
Health care quality and rheumatology: the role of the American College of Rheumatology (ACR)

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ABSTRACT

In the context of undeniable evidence that health care can and must be improved, the ACR has committed to lead the effort to develop and implement quality measures designed to identify opportunities to improve sub-optimal care. In the process of creating and offering tools to measure and assess adherence to evidence-based care, the ACR seeks to be proactive in preparing its member physicians and their practice teams for the likely upcoming healthcare environment shift to more quality-based reimbursement and public reporting.

Introduction

New medications, especially the biologic agents, have transformed the way we treat many of our important diseases in rheumatology. Over the next decade we will witness another transformation in patient care with increasing application of health information technology and an increasing focus on quality in healthcare reimbursement and public reporting. This article will survey the current healthcare environment and summarize the response of the American College of Rheumatology (ACR) to the changing environment, with a forecast about how these changes may affect us as rheumatologists.

Rising healthcare costs: the burning platform

The increasing burden of healthcare costs is alarming and threatens the viability of American businesses, as well as state and federal programs with healthcare benefits. The cost of healthcare per capita in America is triple that in Japan. General Motors is compromised on the global market by being forced to invest more dollars in healthcare than dollars invested in steel for each car it builds. Erosion of profit margins from high health insurance premiums

drives employers to drop coverage or offer plans with higher deductibles and fewer benefits. The rising healthcare costs of federal programs for Medicaid and Medicare are on an unsustainable, runaway course. Unless there is change, these programs in their current form will not exist for our children's and grandchildren's generations.

Rising healthcare costs have created a health insurance affordability crisis that threatens access to care for many Americans. As employers increasingly shift costs to employees, the service workers of America (our patients) are struggling to maintain health insurance coverage for their families (1).

Since over 80% of healthcare costs are driven by the "power of the pen" (or now the click of the computer mouse) by physicians, we as physicians must carefully examine the extent to which we are part of the healthcare cost crisis and take the lead in seeking solutions.

The quality-cost connection

The medical and economic literature form rules of thumb that feed current thinking about the connections between quality and cost. The 20% of the population with chronic illness (the majority of the problems cared for by rheumatologists are chronic illnesses) accounts for 80% of the healthcare costs. Since primary care physicians provide more than 80% of the care of most chronic illnesses such as diabetes and cardiovascular disease, it is logical that the quality movement first focused on the primary care of chronic illnesses like diabetes in early quality measure development, pay-for-performance, and quality-based public reporting.

Failure to achieve evidence-based care early in the course of chronic illness leads to a higher rate of complications, with needless suffering and unnecessary costs associated with potentially preventable complications. Two senti-

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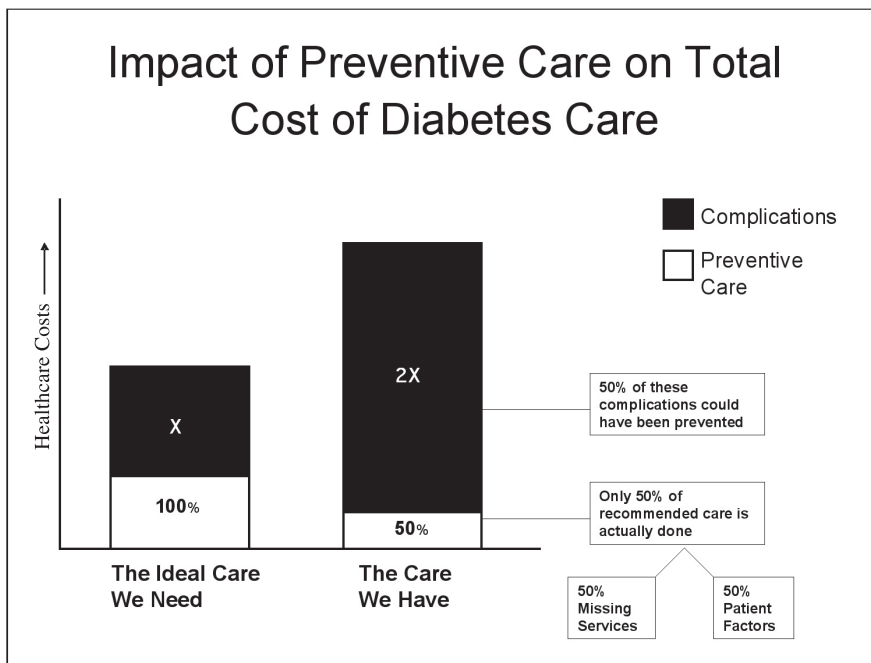


Fig. 1. The rate of complications of diabetes (with the suffering and costs associated with these complications) from usual care is double that from evidence-based, secondary preventive ideal care (see text), yet evidence-based care is delivered only half the time. Missing services, or under-care, from physicians and their practice teams contribute to the shortfall in evidence-based care.

