Chapter 2
Healthcare Changes and the Affordable Care Act: A Physician Call to Action Quality Improvement Organizations

Adrienne D. Mims, Jane C. Pederson, and Jay A. Gold

Abbreviations

AAA	Area Agency on Aging
AAFP	American Academy of Family Physicians
AARP	American Association of Retired Persons
AGS	American Geriatric Society

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A.D. Mims, M.D., MPH (✉)
Medicare Quality Improvement, Quality Improvement Organization, Alliant GMCF, 1455 Lincoln Parkway, Suite 800, Atlanta, GA 30331, USA

American Health Quality Association, 1725 I (Eye) Street, NW Suite 300, Washington, DC 20006, USA
e-mail: Adrienne.mims@gmcf.org

J.C. Pederson, M.D., MS
Medical Affairs, Stratis Health, 2901 Metro Drive, Suite 400, Bloomington, MN 55425, USA
e-mail: jpederson@stratishealth.org

J.A. Gold, M.D., JD, MPH
MetaStar, Inc, 2909 Landmark Place, Madison, WI 53713, USA
e-mail: jgold@metastar.com

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AHQA	American Health Quality Association
AHRQ	Agency for Healthcare Research and Quality
AMA-PCPI	American Medical Association – Physician Consortium for Performance Improvement
AMDA	American Medical Directors Association
BFCC	Beneficiary and Family Centered Care
CKD	Chronic Kidney Disease
CMO	Chief Medical Officer
CMS	Centers for Medicare and Medicaid Services
CORF	Comprehensive Outpatient Rehabilitation Facility
DOQ-IT	Doctor's Office Quality-Information Technology
EMCRO	Experimental Medical Care Review Organizations
EHR	Electronic Health Record
EMTALA	Emergency Medical Treatment and Labor Act
FY	Fiscal Year
HCFA	Health Care Financing Organization
HCQII	Health Care Quality Improvement Initiative
HCQIP	Health Care Quality Improvement Program
HHS	Health and Human Services
INTERACT	Interventions to Reduce Acute Care Transfers
IOM	Institute of Medicine
JAMA	Journal of the American Medical Association
LAN	Learning and Action Network
LANE	Local Area Networks for Excellence
NCQA-GMAP	National Committee Quality Assurance – Geriatric Measurement Advisory Panel
OPPS	Outpatient Prospective Payment System
PLN	Physician Leadership Network
PPACA	Patient Protection and Affordable Care Act
PQRS	Physician Quality Reporting System
PRO	Peer Review Organization
PSPC	Patient Safety and Clinical Pharmacy Services Collaborative
PSRO	Professional Standards Review Organization
QA	Quality Assurance
QAPI	Quality Assurance and Performance Improvement
QI	Quality Improvement
QIN	Quality Innovation Network
QIO	Quality Improvement Organization
RFP	Request for Proposals
SOW	Scope of Work or Statement of Work

Overview

The national Quality Improvement Organization (QIO) Program is administered by the Centers for Medicare and Medicaid Services (CMS), the Federal agency that administers Medicare, the federal portion of Medicaid, and other federal health insurance programs. QIOs are private, mostly not-for-profit organizations that hold contracts with CMS aimed at protecting the quality of health care available to Americans with Medicare. Historically, CMS contracted with one organization in each state as well as Washington D.C., Puerto Rico, and the U.S. Virgin Islands to serve as that state/jurisdiction's Quality Improvement Organization (QIO) contractor. QIO contracts have traditionally been 3 years in length, with each 3-year cycle referenced as an ordinal Scope or Statement of Work (SOW). (For instance, the contract cycle from 2011 to 2014 is known as the "10th SOW") [1]. Starting in 2014, CMS will engage contractors to serve as QIOs in 5-year cycles as parts of networks that span across the country, rather than stand-alone entities that work independently in a single state or territory [2]. This restructuring of the QIO Program will lead to many "flavors" of QIOs doing many different things, not limited to traditional quality improvement activities.

The statutory mission of the QIO Program is set forth in Title XI of the Social Security Act [3]. More specifically, Section 1154 of the Act states that the mission of the QIO Program is to improve the effectiveness, efficiency, economy, and quality of services delivered to Medicare beneficiaries and to ensure that those services are reasonable and necessary.

CMS identifies the core functions of the QIOs as:

- Improving quality of care for beneficiaries;
- Protecting the integrity of the Medicare Trust Fund by ensuring that Medicare pays only for services and goods that are reasonable and necessary and that are provided in the most appropriate setting; and
- Protecting beneficiaries by expeditiously addressing individual complaints, such as complaints from beneficiaries and their families about the quality of health care services they receive under Medicare, appeals from beneficiaries who believe an aspect of their care is ending prematurely (e.g., a premature hospital discharge), violations of the Emergency Medical Treatment and Labor Act (EMTALA), and related responsibilities as articulated in the law governing QIOs [1].

