the care and services provided by nursing homes meet the assessed needs of residents and whether nursing homes are in compliance with federal quality standards.¹³ These standards include preventing avoidable pressure ulcers; avoiding unnecessary restraints, either physical or chemical; and averting a decline in a resident's ability to perform activities of daily living, such as toileting or walking.¹⁴ During a standard survey, a team that includes registered nurses spends several days at a home reviewing the quality of care provided to a sample of residents. States are also required to investigate complaints filed against nursing homes by residents, families, and others. Complaint investigations are less comprehensive than standard surveys because they generally target specific allegations raised by the complainants.

Any deficiencies identified during standard surveys or complaint investigations are classified according to the number of residents potentially or actually affected (isolated, pattern, or widespread) and their severity (potential for minimal harm, potential for more than minimal harm, actual harm, or immediate jeopardy). Deficiencies cited at the actual harm and immediate jeopardy level are considered serious and could trigger enforcement actions such as civil money penalties. We have previously reported on the considerable interstate variation in the proportion of homes cited for serious care problems, which ranged during fiscal year 2005 from 4 percent of Florida's 691 homes to 44 percent of Connecticut's 247 homes.¹⁵ We reported that such variability suggests inconsistency in states' interpretation and application of federal

¹³CMS's Survey and Certification Group is responsible for oversight of state survey agency activities.

¹⁴Surveys must be conducted at each home on average once every 12 months but no less than once every 15 months.

¹⁵This analysis excluded 13 states because fewer than 100 homes were surveyed, and even a small increase or decrease in the number of homes with serious deficiencies in such states could produce a relatively large percentage-point change. In fiscal year 2005, about 17 percent of the 16,337 homes surveyed had serious deficiencies. See GAO, *Nursing Homes: Efforts to Strengthen Federal Enforcement Have Not Deterred Some Homes from Repeatedly Harming Residents*, [GAO-07-241](#) (Washington, D.C.: Mar. 26, 2007).

regulations; in addition, both we and CMS have found that state surveyors do not identify all serious deficiencies.¹⁶

Quality Measures

QMs are relatively new indicators of nursing home quality. Although survey deficiencies have been publicly reported since 1998, CMS did not begin posting QMs on its Nursing Home Compare Web site until November 2002. QMs are derived from resident assessments known as the MDS that nursing homes routinely collect on all residents at specified intervals.¹⁷ Conducted by nursing home staff, MDS assessments cover 17 areas, such as skin conditions, pain, and physical functioning.

In developing QMs, CMS recognized that any publicly reported indicators must pass a rigorous standard for validity and reliability. In October 2002, we reported that national implementation of QMs was premature because of validity and reliability concerns.¹⁸ Valid QMs would distinguish between good and poor care provided by nursing homes; reliable QMs would do so *consistently*. One of our main concerns about publicly reporting QMs was that the QM scores might be influenced by other factors, such as residents' health status. As a result, the specification of appropriate risk adjustment was a key requirement for the validity of any QMs. Risk adjustment is important because it provides consumers with an "apples-to-apples" comparison of nursing homes by taking into consideration the characteristics of individual residents and adjusting the QM scores accordingly. For example, a home with a disproportionate number of residents who are bedfast or who present a challenge for maintaining an adequate level of nutrition—factors that contribute to the development of pressure ulcers—may have a higher pressure ulcer score. Adjusting a home's QM score to fairly represent to what extent a home does or does not admit such residents is important for consumers who wish to compare one home to another. Appendix II lists the 10 QMs initially adopted and publicly reported by CMS—6 applicable to residents with chronic care

¹⁶CMS is evaluating a new survey methodology to help ensure that surveyors do not miss serious care problems. National implementation will depend on the outcome of the evaluation.

¹⁷MDS assessments are conducted for all nursing home residents within 14 days of admission and at quarterly and yearly intervals unless there is a significant change in condition. In addition, Medicare beneficiaries in a Medicare-covered stay are assessed through MDS on or before the 5th, 14th, 30th, 60th, and 90th day of their stays to determine if their Medicare coverage should continue.

¹⁸GAO, *Nursing Homes: Public Reporting of Quality Indicators Has Merit, but National Implementation Is Premature*, [GAO-03-187](#) (Washington, D.C.: Oct. 31, 2002).

problems (long-stay residents) and 4 applicable to residents with post-acute-care needs (short-stay residents).

MDS data are self-reported by nursing homes, and ensuring their accuracy is critical for establishing resident care plans, setting nursing home payments, and publicly reporting QM scores. In February 2002, we concluded that CMS efforts to ensure the accuracy of MDS data, which are used to calculate the QMs, were inadequate because the agency relied too much on off-site review activities by its contractor and planned to conduct on-site reviews in only 10 percent of its data accuracy assessments, representing fewer than 200 of the nation's then approximately 17,000 nursing homes.¹⁹ Although we recommended that CMS reorient its review program to complement ongoing state MDS accuracy efforts as a more effective and efficient way to ensure MDS data accuracy, CMS disagreed and continued to emphasize off-site reviews.²⁰

Evolution of the QIO Program and the Quality Improvement Process

Over the past 24 years, the QIO program has evolved from a focus on *quality assurance* in the acute care setting to *quality improvement* in a broader mix of settings, including physician offices, home health agencies, and nursing homes. Established by the Peer Review Improvement Act of 1982²¹ and originally known as Peer Review Organizations (PRO), QIOs initially focused on ensuring minimum standards by conducting retrospective hospital-based utilization reviews that looked for inappropriate or unnecessary Medicare services. According to the 2006 IOM report, as it became apparent that standards of care themselves required attention, QIOs gradually shifted from retrospective case reviews to collaboration with providers to improve the overall delivery of care—a shift consistent with transformational goals set by CMS's Office of Clinical Standards and Quality, which oversees the QIO program.²²

¹⁹See [GAO-02-279](#).

²⁰Some states that adjust nursing home payments to account for variation in resident care needs have their own separate MDS review programs.

²¹Pub. L. No. 97-248, §141-50, 96 Stat. 381-95. PROs were renamed QIOs in 2002. Under the provisions of the Peer Review Improvement Act of 1982 and implementing regulations, a QIO can be either a physician-sponsored entity or a physician-access entity. See 42 C.F.R. §475.101 (2005). QIOs are allowed to be either for- or not-for-profit entities and are required to include at least one consumer representative on the QIO governing board. Funding for QIO activities comes from the Medicare Trust Funds.

²²IOM, *Medicare's Quality Improvement Organization Program: Maximizing Potential*.

In contrast to enforcing standards, quality improvement tries to ensure that organizations have effective processes for continually measuring and improving quality. The goal of quality improvement is to close the gap between an organization's current performance and its ideal performance, which is defined by either evidence-based research or best practices demonstrated in high-performing organizations. According to the quality improvement literature, successful quality improvement requires a commitment on the part of an organization's leadership and active involvement of the staff. The 2006 IOM report notes that QIOs rely on various mechanisms to promote quality improvement, including one-on-one consulting and collaboratives.²³ While the former provides direct and specialized attention, the latter relies on workshops or meetings that offer opportunities for providers to share experiences and best practices. Quality improvement often relies on the involvement of early adopters of best practices—providers who are highly regarded as leaders and can help convince others to change—for the diffusion of best practices. Key tools for quality improvement include (1) root cause analysis, a technique used to identify the conditions that lead to an undesired outcome; (2) instruction on how to collect, aggregate, and interpret data; and (3) guidance on bringing about, sustaining, and diffusing internal system redesign and process changes, particularly those related to use of information technology for quality improvement. Quality improvement experts also emphasize the importance of protecting the confidentiality of provider information, not only to protect the privacy of personal health information but also to encourage providers to evaluate their peers honestly and to prevent the damage to providers' reputations that might occur through the release of erroneous information.

Section 1160 of the Social Security Act provides that information collected by QIOs during the performance of their contract with CMS must be kept confidential and may not be disclosed except in specific instances; it provides the Secretary of HHS with some discretion to determine instances under which QIO information may be disclosed. The regulations implementing the statute limit the circumstances under which confidential information obtained during QIO quality review studies, including the identities of the participants of those studies, may be disclosed by the QIO.

²³IOM defines collaboratives as interventions designed to bring together stakeholders working toward quality improvement for the same clinical topic. Participants usually follow the same processes to reach goals and interact on a regular basis to share knowledge, experiences, and best practices.

During the 7th SOW, QIOs submitted a list of nursing home participants to CMS as a contract deliverable.

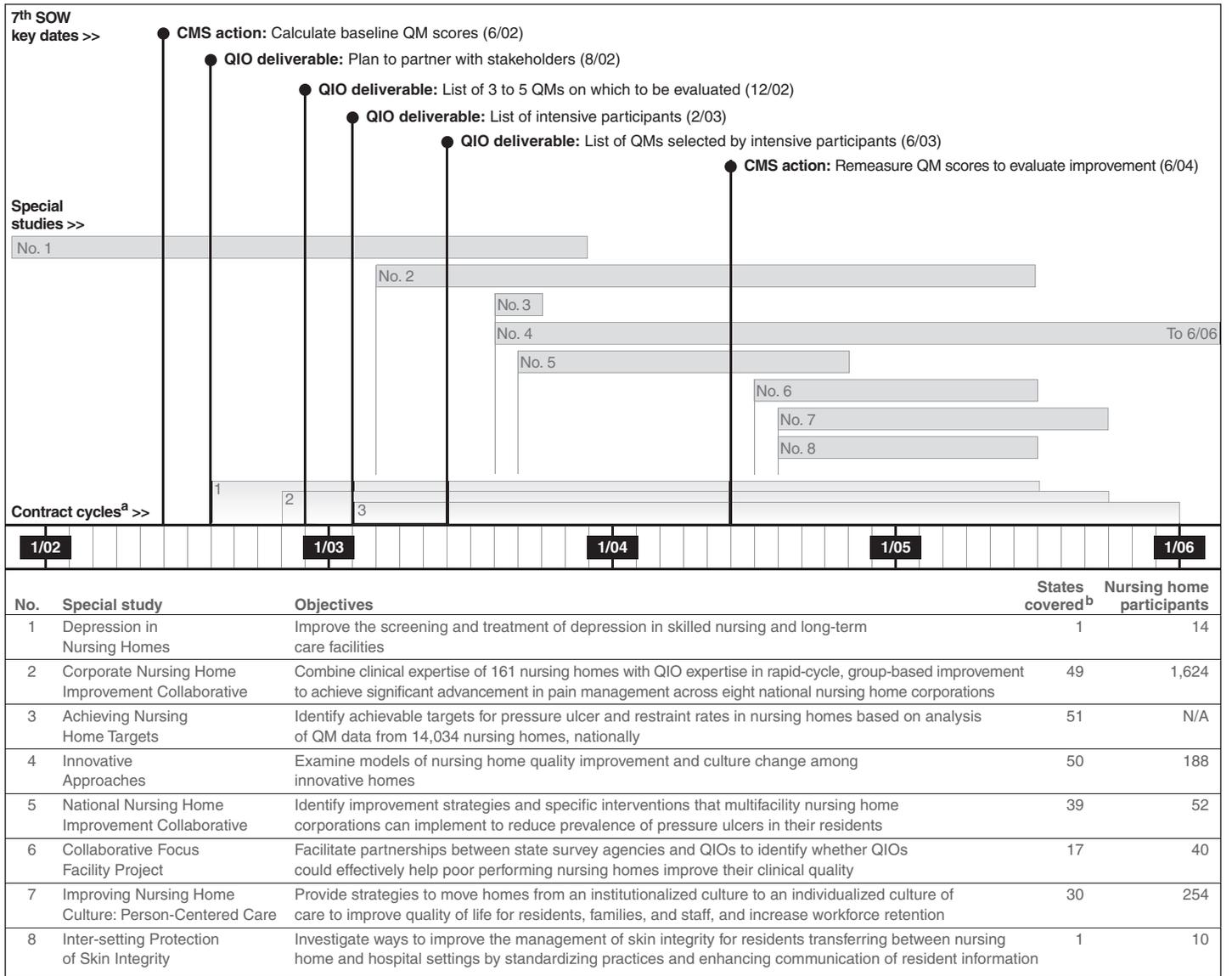
CMS Contract Funding and Requirements

During the 7th SOW, CMS awarded a total of \$117 million to QIOs to improve the quality of care in nursing homes in all 50 states, the District of Columbia, and the territories. The performance-based contracts for QIO assistance to nursing homes delineated broad expectations regarding QIO assistance to nursing homes, provided deadlines for completing four contract deliverables, and laid out criteria for evaluating QIO performance.²⁴ For contracting purposes, the QIOs were divided into three groups with staggered contract cycles. The four contract deliverables, however, were all due on the same dates, irrespective of the different contract cycles. The contracts also required QIOs to work with a QIO support contractor tasked to provide guidelines for recruiting and selecting nursing homes as intensive participants, train QIOs in standard models of quality improvement assistance, and provide tools and educational materials, as well as individualized consultation if needed, to help QIOs meet contractual requirements.²⁵ QIOs and nursing homes were also involved in other quality improvement special studies with budgets separate from the QIO contracts for the 7th SOW. These studies varied greatly in terms of length, the clinical issue(s) covered, the number of QIOs involved, and the characteristics of the nursing homes that participated. Figure 1 shows the 7th SOW contract cycles, deliverables for the nursing home component, and the duration of the special studies.

²⁴According to a CMS official, all QIO contracts prior to the 6th SOW, which began in 2000, were considered “cost plus fixed fee” and there were no deliverables, or set targets, that QIOs had to meet in order to obtain payment. In the late 1990s, however, the Office of Management and Budget instructed CMS to make QIO contracts performance-based with deliverables and objectives that QIOs had to meet during the contract cycle. In response, CMS changed the QIO contract so that part of QIOs’ fee was based on their performance.

²⁵The Rhode Island QIO was awarded the support contract for nursing homes for the 7th SOW. The contract defined roles for the QIO support contractor, including (1) providing QIOs with information on clinical topics and management systems’ approaches and techniques for quality improvement; (2) facilitating coordination and communication between QIOs; (3) maintaining a nursing home informational clearinghouse Web site with best practices, tools, and interventions; and (4) being available for ongoing technical assistance.

Figure 1: Timeline for 7th SOW Contract and Concurrent Special Studies by QIOs to Improve the Quality of Nursing Home Care



Source: GAO analysis of the 7th SOW and CMS descriptions of special studies.

^aIn the 7th SOW, QIOs were divided into three groups with staggered contract cycles. The four contract deliverables, however, were all due on the same dates, irrespective of contract cycle.

^bThe term states includes the 50 United States and the District of Columbia.

^cQIOs could add—but not delete or change—QMs for their intensive participants through September 2003.

Contract funding. The \$117 million awarded to QIOs to improve the quality of care in nursing homes during the 7th SOW included (1) \$106 million awarded to provide statewide and intensive assistance to homes,²⁶ (2) \$5.6 million awarded to selected QIOs to conduct eight special studies focused on nursing home care, and (3) \$5.3 million awarded to the QIO that served as the support contractor for the nursing home component.²⁷ CMS allocated a specific amount for each component of the contracts, but allowed QIOs to move funds among certain components.²⁸ Just over half of the 51 QIOs did not spend all of the funds allocated to the nursing home component, but on average the QIOs overspent the budget for the nursing home work by 3 percent.

