

Statewide Strategy to Improve Quality of Care in Nursing Facilities

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Purpose: We describe the development of a statewide strategy to improve resident outcomes in nursing facilities, and we present some evaluative data from this strategy. **Design and Methods:** Key components of the strategy include (a) a partnership between the state agency responsible for the nursing home survey and certification and the school of nursing in an academic health sciences center; and (b) on-site clinical expert technical assistance and support to facilities throughout the state. **Results:** The partnership has

resulted in state agency staff having information from analyses about resident needs and outcomes in the state and facilities having access to the quarterly electronic "Show-Me Quality Indicator Report." On-site clinical expert technical assistance is now used widely across the state, with 569 site visits conducted in 286 different facilities to help them interpret their quality indicator (QI) reports and implement quality improvement programs; statewide improvements in QI scores have been measured in several key QIs. **Implications:** Other states should consider building partnerships with schools of nursing in an academic health sciences center. Programs using on-site clinical consultation can facilitate improving quality of care in nursing facilities.

Key Words: *Quality indicators, Nursing homes, Quality improvement, Minimum Data Set*

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There have been many federal and state actions to improve quality of care in nursing facilities. These have included a variety of mandates, such as refocusing the survey process (General Accounting Office [GAO], 1998; Health Care Financing Administration [HCFA], 1998, 1999; Zimmerman et al., 1995), restructuring reimbursement (GAO, 1999; Medicare Payment Advisory Commission [MedPAC], 1999; Swan, Dewit, & Harrington, 1994), setting higher staff training standards (Department of Health and Human Services, 1989; Harrington et al., 2000), and standardizing clinical assessment and care planning (Morris et al., 1990; Phillips, Hawes, Mor, Fries, & Morris, 1996). This is an account of a statewide strategy to improve quality of care through a partnership between the state agency responsible for nursing home surveys and certifications and a school of nursing in an academic health sciences center. This partnership is targeted to help facility staff to better use standardized clinical assessment and care planning, use the data from the standardized assessment in quality improvement programs, and provide

on-site clinical consultation that can improve resident outcomes. The principles of quality improvement provide the foundation of the strategy, and, we believe, provide the foundation for success that improves the quality of care in nursing facilities.

Background

Mandate for Quality Improvement and Standardized Assessment in Nursing Homes

Nursing homes have a long history of mandates from Congress to improve quality of care (Committee on Nursing Home Regulation, 1986). The Omnibus Reconciliation Act of 1987 (OBRA '87) had several provisions intended to improve nursing home care. These provisions included developing The Minimum Data Set for Resident Assessment and Care Screening (MDS), mandating routine use of the MDS and its companion care planning process for all nursing home residents, and requiring that a quality assurance and assessment process be used in all nursing homes to improve the quality of care (McElroy & Herbelin, 1989).

This standardized resident assessment process was envisioned to improve resident care through the formulation of a resident-specific care plan; to provide nursing home management with resident-level data for monitoring case mix, staffing, and quality of care performance; and to provide regulators with data for case mix, sampling for survey processes, monitoring resident outcomes, and utilization review for Medicare or Medicaid eligibility (Committee on Nursing Home Regulation, 1986). Most recently, another Institute of Medicine committee viewed the continued use of standardized assessment data as "essential" (Committee on Improving Quality in Long-Term Care, 2001, p. 8). Unfortunately, most would agree that marked improvements nationally in quality of care have not been realized. Our partnership and statewide strategy is an attempt to more fully implement these national mandates and finally achieve some improvement in quality of care in nursing homes.

Information Feedback and On-Site Clinical Consultation to Improve Quality

Although quality improvement activities are commonly believed to affect resident outcomes, limited research supports this premise (Harrington & Carrillo, 1999; Sainfort, Ramsay, & Monato, 1995). Additionally, feedback reports comparing outcomes of one organization to another are commonplace in quality improvement. However, they have received limited evaluation (Anderson, Hsieh, & Su, 1998).

Rantz, Popejoy, and colleagues (2001) designed and conducted a randomized controlled trial ($N = 113$ nursing facilities) to test the benefit of feedback in a quality improvement model and determined that simply providing nursing facilities with comparative

quality performance information and education about quality improvement is not of sufficient strength to improve clinical practices and subsequently improve resident outcomes. They found that a stronger intervention of expert clinical consultation with nursing facility staff coupled with comparative feedback is needed to improve resident outcomes. Facilities need the additional intensive support of on-site clinical consultation to effect enough change in clinical practice to improve resident outcomes significantly. The expert clinical consultation was provided by a Master's-prepared gerontological clinical nurse specialist. Comparative feedback reports were specially designed to display five quarters of MDS-based quality comparisons in table and graphs so that trend lines over time would be easy to see and interpret (Rantz, Petroski, et al., 1997a, 2000a). The findings from this study had a major influence on our statewide strategy.