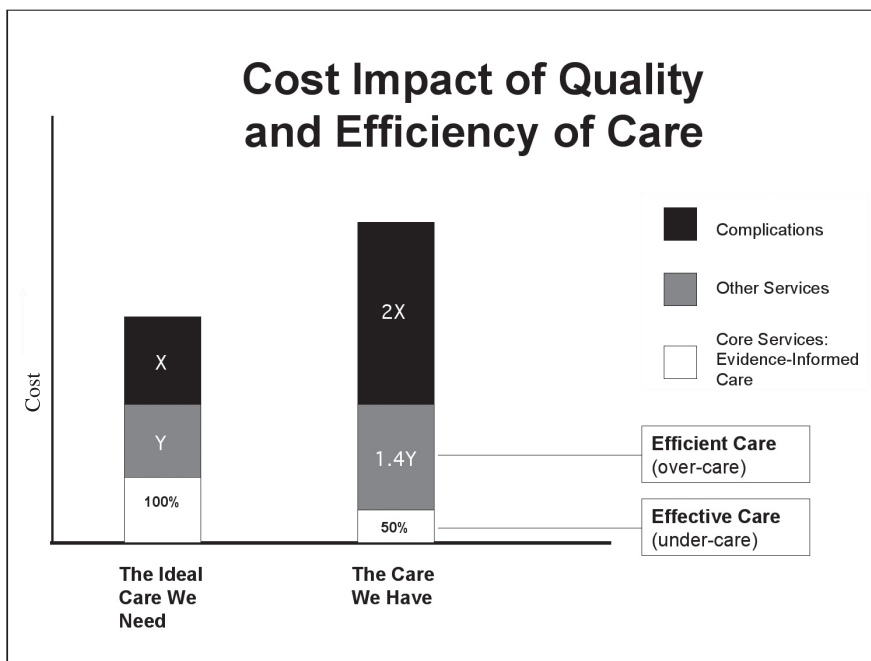


Fig. 2. The healthcare cost differential between usual care and evidence-based care is further accentuated by an estimated 30–40% waste (inefficiency) in the system related to over-care (care without value and redundant services).

nel studies support the case for diabetes (Fig. 1). The first, by Gaede *et al.* (2), demonstrated that patients with diabetes receiving evidence-based care had > 50% fewer complications of diabetes compared to patients receiving usual

care. Second, McGlynn *et al.* (3) demonstrated that only about half of evidence-based chronic illness care is actually achieved. These studies suggest that, regarding the 80% of healthcare costs related to chronic illness, as much

as half results from shortfalls in quality care based on evidence. It has been estimated that about half of the shortfalls can be attributed to missing medical services (under-care) by physicians and their practice teams and half are related to patient factors, such as non-adherence or psychosocial factors.

There are clear examples of under-care gaps in rheumatologic quality care, which result in suffering and expense that potentially could have been avoided. Delay in the referral of patients with rheumatoid arthritis (RA) to a rheumatologist and/or delay in intervention with aggressive disease-modifying anti-rheumatic drug (DMARD) treatment to control disease lead to joint damage, disability, and the need for costly reconstructive surgery. Potentially avoidable fragility fractures occur because of failure in primary prevention (inadequate screening) or in secondary prevention (failure to seek treatable causes of secondary osteoporosis or to intervene with appropriate medication in the patients experiencing their first fragility fracture).

Further cost containment could be achieved by improving efficiency of care (Fig. 2). Studies by Fisher, Wenberg, and others (4) suggest that there is a waste of 30% or more in healthcare costs relating to redundant services and to services for which there is no scientific evidence of benefit. The consequences of the medical errors of under-care in effective primary and secondary prevention and over-care from inefficiency are *muda*, the Japanese word for “needless waste.” Examples of over-use quality gaps in rheumatologic care include the excessive or inappropriate use of biologic agents, inappropriate testing for antinuclear antibody (ANA) subsets and other serologies, or excessive imaging studies beyond evidence-based guidelines for low back pain.