Contract requirements for quality improvement activities. Per the contracts for the 7th SOW, QIOs were required to provide (1) all Medicare- and Medicaid-certified homes with information about systems-based approaches to improving patient care and clinical outcomes, and (2) intensive assistance to a subset of homes in each state. The contracts directed QIOs working in states with 100 or more nursing homes to target 10 to 15 percent of the homes for intensive assistance.²⁹ Figure 2 illustrates that QIOs provided two levels of assistance—statewide and intensive—and that homes’ participation was either nonintensive or intensive. Intensive participants received both statewide and intensive assistance. Selection of intensive participants from among the nursing homes that volunteered was at the discretion of each QIO, but the SOW required the QIO support contractor (the Rhode Island QIO) to provide guidelines and criteria for QIOs to use in determining which homes to select. Participation in the program was voluntary, and QIOs were prohibited

²⁶The \$106 million represented 13 percent of the total amount (\$809 million) awarded to QIOs for their base contracts. CMS did not budget separately for statewide and intensive assistance.

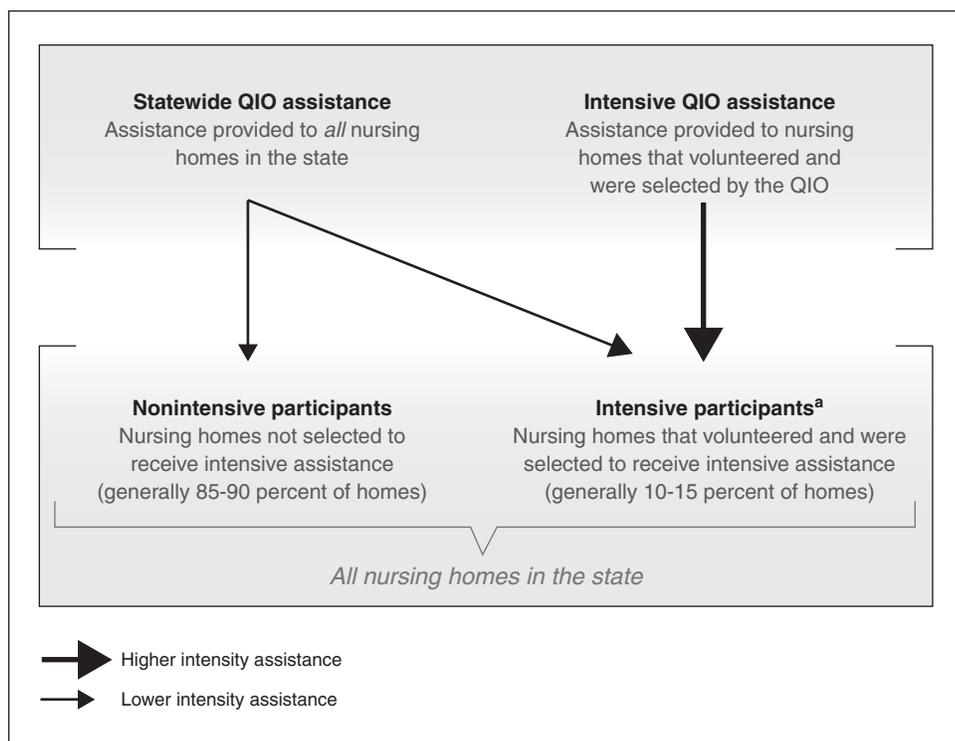
²⁷The QIO support contractor subcontracted with another QIO to provide data analysis.

²⁸For example, QIOs could move funds between the nursing home component and the other components under task 1, which covered clinical quality improvement efforts with home health agencies, hospitals, physician offices, underserved and rural beneficiaries, and Medicare Advantage organizations.

²⁹QIOs working in the 13 states with fewer than 100 nursing homes were expected to target at least 10 homes.

from releasing the names of participating nursing homes except as permitted by statute and regulation.³⁰

Figure 2: Levels of QIO Assistance and Nursing Home Participation in the 7th SOW



Source: GAO analysis of the 7th SOW.

^aNursing homes on the official list of intensive participants submitted to CMS by the QIOs by February 3, 2003.

Under the contracts, the quality improvement assistance provided by QIOs focused on areas related to eight chronic care and post-acute-care QMs publicly reported on the CMS Nursing Home Compare Web site. QIOs were required to consult with relevant stakeholders and select from three to five of the eight QMs on which QIOs' quality improvement efforts would be evaluated (see table 1).³¹ Intensive participant homes were also required

³⁰See Social Security Act §1160; 42 C.F.R. §480.140 (2005).

³¹Stakeholders may include representatives of nursing homes, trade associations, ombudsmen, state survey agencies, medical directors, directors of nursing, geriatric nursing assistants, other licensed professionals, academicians, and consumers.

to select one or more QMs on which to work with the QIO. Although they could select one QM, they were encouraged to select more than one.

Table 1: Quality Measures on Which QIOs Could Focus Their Quality Improvement Efforts in the 7th SOW

Chronic care QMs	Post-acute-care QMs
Decline in activities of daily living	Failure to improve and manage delirium
Pressure ulcers	Inadequate pain management
Inadequate pain management	Improvement in walking
Physical restraints	
Infections	

Source: CMS.

Note: Although CMS adopted 10 QMs, the QIOs were evaluated only on the 8 listed here (see app. II).

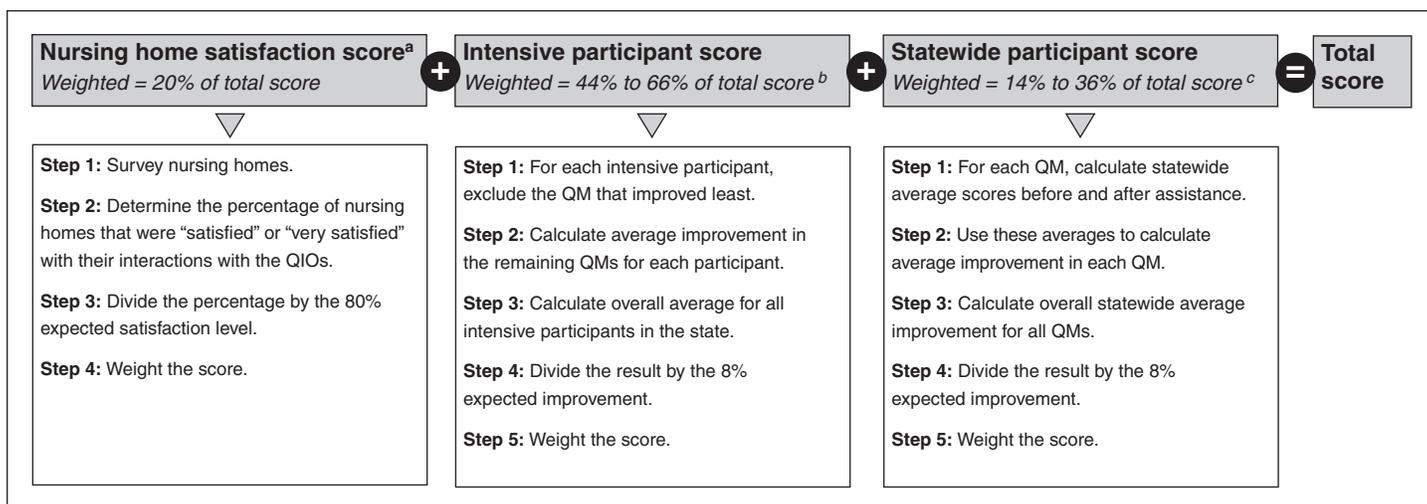
To improve QM scores, QIOs were expected to develop and implement quality improvement projects focused on care processes known to improve patient outcomes in a manner that utilized resources efficiently and reduced burdens on providers. The QIO support contractor developed a model for QIOs to facilitate systems change in nursing homes. This model emphasized the importance of QIOs' statewide activities to form and maintain partnerships, conduct workshops and seminars, and disseminate information on interventions to improve quality. For intensive participants, the model emphasized conducting one-on-one quality improvement assistance as well as conferences and small group meetings. According to contract language, QIOs were expected to coordinate their projects with other stakeholders that were working on similar improvement efforts or were interested in teaming with the QIO. But ultimately, each QIO determined for itself the type, level, duration, and intensity of support it would offer to nursing homes.

Evaluation of QIO contract performance. CMS evaluated QIOs' performance on the nursing home component of the contract using nursing home provider satisfaction with the QIO, QM improvement among intensive participants, and QM improvement statewide (see fig. 3).³² Nursing home provider satisfaction was assessed by surveying all

³²Under the 8th SOW contract, QIOs will not be held accountable for QM improvement statewide.

intensive participants and a sample of nonintensive participants around the 28th month of each 36-month contract. CMS expected at least 80 percent of respondents to report that they were either satisfied or very satisfied.

Figure 3: QIO Contract Evaluation Scoring Methodology for the 7th SOW



Source: GAO analysis of the 7th SOW.

Note: QM improvement was calculated using the following formula: (baseline rate minus remeasurement rate) / baseline rate. For example, if a nursing home had a baseline rate of 20 percent for the pain management QM (e.g., 20 percent of the home’s residents had severe or moderate pain), a 10 percent improvement would mean that 18 percent of residents had moderate or severe pain at remeasurement [(20 percent – 18 percent) / 20 percent].

^aAll intensive participants and a sample of nonintensive participants were surveyed to assess their satisfaction with the QIO.

^bThe weight (percentage of total score) given to this element depended on the proportion of the state’s homes that were included in the intensive participant group; the weight ranged from 44 percent, if 10 percent of the homes were included, to 66 percent, if at least 15 percent of the homes were included.

^cThe weight (percentage of total score) given to this element was the difference between 80 percent and the weight given to the intensive participant element and ranged from 14 to 36 percent.

QIOs were also expected to achieve an 8 percent improvement in QM scores among both intensive participants and homes statewide. The term improvement was defined mathematically to mean the relative change in the QM score from when it was measured at baseline to when it was remeasured. The statewide improvement score included the QM improvement scores for intensive participants averaged with those of nonintensive participants.

CMS established two scoring thresholds for the contracts that encompassed scores from all components of the SOW. If a QIO scored above the first threshold it was eligible for a noncompetitive contract renewal; if it scored below that threshold, it was eligible for a competitive renewal only upon providing information pertinent to its performance to a CMS-wide panel that decided whether to allow the QIO to bid again for another QIO contract.³³

CMS contract monitoring. CMS formally evaluated each QIO at months 9 and 18 of the 7th SOW. If CMS found that a QIO failed to meet contract deliverables or appeared to be in danger of failing to meet contract goals, it could require the QIO to make a performance improvement plan or corrective plan of action to address any barriers to the QIOs successfully fulfilling contract requirements. In addition, CMS reviewed materials such as QIOs internal quality control plans, which were intended to help QIOs monitor their own progress and to document any project changes made to improve their performance.

Other Nursing Home Quality Improvement and Assurance Initiatives

The QIO program operated in the context of other quality improvement initiatives sponsored by federal and state governments and nursing home trade associations. As stated earlier, CMS funded a number of special nursing home studies involving subsets of the QIOs and nursing homes, which addressed a variety of clinical quality-of-care issues and which are summarized in figure 1. Under CMS's Special Focus Facility program, state survey agencies were required to conduct enhanced monitoring of nursing homes with histories of providing poor care. During the 7th SOW, CMS revised the method for selecting homes for the Special Focus Facility program to ensure that the homes performing most poorly were included; increased the minimum number of homes that must be included, from a minimum of two per state to a minimum of up to six, depending on the number of homes in the state; and strengthened enforcement for those nursing homes with an ongoing pattern of substandard care.³⁴ In addition,

³³QIOs could fail to meet contract expectations for up to 2 of the 12 components and still remain eligible for noncompetitive renewal of their contracts.

³⁴Initiated in January 1999, the Special Focus Facility program was expanded by CMS in December 2004. Expansion strengthened enforcement authority so that if homes in the program fail to significantly improve performance from one survey to the next, immediate sanctions must be imposed; if homes show no significant improvement in 18 months and three surveys, they must be terminated from participation in the Medicare and Medicaid programs.

concurrent with the 7th SOW, at least eight states had programs that provided quality assurance and technical assistance to nursing homes in their states.³⁵ These programs varied in terms of whether they were voluntary or mandatory, which homes received assistance, the focus and frequency of the assistance provided, and the number and type of staff employed.

In addition to government-operated quality improvement initiatives, three long-term care professional associations joined together in July 2002 to implement the Quality First Initiative.³⁶ This initiative was based on a publicly articulated pledge on the part of the long-term care profession to establish an environment of continuous quality improvement, openness, and leadership in participating homes.

QIOs Generally Had a Choice among Homes That Volunteered but Did Not Target Assistance to Low-Performing Homes

Although QIOs generally had a choice of homes to select for intensive assistance because more homes volunteered than CMS expected QIOs to assist, QIOs typically did not target the low-performing homes that volunteered. Most QIOs reported in our Web-based survey that they did not have difficulty recruiting homes, and their primary consideration in selecting homes from the pool of volunteers was that the homes be committed to working with the QIOs. In the 7th SOW, CMS did not specify recruitment and selection criteria for intensive participants, leaving the development of guidelines to the QIO support contractor, which encouraged QIOs to select homes that seemed committed to quality improvement and to exclude homes with a high number of survey deficiencies, high management turnover, or QM scores that were too good to improve significantly.³⁷ Our analysis of state survey data showed that,

³⁵The eight states are Florida, Maryland, Texas, Washington, Maine, Michigan, Missouri, and North Carolina. We identified some of these states by reviewing reports and asking officials in states that we knew had quality assurance programs to identify other states with similar programs. We did not attempt to determine if additional states had similar programs.

³⁶The organizations included the American Health Care Association, the Alliance for Quality Nursing Home Care, and the American Association of Homes and Services for the Aging, which are three of the largest long-term care organizations and together represent the majority of the approximately 16,400 nursing facilities in the United States.

³⁷In the 8th SOW contracts, CMS specified more selection parameters, requiring QIOs to work with two groups of intensive participants, including some “persistently poor-performing” homes identified in consultation with state survey agencies; increasing the overall number of intensive participants; and requiring geographic distribution of these homes.

nationwide, intensive participants were less likely to be low-performing than other homes in their state in terms of the number, scope, and severity of deficiencies for which they were cited in standard surveys from 1999 through 2002. This result may reflect the nature of the homes that volunteered for assistance, the QIOs' selection criteria, or a combination of the two. The stakeholders we interviewed—including officials of state survey agencies and nursing home trade associations—generally believed QIOs' resources should be targeted to low-performing homes.

QIOs Generally Had a Choice of Which Nursing Homes to Assist Intensively

Most QIOs had a choice of which nursing homes to assist intensively, as more homes volunteered than the QIOs could receive credit for serving under the terms of their contracts.³⁸ Of the 38 QIOs in states with 100 or more homes, which were expected to work intensively with 10 to 15 percent of the homes, 30 reported in our Web-based survey that more than 15 percent of homes expressed interest in intensive assistance, and 8 reported that more than 30 percent of homes expressed interest.³⁹ Most QIOs selected about as many intensive participants as needed to get the maximum weight for the intensive participant element of their contract evaluation score. Nationwide, the intensive participant group included just under 15 percent (2,471) of the 16,552 homes identified by CMS at the beginning of the 7th SOW.⁴⁰

Most QIOs—82 percent of the 51 that responded to our survey—reported that it was not difficult to recruit the target number of homes for intensive assistance; the remainder reported that it was difficult (12 percent) or very difficult (4 percent) to recruit enough volunteers.⁴¹ Among the QIOs we

³⁸QIOs could select more than 15 percent of the homes in their state for intensive assistance. However, the weight given to this component in a QIO's contract evaluation score could not exceed 66 percent—generally, the weight given if the intensive participant group comprised 15 percent of homes in the state.