Other studies have demonstrated the effectiveness of on-site clinical consultation by a nurse expert to help nursing home staff implement changes to improve care. The use of advanced-practice nurse consultation in a randomly assigned treatment to work with nursing home staff to implement research-based protocols resulted in improvement or less decline in incontinence, pressure ulcers, and aggressive behavior (Ryden et al., 2000). Educational programming and resident-centered consultation were found to reduce the use of physical restraints in nursing homes without subsequent increases in staffing or resident injury (Ejaz, Folmar, Kaufmann, Rose, & Goldman, 1994; Evans, Strumpf, Allen-Taylor, Capezuti, Maislin, & Jacobsen, 1997; Neufeld, Libow, Foley, & White, 1995; Neufeld, Libow, Foley, Dunbar, Cohen, & Breuer, 1999; Strumpf, Evans, Wagner, & Patterson, 1992; Werner, Koroknay, Braun, & Cohen-Mansfield, 1994). Similarly, consultation was shown to reduce falls in nursing homes (Ray et al., 1997). However, some of these studies and others have demonstrated that follow-through by the nursing home staff to the recommendations made during consultation and sustained use of the recommended interventions over time may be difficult to achieve (Ouslander et al., 1995; Schnelle, Newman, et al., 1993; Schnelle, Ouslander, Osterweil, & Blumenthal, 1993).

Quality Indicators and the MDS

The Centers for Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration (HCFA), has a basic strategy to develop a system of quality indicators (QIs) across the full range of services paid for by the Medicare and Medicaid programs nationwide (Gagel, 1995; Jencks, 1995). For nursing facilities, these indicators are derived from MDS data that are routinely obtained for residents upon admission to facilities participating in Medicaid and (or) Medicare, at times of significant change in condition of the resident, quarterly, and annually. As part of the HCFA Multi-State Nursing Home Case-Mix and Quality Demonstration Project, Zimmerman

and colleagues at the University of Wisconsin—Madison developed a series of MDS-based QIs (Ryther, Zimmerman, & Kelly-Powell, 1994, 1995; Zimmerman et al., 1995). The most current version includes 30 MDS QIs, measuring such areas as falls, incontinence, physical function, skin care, cognitive functioning, and behavior (Karon & Zimmerman, 1996; Rantz, Popejoy, Zwygart-Stauffacher, Wipke-Tevis, & Grando, 1999). Nationally, 24 of the 30 were implemented by the HCFA nationwide in 1999 for use in the nursing home survey and certification process and provided to facilities in a feedback report.

Multifaceted Statewide Strategy

The development of this multifaceted statewide strategy to improve quality of nursing home care began with the vision of leadership from the Missouri Division of Aging (DA) of the Department of Social Services, now the Missouri Department of Health and Senior Services (DHSS). There was a commitment to the value of the principles of quality improvement and a commitment to provide facilities something useful for quality improvement based on the MDS resident assessment data that facilities had been collecting and providing to the state agency for many years. The need to improve the quality of the data transmitted to the state agency was also considered. State officials could see the value and potential uses of the data; however, the information derived from the data would only be useful if the data were accurate. The need to provide ongoing training to facility staff assuming responsibility for MDS completion was also of concern. Whereas there were some speakers willing to provide training, there was no standard for the training information provided in the workshops. To address these issues, faculty at the school of nursing at University of Missouri (MU) were willing and committed to partnering with the state agency to develop and implement this statewide strategy. Faculty were interested in the research and evaluation possibilities to enhance quality of care in nursing facilities by using MDS data.

The strategy has two basic features: (a) a partnership between the state agency responsible for the nursing home survey and certification and the school of nursing in the research intensive academic health sciences center in the state; and (b) on-site clinical expert technical assistance and support to facilities throughout the state. Details of the strategy are presented so others may learn from our experiences and select parts they would find feasible to implement in other states. Key features are pointed out that we think were critical to our success. Table 1 is a timeline that illustrates the key activities of building the partnership.

Partnership Between the State Agency and School of Nursing

In 1993, a multidisciplinary group of faculty at the MU schools of nursing, medicine, health services

Table 1. Timeline of Key Activities of Building the Partnership

Year	Description
1993	Multidisciplinary group of faculty from the MU Schools of Nursing, Medicine, Health Services Management, and Informatics, Biostatistics begin discussing mutual research and clinical interests in improving quality of care for older adults in nursing homes and contact the Missouri DA.
1994	MU MDS and Quality Research Team formalize and establish a cooperative agreement between the Missouri DA and MU School of Nursing, and identify needs of residents in state analyzing MDS data.
1995	Research team conducts qualitative study to better understand quality of care.
1996	Other quality of care analyses are conducted.
1997	Statewide Task Force for MDS education is formed.
1997–1998	Task Force serves as link between DA and providers as MDS data transmission and automation implementation. A randomized trial is conducted with “Show-Me Quality Indicator Reports” and on-site nurse expert clinical consultation.
1999	Pilot of QIPMO on-site clinical consultation and implementation of electronic “Show-Me Quality Indicator Reports” is made statewide.
2000–2001	Full implementation of QIPMO is made, and a monthly support group is established for MDS coordinators in the state.

Notes: MU = Missouri University; DA = Division of Aging; MDS = minimum data set; QIPMO = Quality Improvement Program of Missouri.

management, and statistics began meeting to discuss our similar research interests and desire to improve the quality of care for older people, particularly those in nursing homes. Some members of the group had experience conducting research and analyses with nursing home MDS data. We contacted the Missouri DA staff who were responsible for collecting MDS data in the state and expressed our interest in assisting with data management and analysis with a mutual goal of using the data to improve quality of care for Missouri nursing facility residents. DA staff were enthusiastic about the possibilities that a collaborative relationship could hold to advance their agenda to use MDS data to improve quality of care. The faculty officially formed the MU MDS and Quality Research Team and began working with Missouri MDS data under cooperative agreement in 1994 with the DA, the state agency responsible for survey and certification of long-term care facilities.