As current drivers of the quality agenda, employers are actively involved in designing health insurance benefits and healthcare reimbursement reforms that will encourage their employees to seek providers in the “high quality, low cost” upper right-hand quadrant of the effectiveness-efficiency grid (Fig. 3) (1). In the minds of those bearing the

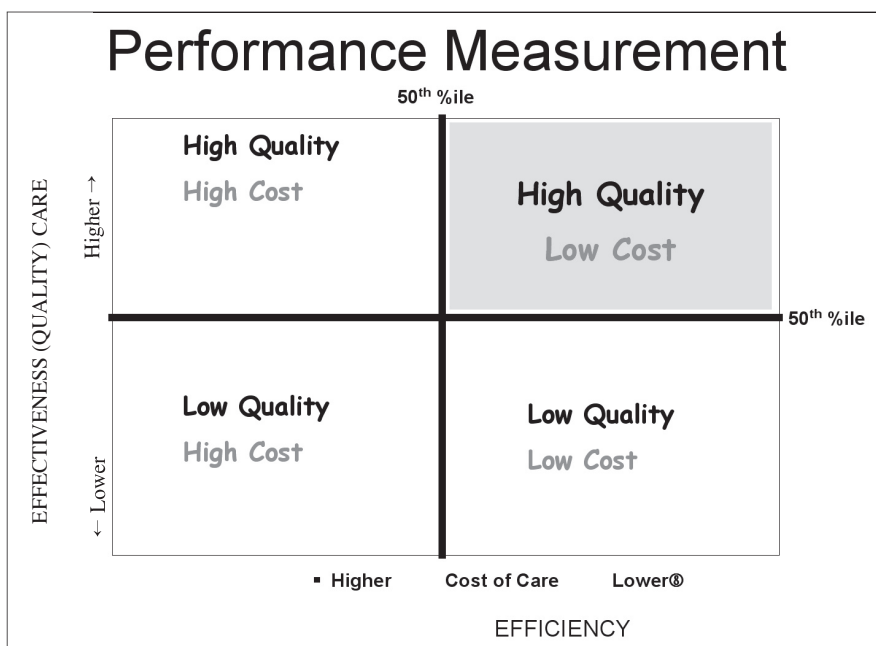


Fig. 3. The effectiveness-efficiency grid used to differentiate providers on the basis of quality and cost (1).

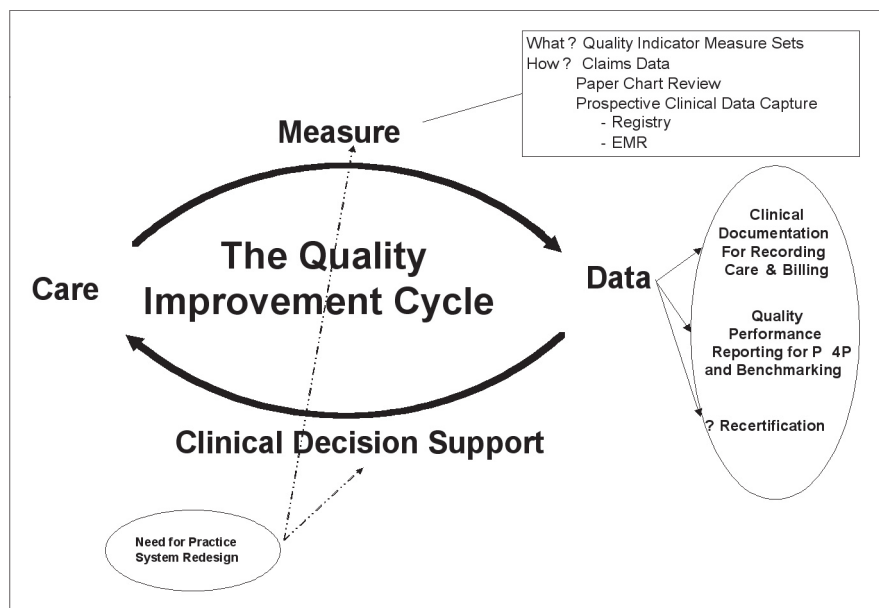


Fig. 4. The cycle of capturing and using clinical data to improve care continuously (see text), while achieving documentation for clinical care and performance measurement.

burden of healthcare costs, the physicians, practices, or hospitals in the right half of the cost grid (lower cost) are providing much more value for their health care dollar than those in the left half. Employers and the public need to become better informed about the importance of assessing the value, and not just the cost, of care by incorporating measures of quality. Since

specialists are responsible for about 80% of the healthcare costs controlled by physicians, the spotlight is now being focused on specialist efficiency performance.