³⁹The 13 QIOs in states with fewer than 100 homes were expected to work intensively with at least 10 homes.

⁴⁰The 38 QIOs that were expected to work intensively with 10 to 15 percent of the homes in their state worked with an average of 15 percent. The other 13 QIOs worked with an average of 15 homes.

⁴¹The largest proportion of QIOs (27 percent) reported that their most effective recruiting tactic was hosting statewide or regional conferences for homes; however, 20 percent did not use this tactic at all. The vast majority of QIOs (84 to 98 percent) also sent materials to homes, contacted homes by telephone, and asked nursing home trade associations or other groups to inform homes of the opportunity to participate.

interviewed, personnel at two that reported difficulties recruiting homes cited homes' lack of familiarity with QIOs as a barrier. Personnel at one of these two QIOs commented that the QIO's first task was to build trust among homes and address confusion about its role, as some homes thought the QIO was a regulatory authority charged with investigating complaints and citing homes for deficiencies.

Commitment to Working with QIOs Was QIOs' Primary Consideration in Selecting Homes from among Those That Volunteered

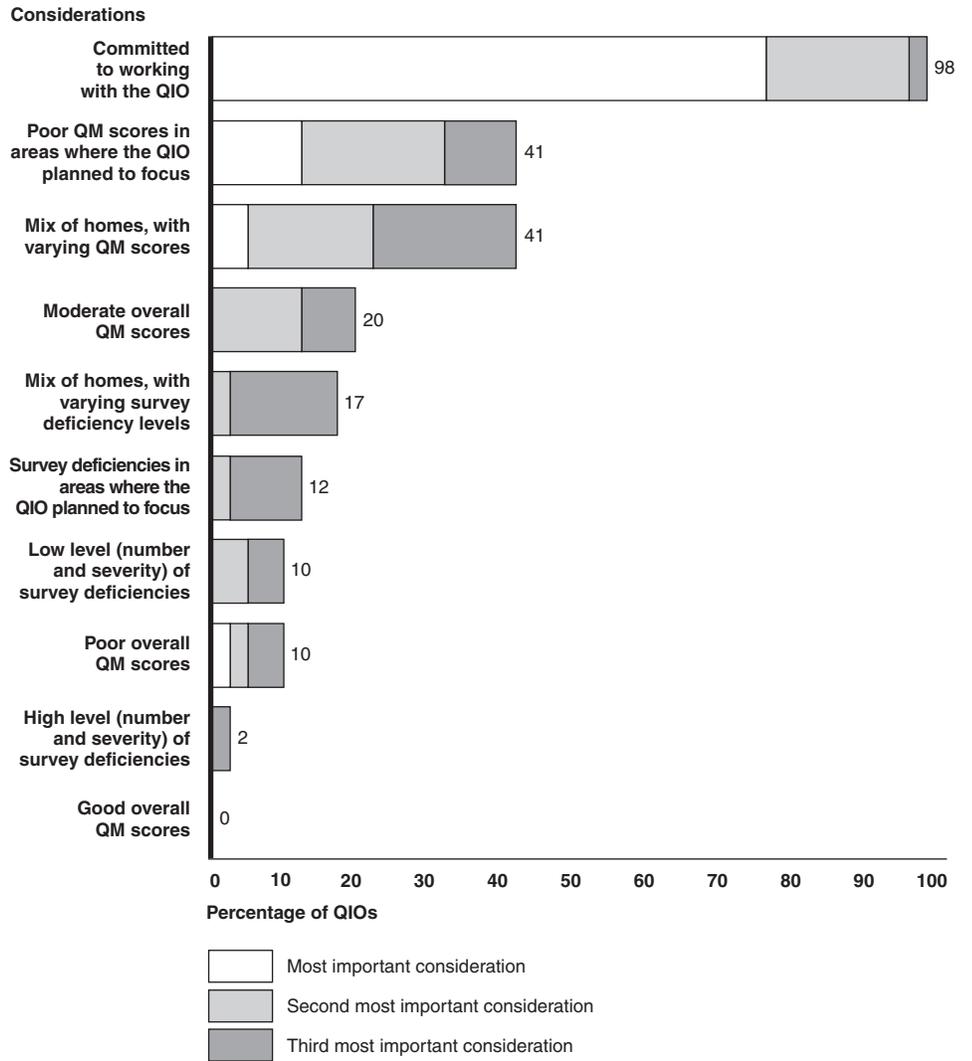
QIOs that responded to our Web-based survey almost uniformly cited homes' commitment to working with them as a key consideration in choosing among the homes that volunteered to be intensive participants. QIOs had wide latitude in choosing among homes because CMS did not specify the characteristics of the homes they should recruit or select, leaving it to the QIO support contractor to provide voluntary guidelines. The QIO support contractor developed guidelines based on input from a variety of sources, including QIOs that worked with nursing homes during the 6th SOW. Issued at the beginning of the 7th SOW, the guidelines emphasized the important role the selected homes would play in the QIOs' contract performance and encouraged QIOs to select homes that demonstrated a willingness and ability to commit time and resources to quality improvement. The QIO support contractor also encouraged QIOs to exclude homes with a high number of survey deficiencies, high management turnover, and QM scores that were too good to improve significantly. With respect to homes' survey histories, the QIO support contractor reasoned that homes with a high number of deficiencies might be more focused on improving their survey results than on committing time and resources to quality improvement projects. For example, the care areas in which a home was cited for deficiencies might not correspond with any of the eight QMs to which CMS limited the QIOs' quality improvement activities (see table 1). In fact, the quality of care area in which homes were most frequently cited for serious deficiencies in surveys in 2006 was the provision of supervision and devices to prevent accidents, which does not have a corresponding QM.⁴²

⁴²Deficiencies are deemed serious if they constitute either actual harm to residents or actual or potential for death/serious injury.

Consistent with the guidelines, 76 percent of the 41 QIOs that reported in our Web-based survey their considerations in selecting homes for the intensive participant group ranked homes' commitment as their primary consideration. Nearly all QIOs ranked commitment among their top three considerations (see fig. 4).⁴³

⁴³Although many QIOs excluded some interested homes from the official list of intensive participants submitted as a contract deliverable, most QIOs (75 percent) reported that they gave these homes more assistance than they did other homes in the state, and 37 percent reported that they gave these homes as much assistance as they gave intensive participants.

Figure 4: QIOs' Considerations in Choosing among Homes That Volunteered for Intensive Assistance in the 7th SOW



Source: GAO survey of QIOs.

Note: Forty-one QIOs reported their considerations in choosing among homes that volunteered for intensive assistance.

Homes' QM scores were also an important consideration for QIOs. QIOs were particularly interested in including homes that had poor QM scores in areas where the QIO planned to focus or in assembling a group of homes that represented a mix of QM scores. With respect to homes' overall QM scores, the QIOs that responded to our survey were more likely

to seek homes with moderate overall scores than homes with poor or good overall scores. Similarly, personnel at most QIOs we contacted gave serious consideration to homes' QM scores, looking for homes that appeared to need help and could demonstrate improvement. For example, personnel at one QIO said that they tended to select homes whose QM scores were worse than the statewide average; personnel at another QIO said that this QIO selected homes with scores it thought could be improved, eliminating homes with either very high or very low scores. Personnel at one QIO acknowledged that some QIOs might "cherry pick" homes in this way in order to satisfy CMS contract requirements but argued that it was not possible for QIOs to predict which homes would improve the most.

QIOs generally gave less consideration to the number of deficiencies homes had on state surveys than to their QM scores. However, the 17 QIOs that ranked survey deficiencies among their top three considerations in our survey were more likely to seek homes with deficiencies in areas where they planned to focus or homes with an overall low level (number and severity) of survey deficiencies than homes with an overall high level. Moreover, of the 33 QIOs that reported in our survey systematically excluding some of the homes that volunteered from the intensive participant group, nearly one-quarter (8) excluded homes with a high number of survey deficiencies. None excluded homes with a low number of survey deficiencies.⁴⁴

Personnel at the QIOs we interviewed offered several reasons for excluding homes with a high number of survey deficiencies from the intensive participant group. Personnel at several QIOs concurred with the QIO support contractor that such homes were likely to be too consumed with correcting survey issues to focus on quality improvement. Personnel at one QIO suggested that the kind of assistance very poor-performing homes need—help improving the basic underlying structures of operation—was not the kind the QIO offered. Personnel at some QIOs said they considered not just the level of deficiencies for which homes were cited on recent surveys but the level over multiple years or the specific

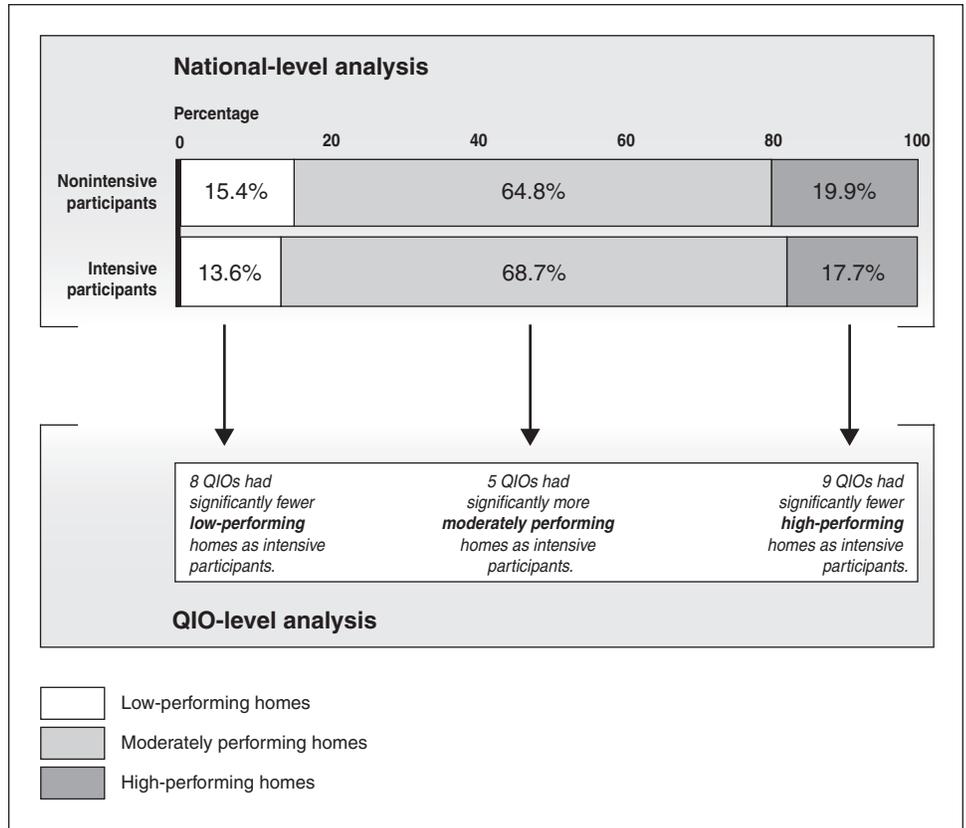
⁴⁴Some QIOs also considered financial status and management stability in making their selections. Among the 51 QIOs surveyed, 8 excluded homes that were struggling financially and 5 excluded homes with recent management turnover. Personnel at one of the QIOs we interviewed explained that the QIO excluded homes with known leadership instability in order to avoid having to perform a great deal of training and retraining as administrators came and went.

categories of deficiencies. For example, personnel at one QIO said that although the QIO excluded homes with long-standing histories of poor performance, it actively recruited homes that had performed poorly only on recent surveys. Personnel at another QIO stated that their concern was to avoid homes with competing priorities. This QIO sought to include homes with deficiencies in the areas it planned to address but to exclude homes with deficiencies in other areas on the assumption that these homes would not benefit from the assistance it planned to offer. Personnel we interviewed at two QIOs said that they worked with some extremely poor-performing homes but did not include them on the official list of intensive participants submitted to CMS; personnel at one of these QIOs explained that they did not want to be held responsible if these homes were unable to improve.

QIOs Did Not Target Intensive Assistance to Low-Performing Homes

Our analysis of homes' state survey histories from 1999 through 2002 indicates that QIOs did not target intensive assistance to homes that had performed poorly in state surveys. Nationwide, the homes in the intensive participant group were less likely than other homes in their state to be low-performing in terms of the number, scope, and severity of deficiencies for which they were cited in surveys during that time frame. As illustrated in figure 5, the intensive participant group included proportionately more homes in the middle of the performance spectrum and proportionately fewer at either end. Although our analysis focused on survey deficiencies rather than QMs, this result is generally consistent with the results of our Web-based survey concerning QIOs' use of QM scores as selection criteria, which showed that QIOs were more likely to select homes with moderate overall scores than homes with poor or good overall scores and to seek a mix of performance levels among homes in the group. However, not knowing the composition of the pool of homes that volunteered for assistance, we cannot determine whether the composition of the intensive participant group—in particular, the disproportionately low number of low-performing homes in the group—was a function of which homes volunteered, which homes the QIOs selected from among the volunteers, or a combination of both factors.

Figure 5: Comparison of Nonintensive and Intensive Participants' Performance on State Surveys



Source: GAO analysis of state survey data.

Note: Homes are categorized as low-, moderately, or high-performing on the basis of the number, scope, and severity of deficiencies for which they were cited, relative to other homes in their state, in three standard state surveys from 1999 through 2002. All differences are statistically significant at p-value < 0.05 level.

On a state-by-state basis, none of the QIOs targeted assistance to low-performing homes by including proportionately more such homes in the intensive participant group. Most QIOs (33 of 51) worked intensively with homes that were generally representative of the range of homes in their state in terms of performance on state surveys from 1999 through 2002. In these states, there was no significant difference in the proportion of high-, moderately, or low-performing homes among intensive participants compared with nonintensive participants. However, 18 QIOs worked intensively with a group that differed significantly from other homes in the state: 8 of these QIOs worked with proportionately fewer low-performing

homes, 5 worked with proportionately more moderately performing homes, and 9 worked with proportionately fewer high-performing homes.⁴⁵

Stakeholders Often Stated QIOs Should Target Intensive Assistance to Low-Performing Homes

Stakeholders we interviewed who expressed an opinion about the homes QIOs should target for intensive assistance—11 of the 16 we interviewed—almost uniformly said that the QIOs should concentrate on low-performing homes.⁴⁶ Survey officials in one state suggested that QIOs should use state survey data to assess homes' need for assistance because these data are often more current than QM data. In their emphasis on low-performing homes, stakeholders echoed the views expressed in the 2006 IOM report, which recommended that QIOs give priority for assistance to providers, including nursing homes, that most need improvement. Other stakeholder suggestions regarding the homes QIOs should target are listed in table 2. Because the QIOs were required to protect the confidentiality of QIO information about nursing homes that agreed to work with them, stakeholders were generally not informed which homes were receiving intensive assistance. One exception was in Iowa, where the QIO obtained consent from the selected homes to reveal their identities.

⁴⁵These numbers do not sum to 18 because 4 of the 5 QIOs that selected proportionately more moderately performing homes also selected proportionately fewer low- or high-performing homes.

⁴⁶Stakeholders included officials of state survey agencies and state nursing home trade associations.