Our research team began with analyses of the MDS data that could prove insightful about the collective needs of the residents served in Missouri’s facilities. These analyses helped us gain skills with managing and interpreting the data, and the DA staff wanted information that could be gleaned from these analyses. We duplicated programming from national studies

examining quality of care in nursing homes and conducted QI analyses of the range of quality in nursing homes in Missouri (Rantz et al., 1996; Rantz, Popejoy, et al., 1997). We conducted a major qualitative study to better understand quality of care in nursing homes (Rantz et al., 1998; Rantz, Zwygart-Stauffacher, et al., 1999), and then we developed and tested an instrument to measure quality of care in nursing homes to use as an independent measure in our MDS QI analyses (Rantz, Mehr, et al., 2000; Rantz & Mehr, 2001). Other topics pursued include lower respiratory tract infections (Mehr, et al., 2001), cost and staffing by using other large data sets (Hicks et al., 1997), resident acuity (Grando, Mehr, Popejoy, Maas, Rantz, & Westhoff, 2002), cost and quality, and end-of-life care (Oliver, Porock, Zweig, Rantz, & Petroski, 2003). The DA staff and policy makers in the state consider the information that can be summarized about resident needs, costs, quality, and related issues a real advantage of the partnership with the school of nursing and our research team.

Facilities find the information helpful, too. For example, we offer a service to all nursing facilities in the state upon written request to project individual facility staffing needs based on the acuity of the residents using Resource Utilization Groups (RUGS) and results of national staffing studies. Many facilities in the state routinely take advantage of this service and tailor staffing decisions in light of resident acuity reflected in their MDS data. Some states may find the data management and interpretation component of such a partnership a duplication of effort, if they have such evaluation skills. Other states may find that this assistance enhances their data management and interpretation, as did Missouri.

In March of 1997, a Statewide Task Force for MDS Education convened through the partnership between the Missouri DA and the school of nursing. The purpose of the task force was to develop and promote the use of standardized educational materials for nursing homes in the state that would improve both the quality and the accuracy of MDS data being transmitted to state and federal agencies. The training materials were to be based on acceptable and preferred standards of practice and were to be used consistently by all trainers doing MDS training in the state. This task force was to be industry driven, and the school of nursing was to serve as a facilitator to the group with input and assistance from the DA. The group began meeting bimonthly for the first 2 years, and then three to four times each year as the group's work and collaborations became clear.

Membership consists of representatives from the Missouri nursing home industry, such as directors of nursing, administrators, nursing home consultants, and MDS coordinators. Representatives from the for-profit and not-for-profit nursing home organizations are also present, along with the Missouri League for Nursing, the Missouri Hospital Association, the Missouri League of Nursing Home Administrators, and Missouri DA. Faculty in the school of nursing interested in

gerontology volunteered to participate. The intent of the group is to develop cooperative efforts with all members and across disciplines through information sharing and open discussion that encouraged the definition of problems faced by the industry and possible solutions.

During the first meeting of the group, three questions guided discussion and defined the group's direction. First, what things are interfering with use by nursing home staff of the MDS instrument for assessment and care planning (as intended by OBRA '87 legislation)? Second, what things are interfering with use by nursing home staff of MDS data in their quality improvement activities? Third, what are some potential strategies to help staff in nursing homes use the MDS instrument effectively for assessment? The group decided that standardizing training materials and coordinating educational efforts for statewide MDS training would be our first priority.

During the first year, training materials were drafted by the group. The first was an "Item-by-Item Guide to the MDS," and the second was "Case Study: Mrs. M." The purpose of the Item-by-Item Guide is to give facilities an easy reference for correct coding and definitions of MDS items. The Case Study is used for teaching the Resident Assessment Protocols and care planning. These materials are intended for interdisciplinary use and training, not just for nursing. They are complementary to the federal MDS manual, and users have found them helpful to better illustrate correct coding and practical care planning. They are consistently used as handouts during both the basic and advanced assessment and care-planning workshops conducted in the state. Workshops are sponsored by both the not-for-profit and for-profit nursing home and hospital associations in the state, the school of nursing, and Missouri DA; facilities pay nominal fees for their staff to attend. Workshops are scheduled several times each year in different geographic locations in the state to address the ongoing training needs of new staff at nursing facilities. Both of these tools have been edited and revised on an ongoing basis by members of the Statewide Task Force with assistance from school of nursing staff, and they will continue to be as regulations change and the need arises. As a way to address training needs between scheduled workshops, the Item-by-Item Guide and Case Study are distributed to facilities upon request by school of nursing staff.

For the first 2 years, the task force also served as a link between the DA and providers in the state during a time when provider frustrations were running high with new MDS data transmission and automation requirements. The task force felt it could use its educational programs to make the transitions less troublesome for facilities. It also served to keep the DA informed of provider needs and problems during the transition.

Since the inception of the Statewide Task Force for MDS education, four to eight workshops each year have been conducted in five to seven locations throughout the state. More than 1,700 staff have

participated in the programs; most are nurses and many are administrators and other staff. Encouraged by the task force, one of our members who is faculty at the school of nursing recently applied for and received a Hartford Foundation grant to develop a gerontology course for the undergraduate curriculum to emphasize gerontology. The course is being implemented in 2002 and includes instruction about the MDS instrument and the importance of assessment and care planning in long-term care.