The measurement of efficiency needs to improve. Most programs now utilize episode treatment groupers (ETGs) that, on the basis of administrative (claims) databases, compare physicians

and physician groups in terms of costs and the utilization of services grouped around specified illnesses or conditions. Currently some payer groups and self-insured employers are using ETGs to tier specialists and offer benefit packages that include higher co-pays or co-insurance for employees seeing specialists not in the preferred network (5). Often the tool employed for tiering performance is non-transparent, with no opportunity for physicians to learn how to correct or improve the efficiency of the care delivered. The Agency for Healthcare Research and Quality (AHRQ) has commissioned the RAND Corporation to develop a more meaningful methodology for measuring the efficiency of care, linked to the quality and value of care.

Among physicians, the most frequently expressed cynicism regarding the quality movement is that cost containment is simply masquerading as "quality", with the end game being to ratchet down physician reimbursement. The response to skeptical colleagues should be: Yes, it is about cost containment (the "burning platform") but not necessarily for the reasons one may think. Payment to physicians forms a relatively small part of total healthcare costs. Payment for physician services constitutes less than 3% of the state of Maine's Medicaid budget and 17% of the national Medicare budget. The overwhelming proportion – more than 80% – of healthcare costs is controlled by physicians and needlessly inflated by the medical errors of under-care and over-care, many of which can be attributed to physicians.

The new, ideal models of healthcare payment reform include the accrual of financial benefit to those physician groups who demonstrably correct over-care and under-care errors, resulting in cost savings over the short- and long-term. Models currently under consideration include the "medical home" (6) and PROMETHEUS (7), with prospective or case rate payments to managing physicians. The advantages of this type of reform include: 1) increased sensitivity of both patients and physicians to the costs of care, e.g., with incentives to seek generic drugs with comparable

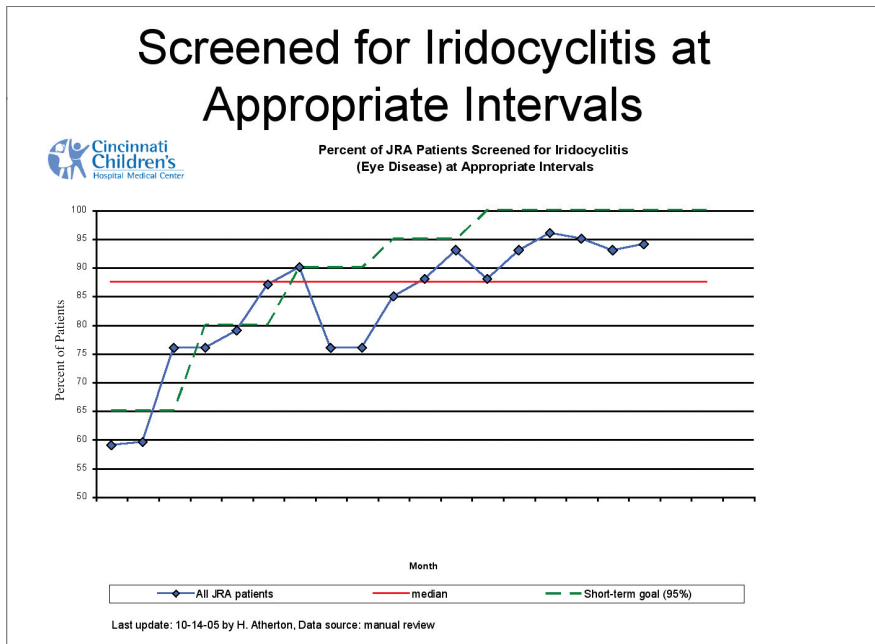


Fig. 5. A run chart demonstrating improvement over time in iridocyclitis screening in patients with juvenile idiopathic arthritis (from a study by Dr. Murray Passo and colleagues). Note the performance comparison against evolving short-term goals.

efficacy and providers delivering high value at lower cost; 2) returning autonomy to physicians, *e.g.*, reducing the administrative burden by eliminating payer pre-authorization for services; and 3) a form of gain-sharing or sharing in the savings of more cost-efficient care.

21st century medical care

If we are to have any hope of correcting the current under-care and over-care errors in healthcare, we need to learn to measure and document the care we provide, collect data about the care provided, use these data to compare care among providers, and improve the care where needed (Fig. 4). How we measure care and the data will be the keys to success. We will use quality measure sets derived from standardized, validated, evidence-based guidelines for care. The most useful data will be prospective clinical data collected electronically in real-time at or near the point of care by means of registries or electronic health records (EHRs). Other data sources have severe limitations. Administrative data can be used to measure processes and the cost/utilization of care, but are retrospective, lack much clinical outcome data, and suffer from flaws such

as coding errors. Chart reviews for data abstraction are labor-intensive, inefficient, retrospective, and prone to errors of self-reporting.