Table 2: Examples of Other Categories of Homes Stakeholders Suggested QIOs Should Include as Intensive Participants

Category of home	Explanation
Special focus facilities	One state survey official suggested that CMS mandate that QIOs work with the low-performing homes selected by state survey agencies for the Special Focus Facility program. ^a
Homes lacking resources for quality improvement	Stakeholders suggested targeting small rural facilities, “stand-alone” facilities that lack the resources of corporate chains, or facilities that are struggling financially.
High-performing homes	Several stakeholders advocated including some high-performing homes. One stakeholder group suggested that such homes could serve as models and share their approaches with homes that were struggling. Another suggested that QIOs may include homes at varying performance levels to avoid stigmatizing the intensive participants as “bad homes.”

Source: GAO analysis.

Note: Eleven of the 16 stakeholders we interviewed expressed an opinion about which homes the QIOs should include as intensive participants.

^aSeventeen (13 percent) of the 129 facilities in the Special Focus Facility program as of January 2005 were also among the QIOs’ 2,471 intensive participants in the 7th SOW.

Several stakeholders said that low-performing homes can improve with assistance. However, one suggested that QIOs might have to adapt their approach—for example, by streamlining their training—to avoid overburdening homes that are struggling with competing demands. Another agreed that low-performing homes can benefit from working with a QIO but added that real improvements in the quality of care in these homes would require attention to staffing, turnover, pay, and recognition for staff. The results of one special study funded by CMS during the time frame of the 7th SOW supported stakeholders’ contention that low-performing homes can improve, although the improvements documented in these homes cannot be definitively attributed to the QIOs.⁴⁷ In this study, known as the Collaborative Focus Facility project, 17 QIOs worked intensively with one to five low-performing homes identified in

⁴⁷One reason that improvements cannot be definitively attributed to the QIOs is that homes may have benefited from other quality improvement efforts as well.

consultation with the state survey agency.⁴⁸ According to a QIO assessment of the project, the participating homes showed improvement in areas related to the assistance provided by the QIO in terms of both the number of serious state survey deficiencies for which they were cited and their QM scores.⁴⁹ CMS officials pointed out that these improvements were hard-won: one-third of the homes that were asked to participate in the Collaborative Focus Facility project refused, and those that did participate required more effort and resources from the QIOs to improve than did other homes assisted by the QIOs.

Overall, CMS has specifically directed only a small share of QIO resources to low-performing homes. In the current contracts (the 8th SOW), CMS required QIOs to provide intensive assistance to some “persistently poor-performing homes” identified in consultation with each state survey agency. However, the number of such homes that the QIOs must serve is small—ranging from one to three, depending on the number of nursing homes in the state—and accounts for less than 10 percent of the homes the QIOs are expected to assist intensively. Less than 17 percent of the 144 persistently poor-performing homes the QIOs selected in consultation with state survey agencies to assist in the 8th SOW were also special focus facilities in 2005 or 2006.

QIOs and stakeholders tended to disagree about whether participation in the program should remain voluntary for all homes. QIO personnel we interviewed who expressed an opinion generally supported voluntary participation on the theory that homes that were forced to participate would probably be less engaged and put forth only minimal effort.

⁴⁸In most cases, the state survey agencies and QIOs issued joint letters of invitation to the homes, and those that agreed to work with the QIOs signed a participation agreement that addressed issues of confidentiality and information sharing. The state survey agencies’ role was generally limited to identifying and helping recruit homes for the project. As with homes in the intensive participant group, there was little overlap between homes in the Collaborative Focus Facility project and homes selected by state survey agencies for the Special Focus Facility program. Although the Puerto Rico QIO participated in the Collaborative Focus Facility project, our analysis focused on QIOs in the 50 states and the District of Columbia.

⁴⁹Over a 1-year period, the average number of survey deficiencies the homes received in five areas (comprehensive assessment, comprehensive care plan, pressure sore prevention/treatment, quality of care, and physical restraints) changed little, going from 2.59 to 2.60, but the average number of serious deficiencies they received in these areas declined from 0.93 to 0.71. The homes’ QM scores for physical restraints and high- and low-risk pressure ulcers improved an average of 31 percent (or 38 percent when the score with the lowest improvement was dropped from the average).

Personnel at some QIOs that opposed mandatory participation suggested that creating incentives for homes to improve their quality of care—for example, through pay for performance—would increase homes’ interest in working with the QIO. In contrast, most of the state survey agency and trade association officials we interviewed who expressed an opinion about the voluntary nature of the QIO program said that some homes should be required to work with the QIO. Officials at one state survey agency pointed out that the low-performing homes that really need assistance rarely seek it; these officials believed that working with the QIO should be mandatory for low-performing homes and voluntary for moderately to high-performing homes. Another state survey agency official recommended that 25 to 40 percent of the homes assisted intensively be chosen from among the lower-performing homes in the state and required to work with the QIO.

QIO Contract Flexibility Resulted in Variation in Assistance Provided to Intensive Participants

The 7th SOW contracts allowed QIOs flexibility in the QMs they focused on and the interventions they used, and while the majority of QIOs selected the same QMs and most used the same interventions to assist homes statewide, the interventions for intensive participants and staffing to accomplish program goals varied. Most QIOs and intensive participants worked on the chronic pain and pressure ulcer QMs, but these were not the QMs that some intensive participants believed matched their greatest quality-of-care challenges. To assist all homes statewide, QIOs generally relied on conferences and the distribution of educational materials. The top three interventions for intensive participants included on-site visits (87 percent), followed by conferences (57 percent), and small group meetings (48 percent). According to nursing home staff we interviewed, turnover and experience levels of the QIO personnel that provided them assistance affected their satisfaction with the program and the extent of their quality improvements.

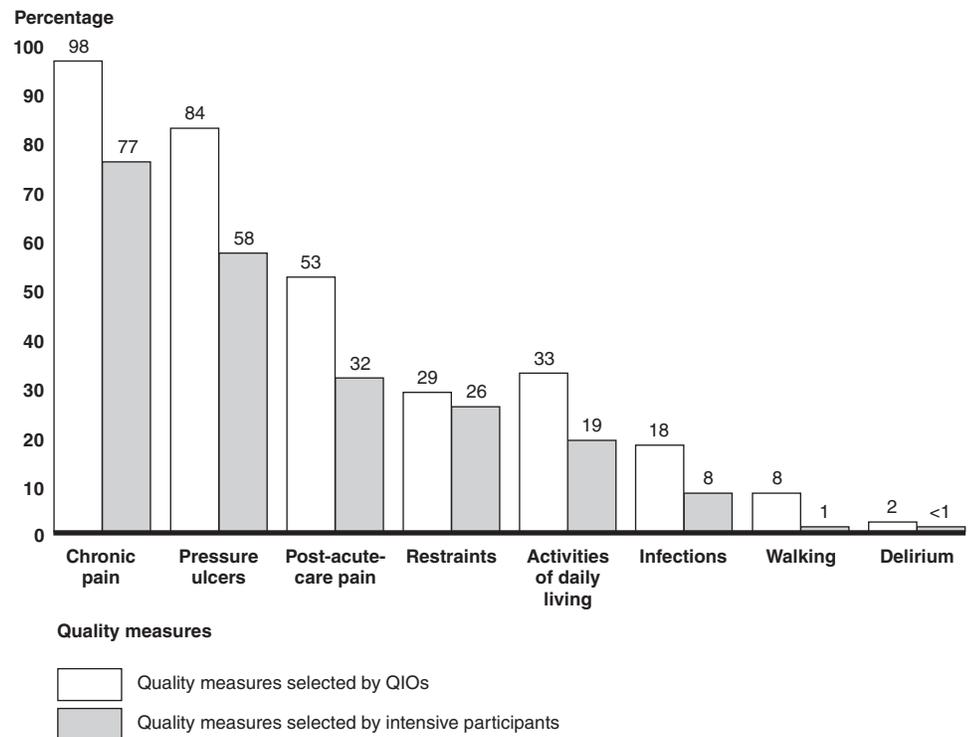
Most Quality Improvement Efforts Focused on Chronic Pain and Pressure Ulcers

Under the terms of the contracts, both QIOs and intensive participants could select QMs to focus on, but most chose to work on two of the same QMs.⁵⁰ While nearly all QIOs chose to work statewide on chronic pain and pressure ulcers, they differed on their selection of additional QMs (see

⁵⁰For their statewide assistance, three-quarters of the QIOs selected three QMs, the minimum number contractually allowed; the remainder selected four QMs. No QIOs selected the maximum of five.

fig. 6). QIO personnel we interviewed told us they based the choice of QMs for their statewide work on input from stakeholders and nursing homes or QM data. For example, some stakeholders told us that specific QMs selected addressed existing long-term care challenges and were ones on which homes in the state ranked below the national average. Personnel from two QIOs said they selected QMs based on input from homes in their state about which QMs the homes were interested in working on, and personnel from several QIOs stated that they selected QMs on which their homes could improve. Personnel from one QIO specifically mentioned that they selected QMs related to the quality of life for nursing home residents.

Figure 6: QMs Selected by QIOs for Statewide Interventions and QMs Selected by Nursing Homes for Intensive Assistance, 7th SOW



Source: GAO analysis of QIO support contractor data.

Most intensive participants worked on a subset of the QMs selected by their QIO—chronic pain and pressure ulcers (see fig. 6). The degree to which intensive participants knew they had a choice of QMs was unclear. Of the 14 intensive participants we interviewed that commented on

whether they had a choice, 9 said that they did. Staff from these homes generally reported having selected QMs related to clinical issues on which they could improve. However, the remaining 5 homes indicated that their QIO selected the QMs on which they received assistance. Most of these 5 homes' staff reported that they would have preferred to work on different QMs from the list of eight that are publicly reported on the CMS Nursing Home Compare Web site or other clinical issues that reflect their greatest quality-of-care challenges.

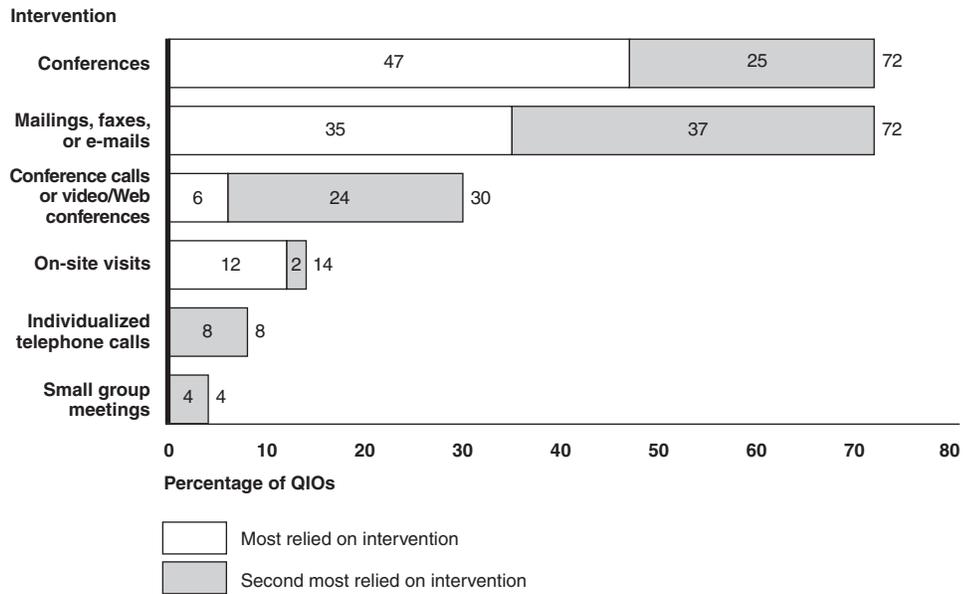
Statewide Interventions Less Variable Than Those for Intensive Participants

The terms of the QIO contract with CMS allowed QIOs to determine the kinds of quality improvement interventions they offered to homes, and those selected by QIOs were consistent with an approach recommended by the QIO support contractor: QIOs generally relied most on conferences and the distribution of educational materials to assist homes statewide and on on-site visits to assist intensive participants. However, there was a greater variety of interventions frequently relied on to assist intensive participants. In general, QIOs reported that the interventions they relied on most were also the most effective for improving the quality of resident care.

Statewide Assistance

Almost three-quarters of the QIOs included conferences among the two interventions they relied on most to provide quality improvement assistance to homes statewide (see fig. 7). These QIOs held an average of nine conferences over the course of the 7th SOW, typically in various cities throughout the state to accommodate homes from different regions. Sixty-eight percent of these QIOs reported that more than half the homes in their state sent staff to at least one conference, and 16 percent of QIOs reported that all or nearly all homes did so. QIO personnel reported holding conferences to educate homes on quality improvement, discuss the relationship between MDS assessments and the QMs, and provide QM-specific clinical information or best practices. Some conferences included presentations by state or national experts.

Figure 7: Statewide Interventions Most Relied on by QIOs, 7th SOW



Source: GAO survey of QIOs.

Almost three-quarters of QIOs also ranked the distribution of educational materials by mail, fax, or e-mail among their top two statewide interventions. Thirty-two percent of these QIOs sent materials four or fewer times per year, whereas 27 percent sent materials 12 or more times per year to all or nearly all homes in the state. For the QIOs we interviewed, these materials included newsletters, QM-specific tools or clinical information related to the QMs, and QM data progress reports for the home or state, overall.

Almost one-third of the QIOs (31 percent) reported that the type or intensity of interventions they used to assist homes statewide changed over the course of the 7th SOW.⁵¹ For example, two QIOs reported that they concentrated much of their statewide efforts into the first half of the 3-year period; one QIO specifically reported doing so in the interest of ensuring that any improvements in QMs were reflected in its evaluation scores, which, as specified by the contract, were calculated near the mid-

⁵¹The intensity of interventions varies by type of intervention (for example, on-site versus telephone calls) and with the frequency of use.

point of the contract cycle.⁵² In contrast, five other QIOs reported that they increased the intensity of their statewide work over time, in some cases concentrating on homes whose performance was lagging.

For the 8th SOW, CMS has focused resources on assistance to intensive participants by eliminating expectations for improvements in QMs statewide. However, the contracts still contain statewide elements, including a requirement to promote QM target-setting.

Intensive Assistance

Fifty-one percent of QIOs ranked on-site visits as their most relied on intervention with intensive participants and 87 percent ranked it among their top three interventions (see fig. 8).⁵³ Both the number of visits and the time spent at sites varied considerably. The median number of visits was 5 but ranged from 1 to 20.⁵⁴ Sixty-eight percent of QIOs that included on-site visits among their top three interventions spent an average of 1 to 2 hours at sites each time they visited, while 20 percent spent 3 to 4 hours. QIOs that ranked on-site visits as their number one intervention made more and longer visits to intensive participants than did QIOs that ranked them lower. When surveyed about a typical on-site visit, the majority of QIO respondents reported that they generally reviewed the homes' QM data, provided education or best practices, or both. Approximately one-third of QIOs that conducted site visits indicated that they had discussions with the home about their systems or processes for care, homework assignments, or quality improvement activities.⁵⁵ Some QIOs (26 percent)

⁵²In its 2006 report on QIOs, the IOM recommended that Congress permit extension of the contract from 3 to 5 years to allow for measurement, refinement, and evaluation of technical assistance efforts.