The QIO program impacts Medicare beneficiaries both on an individual basis and as a whole. In FY 2009 more than 45 million persons were covered by Medicare; that is 98.1 % of individuals aged 65 and older. Additionally, 7.3 million people with disabilities or end-stage renal disease were covered. These Medicare beneficiaries represent a significant portion of the nation's population (14.7 %), many of whom receive better, safer care in the thousands of hospitals, nursing homes, and other care settings where QIOs work [4].

Many current QIOs evolved from antecedent organizations with long histories of involvement in the Medicare peer review program. The next section offers an overview of the Medicare program's quality improvement efforts.

Background

Physicians have been essential to the development of the quality improvement initiatives since Medicare's inception. The Medicare statute first adopted in 1965 included language focused on patient safety and access to care from competent health care providers. In 1971, the U.S. Congress authorized Experimental Medical Care Review Organizations (EMCROs) to evaluate services provided to Medicare beneficiaries, with a focus on reducing unnecessary utilization of services through physician education and research. EMCROs, which operated from 1970 to 1974, were voluntary groups of physicians who received grants from the National Center for Health Services Research, a predecessor agency of the U.S. Agency for Healthcare Research and Quality (AHRQ) [5].

In 1972, an amendment was adopted to Title XI of the Social Security Act authorizing the establishment of Professional Standards Review Organizations (PSROs). The physician-sponsored PSROs used local physicians to evaluate cases to determine the medical necessity of services. The PSROs also focused on retrospective utilization review of hospital admissions and length of stay [5].

PSROs evolved to PROs thanks to the Peer Review Improvement Act of 1982. PROs, or Utilization and Quality Control Peer Review Organizations, launched in 1984 with a continued focus on retrospective case review along with educational or punitive measures for individual providers when needed. The Act continued to require significant physician participation, defining the PROs as physician-sponsored (10 % of local physicians participating as reviewers) or physician-access (at least one physician per specialty area to conduct medical reviews). Additional changes included not reviewing cases of close colleagues, having a consumer representative on the PRO Board of Directors, and the option of a for-profit status for the PRO. The statute provided for one PRO per state (50) and one each for Washington DC, Puerto Rico, and the Virgin Islands [5].

Funding for the PRO program originally came from annual appropriations. However, legislation starting in 1982 funded PRO work from the Medicare Trust Fund directly [5]. This stable funding source gave the Government the flexibility it needed to award contracts longer than 1 year. These longer contract periods evolved into cycles called Scopes of Work or SOWs, which distinguish each contract from the others. The 1st SOW went from 1984 to 1986 with a focus on reducing inappropriate hospital admissions. The 2nd SOW extended the PROs' mandatory quality monitoring and review activities to skilled nursing facilities, home health care agencies, hospital outpatient facilities, and physician office settings. The 2nd and 3rd SOWs continued to focus on retrospective case review that identified inappropriate care, but in isolated pockets on a case-by-case basis.

During the 3rd SOW contract cycle, PROs conducted random reviews of 25 % of all Medicare visits in their jurisdictions. A 1990 Institute of Medicine report [6] noted two glaring weaknesses of this approach: physician reviews were unreliable (i.e., studies in which cases were reviewed by other physicians frequently resulted in determinations different from the original ones), and PRO activity elicited substantial animosity from the medical community.

In response to these concerns, as well as to the growing evidence base for guidelines and processes that improve care, PROs began to shift their focus to building cooperative relationships with providers that attempted to improve care prospectively, rather than attempting to address quality issues once they happened.

In 1992, during the 3rd SOW, the Health Care Quality Improvement Initiative (HCQII) [7] redirected PROs to focus away from individual provider errors detected retrospectively towards evaluating practice patterns prospectively and using physician expertise to guide larger scale improvement at the institutional or national level [5]. HCQII would be followed by the Health Care Quality Improvement Program (HCQIP) in 1995, which positioned PROs as part of a comprehensive program that sought to unify and streamline quality improvement work across the Medicare and Medicaid programs (Table 2.1) [8].

The 4th and 5th SOWs (1993–1999) added quality improvement projects focused upon areas of high morbidity and mortality among Medicare beneficiaries where there existed strong scientific evidence that interventions could improve outcomes. Physicians were used as subject matter experts on strategies to impact the clinical topic areas of heart disease, diabetes, and preventive care. The government also called upon PROs to improve data collection and use of standardized measures to demonstrate statewide improvement. There was an emphasis on local collaboration among government, providers, and consumers to achieve desirable outcomes. Physicians became involved to build stakeholder relationships. During this period, PROs adopted practices from the growing literature surrounding quality improvement methodology, including introducing thousands of physician partners to the Plan-Do-Study-Act (PDSA) Cycle (the Shewhart Cycle), designed to implement changes in a clinical or administrative practice by making incrementally small-scale adjustments, and testing and learning from these adjustments before scaling the changes more widely. In addition to mandatory case review activities, there was a focus on beneficiary outreach and education [5].