When important clinical data is digitized once, the data can be used for several purposes, including clinical documentation for billing and clinical records, clinical decision support, and performance reporting for quality-based reimbursement. There is increasing interest in using data from quality indicators for re-certification, one example being the Practice Improvement Modules (PIMs) used by the American Board of Internal Medicine. The ability to compare one's data with local or national benchmarks stimulates quality care improvement.

In terms of quality improvement, the most important use of the clinical data will be the clinical decision support provided by electronic databases from a registry or EHR. Clinical decision support tools identify gaps in care for: 1) individual patients at the point of care, and 2) defined populations of patients (population management). Standardized quality measure sets and organized reports displaying clinical data within the measure set data fields allow the ready and efficient identification

of missing services or treatment not at target goals at the time of the patient encounter. The physician and the practice team can use the point of service clinical summaries to guide action and address today's gaps in care.

Population management may be a new concept to many physicians. A subpopulation within your practice or clinic is identified by standardized criteria (such as ICD-9 codes from the billing system) for a certain illness or condition, and your progress in providing care for that population is reported by data from the measure set for that illness. Gaps in care such as overdue services or treatment goal shortfalls can be identified so that a systematic outreach to those patients can be directed by the practice team.

Learning to measure care, collect data, and close quality gaps requires a re-designing of the office or clinic workflow. Keys to success in practice redesign include readiness for change, staff and physician acceptance and training, culture change, a team approach, adherence to a standardized workflow, and adoption of health information technology. At some point, every practice must cross the threshold of digitizing important clinical data. Decisions about who carries out the computer entries, and when, and how are among the tasks of practice redesign. Continuous improvement of patient care requires a process of quality performance review and trials of system changes to seek performance improvement.

Quality care measurement and reporting

Quality performance is reported as a percentage for each quality measure or measure set. The denominator is the number of patients with a given condition who are under your care, and the numerator is the number of process or outcome elements of care achieved by you, your practice team, and your patients. Performance reporting should drive system changes to improve care. An example of a quality measure-driven chart report in rheumatology is provided by Dr. Murray Passo. Figure 5 demonstrates the improvement over time in iridocyclitis screening in pa-

Table I. Potential CMS PQRI measures for reporting by rheumatologists.

CMS PQRI Measure

#4: Screening for future fall risk: Percentage of patients 65 or older who were screened for future fall risk (patients are considered at risk for future falls if they have had two or more falls in the past year or any fall with injury in the past year) at least once within 12 months.

#39: Osteoporosis screening or therapy for women 65 and older: Percentage of female patients 65 or older who have had a central dual-energy X-ray absorptiometry (DXA) measurement ordered or performed at least once since age 60 or pharmacologic therapy prescribed within 12 months.

#40: Osteoporosis: management following fracture: Percentage of patients 50 or older with fracture of the hip, spine, or distal radius who have had a central dual-energy X-ray absorptiometry (DXA) measurement ordered or performed or pharmacologic therapy prescribed.

#41: Osteoporosis: pharmacologic therapy: Percentage of patients 50 or older with a diagnosis of osteoporosis who were prescribed pharmacologic therapy within 12 months.

#42: Osteoporosis: counseling for vitamin D, calcium intake, and exercise: Percentage of patients, regardless of age, with a diagnosis of osteoporosis who are either receiving both calcium and vitamin D or have been counseled regarding both calcium and vitamin D and exercise at least once within 12 months.

Details may be found at www.cms.hhs.gov/PQRI.

Table II. 2007 ACR quality measures synopsis*.

Rheumatoid arthritis

1. Documentation of standardized assessment within 3 months of diagnosis and then at least annually
2. DMARD treatment for RA
3. Intensification of DMARD treatment for ongoing active/progressive disease

Osteoporosis

1. Documentation of calcium and vitamin D treatment
2. Treatment with anti-resorptive or anabolic agent
3. DEXA or Rx within 6 months of fragility fracture
4. Falls assessment

Gout

1. Allopurinol safe dose with renal insufficiency
2. Colchicine or NSAID coverage for allopurinol initiation
3. Xanthine oxidase inhibitor, not uricosuric, in presence of renal stones or insufficiency
4. Urate-lowering Rx for tophi, x-ray damage, or frequent attacks

Drug safety

1. Documentation of risks vs. benefits discussion with patient
2. GI protection for patients at upper GI bleeding risk with NSAIDs
3. Hb/Hct monitoring of patients at upper GI bleeding risk with NSAIDs
4. Creatinine monitoring for patients at renal risk with NSAIDs
5. Baseline studies for DMARD monitoring
6. Monitoring for DMARD or steroid Rx

*Details may be found at rheumatology.org/practice/qmc/starterset0206.asp

tients with juvenile idiopathic arthritis. Quality measure reports can include goals or comparisons to specific benchmarks. In this example, achieving improvement and surpassing goals required gaining awareness, identifying quality gaps, and redesigning systems to close these gaps.