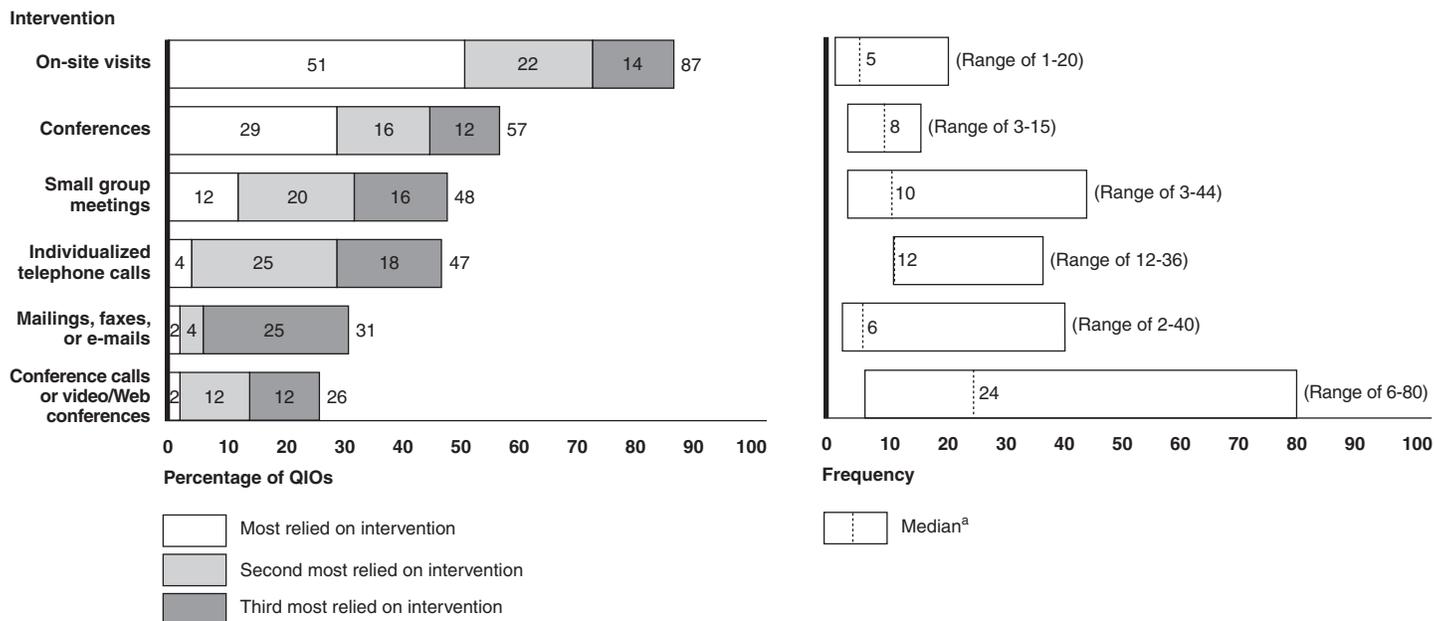
⁵³Because the largest component of the QIOs' contract evaluation related to the intensive participants, we asked QIOs to rank and provide detailed information on a greater number of interventions for intensive participants than for statewide participants.

⁵⁴The median number of times an intervention was provided is the midpoint of all the times that an intervention was provided, as reported by QIOs. Half the QIOs reported a number above the median and half reported a number below.

⁵⁵Nearly all QIOs (94 percent) also reported asking intensive participants to complete homework assignments on their own. These assignments most frequently involved conducting self audits, comparing existing policies and procedures with checklists provided by the QIO, and developing new practice protocols related to selected QMs. For example, two homes told us they were given cause-and-effect analysis exercises to complete to identify possible causes of and solutions to a problem. Staff from another home told us that QIO personnel asked them to conduct a mock survey to prepare for their next standard survey.

reported that they conducted team-building exercises with the staff when on site.

Figure 8: Intensive Interventions Most Relied on by QIOs and Frequency of Interventions (Range and Median Number) during the 7th SOW



Source: GAO survey of QIOs.

^aThe median number of times an intervention was provided is the midpoint of all the times that an intervention was provided in the 7th SOW, as reported by QIOs.

QIOs varied in the interventions they used in addition to on-site visits, with conferences, small group meetings emphasizing peer-to-peer learning, and telephone calls being the three others most commonly used. QIOs that included conferences among their three most relied on interventions typically held between 3 and 10 during the 7th SOW, but as with site visits, some variation existed. After conferences, QIOs were most likely to rely on small group meetings and telephone calls with individual homes. Nearly half of the QIOs ranked these two interventions among their three most relied on, but few ranked them highest. The number of homes that attended small group meetings varied. An average of 6 to 10 homes was most common, but one-fifth of QIOs reported having an average of 20 or more homes represented at each meeting. As for telephone calls, the vast majority of QIOs (92 percent) that ranked these calls among their three most relied on interventions called all or nearly all of their intensive participants, typically on a monthly basis.

Our interviews with QIOs and intensive participant homes suggested that the small group meetings they held generally followed a similar format, while telephone calls were used for a variety of purposes. For example, personnel from several QIOs and intensive participant homes told us that their small group meetings generally included a formal presentation on the QMs or related best practices, as well as a time for less formal information sharing and peer-to-peer learning among the attendees. Participants shared stories about their successes and challenges conducting quality improvement. Personnel from a number of QIOs told us they used telephone calls to follow up after visits or meetings, discuss the homes' progress on quality improvement, and to decide on next steps.

Almost two-thirds of QIOs indicated that the type or intensity of interventions for intensive participants varied over time. Of these QIOs, 36 percent reduced the intensity of their interventions (substituting small group meetings or telephone calls for on-site visits), while 33 percent did the reverse (in some cases increasing the frequency of on-site visits or substituting small group meetings for conferences to increase participation). For example, personnel from a few QIOs told us that while they initially relied on on-site visits to begin the quality improvement process, they came to rely more on telephone calls or on small group meetings where intensive participants could share their success stories or ways to overcome barriers to quality improvement. Seventy-nine percent of QIOs surveyed varied their interventions based on the needs of intensive participants. Thus, personnel from three QIOs told us they realized that some homes did not need frequent on-site visits, while others needed more. The two specific needs that QIOs cited most as having precipitated changes in their interventions were nursing home staffing changes and turnover (23 percent) and poorer performance by some homes relative to others (15 percent). A few QIOs also noted that interventions varied by the preferences or levels of readiness and participation of the homes with which they were working.

QIO and Nursing Home Perspectives on the Interventions

Most QIOs we surveyed deemed conferences the most effective statewide intervention and on-site visits the most effective intensive intervention; intensive participant homes we interviewed also found these interventions valuable. For homes statewide, most QIOs (54 percent) reported that conferences were their most effective intervention, followed by distribution of educational materials and on-site visits. Of the one-quarter of QIOs that reported they would change their statewide approach, the largest proportion (46 percent) would make conferences their primary intervention. Staff from several nursing homes we interviewed tended to concur that conferences were valuable aspects of the program because

conferences included expert presenters, energized or motivated attendees, and were free.

For intensive participants, most QIOs (63 percent) deemed on-site visits their most effective intervention, followed by conferences and small group meetings. Of the 15 QIOs that said they would change their approach with these homes, most (60 percent) would make on-site visits their primary intervention, while fewer would rely on small group meetings, conferences, and other interventions. One QIO began conducting on-site visits and small group meetings when it became apparent that telephone calls were less productive than had been anticipated because of the difficulty of getting the right staff on the telephone at the right time, the lack of speaker phones at many homes, and the lack of staff engagement on the phone. Staff from a number of nursing homes we interviewed agreed that visits by QIO personnel were helpful. Some homes indicated that having someone from the QIO visit the home maximized the number of staff that could take advantage of the quality improvement training offered. Furthermore, the on-site visits were motivating and kept staff on track with quality improvement efforts. Regarding small group meetings, staff we interviewed from a few homes stated that meeting with staff from other homes helped validate their own efforts or facilitated the sharing of materials and experiences. Staff from one nursing home specifically reported that they were disappointed not to have formally participated in small group meetings with other facilities in the state.

Homes also found particular types of assistance less helpful. Some homes' staff reported that they did not feel they had the time or the staff necessary to complete some of the homework assignments expected of them, such as conducting chart reviews. Staff at some homes stated that the QIO provided quality improvement information with which they were already familiar.

QIO Staffing and Turnover Influenced Intensive Participants' Satisfaction with Program

Our interviews with nursing home staff who worked intensively with the QIOs indicated that homes' satisfaction with the program was influenced by the training and experience of the primary QIO personnel who served as their principal contact with the QIOs, as well as by turnover among these individuals during the course of the 7th SOW.⁵⁶

When a home's principal contact with the QIO was a nurse or someone with long-term care or quality improvement experience, nursing home staff tended to report that this person possessed the knowledge and skills necessary to help them improve the quality of care in their home. Interviewees also spoke appreciatively of QIO personnel who were knowledgeable, motivating, and kept them on track with their efforts. However, when the QIO principal contact lacked these qualifications or characteristics, he or she was perceived as unable to effectively address clinical topics with staff. Staff at one home said explicitly that working with an experienced nurse, instead of a social worker who seemed to lack knowledge of long-term care, would have led to greater improvement in clinical quality.

The extent to which QIO primary personnel had the training or experience that homes considered important varied. More than half (58 percent) of the primary QIO personnel who worked with nursing homes during the 7th SOW were trained in nursing, and 42 percent held an advanced degree. Nationwide, 27 percent of the primary personnel who worked with nursing homes had less than 1 year of long-term care experience, while 30 percent had more than 10 years of such experience.⁵⁷ Just over half of primary QIO personnel (54 percent) working with nursing homes had 4 or fewer years of quality improvement experience. Nine percent of QIO personnel had

⁵⁶We defined primary personnel as individuals who devoted more than 20 percent of a full-time work week to the nursing home component of the contract. Some primary QIO personnel served as the principal contacts, providing quality improvement assistance to homes. According to our survey, 78 percent of QIOs also used outside experts (consultants or subcontractors) for their quality improvement efforts. The majority of QIOs reported using these experts to provide presentations or training at conferences, participate in conference calls, and develop or review materials. QIOs personnel we interviewed told us they also used outside experts to train their primary personnel or to provide technical assistance to intensive participant homes.

⁵⁷Among individual QIOs, the extent of long-term care experience spanned a wide spectrum. At five QIOs, 75 percent or more of the primary personnel who worked with nursing homes had less than 1 year of long-term care experience, while at two QIOs, all of the primary personnel who worked with nursing homes had more than 10 years' experience.

more than 10 years' experience in both long-term care and quality improvement. Few of the personnel working with nursing homes during the 7th SOW gained any of their experience working for the QIO during the 6th SOW because there was little overlap in personnel across the two periods.

Our interviews with intensive participants suggested that turnover among primary QIO personnel lowered nursing homes' satisfaction with the program. Our survey revealed that turnover was particularly high at some QIOs. At 24 QIOs, 25 percent or more of primary personnel who worked with nursing homes did so for less than half of the 36-month contract, and at 6 QIOs, the proportion was 50 percent or more. When a nursing home's principal contact with a QIO changed frequently, nursing home staff we interviewed reported that they received inconsistent assistance that was disruptive to their efforts to improve quality of care. For example, one nursing home we visited had four different principal contacts over the course of the 7th SOW and found this to be frustrating because, just as they were establishing a relationship with a contact, the contact would leave. Staff at another home complained that their interaction with QIO primary personnel turned out not to be the learning experience that the staff thought it would be.

Staffing levels for the nursing home component also varied among QIOs. As would be expected, given the wide variation in the number of nursing homes per state, the number of full-time-equivalent (FTE) staff working with nursing homes varied across the QIOs, ranging from 0.50 to 12. However, the ratio of QIO staff FTEs to intensive participant homes also showed significant variation. On average, the ratio was about 1 to 14; but for at least 9 QIOs, the ratio of staff FTEs to homes was 1 to 10 or fewer, and for at least 8 QIOs, the ratio was 1 to 18 or more.

QIOs' Impact on Quality Is Not Clear, but Staff at Homes We Contacted Attributed Some Improvements to QIOs

Although the QIOs' impact on the quality of nursing home care cannot be determined from available data, staff we interviewed at most nursing homes attributed some improvements in the quality of resident care to their work with the QIOs. Nursing homes' QM scores generally improved enough for the QIOs to surpass by a wide margin the modest contract performance targets set by CMS; however, the overall impact of the QIOs on the quality of nursing home care cannot be determined from these data because of the shortcomings of the QMs as measures of nursing home quality and because confounding factors make it difficult to attribute quality improvements solely to the QIOs. Multiple long-term care professionals we interviewed indicated that QMs should not be used in

isolation to measure quality improvement, but combined with other indicators, such as state survey data. Moreover, the effectiveness of the individual interventions QIOs used to assist homes also cannot be evaluated with the available data. CMS planned to enhance evaluation of the program during the 8th SOW, but a 2005 determination by HHS's Office of General Counsel that the QIO program regulations prohibit QIOs from providing to CMS the identities of the homes they are assisting has hampered the agency's efforts to collect the necessary data. Although the impact of the QIOs on the quality of nursing home care is not known, over two-thirds of the 32 nursing homes we interviewed attributed some improvements in care to their work with the QIOs.

All QIOs Met Modest Targets for QM Improvement, but the Impact of the QIOs on the Quality of Nursing Home Care Cannot Be Determined

Although all of the QIOs met the modest targets CMS set for QM improvement among homes both statewide and in the intensive participant group, the impact of the QIOs on the quality of nursing home care cannot be determined because of the limitations of the QMs and because improvements cannot be definitively attributed to the QIOs. The effectiveness of the specific interventions used by the QIOs to assist homes also cannot be evaluated with the available data.

All QIOs Met CMS's Modest Targets for Improvement in Nursing Home QMs

All QIOs met the CMS performance targets for the nursing home component of the 7th SOW. In addition to receiving an overall passing score for this component, nearly all QIOs surpassed expectations for each of the three elements that contributed to the overall score: provider satisfaction, improvement in QM scores among intensive participants, and improvement in QM scores among homes statewide. In fact, about two-thirds of the QIOs achieved at least five times the expected 8 percent improvement among intensive participants, and nearly half achieved at least twice the expected 8 percent improvement statewide.⁵⁸

CMS officials stated that the targets set for the nursing home component of the contract were purposely modest. Because the 7th SOW marked the first time all QIOs were required to work with nursing homes on quality improvement, and little data existed to predict how much improvement

⁵⁸The improvement, or relative change, in a home's QM scores is calculated by subtracting its score at remeasurement from its score at baseline and dividing by its score at baseline. For example, if the number of residents with chronic pain in a 100-bed home decreased from 20 to 12—which translates to a change in scores from 0.20 to 0.12—the improvement in the home's pain QM would be 40 percent $((0.20-0.12)/0.20)$.

CMS's Use of QMs to Evaluate
QIO Performance Is
Problematic

could be expected, CMS deliberately designed performance criteria to limit QIOs' chances of failing. For example, expectations for improvements in QM scores were set no higher for intensive participants than for homes statewide. In addition, CMS modified the evaluation plan so that if an intensive participant worked on more than one QM, the QM that improved least was dropped before the home's average improvement was calculated. CMS officials told us that, based in large part on QIOs' performance in the 7th SOW, the agency raised its expectations for the 8th SOW. For example, QIOs are required to work with most intensive participants on four specified QMs and to achieve an improvement rate of 15 to 60 percent, depending on the QM and the homes' baseline scores. In addition, CMS will no longer drop the QM that improved least when calculating homes' average improvement.⁵⁹

Long-term care experts we interviewed generally agreed that CMS's use of QMs to evaluate nursing home quality—and by extension, QIOs' performance—is problematic because of unresolved issues related to the QMs and the MDS data used to calculate them.