Table 2.1 QIO contract cycles

Cycle	Date	Name	Responsible federal agency
1st SOW	1984–1986	Peer Review Organization (PRO) (starting in 1983)	Health Care Financing Administration (HCFA)
2nd SOW	1986–1989	PRO	HCFA
3rd SOW	1989–1993	PRO	HCFA
4th SOW	1993–1996	PRO	HCFA
5th SOW	1996–1999	PRO	HCFA
6th SOW	1999–2002	Name updated from PRO to Quality Improvement Organization (QIO) [9]	HCFA/Centers for Medicare and Medicaid Services (CMS)
7th SOW	2002–2005	QIO	CMS
8th SOW	2005–2008	QIO	CMS
9th SOW	2008–2011	QIO	CMS
10th SOW	2011–2014	QIO	CMS
11th SOW	2014–2019	QIO, though not necessarily state/territory based	CMS

In the 4th and 5th SOWs, individual PROs developed their own "local projects" to improve care. These projects were led by a physician Principal Clinical Coordinator and physician Associate Clinical Coordinators, who directed literature searches, measure development, choice of intervention, participant recruitment, analysis of results, and communication with participants. Starting with the 6th SOW, the topics and measures for most QIO quality improvement projects were determined centrally by CMS.

In 2002, CMS renamed PROs Quality Improvement Organizations or QIOs. The name change – aligned with the program's 20th anniversary – reflected Medicare's evolving emphasis on improving clinical quality of care, and the vital role that PROs (now QIOs) would play in making these improvements [9]. Clinical topics were added, including stroke and pneumonia with standardized indicators for the hospital, long-term care, and outpatient settings. Three local projects were required including one showing a reduction in disparity and one based on local needs. Physicians played a major role in designing these projects. The contract included a separate focus on working with Medicare + Choice (M + C) plans on two performance improvement projects. A portion of 6th SOW funding was set aside for special studies; more than 2,000 such projects were funded [5].

While national performance measurement of 6th SOW results noted national improvement in 20 out of 22 indicators for Medicare fee-for-service care [10], the 7th SOW (2002–2005) was designed to evaluate QIO performance based on achievement of specific state-level targets. Mandatory projects were included for home health agencies, nursing homes, managed care plans, and physician offices. Special attention was required for rural and underserved populations [11]. Participation by providers and practitioners in QI projects was voluntary. QIO physicians played a key role in the success of these projects, recruiting physician collaborators, enlisting professional associations to endorse the projects and inform their members of that endorsement, and offering medical support to internal teams [5].

At the turn of the millennium, CMS began to focus on making the rich data available in Medicare's files available to the public. CMS' efforts to increase transparency of quality information included launching the Nursing Home Compare website, a publicly available database on the Medicare.gov website aimed at sharing the results of quality measures with the general public and using these results to motivate beneficiaries to make smarter choices about their care options. Over the years, CMS also launched similar websites for home health agencies, hospitals, dialysis clinics, and physician practices. Increased involvement of Medicare beneficiaries occurred as they were added to panels advising the QIO project teams. QIOs provided hotlines and offered beneficiaries the option of having their complaints addressed through mediation rather than the longer formal case review process. CMS recognized a handful of QIOs as providing national-level expertise and leadership to support other QIOs for specific clinical topics or provider settings. These support centers served as peer-leaders among the QIO community as each specialized in one particular facet of QIO work, providing educational materials, compiling scientific evidence and tools, and convening educational sessions to distribute knowledge QIOs then could spread in their home states [5].

The 8th SOW (2005–2008) changed the focus from making incremental improvements on quality metrics as they apply to individual episodes of care to achieving

transformational change in systems and processes (i.e., change that has broad, systemic impact). The Doctor's Office Quality-Information Technology (DOQ-IT) program was implemented nationally to promote the use of health information technology [5]. Many QIO physicians developed innovative projects to impact the quality of care through a new funding mechanism of special focus projects. One such project involved the development of Interventions to Reduce Acute Care Transfers (INTERACT), which focused on reducing the need for nursing home residents to receive acute-care hospital treatment. Over time, the lessons learned from the INTERACT program have led to innovations in how nursing homes coordinate care for their residents. One innovation in particular created new ways to share information among nursing home caregivers that encourages them to work more effectively together to identify, communicate, and evaluate changes in a resident's health or well-being – these early, proactive communication loops are vital to detecting potential problems early enough to avoid costly and disruptive hospital stays for residents [12].

After a series of QIO-specific recommendations from the IOM in 2006, CMS strengthened the QIO Program for the 9th SOW (2008–2011) by [4]:

- Strengthening evaluation design to better assess the impact of the Program;
- Strengthening financial oversight and establishing requirements for QIO board governance to assure appropriate use of contractor funds and the representation of key constituencies;
- Increasing competition for QIO contracts;
- Enabling QIOs to release information to beneficiaries about QIO findings related to their complaints;
- Focusing QIOs on achieving national quality goals aimed at improving care for beneficiaries with significant medical needs;
- Supporting local initiatives that develop and use information on quality and cost to help beneficiaries, their caregivers, and their health professionals make better choices about beneficiaries' care.