To be successful, programs to embed continuous quality improvement into office practice or to construct a quality-based reimbursement or reporting sys-

tem must follow a requisite sequence of: *structure*, *process*, and *outcomes*. To use diabetes as an example, the first step is to develop and implement systems for collecting and reporting data, such as a registry or EHR. Early pay-for-performance programs, at least in part, recognized whether office systems (structure) were in place and then paid for participation (the ability to report with these systems) or simply paid for reporting, with no regard for the per-

formance reflected in the data. The next step is to report and improve processes of care, *e.g.*, the percent of HbA1c or LDL cholesterol testing done in the diabetes population. Only by successfully achieving and performing in the areas of structure and process will one have the ability to report and improve outcomes, *e.g.*, the percentage of patients who reached the American Diabetes Association targets of HbA1c < 7.0 and LDL < 100. Most of the quality measures now available for reporting quality care performance are process measures based on administrative data, *e.g.*, the Health Plan Employer Data and Information Set (HEDIS). Clinical data from registries and EHRs will increasingly be used for outcome as well as process performance reporting. Payers and employers are impatiently awaiting more outcome measures, but coming up with outcome measurements in other fields that are comparable to the defined numeric outcomes in diabetes still presents a challenge.

While no one can accurately predict the extent to which future healthcare reimbursement will be based on quality, progressive practices are now focused on how to measure, improve, and report quality care performance. The Centers for Medicare & Medicaid Services (CMS) has clearly declared its intention to move from volume-based to quality-based reimbursement, from being a passive payer to being an active purchaser of healthcare. Initially in its Hospital Quality Initiative, CMS requested the voluntary reporting of specified quality measures. Only 10% of hospitals reported voluntarily until CMS added a 0.4% increase in hospital payments, after which participation increased to 95%. CMS concluded that paying for reporting works. In its Premier Hospital Quality Demonstration, CMS divided those hospitals reporting quality performance into deciles based on their performance data. Payments were increased by 2% in the upper decile and by 1% in the next highest decile and were decreased by 2% in the lowest and by 1% in the second lowest (8). Quality performance was reported and publicly recognized for the upper 50% of hospitals. Fol-

lowing these demonstration projects, CMS has announced a new system for hospital reimbursement – Value Based Purchasing (VBP) – scheduled to start in October 2008. Not yet finalized, the VBP methodology is likely to include a pro-rating of the traditional diagnosis-related group (DRG) payment based on each hospital's quality performance.

This pattern of reimbursement and public reporting may be applied to physicians and practices by the CMS. CMS recently announced its voluntary Physician Quality Reporting Initiative (PQRI). Practices reporting on at least 3 of 74 measures offered by the CMS between July 1 and December 31, 2007 will receive a 1.5% increase in their global Medicare payments. Eligibility for the bonus includes reporting the quality measures along with billing claims for 80% or more of the patients with a given condition. Rheumatologist could consider reporting on 5 of the 74 measures, as listed in Table I.

While many practices may conclude that the current CMS incentive is not sufficient to cover the costs entailed in the reporting, physicians should carefully consider learning to report in this manner as future financial incentives are likely to be stronger. Furthermore, as in the CMS Premier Hospital Demonstration, practices that are unable to report or that report unfavorable results may experience a reduction in CMS payments in the future. Since CMS is the largest payer, commercial payers will likely follow its lead.

Focus on quality by the ACR

If 21st century medical care is destined to include measuring care, collecting digitized data, using the data to benchmark and improve care, and redesigning practice systems, how can the ACR support and prepare its members for this transformation? Anticipating the importance of the quality movement to rheumatology, the ACR Board of Directors formed the Quality Measures Committee in 2004. The ACR leadership embraced the concept that the College should participate in, if not direct, the formulation of quality improvement in treating rheumatic diseases. The committee was assigned the task

of standardizing criteria for population identification and treatment outcomes (Criteria and Responses Subcommittee), developing and updating evidence-based processes of care (Guidelines Subcommittee), and developing and implementing quality measure sets (Quality of Care Subcommittee). With quality as a common denominator cross-cutting the work of several of the ACR committees, an ACR Quality Leadership Council was formed to coordinate efforts in this important emerging field, including the Quality Measures Committee, Government Affairs, the PIM Subcommittee of the Committee on Education, the Committee on Rheumatology Training and Workforce Issues, Communications, and the Committee on Rheumatologic Care.