QMs. As we reported in 2002, the validity of the QMs CMS proposed to publicly report in November 2002 was unclear.⁶⁰ Although the validation study commissioned by CMS found that most of the publicly reported QMs were valid and reflected the quality of care delivered by facilities, long-term care experts have criticized the study on several grounds. For example, a 2005 report concluded that (1) the statistical criteria for the validity assessments were not stringent and (2) the researchers did not attempt to determine whether QMs were associated with quality of care at the resident level.⁶¹ As a result, it is not clear whether a resident who triggers a QM (e.g., is assessed as having his or her pain managed

⁵⁹The four QMs specified in the contract are pressure ulcers among high-risk patients, restraints, depression management, and chronic pain management. With most intensive participants, QIOs are expected to work on all four QMs and achieve a relative improvement rate of 15 to 60 percent. With the small group of persistently poor-performing homes QIOs are now required to assist, they are expected to work on two QMs (pressure ulcers among high-risk patients and restraints) and achieve an improvement rate of 10 percent.

⁶⁰GAO-03-187.

⁶¹Greg Arling and others, "Future Development of Nursing Home Quality Indicators," *The Gerontologist*, vol. 45, no. 2 (2005).

inadequately) is actually receiving poor care.⁶² The lack of correlation among the QMs—a home may score well on some QMs and poorly on others—also calls into question their validity as measures of overall quality. Since 2002, CMS has removed or replaced 5 of the original 10 QMs—including some of those on which the QIOs were evaluated during the 7th SOW—to address limitations in the QMs, such as reliability and measurement problems. (See app. II for a list of the QMs as of November 2002 and February 2007).

Risk adjustment also impacts the validity of QMs. There is general recognition that some QMs should be adjusted to account for the characteristics of residents. However, there is disagreement about which QMs to adjust, what risk factors should be used, or how the adjustment should be made. For example, one expert we interviewed suggested that in many cases pressure ulcers start in hospitals; the pressure ulcer QM does not account for the origin of ulcers. Another expert highlighted the difficulty of making an appropriate adjustment—noting, for example, that improperly risk-adjusting the pressure ulcer QM could mask poor care that contributed to the development of ulcers.

MDS. We have also previously reported concerns about MDS reliability—that is, the consistency with which homes conduct and code the assessments used to calculate the QMs.⁶³ CMS awarded a contract for an MDS accuracy review program in 2001 but revamped the program in 2005, near the end of the QIOs' 7th SOW, acknowledging weaknesses—mainly its reliance on off-site, rather than on-site, accuracy and verification reviews—that we had previously identified.⁶⁴ Some states that sponsor on-site MDS accuracy reviews continue to report troubling rates of errors in the data. For example, officials of Iowa's program reported an average MDS error rate of approximately 24 percent in 2005.

Our interviews with long-term care experts and nursing home staff suggested that the chronic pain QM—which was selected as a focus of quality improvement work by many QIOs and intensive participant nursing homes—may be particularly vulnerable to error in the underlying MDS

⁶²A resident who triggers a QM is included in both the numerator and denominator when a facility's QM score is calculated.

⁶³[GAO-02-279](#) and [GAO-03-187](#).

⁶⁴In April 2005, CMS ended work under its data assessment and verification contract but signed a new contract in September 2005 that focused on on-site reviews of MDS accuracy.

data. Possible sources of error are systematic differences in the extent to which facilities identify and assess residents in pain and misunderstandings about how to accurately code MDS questions specific to pain. For example, staff from two nursing homes told us that their pain management QM scores improved after staff realized that they had been mistakenly coding residents as having pain even though their pain was successfully managed. Moreover, experts we interviewed noted that higher-quality homes may have worse pain QM scores because they do a better job of identifying and reporting pain in residents.

The use of MDS data to measure the quality of care in nursing homes is also problematic because the MDS was not designed as a quality measurement tool and does not reflect advances in clinical practice. CMS is updating the MDS now to address these limitations. For example, instead of asking homes to classify the severity of a pressure ulcer on the basis of a four-stage system, the draft MDS now under review includes a measurement tool intended to more accurately classify the severity of a pressure ulcer.⁶⁵ In addition, facilities are asked to indicate whether the pressure ulcer developed at the facility or during a hospitalization. CMS does not yet have an official release date for the revised MDS but anticipates that all validation and reliability testing will be completed by December 2007.

Other Measures of Quality. Multiple long-term care professionals we interviewed, including stakeholders and experts on quality measurement, recommended both that the QMs undergo continued refinement and that they not be used in isolation to assess the quality of care in nursing homes. They suggested a number of other sources of information as alternatives or complements to QMs for measuring quality. For example, a representative of the National Quality Forum (NQF), a group with which CMS contracted to provide recommendations on quality measures for public reporting, stated that experts do not consider the QMs sufficient in themselves to rate homes and that the other quality markers—such as perceptions of care by family members, residents, and staff; state survey data; and resident complaints—also provide useful information about quality of care. Other long-term care professionals we interviewed

⁶⁵Stages of pressure ulcer formation are I—skin of involved area is reddened, II—upper layer of skin is involved and blistered or abraded, III—skin has an open sore and involves all layers of skin down to underlying connective tissue, IV—tissue surrounding the sore has died, exposing muscle and bone.

Influence of Other Factors on
Nursing Home Quality Makes It
Difficult to Evaluate QIOs'
Impact

suggested these and other measures, including nursing home staffing levels and staff turnover and retention rates.

Factors such as the existence of other quality improvement efforts make it difficult to evaluate QIOs' work with nursing homes and attribute quality improvement solely to QIOs. In an assessment of the QIO program during the 7th SOW, CMS and QIO officials acknowledged this difficulty. The assessment found that intensive participants improved more than nonintensive participants on all five QMs studied, and for each QM, intensive participants that worked on the QM improved more than intensive participants that did not.⁶⁶ However, the authors noted that these results could not be definitively attributed to the efforts of the QIOs because improvements may have been influenced by a variety of factors, including preexisting differences between intensive participants and nonintensive participants;⁶⁷ public reporting of the QMs, which may have focused homes' attention on improving these measures; and other quality improvement efforts to which homes may have been exposed. As noted earlier in this report, these other efforts included, but were not necessarily limited to, initiatives sponsored by state governments, nursing home trade associations, and CMS. While these other efforts varied considerably in the intensity of technical assistance offered—ranging from a trade association-sponsored program that homes characterized as essentially signing a quality improvement pledge, to state-sponsored programs that involved on-site visits by experienced long-term care nurses who provided best-practice guidelines, educational materials, and clinical tools—the fact that the efforts were present made it impossible to attribute quality improvements solely to the QIOs.

In its 2006 report on all aspects of the QIO program, IOM highlighted similar shortcomings in previous studies of the QIO program and called for more systematic and rigorous evaluations. IOM concluded that although the QIOs may have contributed to improvements in the quality of care, the existing evidence was inadequate to determine the extent of their contribution. In its response to the IOM study, CMS acknowledged the

⁶⁶William Rollow and others, "Assessment of the Medicare Quality Improvement Organization Program," *Annals of Internal Medicine*, vol. 145, no. 5 (2006).

⁶⁷Because homes must volunteer and be selected by the QIOs to receive intensive assistance, intensive participants may differ from nonintensive participants in ways that affect their capacity to improve their QM scores, such as differences in motivation and commitment, available resources, and competing priorities.

CMS Data Are Too Limited to Evaluate Effectiveness of Specific QIO Interventions

need to strengthen its methods of evaluating the program and outlined plans to convene an evaluation expert advisory panel to make recommendations on the framework for the next contracts (the 9th SOW, which will begin in 2008). CMS also stated that it will collect information during the 8th SOW that will allow it to control for differences in motivation between intensive and nonintensive participants but did not specify the nature of this information.⁶⁸ Subsequently, HHS's Office of General Counsel determined that QIO program regulations prohibited QIOs from providing to CMS the identities of intensive participants.⁶⁹ CMS officials acknowledged that this prohibition posed a considerable challenge to their evaluation plans and said that as a short-term solution the agency might contract with one of the QIOs to evaluate the program, with the possible stipulation that the findings be verified by an independent auditor.

CMS collected little information about the specific interventions QIOs used to assist nursing homes and acknowledged that the information it did have was not sufficiently comprehensive or consistent to be used to evaluate the interventions' effectiveness. In general, CMS's oversight of QIOs' work on the nursing home component consisted of ensuring that the QIOs produced the reports and deliverables specified in the contracts and appeared on track to meet performance targets.

CMS's primary source of data about QIOs' interventions was the monthly activity reports the QIOs were required to submit through the Program Activity Reporting Tool (PARTner). In these reports, QIOs were to document the specific interventions they provided to each home, using such activity codes as "on-site support" and "stand-alone workshops on quality improvement." However, with only seven activity codes for QIOs to choose from, the level of detail in these reports was low. For example, the

⁶⁸At a meeting on October 31, 2006, of the Technical Expert Panel convened by the contractor tasked to design an evaluation of the QIO program for the Office of the Assistant Secretary for Planning and Evaluation of HHS, panel members underscored the difficulty of controlling for a subjective condition such as motivation to improve the quality of care and noted the potential for biased assessments of the impact of the QIOs if differences in motivation are not accounted for appropriately.

⁶⁹According to CMS guidance, the names of participants in collaborative quality improvement projects constitute quality review study information. See QIO Manual, §16005 (Rev. 07-11-03). Federal regulations specify that quality review study information revealing the identities of practitioners and institutions must be disclosed to CMS "on site" or at the QIOs' place of operation. See 42 C.F.R. §480.140 (2005). That restriction does not apply to disclosures to certain other federal agencies, such as HHS Office of Inspector General or GAO. See 42 C.F.R. §480.140(b)(2005).

same code would be used for a full-day visit as for an hour visit. Moreover, because QIOs were not expected to enter any code more than once per month for a home, a code for on-site support could indicate a single visit or multiple visits. The system also captured no information about the content of visits or other interventions. From the perspective of the QIOs, the system was of limited use: More than half of the 52 QIOs surveyed by IOM rated PARTner fair or poor in terms of both value and ease of use. Staff at one QIO we interviewed reported using tracking systems they developed themselves, rather than PARTner, to monitor their work.

CMS regional offices and the nursing home satisfaction survey gathered some additional information about the interventions used by QIOs. The CMS regional offices gathered information through telephone calls and visits to the QIOs and by participating in quarterly conference calls during which QIOs and CMS regional and central offices discussed issues related to the nursing home component of the contract. The regional office staff also reviewed information entered into the PARTner data system by QIOs, but they focused their evaluations on QIO contract compliance and not on the effectiveness of specific interventions because—as some regional staff emphasized—the contracts were performance-based, and therefore it was not their place to “micromanage” the QIOs or to advocate for or against specific interventions. Feedback from nursing homes was gathered through the nursing home satisfaction survey, conducted after the midpoint of the contract cycle by a contractor for CMS.⁷⁰ The survey collected information about the frequency of, and homes’ satisfaction with, a range of interventions, including on-site visits, training workshops, one-on-one telephone calls, conference calls, one-to-one e-mails, and broadcast e-mails. However, the survey collected no information about the content of these interventions or the aspects that contributed to providers’ satisfaction or dissatisfaction.

In its 2006 report on the QIO program, IOM emphasized the need for CMS to gather more information about specific interventions and noted that CMS was uniquely positioned to determine which interventions lead to high levels of quality improvement. The agency responded that it will collect information during the 8th SOW to better explore the relationship between the intensity of assistance provided by the QIO and the level of improvement, but did not specify the type of information it will collect. As

⁷⁰For the survey conducted during the 7th SOW, the response rate for nursing homes was 95 percent.

of March 2007, CMS had not yet implemented a revamped PARTner system. In addition, the agency cancelled its plans to conduct an initial survey of nursing homes early in the contract period and now plans to conduct only one, later in the contract period. CMS officials explained that the delay and cancellation were due at least in part to the determination by HHS's Office of General Counsel that QIOs could not provide to CMS the identities of intensive participants to CMS.

Homes That Received Intensive Assistance Generally Attributed Some Improvements in Quality of Care to Work with QIOs

Although the impact of the QIOs on the overall quality of nursing home care cannot be determined, staff we interviewed at over two-thirds of the 32 nursing homes stated that they improved the care delivered to residents as a result of working intensively with the QIOs. Staff at 23 of the 32 homes told us that they implemented new, or made changes to existing, policies and procedures related to pain or pressure ulcers. Of the 23 nursing homes, staff from 21 stated that they changed the way they addressed resident pain. In general, these changes involved implementing pain scales or new assessment forms. Staff at some facilities noted that working with the QIO heightened staff awareness of resident pain, including awareness of cultural differences in the expression of pain. Staff at 8 of the 23 nursing homes stated that they changed the way they addressed pressure ulcers. In general, these 8 homes implemented new assessment tools, changed assessment plans, or revised facility policies using materials provided by the QIO. (Table 3 provides examples of resident care improvements related to pain assessment and treatment and pressure ulcers.) Staff at 13 of the 32 nursing homes stated that the changes they made as a result of working with the QIOs were sustainable, but staff from some nursing homes noted that staffing turnover at their facilities could affect sustainability.

Table 3: Examples of Resident Care Improvements Made by Homes as a Result of Intensive Assistance Provided by QIOs, 7th SOW

Care area	Example
Pain	Had nurses evaluate acute pain management at end of each shift with nurse aide involvement
	Used interventions other than medications, such as massage, compresses, and repositioning
	Recorded signs of pain when providing care for wounds such as pressure ulcers
	Began using or resumed using pain scales to assess resident pain
	Implemented pain policy that addresses both cognitively intact residents and residents who have dementia or are nonverbal
Pressure ulcers	Increased skin assessments to four times a week and had nurse aides document changes on a daily basis
	Established a wound care team
	Used a tracking tool to measure depth and width of pressure ulcers
	Conducted skin checks when a resident returned to the facility, such as after a hospitalization

Source: GAO interviews with staff from nursing homes assisted intensively by the QIOs.

Of the 32 nursing homes we contacted, staff from 4 specifically stated that working with the QIO did not change their quality of care. For example, staff from one home stated that the QIO did not offer their facility any new or helpful information and did not offer feedback on how the facility’s processes could improve. Staff from another home reported that the information provided by the QIO was on techniques their facility had already implemented. Staff at a third home noted that while the QIO was a good resource, the home could have done as much on its own, without assistance from the QIO. Staff at three facilities, none of which reported making any policy or procedural changes, said the facilities experienced worse survey results while working with their QIO; staff from two of the three reported being cited for quality deficiencies in the specific areas they had been addressing with the QIO. Staff at one of these facilities believed they were cited because their work with the QIO had made the surveyor more aware of the facility’s problems in this area.

Conclusions

Although it is difficult to evaluate the impact of QIO assistance, the QIO program does have the potential to help improve the quality of nursing home care. CMS program improvements for the 8th SOW, such as the agency’s decision to focus resources on intensive rather than statewide assistance and its plans to improve evaluation, are positive steps that

could result in more effective use of available funds and provide more insight into the program's impact. Our evaluation of assistance provided during the 7th SOW, however, raised two major questions about the future focus, oversight, and evaluation of the QIO program, which we address below.