The 9th SOW (2008–2011) was administered through 53 contracts covering 50 states, Puerto Rico, the U.S. Virgin Islands, and Washington DC, awarded to 41 independent organizations that collectively employed about 2,300 individuals across the country. During Fiscal Year 2009, CMS spent $174.6 million to administer the program [4]. While they employed fewer physicians than in earlier years, every state had physicians in positions of leadership, case review, or consultation.

QIOs employed additional tools to monitor and report on their impact on the care provided in their states/jurisdictions. QIOs focused on providing intensive support to low-performing providers and practitioners. Roughly 85 % of the provider facilities that QIOs assisted were determined by CMS using CMS data. The QIOs chose the remaining 15 % [4].

The 9th SOW included as content areas for all QIOs: beneficiary protection including mandatory case review, patient safety in hospitals and nursing homes, primary prevention, early detection, and providing assistance in using EHRs. Three "Sub-National" projects were awarded competitively to a subset of QIOs: Chronic Kidney Disease (CKD); Care Transitions to Reduce Hospital Readmissions; and Reducing Health Disparities among Patients with Diabetes [4].

The 10th SOW (2011–2014) at this writing is being carried out by 37 contractors holding contracts for 50 states, Puerto Rico, the U.S. Virgin Islands, and Washington D.C., with a total contract value of approximately $200 million/year. The program has three aims: improving patient care, improving population health, and lowering health care costs through quality improvement. All three of these aims support the aims of the U.S. Department of Health and Human Services' National Quality Strategy. Through large-scale Learning and Action Networks, discussed below, QIOs accelerate the pace of change. Improvement initiatives encourage innovation and respond to community needs. The voice of the Medicare beneficiary is prominent in all activities. Initiatives are open to providers at all levels of clinical performance that make a commitment to improvement. Improvement initiatives include collaborative projects, online interaction, and peer-to-peer education. The QIOs support CMS's value-based purchasing programs with technical assistance to providers that includes sharing best practices, assisting with data analysis, and conducting improvement activities [13]. There are QIO physicians at all levels of local programs.

Focus areas include [13]:

- Protecting the rights of Medicare beneficiaries by reviewing complaints about the quality of care received and processing appeals of the denial or discontinuation of health care services.
- Facilitating patient safety initiatives in hospitals to reduce central line bloodstream infections, catheter-associated urinary tract infections, *Clostridium difficile* infections, and surgical site infections.
- Providing technical assistance for reporting inpatient and outpatient quality data to CMS.
- Working with nursing homes to reduce the prevalence of pressure ulcers, the use of physical restraints, and the use of antipsychotic medications for managing behavior in people with dementia; and providing technical assistance in implementing Quality Assurance and Performance Improvement or QAPI methodology to structure quality improvement projects in nursing homes.
- Decreasing the incidence of adverse drug events by bringing clinical pharmacists, physicians, and facilities together to participate in the national Patient Safety and Clinical Pharmacy Services Collaborative (PSPC).
- Reducing readmissions within 30 days of hospital discharge; changing processes of care at the community level in hospitals, home health agencies, dialysis facilities, nursing homes, and physician offices; and bringing together providers, patient advocacy organizations, and other stakeholders in community coalitions.
- Assisting physician practices in using their electronic health record systems to coordinate preventive services and report related quality measure data to CMS. Practices can participate in a Learning and Action Network focused on reducing patient risk factors for cardiac disease. QIOs partner with their local Health Information Technology Regional Extension Centers (RECs) to promote health IT integration into clinical practice.

The Patient Protection and Affordable Care Act (PPACA), called for the development of new models of care and the emergence of new models for reimbursement

for medical claims payment [14]. New care delivery models include increased use of performance on quality measures to impact reimbursement (Accountable Care Organizations). The 10th SOW includes tasks to support providers to begin submitting PQRS data and to improve performance on those submitted measures.

Milestone changes to the structure of the QIO program in 2014 are a result of Section 261 of the Trade Adjustment Assistance Extension Act of 2011. The U.S. Secretary of Health and Human Services was given the authority to contract with a broader array of entities than in the past, which may result in multistate entities providing local QI support, rather than a state-by-state approach to QIO work [15]. As a result, broad changes will occur in subsequent contracts [2].

- The contract cycle moves from 3 years to 5 years.
- Fewer organizations will coordinate activities over several states.
- CMS will award medical case review for Medicare beneficiaries to Beneficiary- and Family-Centered Care Quality Improvement Organizations (BFCC-QIOs), while quality improvement work will be conducted by Quality Innovation Network QIOs (QIN-QIOs). Thus, the traditional work of the QIO Program will be performed by different types of QIOs across the country, rather than assigning all QIO work to a single organization within a single state.