The partnership between DA and the school devoted much time to developing helpful feedback reports for facilities to use their MDS data to improve quality of care. The school of nursing interdisciplinary research team designed and tested the Missouri Show-Me Quality Indicator Report to help facility staff accurately track trends in QIs over time, the most effective way of using QIs for quality improvement. The Show-Me Quality Indicator Report is a facility-level report that displays five quarters of scores for each QI with a line graph that is easy to interpret with the comparative thresholds set by an expert panel (Rantz, Petroski, et al., 1997, 2000). The report helps facility staff determine which problems require attention and see results of their quality improvement efforts.

We then conducted the randomized clinical trial discussed earlier in this article that determined how much clinical support facilities need to improve resident outcomes (Rantz et al., 2001). The research about the MDS QI feedback report and clinical support became the foundation for the statewide electronic Show-Me Quality Indicator Report implemented in 1999 for all nursing facilities in Missouri and the on-site clinical consultation program to assist facilities with their quality improvement programs. We are working with other states to implement the electronic Show-Me Quality Indicator Report in their state. We have also submitted requests to federal officials asking that the report be added to the national MDS data collection system as a report option for facilities nationwide.

On-Site Clinical Consultation by a Team of Expert Nurses

The second feature of the statewide strategy is the on-site clinical expert technical assistance and support to facilities throughout the state. The Quality Improvement Program of Missouri (QIPMO), a cooperative program between the Missouri DA (now DHSS) and the MU Sinclair School of Nursing, began as a pilot project in nursing facilities in 1999 with an official start in mid-2000 (Heimericks, 2001). The QIPMO is designed to provide on-site quality improvement assistance to nursing facilities, using their QI reports as a foundation for the consultation. The QIPMO is based on our research study that found that ongoing on-site clinical consultation visits by an advanced-practice nurse was effective in improving care and outcomes for residents in nursing facilities (Rantz et al., 2001). Additionally, others have found that ongoing

repeated interactions with staff is an effective means to influence change in nursing care to influence outcomes (Conn, Rantz, Wipke-Tevis, & Maas, 2001). The QIPMO staff currently consists of seven gerontological nurse specialists, several with advanced degrees, providing resources and support to the staff of nursing facilities throughout the geographic regions of the state. Key elements of the on-site clinical consultation are illustrated in Figure 1.

The QIPMO service is provided at no charge to facilities; funding for the service is provided by state and federal funds (facilities participate in these funds through an assessment charged by the state based on the number of licensed beds) targeted to improve quality of care in long-term care facilities in the state. Visits to nursing facilities are voluntary, confidential, and consultative rather than regulatory in nature. The consultative focus of the visits allows QIPMO nurses to emphasize standards of care and to work with ongoing with facility staff toward improvement efforts that are specific to their facility and resident needs. Visits are based on needs identified by the facility. Some facilities have an understanding of their clinical problems, but need help with quality improvement efforts such as determining appropriate standards or in-service education about the care they want to improve. Other facilities need basic education about QIs to better identify their clinical problems, thus facilitating the ongoing improvement process.

An introductory letter explaining the QIPMO service was sent by DA staff to all facilities in the state. Then initial personal contact with homes began when QIPMO team members phoned facilities that had been involved in the randomized quality intervention study or that had attended workshops sponsored by the Statewide Task Force for MDS Education. As word of mouth spread about the program and the successes experienced by many of the facilities, nursing homes began soliciting QIPMO visits. Each facility is assessed by phone when the initial visit is scheduled. To determine the facility's current use of their QIs, nurses ask questions, such as "Are you able to access your analytic and Show-Me QI reports?," "Are you currently using your QI reports for quality improvement?," and "Do you have any areas of clinical concern based on your QIs that are particularly troublesome?" This assessment helps determine the assistance each facility needs and facilitates the visit and time spent by facility staff. QIPMO staff request that facility staff download their most current QI reports, both analytic and Show-Me, prior to the visit. The visits and learning process are much more effective if facility staff have their own reports to review and discuss during the initial teaching. If they are unaware of how to access the reports or are unable to access them as a result of technical difficulty, then assistance is provided either by phone or on site during the initial visit. Phone discussion also determines who should be in attendance at the initial visit. Key facility staff such as the administrator, director of nursing, and Resident