ACR quality measure selection was facilitated by the involvement of rheumatologists in earlier projects to develop and validate quality measures in our field, such as Assessing Care for Vulnerable Elders (ACOVE) and Arthritis Foundation Quality Indicator Project (AFQuIP) (9). Mindful of the need to offer a manageable number of quality measures in order to introduce quality measurement and reporting to our members, the ACR adopted the following criteria to select its initial set of quality measures:

- Evidence-based (scientifically acceptable);
- Clinical importance (most would agree about clinical relevance, with known existing quality gaps and interventions to close the gaps);
- Feasibility (understandable, administratively reasonable to collect data);
- Harmonization with national quality measures when available.

The current ACR Quality Measure Set is summarized in Table II, with details available at rheumatology.org/practice/qmc/quality.asp. The ACR also co-sponsored the American Medical Association's Physician Consortium for Performance Improvement in its development of quality measures for osteoporosis, and will play a leadership role in quality measurement for rheumatoid arthritis and juvenile idiopathic arthritis. The College will seek input

from its members regarding the prioritization and development of quality measures for other illnesses and conditions in our field.

Dr. David Pisetsky recently discussed the merits of disease scores such as DAS (the disease activity score) in guiding the clinical management of rheumatoid arthritis (10). He pointed out the need for rheumatologists, who traditionally rely on intuition in their decisions, to learn to 'treat by numbers'. Response criteria, including the newly proposed hybrid revision of the ACR 20 (11), are designed to measure the endpoints of clinical trials, but are of only limited use in guiding treatment in clinical practice. Because of their cost, there will be increasing pressure to have standardized objective (numeric) criteria for starting, changing, and stopping biologic agents in the treatment of rheumatoid arthritis. The desired disease activity or outcome measurement of RA will likely be a composite score that includes: subjective patient measures [*e.g.*, the Health Assessment Questionnaire (HAQ) or equivalent, and the visual analog score]; joint counts (swollen and/or tender); and laboratory values such as the erythrocyte sedimentation rate (ESR) or C-reactive protein (CRP); with or without a patient's and/or physician's global assessment and factors such as absent, stable, or progressive joint damage by imaging studies. Standardized disease activity scores will guide decisions concerning the introduction, continuation or intensification of DMARD treatment for RA.

Like all physicians, we as rheumatologists have prided ourselves on data-driven decision-making. Traditionally, the data upon which we make clinical decisions depends on knowledge, understanding, interpretation, and retention (all parameters that may vary greatly from individual to individual) of clinical trials and guidelines. By using standardized processes of measuring disease activity and by following protocols of disease management embedded into the office workflow, data-driven decisions based on one's own clinical data with appropriate electronic decision support will bring us closer to

evidence-based care for every patient. A major challenge for optimizing benefit from quality measures is embedding the data collection and feedback process into the office workflow. Published evidence-based guidelines have served educational purposes, but probably have had only marginal benefit for quality care improvement. The ACR is actively seeking to develop a practice web-based registry (the ACR "Quality Management Tool") to collect and track data for the ACR quality measures to guide continuous improvement and to support our members in their efforts to meet predicted quality performance reporting needs. The tool will be designed to function in different environments, from traditional paper-based offices to paperless electronic health record (EHR) systems. To take advantage of the tool's informatics-enabled clinical decision support, the practice will require at least a computer and high-speed Internet access. The goal is to develop a secure, ACR-sponsored web-based registry that will be inter-operable with standard-based EHRs and data sources such as reference labs. Standardized data sets constructed from ACR-endorsed quality measures will feed information into a national database that will provide physicians with peer comparative benchmarks. The tool will provide practice-based point-of-care decision support and population management functions. The registry will meet Health Insurance Portability and Accountability Act (HIPAA) privacy requirements, and patient-identified data will be available only to the practice. Benchmarks will be determined from aggregated, patient de-identified data.