Physician leadership will be invaluable to improving quality of care on a multistate level, while local physician involvement for recruitment, convening advisory boards, stakeholder interactions, clinical education sessions, and design of implementation tools and strategies will be essential for successful quality improvement at the community level.

Capabilities of QIOs

As noted, the QIOs' charge from CMS has become increasing complex, as CMS tasks QIOs with supporting more provider venues and changing the program's strategies, and at the same time introducing technology to effect change. In order to provide services as a QIO, an organization needs the capability to implement quality improvement initiatives at a statewide and a local community level, as well as across states. QIO staff expertise includes (Table 2.2):

Table 2.2 Capabilities of staff working at the QIO

Technical assistance	Public speaking	Process redesign
QI methodologies	Community organizing	Government contracting
Data analysis and reporting	Technical writing	Clinical practice
Information technology	Change management	Recruitment
Electronic health record systems	Communications and publication	Convening and managing a collaborative
Evaluation	Security	Outreach
Clinician and patient education	Contract management	Data collection

Thus the QIO physician will work with an interdisciplinary team of individuals with a range of expertise that differs from a clinical practice or educational environment.

The Work of QIOs

The QIO Program's primary purpose is to improve the quality of care provided to Medicare beneficiaries. It does this in a two-fold way. First, the QIO provides a mechanism for Medicare beneficiaries and their representatives to raise concerns regarding the quality of the care they have received. Second, the QIO supports providers in improving the quality of care they deliver to their patients. Physicians have a comprehensive view on how various aspects of the healthcare system impact the patient and thus can play an essential role in improvement efforts within the QIO.

An understanding of the general difference between quality assurance (QA) and quality improvement (QI) provides the basis for a good understanding of the purview of the QIO Program. QA typically focuses on variation in practice – especially variation in practice that would result in falling below the generally accepted standard of care or the minimal standard of care. QI typically focuses on setting goals and striving to improve performance. Goals are chosen based on the perceived gap between current performance and what it felt to be "best practice" derived from what is known from medical literature or what is observed and measured in the practice setting. QI generally assumes a goal of meeting the standard of care and therefore goals are selected based on a desire to meet or exceed the current performance or benchmarks set by the high performers. QI is therefore a continuous process as the standard of care and best practice is always evolving and improving. These concepts of QA and QI are evident in both major bodies of QIO work: beneficiary and family centered care (BFCC) and quality improvement (QI).

Also important to an understanding of the work of the QIO are the concepts of "systems" and "processes." A basic definition of a process is the series of steps that are taken in order to complete a task or an action. The term "system" refers a combination of multiple processes. Health care is made up of many systems and these systems are in turn made up of many processes. For example, in settings of care where medications are administered, such as hospitals or long-term care facilities, there exists a system for medication administration that includes all the processes involved in taking a medication from the point of prescribing to administering it to a patient. Both QA and QI focus on systems and processes in order to assess causes of variation and to look for breakdowns or determine opportunities for improvement. An example of this in the QIO program is the work that has been done to decrease the prevalence and incidence of pressure ulcers in the hospital and long-term care settings. The focus in eliminating pressure ulcers has been on the system of care and the processes aimed at assuring appropriate preventive measures are taken to preserve skin integrity for each patient at the right time.

A basic assumption of both QA and QI is that the outcomes that are achieved in health care are influenced most by the systems and processes that lead to those outcomes, and it is these systems and processes that influence the individual behavior of those who engage in those processes. Any given process permits certain results and precludes certain other results. Thus, individual behavior can achieve certain outcomes only if the process permits these outcomes. The systems and processes that individuals work within are usually a much stronger determining factor in outcomes than individual activity. Therefore, in both QA and QI, if we are working to change an outcome, in the vast majority of cases this needs to be done through changing the systems and processes. This philosophy is evident in the work of the QIO. It is often assumed that improvement in quality is achieved through education. While education is important and part of all QA and QI work, it is often not sufficient. The QIO plays a unique role in helping providers understand that frequently individuals providing care have all needed knowledge and skill; however, it is the systems and processes that prevent those individuals from delivering the right care at all times for all patients. This approach requires taking time up front to understand the systems and processes; however, ultimately this step can save time by reducing rework, and in the end will produce a better outcome that is more likely to be sustained over time. This approach is also one of the reasons QIO work is rewarding to QIO physicians.

The QIO approaches improving quality of systems and processes from two vantage points; case-based that uses information gained from individual episodes of care, and setting-based that looks at care provide in a setting or across settings. The case-based approach is most evident in the BFCC-focused work that addresses variation in quality, coding and utilization through review of the medical records that document individual patients' episodes of care. The setting-based approach is evident in the QI initiatives that focus on the various settings of care such as hospital, outpatient, and long-term care. In this approach the QIO is not focused in individual episodes of care but instead in looking at aggregate data such as publicly reported measures of care.