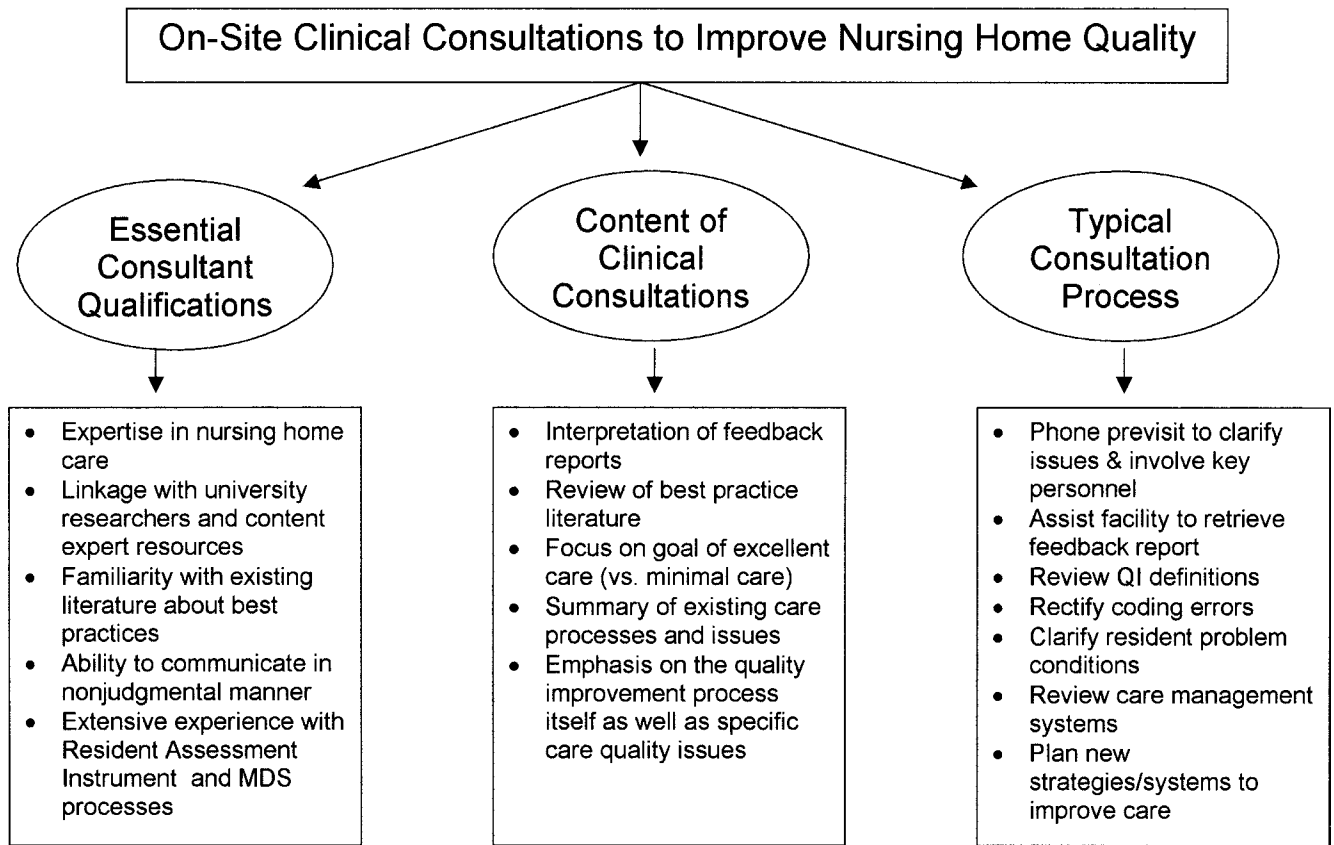


Figure 1. On-site clinical consultation key elements. MDS = minimum data set; QI = quality indicator.

Assessment Instrument (RAI)–MDS coordinator are encouraged to attend, as are members of the care plan team. Emphasis on administrative and team involvement facilitates success with improvement in resident care practices.

During initial site visits, most facilities need to start at square one. Initial visits generally begin with a basic overview of the QIs and definitions for both the analytic and Show-Me reports. Copies of the QI definitions and the facility's own QI reports are distributed for everyone present, and an in-depth overview is explained by QIPMO nurses. Accurate interpretation of the reports is a critical first step in helping facilities identify potential problem areas. Staff from most facilities understand the use of QIs by survey agencies in Missouri, so they have focused on the percentile rank of each QI. QIPMO staff emphasize the use of thresholds for comparison rather than the facility's rank to help facilities identify potential problem areas. Using thresholds for comparison provides a way to compare with best practice rather than average nursing home scores throughout the state. Statewide thresholds are available and updated routinely in the state by an expert panel and the research team (Rantz, Petroski, et al., 1997, 2000).

Once an understanding of the QI definitions and reports is achieved, discussion often leads to specific clinical indicators that might require further review. MDS coding errors are often identified at this point, as

facility staff discuss and sometimes debate individual resident issues. Once coding errors are discussed, resident-level assessments are emphasized. This is an opportunity to review resident-specific problem conditions and determine an appropriate change to the plan of care. This is also an opportunity to help the facility staff identify appropriate interventions that positively influence a resident's outcome but that appear to negatively affect a QI. For example, weight loss as an expected outcome may not be an actual problem if the anticipated goal and interventions are appropriate for that particular resident. The next step in the process is to assist staff to review their systems for resident care such as weight loss, fall, or pressure ulcer management. This often requires a more in-depth review, including a review of existing policies, interview of staff, and observation of care delivery.

Usually, at the end of the first site visit, often approximately 2–4 hr in length, return visits are scheduled and a relationship develops as facility staff see the potential impact of QIPMO nurses as a resource. Subsequent visits involve a myriad of topics. If coding errors are of concern, a review of the RAI/MDS process and completion is recommended. If specific clinical conditions such as pressure ulcer prevention or falls are of concern, current practice guidelines are discussed and on-site assistance with understanding the current standards of care and in-service education about standards are offered. Resource files of literature

are maintained by QIPMO staff and taken on site for facility staff to use. Staff are encouraged to use the literature so they have immediate access to current clinical information. In addition, information about how to obtain practice guidelines such as those from the Agency for Health Care Policy and Research, now the Agency for Healthcare Research and Quality, and the American Medical Directors Association is provided and staff are encouraged to obtain these. The philosophy of the QIPMO team, as with the study that was the foundation for QIPMO, is to maintain a teaching focus for the consultations that is grounded in standards of care following clinical practice guidelines and the latest gerontological standards of practice (see Table 2).