Given the available resources, which homes and quality-of-care areas should CMS direct QIOs to target for intensive assistance?

We found that QIOs generally did not target intensive assistance to homes that performed poorly in state surveys, partly because of concerns about the willingness and ability of such homes to simultaneously focus on quality improvement and cooperate with the QIOs. However, the Collaborative Focus Facility project during the 7th SOW demonstrated that low-performing homes could improve their survey results and QM scores; subsequently, CMS required that during the 8th SOW each QIO work with up to three such homes—about 10 percent of the total number that QIOs are expected to assist intensively. Stakeholders we interviewed believed that even more emphasis should be placed on assisting low-performing homes. We found that there was little overlap between homes that participated in the QIO Collaborative Focus Facility project and in CMS's Special Focus Facility program, which is a program involving about 130 nursing homes nationwide that, on the basis of their survey results, receive increased scrutiny and enforcement by state survey agencies. The limited overlap suggests that each state has more than three low-performing facilities that could benefit from QIO assistance.

Targeting assistance to low-performing homes could pose challenges given the voluntary nature of the program—homes must agree to work with a QIO. QIOs maintain that voluntary participation is critical to ensuring homes' commitment to the program. However, the risk in this approach is that some of the homes that need help most will not get it. Indeed, in the Collaborative Focus Facility project, some of the low-performing homes that were asked to participate refused QIO assistance. In addition, QIOs expended more resources working to improve these low-performing homes than were required to assist better-performing homes. Thus, increasing the number of low-performing homes QIOs are required to assist above the small number mandated for the 8th SOW might necessitate decreasing the total number of homes assisted. However, existing resources might be maximized if QIOs worked with each home only on the quality-of-care areas that pose particular challenges for that home.

Could interim steps be taken to improve oversight and evaluation of QIOs' work with nursing homes before the contracting cycle that begins in August 2008? Currently, CMS collects data primarily on QIO outcomes—specifically, changes in QM scores—and costs. CMS needs more detailed data, particularly about the type and intensity of interventions used to assist nursing homes, to improve its oversight and evaluation of the QIO program. Without such data, CMS cannot hold QIOs fully accountable for their performance under their contract with CMS. Some evaluation activities are now scaled back or on hold because HHS determined early in the 8th SOW that program regulations prohibited the QIOs from providing to CMS the identities of the intensive participants. Such a firewall presents a major impediment to improved oversight and evaluation of the QIO program and prevented CMS from implementing interim changes it planned to make. For example, for the 7th SOW, CMS contracted for one nursing home satisfaction survey to be conducted near the end of the contract period—too late to be of use in interim monitoring of the QIOs' performance. For the 8th SOW, CMS had planned to contract for two surveys but was forced to cancel the one planned for early in the contract period because it was unable to provide the names of intensive participants to its survey contractor. Moreover, the lack of these data would preclude CMS from independently verifying QIO compliance with such contract requirements as the geographic dispersion of intensive participants in each state.

CMS evaluated QIOs' work with nursing homes primarily on the basis of changes in QM scores; given the weaknesses of QM data, the current reliance on these data appears unwarranted. While CMS actions to improve the MDS instrument as a quality measurement tool are important, the agency has not yet established an implementation date. Although multiple long-term care professionals believe that multiple indicators of quality, including deficiencies on homes' standard and complaint surveys and residents' and family members' satisfaction with care, should be used to measure quality improvement, CMS is not currently drawing on these data sources to evaluate QIOs' efforts. Recognized shortcomings in these other data sources—such as the understatement of survey deficiencies by state surveyors—underscore the importance of using multiple data sources to evaluate QIO outcomes.

Recommendations for Executive Action

To ensure that available resources are better targeted to the nursing homes and quality-of-care areas most in need of improvement, we recommend that the Administrator of CMS take the following two actions:

- Further increase the number of low-performing homes that QIOs assist intensively.
- Direct QIOs to focus intensive assistance on those quality-of-care areas on which homes most need improvement.

To improve monitoring of QIO assistance to nursing homes and to overcome limitations of the QMs as an evaluation tool, we recommend that the Administrator of CMS take the following three actions:

- Revise the QIO program regulations to require QIOs to provide to CMS the identities of the nursing homes they are assisting in order to facilitate evaluation.
- Collect more complete and detailed data on the interventions QIOs are using to assist homes.
- Identify a broader spectrum of measures than QMs to evaluate changes in nursing home quality.

Agency Comments and Our Evaluation

We obtained written comments from CMS on our draft report. CMS addressed three of our five recommendations. It concurred with two of the three recommendations but did not specify how it would implement them, and it continues to explore options for implementing the third recommendation. Our evaluation of CMS's comments follows the order we presented each recommendation in the report. CMS's comments are included in app. III.

Further increase the number of low-performing homes that QIOs assist intensively. CMS agreed with this recommendation but did not specify a time frame for addressing it or indicate how many low-performing homes it will expect QIOs to assist in the future. Although our report focused on the most recently completed contract period (the 7th SOW), we acknowledged that in the current contract period, CMS required QIOs to provide intensive assistance to some “persistently poor-performing” homes identified in consultation with each state survey agency. However, we pointed out that the number of these homes the QIOs were required to serve was small, accounting for less than 10 percent

of the homes they were expected to assist intensively. CMS commented that preliminary estimates from a special study conducted during the 7th SOW indicated that assisting chronically poor-performing homes cost the QIOs 5 to 10 times as much as assisting the “usual” home.⁷¹ Our report acknowledged that additional resources were required for QIOs to assist low-performing homes but suggested that CMS could decrease the total number of homes assisted in order to increase the number of low-performing homes beyond the small number mandated for the 8th SOW.

Direct QIOs to focus intensive assistance on those quality-of-care areas on which homes most need improvement. CMS did not directly respond to this recommendation, but did point out that about one-third of QIOs were working primarily with homes on QMs on which the homes scored worse than the national average during the 8th SOW. Our recommendation was to direct all QIOs to focus intensive assistance on QMs that reflect homes’ greatest quality-of-care challenges. We had reported that some nursing homes assisted intensively by QIOs did not have a choice of QMs on which to work. We concluded that having QIOs work intensively with homes only on the quality-of-care issues that posed particular challenges to them would maximize program resources.

Revise QIO program regulations to require QIOs to provide CMS with the identities of the homes assisted in order to facilitate evaluation. CMS did not specifically indicate whether it agreed with this recommendation, but did indicate that it continues to explore options which would allow access to data on the homes assisted intensively in order to facilitate evaluation. However, CMS expressed concern that providing this access could potentially subject the information to laws that could afford third parties similar access. We believe that CMS should continue to evaluate how best to maintain an appropriate balance between disclosure and confidentiality. If CMS’s evaluation indicates that it is unable to incorporate adequate confidentiality safeguards to promote voluntary participation in QIOs’ quality improvement initiatives, the agency could seek legislation that would provide such safeguards.

⁷¹CMS did not provide this cost estimate during the course of our work.

Collect more complete and detailed data on the interventions QIOs use to assist homes. CMS responded to this recommendation, although it labeled it “improve the monitoring of QIO activities,” and agreed with our recommendation. CMS noted that, in concert with HHS, it is reviewing recommendations from the IOM’s 2006 report on QIOs, which may result in redesigning the program, including systems for evaluating QIO activities in different care settings, such as nursing homes. CMS did not discuss how it planned to collect additional data on QIO nursing home interventions. Further, it stated that it may incorporate data-handling and -reporting features of the nursing home subtask into overall program improvements. We have reservations about this plan because we found that CMS collected little information about specific QIO interventions with nursing homes during the 7th SOW, the information collected was not sufficiently comprehensive or consistent to be used to evaluate the interventions’ effectiveness, and QIOs themselves reported that the data collection system was of limited use to them.

Identify a broader spectrum of measures than QMs to evaluate changes in nursing home quality. CMS did not directly address this recommendation. However, the agency took issue with our judgment that the use of QMs to evaluate nursing home quality—and by extension, QIOs’ performance—is problematic. CMS commented that the QMs have passed through rigorous development, testing, deployment, and national consensus processes. We reported that the study commissioned by CMS to validate the QMs has been criticized by experts on several grounds, including a lack of statistical rigor. We also noted that CMS has revised or is currently revising both the QMs and the MDS data used to calculate them to address limitations, such as reliability and measurement problems. For example, CMS has removed or replaced 5 of the original 10 QMs since 2002, including some of those on which the QIOs were evaluated during the 7th SOW. In addition, CMS is currently updating the MDS to reflect advances in clinical practice and to improve its utility as a quality measure tool. While we expect that these efforts will improve the QMs as measures of nursing home quality, we believe that the QMs’ current limitations argue for the use of a broader spectrum of measures to evaluate changes in nursing home quality. Multiple long-term care professionals we interviewed recommended that the QMs not be used in isolation to assess the quality of care in nursing homes; these professionals suggested a range of measures that could be used to supplement the QMs, including perceptions of care by family members, residents, and staff; state survey data; and nursing home staffing levels.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to the Administrator of the Centers for Medicare & Medicaid Services and appropriate congressional committees. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7118 or allenk@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix IV.

Sincerely yours,



Kathryn G. Allen
Director, Health Care

Appendix I: Scope and Methodology

Our analysis of QIOs' work with nursing homes had three major components: (1) site visits to five QIOs, (2) analysis of state survey data to compare homes that were assisted intensively with homes that were not, and (3) a Web-based survey of 51 QIOs.

Site Visits

We visited a QIO in each of five states to gather detailed information about QIOs' work with nursing homes from the perspective of the QIOs, nursing homes in the intensive participant group, and stakeholders; we used this information to address all three objectives.¹ We selected the states—and by extension, the QIOs that worked in those states—on the basis of six criteria described in the following section. After selecting the QIOs, we identified nursing homes that received intensive assistance and stakeholders to contact for interviews. We conducted most of our site visit interviews in March and April 2006.

Selection of QIOs

We based our selection of QIOs on the following criteria:

- **Number of nursing home beds in the state.** We divided the states into three groups of 17 states each based on the number of nursing home beds at the beginning of the 7th SOW (2002). We over-sampled states with high numbers of nursing home beds by selecting one state with a low number of beds, one state with a medium number, and three states with a high number.
- **Evaluation score for the nursing home component of the 7th SOW relative to scores of other QIOs.** We divided the states into three groups of 17 based on the QIOs' evaluation scores for the 7th SOW. To help us identify the possible determinants of scores, we selected more states at each end of the spectrum than in the middle: two states with scores in the bottom third, one state with a score in the middle third, and two states with scores in the top third.

¹To assist in the development of our site visit interview protocols, we interviewed personnel from three additional QIOs (Massachusetts, Rhode Island, and Washington) and staff from one nursing home in each of four other states (Maryland, Massachusetts, New Hampshire, and Virginia).

- **State survey performance of homes selected for intensive assistance relative to homes not selected.** We also considered the extent to which the homes selected for intensive assistance by a given QIO at the beginning of the 7th SOW differed from the homes that were not selected, in terms of serious deficiencies cited on state surveys (both the proportion of homes cited in each group and the average number of serious deficiencies per home). We chose one QIO that selected worse homes, three QIOs that selected homes that were neither better nor worse, and one QIO that selected better homes.
- **Presence of a state-sponsored nursing home quality improvement program.** At the time we selected QIOs for site visits, we were aware of four states that had state-sponsored quality improvement initiatives in place during the 7th SOW.² To learn more about these efforts and how they interacted with and compared with efforts by the QIOs, we included one state (Florida) with its own quality improvement initiative.³ After we made our selection, we learned that another state we had selected (Maine) had a state-sponsored quality improvement program.
- **QIO participation in the Collaborative Focus Facilities project.** CMS has funded QIOs to conduct several special studies with nursing homes, including one in which the 17 participating QIOs each worked intensively with up to five nursing homes identified by their state survey agencies as having significant quality problems. To learn more about the challenges involved in working with low-performing homes, we selected two states whose QIOs participated in this project.
- **Census region.** We selected states from four different regions of the country: Northeast, Midwest, South, and West.

Using these criteria, we selected the following five states: Colorado, Florida, Iowa, Maine, and New York. Together these states represented 15 percent of nursing home beds nationwide at the beginning of the 7th SOW (2002).

²The four states were Florida, Maryland, Texas, and Washington. We subsequently learned that four other states, (Maine, Michigan, Missouri, and North Carolina) also had state-sponsored quality improvement programs.

³We contacted officials of programs in six states: Florida, Maryland, Michigan, North Carolina, Texas, and Washington.

Selection of Nursing Homes

Overall, we interviewed staff from 32 nursing homes in nine states. To assist in the development of our site visit protocols, we interviewed staff from 4 homes in four states. During the site visits to five states, we interviewed staff from 28 nursing homes. In each state, we interviewed staff from 4 to 8 nursing homes that received intensive assistance from the QIO, for a total of 28 homes in these five states. The number of homes we selected in each of the five states visited varied depending on the number of homes the QIO was expected to select for intensive assistance, an expectation based on the number of homes in the state. Specifically, we selected either four homes or 7 percent of the maximum number of homes that each of the five QIOs was expected to assist intensively, whichever was greater.⁴

We chose homes on the basis of four characteristics: number of serious deficiencies in the standard state survey at the beginning of the 7th SOW (2002), improvement in QM scores during the 7th SOW, distance from the QIO (in order to include homes that were more difficult for QIOs to visit), and urban versus rural location. Specifically, we sought to include (1) at least one home that had one or more serious deficiencies and that finished in the top third of the intensively assisted homes in their state in terms of improvement on QM scores, and (2) at least one home that had one or more serious deficiencies and that finished in the bottom third of the intensively assisted homes in their state in terms of improvement on QM scores. For the remaining homes, we sought a group whose state survey deficiency levels and QM improvement scores were representative of the range among intensive participants in their state. However, the experiences of this sample of 32 homes cannot be generalized to the entire group of homes that received intensive assistance from the QIOs nationwide.

Selection of Stakeholders

In each state we also interviewed officials from three stakeholder groups: (1) the state survey agency; (2) the local affiliate of the American Health Care Association, which generally represents for-profit homes; and (3) the local affiliate of the American Association of Homes and Services for the Aging, which represents not-for-profit homes.

⁴QIOs working in states with at least 100 nursing homes were expected to target 10 to 15 percent of all homes in the state for intensive assistance. In the state we selected that had the highest number of homes (Florida), 7 percent of the homes in the state equaled approximately 8 homes.

Analysis of State Survey Data

To assess the characteristics of the nursing homes that were selected by the QIOs for intensive assistance from among the homes that volunteered, we analyzed 3 years of standard state survey data on deficiencies cited at nursing homes and compared the results for homes that were assisted intensively with results for homes that were not; we used this information to address our first objective.⁵ The analysis involved three steps:

1. identifying nursing homes that had three standard state surveys from 1999 through 2002;
2. ranking nursing homes in each state in each year, based on the number of serious and other deficiencies, and then classifying homes as consistently low-, moderately, or high-performing; and
3. identifying on a nationwide and state-by-state basis any statistically significant differences between homes selected and not selected by the QIO, in terms of the proportion of low-, moderately, or high-performing nursing homes.