The BFCC-QIO uses information found through review of episodes of care with the input of patients, patient representatives, and providers to identify opportunities to improve the quality of care provided and address utilization issues. Because most of the episodes of care QIOs review come to them from complaints or appeals from Medicare beneficiaries or their families, BFCC work gives voice to those receiving care. In its review, the QIO aims to ensure that this voice is heard to improve care, not just for that beneficiary, but for all patients in similar care situations. As they do this, QIOs review the quality of care in the context of practice guidelines, the current evidence base, and the community standard of practice.

Physicians play a central role in the BFCC work. Often the review of an episode of care will begin with Medicare beneficiaries raising a concern over care they have received or requesting a review when their benefits have been terminated, which occurs upon discharge from the hospital or other setting of care that is paid by Medicare Part A. The QIO staff work with the beneficiaries to understand their concerns and determine if they can be addressed by the QIO. The key source of data the QIO uses for the BFCC work is medical record documentation. Although the actual review of

the medical record is done by outside physicians that are matched to the case by specialty and geography, the QIO physician makes certain the reviews are consistent not only with evidence but across reviews. This typically requires spending time reviewing each case and discussing the case with the physician reviewer as well as the Medicare beneficiary or family and the provider(s) involved in the care.

The range of case types included in the BFCC QIO work includes:

- Appeals for termination of benefits in any setting that is paid by Medicare; acute inpatient, long-term care hospitals, skilled nursing facilities, Comprehensive Outpatient Rehabilitation Facilities (CORFs), and hospice. In these reviews the QIO is asked to determine if it is appropriate for Part A Medicare coverage to end. This involves reviewing the medical record to determine if the beneficiary was ready for discharge or if s/he still required the services that could only be provided in that setting.
- Requests for higher weighted DRG's. These reviews are requested by a hospital after a patient has been discharged to determine from a clinical standpoint whether the hospital is eligible for a higher reimbursement.
- EMTALA (Emergency Medical Treatment and Labor Act) referrals. The QIO reviews the medical information for CMS to make the clinical determination as to whether a violation of EMTALA exists.
- Quality of Care concerns. These reviews arise when Medicare beneficiaries or their representatives contact the QIO because they feel the care they received was not appropriate or was harmful. They also arise out of utilization reviews as each record reviewed by the QIO is also evaluated for quality of care concerns.

The BFCC work can be personally and professionally rewarding for the QIO staff physician and for the physicians who perform the medical record reviews. In the process of performing the review and analyzing the results, physicians improve their own knowledge and skills, directly impact the care Medicare beneficiaries receive, and work directly with providers to help them determine ways to change their systems and processes of care in order to provide the high quality care they desire for their patients.

The QI QIO work has evolved over the years and continues to evolve. As noted in the background section, the clinical topics that the QIOs are asked to address change based on CMS's analysis of national performance data. Each QIO is asked to work on these topics and to elicit improvements. CMS lays out the general approach and the contract deliverables; however, the approach to achieving improvement is determined by the QIO taking into account the local health care systems and environment.

One way QIOs have worked to identify high performing organizations and to rapidly share effective practices is through learning and action networks (LANs). These LANs are topic-focused and can be statewide, across multiple states, or within a specific community. The idea behind LANs is that they connect organizations and individuals that have similar goals for QI in a collaborative effort where everyone teaches and everyone learns. The intended result of these LANs is rapid, wide-scale improvement that would not happen with each organization working independently. An example of this work is highlighted in an article published in

the Journal of the American Medical Association (JAMA) that showed that hospitalizations and re-hospitalizations among Medicare patients declined nearly twice as much in communities where Quality Improvement Organizations (QIOs) coordinated interventions that engaged whole communities to improve care than in comparison communities [16]. This result was achieved through:

- Developing effective community coalitions involving hospitals, nursing facilities, home care, hospice agencies, physicians and local agencies to meet clinical and social service needs that may prevent patients from getting or staying well;
- Generating and implementing standard transition processes across all local health care settings;
- Transferring patient clinical information among providers in a timely and effective way;
- Helping patients and their family members become actively engaged in their transitions by keeping a personal record, knowing the 'red flags' for trouble, ensuring they receive the right medications, and follow-through on appropriate follow-up care.

Besides highlighting the cross-setting work of the QIO, this coordinated effort also highlights the important role of the physician in QIO work. In each of the above approaches the physician plays a critical role in developing strategy and education, and facilitating communication among various providers.

In addition to the LANs, the QI work also involves direct technical assistance to providers, which involves consultation and hands-on teaching. This approach has been evident in the work QIOs have done in the long-term care setting aimed at clinical topics such as the reduction of physical restraints, and other topics such as the provisions of the Affordable Care Act that require each nursing home to implement its own Quality Assurance and Performance Improvement (QAPI) plan. In these cases, QIO staff and physicians will work one-on-one with facilities to teach QI skills, review data, help with implementation of improvement interventions, and measure effectiveness. Physicians practicing in the community or within the organizations working with the QIO can be an effective resource to support the work of the QIO and provide ongoing education and support to quality improvement initiatives. The QIOs strive to engage physicians and value their support.