Residential care facilities (RCF) in Missouri are also benefiting from QIPMO. Missouri RCFs are not required to complete the RAI process; therefore, they do not have access to QIs based on the MDS. However, they do have many of the same clinical concerns as identified in skilled nursing facilities. QIPMO nurses are conducting site visits and offering in-service education specific to the residential care setting. Educational offerings such as medication management, incontinence management, behavioral interventions, and identification of change in status have been well received by RCF staff.

In addition to helping facilities identify problem areas for improvement, an important aspect of QIPMO is to help facilities identify what they do best. Most facilities do many things well, but often they are not recognized for their good practices. QIPMO staff help identify and confirm these best practices and encourage facilities to share their work with others through discussion at support groups and meetings. Facilities are also encouraged to submit their "best practices" for statewide recognition at the annual Missouri Governor's Conference on Aging.

As the QIPMO nurses conducted site visits, they noticed that nurses working as MDS coordinators in facilities were struggling with their tasks, frequently frustrated with expectations about care planning and MDS completion, and appeared to jump from one facility to another looking for a solution to their job frustrations. The QIPMO nurses began to look for a way to help these nurses charged with responsibility to complete the MDS process in their facilities with the ultimate goals of improving individual coding accuracy, enhancing job satisfaction, and increasing retention. A support group specifically designed for nurses working as MDS coordinators in long-term care facilities came to life in May of 2000 in the St. Louis area. The agreed-upon objectives of the support group were for its members to (a) learn more about the RAI process; (b) meet other nurses who do this job, and share successes and tips to make the job easier; and (c) help and support each other.

QIPMO nurses facilitate the meetings, encouraging everyone to participate, making the nurses feel comfortable, ensuring that the meetings are scheduled

Table 2. QIPMO Team Philosophy

1. Assist nursing home staff to access and interpret QI reports for survey and quality improvement use.
2. Maintain current, consistent knowledge base of gerontological nursing practice.
3. Provide on-site clinical education and consultation services that are in concert with current standards of gerontological nursing practice.
4. Maintain current, consistent knowledge of the RAI process to accurately educate nursing home staff.
5. Communicate and collaborate as a professional nursing team.
6. Maintain professional relationship with nursing facilities, regulatory agencies, university staff, and other professional agencies or organizations.
7. Participate in state and federal research projects as requested through the MU Sinclair School of Nursing.

Notes: QIPMO = Quality Improvement Program of Missouri; QI = quality indicator; MU = Missouri University; RAI = Resident Assessment Instrument.

and speakers or topics are chosen, and serving as resources. The QIPMO nurses provide a wealth of printed information (such as self-study guides, CMS's updates in the form of questions and answers, information about error messages, articles about time frames for completion of the process, and resources from fiscal intermediaries), along with a variety of web sites and other timely updates. A key part of the success of the groups has been the assurance of confidentiality among all participants and guests. This, along with the group objectives, are reiterated each meeting.

As the St. Louis region began meeting monthly in 2000, word spread and requests to offer these meetings in other parts of the state surfaced. Since January of 2001, we have slowly added new groups throughout the state, until seven separate groups in all seven geographic regions of Missouri are now functioning. These regions correspond to the regions of the Missouri DHSS, our state regulatory agency. All of the groups have chosen to meet monthly except during December. A different facility offers to host each meeting, paying for the mailing of announcements (usually less than \$50) and providing light refreshments. With facility participation, we have been able to control costs, and there is no fee or required membership for the nurses attending the meeting. Facilities recognize the value of the information their staff gain by networking in the group and are willing to take responsibility for hosting and mailing.

Region size varies widely. Some regions have 50 skilled facilities; urban areas may have up to 160 facilities. Typical attendance for each meeting has been between 15 to 30 coordinators, with new people coming each month. We alternate meeting days, because some facilities always have their care plan meetings on the same day of the week. By doing this, if a coordinator cannot attend one meeting as a result of scheduling, he or she will be able to attend the next one. Meeting format varies with the interests and concerns of the group. Sometimes there is a speaker;

sometimes there is simply a topic such as Resident Assessment Protocols, Care Planning, or QIs.

One of the reasons for the success of these groups is the high level of cooperation and coordination between the QIPMO nurse facilitators and the state's regulatory staff. The Missouri RAI Coordinator, a state regulatory staff person, has been extremely supportive of the group and has made it a point to visit each region at least annually to give the participants an opportunity to meet her and ask questions. State staff from technical support also visit meetings, discuss MDS correction policies, MDS validation and transmission reports, and any other computer or technology issues. Regional surveyors have visited and shared information on areas of noncompliance that have been recurring in their area. This allows for discussion of what surveyors are judging as noncompliance. It makes it possible for facility staff to go back to their facility, review their practices, and make adjustments to their systems before the surveyors evaluate the facility during an on-site visit.

To date, there have been 60 MDS-RAI Coordinator Support Group meetings in our state. Representatives from 200 different freestanding, hospital-based, and government (VA) facilities have attended (more than 40% of the nursing facilities in the state required to complete MDS). We are confident that in the space of a year and a half, our original goals are already being met to some degree. The questions that regular attendees ask are more advanced, and they are demonstrating a desire to learn as much as they can to help them do a better job. We have seen many of the regular attendees remain in the same position with the same facility consistently. However, we still see people moving to the same position in a different facility. We know from the evidence of attendance, participation, and comments from coordinators that they find the meetings very helpful.