The ideal rheumatology practice of the future

Given the likely need for informatics-enabled patient care and office workflow support, and given the predicted shortage of manpower in rheumatology, ongoing success in clinical rheumatology will require the adoption of health information technology and a team approach to patient care, with the patient forming an important member of the team. With the capability of patient-secure messaging, it will be pos-

sible to handle many of the tasks of scheduling, billing, and prescription refills online, with resulting efficiencies of asynchronous communication and a marked reduction in staff phone time. Standardized questionnaires, such as the HAQ or mHAQ (which some feel should be the "5th vital sign" in rheumatology), could be completed by the patient before the visit, through on-line access at home or in the waiting room using touch-screen, hand-held, or digital pen technology, with assistance from the front office or clinical staff where needed. Since subjective data (functional limitations, fatigue, pain, and global assessment) are so important in judging disease activity, data entry by the patient should be optimized.

There is the need for a standardized "encounter form" for diseases such as rheumatoid arthritis, with a measure-set guided data display and prompts. Important data from previous visits can be carried over (and edited if needed), and current lab results will pre-populate the appropriate fields in the encounter form to minimize the need for manual data entry by the physician or staff at the time of the encounter. In addition to assisting patients with the pre-visit questionnaires, mid-level clinical staff can function "at the top of their license," *e.g.*, ordering lab tests or recording joint exam results, to be verified by the physician. Front office staff can monitor population management reports and reach out to patients with overdue visits or lab tests. With the optimal use of office personnel and optimal rules written into the health information system, the ideal clinical environment will help ensure time for the physician's functions of building relationships, establishing trust, and other aspects of the art of medicine so important to us in rheumatology. The ideal team will have in place a system of monitoring quality care through progress reports, comparing data to benchmarks (continuously accessible from the ACR), and redesigning processes to improve care.

Staying ahead of the curve

By nature physicians have the perception that they are above average, if not near the top of their field. However, if

one measures care the data form a bell-shaped curve, and not everyone can be above average. Where are you on the bell curve? Are you willing to accept that others may do what you do better, and are you willing to learn from them and to change what you do in order to improve your performance (12)? If you accept that change is inevitably coming in terms of how we care for patients and how we are reimbursed, when and how will you transform your practice? Regarding healthcare technology for those not yet using an EHR, you will need to decide whether to add IT incrementally, beginning with electronic prescribing and a registry, or to follow a "big bang" approach with rapid transition to a full EHR.

If CMS does indeed migrate from a volume-based fee for service to quality-based reimbursement, it is likely to be a zero-sum game. As CMS goes through this redistribution process, are you preparing for the transformation required in your practice to fall on the favorable side of redirected payments?

It's all about the patient, right?

At this point in the quality movement, there is no compelling return-on-investment case to be made for the adoption of health information technology and clinical decision support. The clinical grounds trump the business case for those who wish to do the right thing for their patients. In his 1993 ACR presidential address, Dr. John Sergent emphasized that what we do is all about the patient. We are approaching the era when, with the aid of health information technology, our patients can be assured that the latest science is being applied to their care.

There are strong signs coming from the healthcare environment that fundamental changes are in the offing with regard to how we care for patients, how we are reimbursed, and perhaps even how we are re-certified, all with the aim of achieving high quality, improved patient care. Since physicians are those best positioned to lead in these transformations, rheumatologists should aggressively guide the application of these changes to the rheumatic and musculoskeletal diseases. The ACR is com-

mitted to supporting its members as society focuses the spotlight on measures of effectiveness, quality, efficiency, and transparency regarding specialty care. On the bright side, rheumatologists who successfully navigate the complex demands being imposed on patient care will likely benefit from demonstrating superior care for rheumatic and musculoskeletal diseases. In the process, we may learn how to improve the primary care of our diseases. Because of the increased practice efficiency they will allow, more mature electronic clinical decision support tools will be regarded as allies that return autonomy and time to physicians. The positive reinforcement provided by data that demonstrate improved patient care will help restore the joy of medicine to all members of the practice team. Bridging the fields of primary and specialty care, rheumatologists may benefit from healthcare reforms that more appropriately value cognitive and preventive services. By assuming an active rather than a passive role in the changing healthcare environment, rheumatologists have reasons to be hopeful of benefiting from the changes that face us.

The bottom line is that:

- we, as physicians, owe it to society to assess and reduce the under-care and over-care medical errors that are contributing to the healthcare cost crisis,
- we, as physicians, owe it to our patients to provide more effective, cost-efficient care by making optimal use of current information and technology, and
- we, as rheumatologists, are best positioned to chart the course and guide improvement in the care of rheumatic and musculoskeletal diseases.

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