Depending on the needs of the state, QIO work may also focus on specific populations such as rural providers or underserved communities, with multicultural activities aimed at meeting the needs of a changing Medicare demographic.

Role of the Physician in the QIO

QIOs have typically employed physicians to serve either as medical director for the BFCC work or as a clinical and quality improvement leader for the QI work. Taking a position in a QIO can be very rewarding but is also very different from clinical practice. One of the biggest rewards QIO physicians receive is being able

Table 2.3 Roles of physicians working in a QIO

Medical Reviewer	Medical Director	Subject Matter Expert Consultant
Chief Medical Officer	Chief Executive Officer	Senior Vice President
Associate Medical Director	Director of Research	Principal Clinical Coordinator
Director of Medical Affairs	State Program Director	Chief Medical Information Officer

to impact the health and well-being of people on a larger scale than is possible in the individual clinical setting. In a clinical practice, physicians have the opportunity to work with each patient individually to work toward maintaining or improving their health or quality of life. See Table 2.3 of examples of roles for physicians in the QIO program.

Skills Needed

Although clinical training, knowledge and experience are essential for a physician to be successful in QIO work, these skills are not sufficient for success. In many QIOs, the physician is an integral part of the leadership team and also has a hand-on role in BFCC or the various QI initiatives. From a recent survey of physicians working at QIOs, it was noted that 80 % completing the survey have an additional relevant degree or certifications including MPH, MS, MSPH, JD, PhD, MHA, MMA, and MBA. Some of the additional skills needed to be successful in the QIO physician role include:

- Systems and critical thinking: This is the most important skill because of the QIO focus on systems and processes. The QIO physician must be able to model and teach such thinking. An example would be leading a root cause analysis (RCA) with the goal of not only helping the provider identify the root cause of a problem, but also teaching the provider how to use the RCA process for future work.
- QI tools and techniques: There are a number of tools and techniques that assist in quality improvement work and support systems thinking. The QIO physician must be able to model and teach these tools and techniques. An example of this is helping providers understand the use of the Plan-Do- Study-Act (PDSA or Shewhart) cycle and the power of small tests of change. Helping providers use this technique can allow them to make rapid improvements.
- Analytic skills: Although QIOs typically employ various other kinds of professionals to assist, it is important that physicians be able to understand, interpret and transfer the results to be clinically relevant
- Teamwork: Much of the work at a QIO is done in teams. Therefore, the QIO physician needs to be able both to lead and to participate in teams. In addition, the QIO physician will be called upon to teach team skills to other providers as part of basic quality improvement skills.
- Creativity: Although CMS provides the general approach for the QI work, the specific approach is left to the states. QIO physicians need to use their knowledge

of the local health care environment and current state initiatives to find new and innovative ways to address gaps and to encourage improvement.
- Communication: QIO physicians have numerous opportunities to speak in front of a variety of audiences, so good presentation skills are essential. It is also important to have good writing skills and be able to translate information into language that resonates with a wide range of readers, from other physicians to Medicare beneficiaries and their families.
- Networking: A big part of the QIO physician job is building relationships with physicians and others to understand current needs and trends and to gain support for quality initiatives. This may involve participating on local organizations, committees or work groups as well as being active in national stakeholder and partner events.
- Education: QIO physicians are often asked to lead educational sessions on a variety of topics. This requires the ability effectively to utilize adult education principles in order to maximize the impact of education on actual systems, processes, and outcomes of care. An example is teaching a group of physicians how to lead RCA teams. This requires leading them through hands-on activities to gain experience with the tools and techniques that constitute the RCA process.

In summary, given the scope of the QIO work and the skills required, becoming a physician in a QIO can be personally and professionally rewarding as well as intellectually challenging. Success requires gaining skills and competencies beyond those of a successful clinician. There are few opportunities where physicians can affect the health care provided in their state to the degree they can by working for the QIO. Such a position allows physicians to gain knowledge and understanding of the health care industry, and to interact with regulators and policymakers at a state and national level as well as with other partners and stakeholders. Furthermore, a successful QIO experience can be an excellent training for other positions.

Stakeholder Engagement

Quality improvement work is complex and multifactorial. In order to be successful, a project needs both support and input from a variety of viewpoints. To that end, it is essential to develop and maintain ongoing relationships with stakeholders, so that when collaborative engagement is needed, support is easier to garner. Potential stakeholder organizations include the state associations for physicians, nurses, pharmacists, hospitals, nursing homes, hospice, assisted living, state survey agency, AARP, Alzheimer's disease, state public and private agencies including Area Agencies on Aging, CMS, Medicaid, public health, Health Information Technology Regional Extension Centers (RECs), private insurance carriers, and schools of medicine, public health, health policy, pharmacy, and gerontology.

Whether the project is facility-based, local, statewide, or multi-state in scope, the QIO physician can be integral in negotiating collaborative relationships. With a background of interdisciplinary team work for care plan development, comprehensive assessment, and case management, with patients eligible for Medicare, geriatricians

are uniquely suitable for working in this environment. Engaging and valuing the unique contribution of team members as equal contributors is an important skill in team leaders and members.