Additional efforts involving the QIPMO nurses include education of state DHSS surveyor staff, participation in statewide provider meetings conducted and sponsored by the DHSS, involvement in the Missouri Peer Review Organization's efforts in long-term care, and participation as expert speakers at state and national conferences about quality of long-term care. QIPMO staff are respected for their clinical knowledge base and application of evidence-based practice.

QIPMO has been operating for nearly 2 years, and, during this time, QIPMO nurses have conducted 569 site visits in more than 286 different facilities in Missouri. In 2001, site visits were conducted in 128 for-profit, 54 non-profit, and 30 governmental long-term care facilities, including 20 intermediate care (79 total in state), 22 residential care I (316 total in state), 63 residential care II (370 total in state), and 164 skilled nursing facilities (469 total in state). Facilities ranged in size from 12 to 490 beds. Costs of the program are for the nurses' time and travel to facilities, coordination support staff, and data analysis and data support staff for reports; these costs are approximately \$600,000 annually.

The success of QIPMO has been resoundingly positive with facilities, as evidenced by their repeatedly requesting additional visits. A quality improvement evaluation instrument is completed at the conclusion of each site visit, so QIPMO staff can improve their services to facilities. Additionally, we have compared distributions of QI scores for all nursing facilities in the state for the years 1999 (prior to official start of QIPMO) and 2001 (the end of the second year of implementation of QIPMO). Since the implementation of QIPMO, Missouri has seen an improvement in several QIs provided to facilities in the Show-Me and federal QI reports. Improvements of several points (range of 1–15 points) have been made in scores at the median, 90th, and 95th percentiles in such things as pressure ulcers for residents at high risk and low risk for developing them, range of motion or activities of daily living, dehydration, fecal impaction, residents remaining in bed, depression, depression with no treatment, problem behaviors, cognitive impairment, incontinence without a toileting plan, antianxiety, and hypnotic drug use. Figure 2 illustrates the improvements in statewide scores for depression with no treatment, incontinence without a toileting plan, and pressure ulcer QIs.

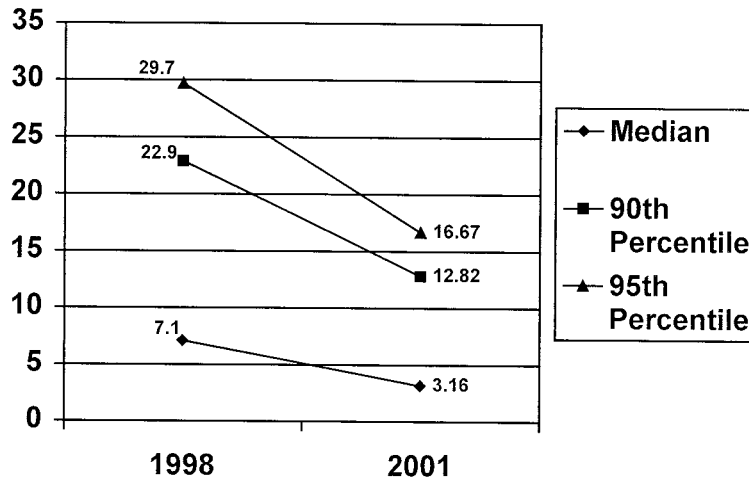
On the basis of the research foundation of the service demonstrating that resident outcomes can be improved with on-site clinical consultation, the growth and use of QIPMO site visits, and the 1999–2001 resident outcome evaluation, we believe the QIPMO is positively influencing nursing home care in Missouri. A comparison of resident outcomes of facilities using the QIPMO service with those that have not chosen to participate is planned.

Discussion

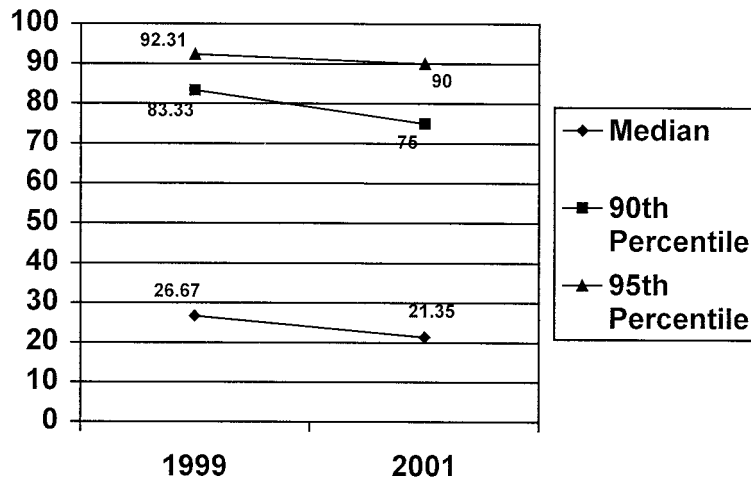
Addressing a complex problem such as improving the quality of care for nursing home residents in a state requires multifaceted strategies. Strategies must go beyond the basic regulatory approach of defining minimum standards and measuring whether facilities meet those standards. If consumers are to have access to high-quality care in nursing facilities, then the principles of quality improvement must be applied. Nursing facility staff need to be challenged to constantly improve the care they are delivering. This cannot be done with a focus on minimum standards. Somehow, strategies must be developed and implemented that reinforce reaching for higher and higher levels of quality care. Such strategies that use the principles of quality improvement and help nursing facility staff reach for quality have been designed and successfully implemented in Missouri.