Identifying Homes with Three Standard Surveys

To identify homes whose performance was consistently lower or higher than other homes in their state prior to the selection of homes by the QIOs, we included in our analysis only homes for which we were able to identify three standard surveys from January 1, 1999, through November 1, 2002. Using the state survey calendar year summary files for 1999 through 2002 for the 50 states and the District of Columbia, we obtained 3 years of deficiency data from standard surveys for 16,303 homes.⁶

Classifying Homes as Low-, Moderately, or High-Performing

CMS classifies deficiencies according to their scope and severity. For each of the three surveys, we ranked all of the nursing homes in each state based on the number of deficiencies in two categories: (1) actual harm or immediate jeopardy and (2) potential for more than minimal harm.⁷

⁵This analysis drew on data from the On-line Survey, Certification, and Reporting system (OSCAR), a database maintained by CMS that compiles the results of every state survey conducted at Medicare- and Medicaid-certified facilities nationwide.

⁶We eliminated from the analysis 1,946 homes that had a standard survey in the year prior to November 1, 2002, but for which we were unable to identify two additional surveys during the period we specified. The homes that we eliminated represented a larger proportion of the group of homes not selected by the QIOs (11.8 percent) than of the group of homes that were selected by the QIOs (3.4 percent).

⁷CMS defines immediate jeopardy as actual or potential for death/serious injury.

Deficiencies in the first category are considered serious deficiencies. We gave more weight to the serious deficiencies by sorting the homes first on the number of deficiencies in the first category and then on the number of deficiencies in the second category. Homes with the same number of deficiencies in each category were assigned the same rank. Based on these rankings, we identified homes in the bottom and top quartile in each state in each survey.⁸

We classified homes as low-performing if they ranked in the bottom quartile in the most recent of the three surveys and in at least one of the two preceding surveys. We classified homes as high-performing if they ranked in the top quartile in the most recent of the three surveys and in at least one of the two preceding surveys. We classified homes as moderately performing if they did not meet the criteria for inclusion in either the low- or high-performing group. Of the 16,303 homes with three standard state surveys during the period we specified, we classified 15 percent as low-performing, 65 percent as moderately performing, and 20 percent as high-performing.

To assess the stability of our categorization of homes as low- (or high-) performing, we ran a logistic regression model to predict the probability of a home being categorized as low- (or high-) performing in the most recent of the three surveys given its categorization in the two prior surveys. The regression results showed that homes that were categorized as low- (or high-) performing in one survey were significantly more likely to be categorized as low- (or high-) performing in the other surveys as well.

⁸Because homes with the same number of deficiencies were assigned the same rank, in some cases the top and bottom quartiles included more than 25 percent of the homes in the state. We based our classification of homes on their performance level relative to other homes in the state to take into account the inconsistency in how states conduct surveys, a problem we have reported on since 1998. An alternative approach, which would not take into account the inconsistency in how states conduct surveys, would be to classify homes based on the absolute number of deficiencies they had received—for example, to classify all homes with five or more serious deficiencies as low-performing homes. For data on inconsistencies, see [GAO-06-117](#) and [GAO-07-241](#).

Determining Statistically Significant Differences between Homes Assisted Intensively and Homes Not Assisted Intensively by the QIOs

Our final step was to determine, on both a nationwide and state-by-state basis, whether there was a statistically significant difference in the proportion of (1) low-performing homes, (2) moderately performing homes, and (3) high-performing homes in the group assisted intensively by the QIOs compared with the group not assisted intensively.⁹

Web-Based Survey of QIOs

To gather information about the characteristics of the QIOs, including their process for selecting homes for intensive assistance from the pool of volunteers and the interventions they used, on July 19, 2006, we launched a two-part Web-based survey of QIOs in all 50 states and the District of Columbia; we used this information to address objectives one and two.¹⁰ We achieved a 100 percent response rate. The first part of the survey gathered information about the primary personnel who worked with nursing homes during the 7th SOW, including information about their employment with the QIO, and their relevant credentials and experience.¹¹ The second part of the survey gathered information on a range of other topics, including information about stakeholder involvement with the QIO, recruitment and selection of nursing homes for intensive assistance, interventions used with intensive participants, interventions used with homes statewide, and QIOs' communication with CMS. We specifically inquired about QIOs' use of six interventions: (1) mailings, faxes, and e-mails; (2) conferences; (3) small group meetings; (4) conference calls and video or Web conferences with multiple homes; (5) telephone conversations with individual homes; and (6) on-site visits.¹² We asked QIOs to rank and provide information on the two interventions they relied on most to assist homes statewide and on the three interventions they

⁹We used the Satterthwaite t-test because it does not require the variances of the two groups to be equal. We rejected the null hypothesis that the proportions of two groups were equal when the p-value from the Satterthwaite t-test was less than 0.05.

¹⁰We asked the QIOs to complete a separate survey for each state in which they worked during the 7th SOW.

¹¹We defined primary personnel as employees, subcontractors, or consultants who worked with nursing homes or provided direct oversight of those individuals, excluding administrative support staff and individuals who worked less than 20 percent of a full-time work week on the nursing home component.

¹²QIOs were also given the option of specifying other interventions they used.

relied on most to assist homes in the intensive participant group.¹³ We also asked QIOs to rank the effectiveness of the interventions they used and to identify the interventions they would use if they could do the 7th SOW over again.

¹³Because QM improvement among intensive participants constituted the largest part of the QIOs' contract evaluation score, we asked QIOs to rank and provide detailed information on a greater number of interventions for intensive participants than for statewide participants.

Appendix II: Publicly Reported Quality Measures

In November 2002, CMS began a national Nursing Home Quality Initiative that included the development of QMs that would be publicly reported on the CMS Web site called Nursing Home Compare. CMS has continued to refine the QMs and, as shown in table 4, has dropped some QMs and added others.

Table 4: QMs as of November 2002 and as of February 2007

QM	QM as of November 2002	QM as of February 2007
Chronic care QM		
Decline in activities of daily living	✓	✓
Pressure ulcers	✓	
Pressure ulcers ^a	✓	
Pressure ulcers in high-risk residents		✓
Pressure ulcers in low-risk residents		✓
Inadequate pain management	✓	✓
Physical restraints	✓	✓
Infections	✓	
Weight loss		✓
Urinary tract infection		✓
Catheter insertion		✓
Depression		✓
Bowel or bladder control in low-risk residents		✓
Bedfast		✓
Worsening ability to move about room		✓
Administration of influenza vaccination during flu season		✓
Assessment for and administration of pneumococcal vaccination		✓
Post-acute-care QM		
Failure to improve and manage delirium	✓	✓
Failure to improve and manage delirium (facility-adjusted) ^a	✓	
Inadequate pain management	✓	✓
Improvement in walking	✓	
Pressure ulcers		✓
Administration of influenza vaccination during flu season		✓
Assessment for and administration of pneumococcal vaccination		✓

Source: CMS.

^aFacility-level risk adjustment was intended to take into account the fact that some homes may admit frailer, sicker residents, or may specialize in a particular area of care that may account for a larger proportion of residents for a particular measure. CMS reported the delirium measure both with and without facility adjustment.

Appendix III: Comments from the Centers for Medicare & Medicaid Services



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

MAY 11 2007

DATE:

TO: Kathryn G. Allen
Director, Health Care
Government Accountability Office

FROM: Leslie V. Norwalk, Esq.
Acting Administrator

SUBJECT: Government Accountability Office's (GAO) Draft Report: "Federal Actions Needed to Improve Targeting and Evaluation of Assistance By Quality Improvement Organizations" (GAO-07-373)

Background

The Centers for Medicare & Medicaid Services (CMS) launched the National Nursing Home Quality Initiative (NHQI) in November 2002, marking the beginning of the first organized work with the Nation's nursing homes on national quality improvement activities outside of the Survey & Certification process. This coincided with the beginning of the Quality Improvement Organizations' (QIOs) 7th Statement of Work (SOW) contract cycle and marked the first time the QIOs were tasked with "core" work in the nursing home setting in all 53 contract regions.

Since, up until this time, the entire CMS interface for nursing home quality was through the Survey & Certification program, Senator Grassley requested that the GAO collect data about the nursing home task in the QIO contract ("Task 1A"). Specifically, Senator Grassley requested that the GAO collect information about the nursing homes which worked with the QIOs and the quality improvement outcome measures associated with this work, especially in the 7th SOW (2002-2005).

The GAO conducted the study over an 18 month period from October 2005 to April 2007. During the course of the study, the GAO conducted a web-based survey of 51 QIOs, conducted on-site reviews of QIOs and nursing homes in five States (CO, FL, IA, ME, and NY), and interviewed experts on "using quality measures to evaluate QIOs." The three initial research questions were as follows:

1. What assistance are QIOs providing to nursing homes to help them improve resident care?
2. Have nursing homes that have worked with QIOs improved their quality of care?
3. How effective is CMS oversight of QIO assistance to nursing homes?

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GAO Recommendations

The GAO made the following three recommendations for future QIO work in the nursing home setting:

1. The CMS should further increase the number of low-performing homes that QIOs work with intensively.
2. The CMS should improve the monitoring and evaluation of QIO activities.
3. The CMS should require QIOs to share with CMS the identity of homes assisted intensively in order to facilitate evaluation.

CMS Response: Executive Summary

Recommendation 1: CMS agrees with the recommendation and points out additional facts about the nursing home work of the QIO program. CMS has already identified this as an issue from its own review, and has taken steps to address it. For example, in the 8th SOW, 34 percent of QIOs are working with an average of 56 percent of the nursing homes in their states. However, there are significant cost implications for this recommendation. A study conducted during the 7th SOW showed that chronically poor performing nursing homes cost between five and tenfold more to work with than nursing homes that are closer to average performance.

Recommendation 2: CMS agrees with the recommendation, and has already made progress toward re-designing the management of the QIO program.

Recommendation 3: CMS continues to explore options which would allow access to this data for evaluation of the QIOs individually and the program as a whole, while maintaining appropriate safeguards necessary to promote voluntary participation in quality improvement initiatives. CMS will continue to seek a balance between disclosure and confidentiality.

CMS Response to GAO Recommendations

1. The CMS should further increase the number of low-performing homes that QIOs work with intensively.

The CMS agrees with this recommendation. However, CMS notes that the draft report does not draw enough attention to two important aspects of this recommendation. The first is that CMS, in its own review of the 7th SOW, identified this need and has already taken steps to address it. CMS enhanced coordination between the Survey & Certification and the QIO Programs. As part of this effort, a CMS Long-Term Care Coordinating Task Force was created to establish formal communication lines within the Agency. CMS recently released the Task Force's second annual report, "2007 Action Plan for (Further Improvement of) Nursing Home Quality." This leadership activity translated into significant exploration, both in Task 1A core contract activities and with the QIO Support Contractor, to find innovative ways for the new nursing home teams in

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QIOs and the State Survey Agencies to work collaboratively to assist poorly performing nursing homes.

Secondly, the draft report identifies the special study awarded during the 7th SOW to pilot this new approach (the “Collaborative Focus Facility” Special Study), but draws insufficient attention to the fact that preliminary analysis of cost data in that special study indicates that it is very costly for QIOs to work intensively with chronically poor performing nursing homes with multiple persistent survey deficiencies. Preliminary estimates from the pilot are that additional costs for this type of work run **five to ten times** the cost of helping the “usual” nursing home. There is also significant controversy over the best way to define a “low-performing” nursing home.

The draft report also fails to note where, for a large number of states, the QIO is working intensively with either the great majority of nursing homes in the state or a significant percentage of the homes. In the 8th SOW, the QIO program operates in 53 contract regions. In eight of these contract regions, the QIOs work intensively with 68 percent or more (up to 100 percent, for an average of 81 percent) of the nursing homes in that state or territory. In ten additional contract regions, the QIOs work intensively with more than one quarter of the nursing homes in the state (up to 45 percent, for an average of 35 percent). Overall, for these 18 contract regions (34 percent of the program) the QIOs work intensively with an average of 56 percent of the nursing homes in the state. The overwhelming majority of these nursing homes score worse (in most cases much worse) than the national average on the quality measures they work to improve.

Finally, the draft report strongly suggests that use of the publicly reported quality measures as the main metric for quality interventions is “problematic”. CMS disagrees with this opinion, as the publicly reported quality measures in the nursing home setting have passed through rigorous development, testing, deployment, and national consensus processes involving the highest levels of technical expertise on health care quality measurement in the country.

The CMS uses the Minimum Data Set (MDS), which nursing homes report periodically for each resident, to generate publicly reported quality measures (currently 14 for long-term care residents and five for patients in short-stay skilled nursing facilities). Since 2002, the Nursing Home Compare Web site¹ has provided facility-level quality measures to the public, along with the service array and other basic descriptors of facilities, sorted by geography and other characteristics. The nursing home industry regularly employs the quality measures for quality management, alongside other quality management tools such as Survey & Certification and internal quality assessment and improvement. State Survey Agencies also regularly use the quality measures to assist in their work. The quality measures serve as a basis for improvement activities and research, and CMS continues to update and improve the measures and their reporting overtime. This ongoing process for revising measures has become a major engine for generating tools and insights that substantially advance the measurement and improvement of quality in Medicare.

¹ Nursing Home Compare at www.medicare.gov/nhcompare/home.asp

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2. The CMS should improve the monitoring and evaluation of QIO activities.

The CMS agrees with this recommendation. The Institute of Medicine of the National Academies, in its report released last year (*Medicare's Quality Improvement Organization Program: Maximizing Potential*), outlined 19 specific recommendations to CMS regarding the management, cost accounting, and evaluation systems for the QIO contracts. Right now, CMS, in concert with the Department of Health and Human Services, is evaluating the recommendations from the IOM report and considering ways to redesign the QIO Program. The IOM recommendations apply equally to all aspects of the QIO Program, and all settings in which QIOs are currently deployed (hospitals, physician offices, and home health agencies, as well as nursing homes). Thus, there are no recommendations specific to the work QIOs do with nursing homes. However, many of the aspects of the QIO nursing home work (especially its data handling and reporting features) may be incorporated into the redesigned QIO contract. In addition, CMS and the Department are looking at a completely new approach to QIO evaluation for future contract cycles.

3. The CMS should require QIOs to share with CMS the identity of homes assisted intensively in order to facilitate evaluation.

The CMS is very much aware of the regulatory restrictions imposed upon disclosure of the identities of the identified participant groups (IPGs) and other identifiable data connected to the QIOs' quality review study activity as defined in Federal regulations at 42 CFR 480.101. Given that the nature of the work with practitioners, providers and institutions such as nursing homes is voluntary and most often addresses poor performance in health care delivery, the regulations implementing section 1160 of the Social Security Act are very restrictive in protecting highly sensitive identifying information from disclosure. The GAO correctly notes that under the regulatory provision at 42 CFR 480.140, CMS can only view the IPGs (which GAO calls "intensive participants") on site at a QIO. The regulatory provision allows for the on-site evaluation of the work of the QIO and prevents the QIO from transferring this data to CMS where it would then fall under potentially less restrictive disclosure rules (Health Insurance Portability and Accountability Act and Privacy Act) and be subject to the Freedom of Information Act. However, CMS is committed to conducting effective and efficient oversight of program activities and, therefore, continues to explore options which would allow access to this data for evaluation of the QIOs individually and the program as a whole, while maintaining appropriate safeguards necessary to promote voluntary participation in quality improvement initiatives. The CMS greatly appreciates the GAO's recommendation in this area and will continue to seek a balance between disclosure and confidentiality.

Conclusion

The CMS appreciates the GAO's efforts to study the QIOs' work with nursing homes and will consider the GAO's recommendations in defining future QIO work in this area and others.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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