Within a facility, a quality improvement team typically consists of individuals from different backgrounds who are affected by a process. For example, in the hospital setting, working on a project to improve infection control, the team may include a hospitalist, surgeon, nurse, operating room technician, pharmacist, or specialist in utilization review, infection control, risk management, laboratory, discharge planning, environmental services, or patient education. In a long term care environment, a project to reduce pressure ulcers could include, a medical director, director of nursing, admission nurse, nursing assistant, dietician, wound care nurse, physical therapist, pharmacist, environmental services specialist, social worker, and ombudsman.

Quality improvement projects affecting a broader community may include the oversight of an advisory board. One example is an effort in Georgia to reduce statewide rates of inappropriate antipsychotic medication in patients with dementia in long term care facilities. For this quality improvement project, a multi-organizational effort was needed. In Georgia, the baseline rates for antipsychotic use in dementia for long stay residents was one of the highest in the nation in 2011 [17]. The state set a goal of a 15 % reduction in use by 12/31/12, identical to the national goal [17]. The Advancing Excellence in America's Nursing Homes Campaign supports statewide coalitions of stakeholders called Local Area Networks for Excellence (LANEs) [18]. The Georgia QIO co-convened an advisory board to guide this effort along with the state LANE under the leadership of a QIO geriatrician. The advisory board consisted of representatives from the regional CMS office, the state nursing home association, geriatric pharmacy, geriatric psychiatry, geriatric medicine, state survey agency, geriatric nurse practitioner, long term care pharmacy, occupational therapy, activity director, Alzheimer's Association, ombudsman, and quality improvement specialist. As a result of an intensive, focused effort, the statewide rates dropped surpassing the goal of 15 %, resulting in a 20 % reduction [19].

On a national level, QIO physicians provide quality improvement expertise in a variety of organizations, workgroups, and technical expert panels. A survey of physicians working in the QIO program in 2013 found that they held positions with many organizations that impact the breadth of medical care across the country (Table 2.4).

Table 2.4 Affiliations of QIO physicians

American Geriatric Society (AGS)	American College of Physicians (ACP)	American Academy of Family Physicians (AAFP)
Medical school or residency programs; faculty appointments	National Committee for Quality Assurance – Geriatric Measurement Advisory Panel (NCQA-GMAP)	American Medical Association- Physician Consortium for Performance Improvement (AMA-PCPI)
American Cancer Society	State and County Medical Associations	Technical Expert Panels for CMS and others
Health Insurance Plan	American Medical Director Association	National Quality Forum

Trade Association

The national Quality Improvement Organization program is supported on a national level through a membership organization, the American Health Quality Association (AHQA) [20]. AHQA serves as a voice to represent organizations holding QIO contracts as they interact with HHS, CMS, Congress, and national associations. QIO physicians have held leadership positions within AHQA including President, members of the Board of Directors, chair of Advisory Committees, Networks, and expert panels.

Through AHQA, QIO physicians have served as a resource for Congressional leaders, government regulators, national organizations, and collaborators within the QIO program. Over the years, QIO physicians have met frequently with members of Congress, educating them about the quality improvement work of projects in their district and the needs of clinicians, patients, and facilities in their states. AHQA coordinates QIO physician input into the feedback solicitation process for the QIO contract, proposed rules, National Quality Forum proposed measures, and other national organizations' calls for input.

In the fall of 2012 into early 2013, a special focus committee including QIO physicians collaborated with HHS to help develop recommendations for measurement for the National Quality Strategy 2013 and influenced the CMS Quality Strategy 2013. In the fall of 2013, QIO physicians, pharmacist and quality improvement specialists provided input to the HHS National Action Plan for Adverse Drug Event Prevention [21] regarding measures to improve the safe use of medications for diabetes, anticoagulation, and pain management.

AHQA hosts a collaborative effort of QIO physicians called the Physician Leadership Network (PLN), which consists of physicians holding a variety of positions in their QIOs. Monthly conference calls and periodic onsite meetings have served as vehicles for information exchange, troubleshooting, program concerns, and the sharing of best practices. One product of the PLN was the development of a Clinical Discussion Series of webinars showcasing best practices on clinical topics important in the world of quality improvement [22]. The series demonstrates the interdisciplinary nature of the teamwork used in the QIO program in its production, presentation and attendance, and the importance of physician leadership.

Conclusion

Physicians choosing to build a career or work as consultants within the QIO arena can find that they are able to use a variety of skills in addition to those of the clinical, teaching or research setting. Leadership and collaborative roles among QIO interdisciplinary teams for quality improvement or executive management can be very rewarding as a career path. Physicians interested in working with QIOs should

contact the one covering their state and discuss areas of interest including medical review, participation in quality improvement activities, providing educational lectures, or collaborating on submitting a grant proposal.

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