While the foundation for this statewide strategy of a partnership between the state agency responsible for nursing home survey and certification and a school of nursing in an academic health sciences center are the principles of quality improvement, the cornerstones are using the RAI process to improve clinical care, using MDS data to encourage the development of quality

A QI 5 – Prevalence of Depression Without Antidepressant Therapy



B QI 9 – Prevalence of Occasional or Frequent Bladder or Bowel Incontinence Without a Toileting Plan



C QI 29 – Prevalence of Stage 1-4 Pressure Ulcers

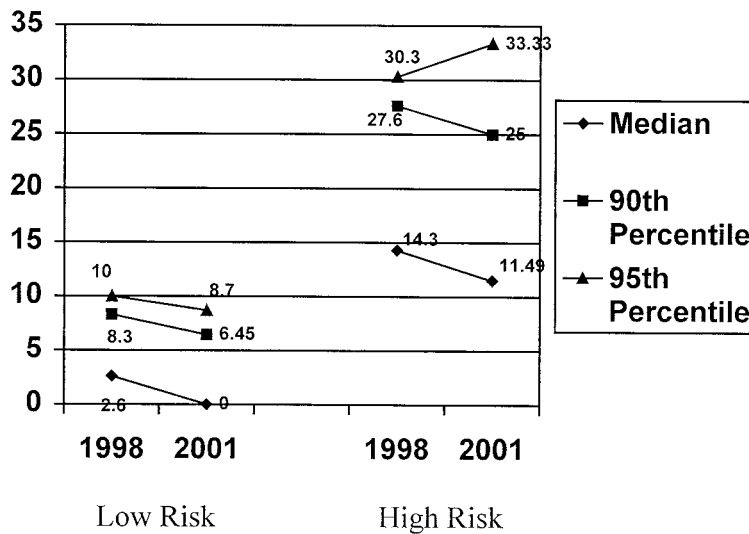


Figure 2. Improvements in statewide scores for **A**, depression with no treatment, **B**, incontinence without a toileting plan, and **C**, pressure ulcer quality indicators (QIs).

improvement programs in each facility, and providing ongoing clinical consultation to encourage the use of the best up-to-date clinical care practices. Resident assessment and care planning using the standardized, mandated RAI can be a way to challenge staff to consider new ways of delivering care and compare their clinical care results with other facilities across the state. Staff cannot only use the assessment data to plan care for their residents, but also see if their care decisions are resulting in better outcomes for their residents. Comparisons using MDS data before and after implementation of better systems of care can reinforce that staff are making good changes or help them take other corrective steps.

The value of on-site confidential clinical consultation cannot be over stated. Many times facility staff are stretched to the limit such that keeping abreast of the latest clinical care is difficult. The QIPMO nurses bring resources for staff to learn about the best ways to care for the frail elders living in nursing facilities; they also bring their clinical expertise in gerontology so staff see them as credible resources. The nurses also provide a source of much needed support to staff who really want to do a good job, but need some ideas and encouragement that they are on the right track. The confidential nature of the visit is essential to success. Staff must feel that they can be honest and sometimes describe situations that need improvement. Unless situations can be described accurately, finding solutions will be difficult, if not impossible. In Missouri, all health care providers are mandated to report elder abuse or neglect; however, we have not encountered any situation thus far in the QIPMO program that would require mandated reporting. The QIPMO nurses are providing a much needed service and support to facility staff to help them improve care to residents.

Partnering with a university school of nursing has proved to be valuable for the state regulatory agency to be able to implement a statewide strategy of quality improvement for nursing facilities. The university brings skilled researchers knowledgeable about data management and analysis so that MDS data can be informative for facilities and for state agency staff. The school of nursing specifically brings clinical expertise about the care of older people that can provide a much needed strong clinical base to decisions about care. The faculty at the school of nursing networks throughout the state to locate nurses with gerontological expertise for the QIPMO nurse staff.

Another advantage of the partnership is that several faculty who are members of the MU MDS and Quality Research Team have strong research programs in specific areas of elder care. When special in-depth expertise is needed, faculty have generously shared their knowledge and guidance. This is particularly helpful with clinical areas such as skin impairment, acute illness recognition, and enhancing exercise. New research proposals have been funded by federal and private agencies to answer complex questions about cost, quality and staffing, exercise and aging, and clinical problems such as pneumonia and skin ulcers. As new findings are available, they are shared so that

the latest information can be used in facilities in the state. Cooperation with state agencies and provider associations lends credibility to the research proposals and improves the chances of success and access to facilities and elders for research.

The school of nursing is in a favorable position to facilitate cooperation among provider organizations and associations to develop educational programs that are relevant to the field and reinforce the quality improvement process. With state regulatory agency collaboration, players are willing to participate because they believe facility administrators are more likely to send staff to programs that have state agency involvement. The school of nursing can suggest best practice ideas generated from research or from providers so new ideas are disseminated in educational programs.

Should other states try such an approach? Absolutely. If we are truly serious about improving the quality of care for residents in long-term care, new strategies are needed. Remember, there is no single "silver bullet" to improve quality in long-term care. However, a well-designed approach using a partnership that coordinates efforts can effect positive change and reinforce the principles of quality improvement. Helping staff focus on "the ceiling" (reaching for higher and higher quality of care) is much more likely to be successful than focusing on "the floor" (being sure the minimum regulations are met). States must move beyond regulation, and with the help of one of their schools of nursing they can help facility staff develop quality improvement programs that can truly improve quality of care and outcomes of residents in long-term care.

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