

ACR White Paper: Strategies for Radiologists in the Era of Health Care Reform and Accountable Care Organizations: A Report From the ACR Future Trends Committee

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Accountable care organizations have received considerable attention as a component of health care reform and have been specifically addressed in recent national legislation and demonstration projects by CMS. The role or roles of radiologists in such organizations are currently unclear, as are changes to the ways in which imaging services will be delivered. The authors review concepts fundamental to accountable care organizations and describe roles for radiologists that may facilitate their success in such health care delivery systems.

Key Words: Accountable care organizations, ACOs, acute care episode, ACE, health care reform, management, payment model, shared savings, value added

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INTRODUCTION

In 2009, the ACR began a comprehensive effort to evaluate and define radiology's place in future health care payment systems. The 2009 ACR Forum: Health Care Payment Models began this process by evaluating alternatives to the traditional fee-for-service (FFS) payment system, which is currently the prevailing mechanism for physician reimbursement throughout most of the United States [1]. Recommendations from forum participants to the ACR Board of Chancellors emphasized the need for the ACR to thoroughly evaluate potential future payment models, including capitation and bundled payments around episodes of care, and to provide information to its members on the possibility of major changes to the reimbursement system. Forum participants also recommended the ACR study the potential for radiology

groups to take leadership roles in the formation of accountable care organizations (ACOs) and prepare its members for this possibility.

Published reports describing the development and function of ACOs emphasize how ACOs might work with regard to primary care and other specialties [2]. However, the role of radiologists and other specialists in ACOs is less clear. A recently published article in *JACR* describes several ways radiologists might participate in an ACO [3]. Early reports from the CMS acute care episode (ACE) demonstration projects indicate that radiologists were neither consulted nor involved in the development of such initiatives [4,5]. Thus far, detailed payment models for imaging within an ACO are generally lacking, and an opportunity exists for radiologists to be proactive in their development.

The ACR Future Trends Committee within the Commission on Economics was tasked with reviewing the recommendations from the ACR Forum as well as the current literature to develop strategies for radiologists and their practices to consider as they interface with or consider participating in an ACO. In this white paper, we present the preliminary recommendations from the ACR regarding radiologist participation in ACOs. We caution readers that major changes in payment policy or movement away from FFS payments for imaging is far from a

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fait accompli in most locales. A considerable number of barriers and difficulties must be surmounted before integrated service models and ACOs become commonplace [6]. Furthermore, whether these models will prove enduring or merely a phase in the evolution of the US health care system remains an open question. Nonetheless, these guidelines represent our best assessment of what the near future may hold for our specialty with regard to ACO development and how radiologists can prepare themselves and their practices for associated potential changes to the current payment system.

BACKGROUND

ACO Structure, Compensation Models, and Risk Sharing

There is considerable interest within the Obama administration and other important policymaking groups about creating ACOs to both improve patient care and control health care costs. The Patient Protection and Affordable Care Act established Medicare shared savings programs and defined an ACO as an entity that has a structure for joint decision making and governance. Legislatively, very specific criteria have been established [7].

Accountable care organizations are intended to be local, flexible provider groups that are accountable for both the cost and quality of care for defined populations of patients. Such accountability includes the assumption of risk. According to CMS regulations, a qualifying ACO must include the following: primary care providers (PCPs) who provide services to 5,000 or more Medicare beneficiaries, contracted specialists and hospitals, a satisfactory mechanism to report cost and quality information, an agreement to a minimum of 3 years of operation, and the capability (both organizationally and legally) to accept and distribute payments from CMS. ACO professionals may be in group practice arrangements or form networks of individual practices. Hospitals may employ ACO professionals or enter into partnerships or joint venture arrangements with them. Finally, other groups of providers of services and supplies may qualify as may be determined by the Secretary of the U.S. Department of Health and Human Services [7].

The payment structure under ACOs may be based on either traditional or novel payment models. The FFS model, with or without incentives for improved outcomes (commonly referred to as “pay for performance”), could be the dominant method for compensation within an ACO, particularly for specialties such as radiology, in which capitation and episodic bundling present implementation challenges. Adding incentives on the basis of pay for performance assumes that adherence to best practice metrics will improve outcomes and the overall health of the population.

Partial or full capitation, although considered by many a tried and failed method of compensation, will likely be revisited by some organizations in an ACO environment. By returning savings achieved beyond predetermined targets to physicians and other providers, capitation offers the highest potential for rewarding those providers. However, it requires a willingness of providers to assume considerable risk. Capitation, however, may encourage better coordination of care and minimize both duplication and inappropriate use of services.

Other reimbursement models are based on forms of bundled payments yet to be determined. These may be as simple as bundling all physician payments into a single hospital payment. Such initiatives could include expanding the Medicare diagnosis-related groups to include physician payments or basing payments for relatively complex care around ACEs, as in CMS’s ACE demonstration projects. Although the providers assume less risk with these models compared with capitation, there is the potential for shared risk and shared savings whenever payments are bundled, and policymakers assume that payment bundling will improve coordination of care.

In any shared-risk model, expected costs will likely be benchmarked to a historical standard, and it is expected there will be a return of any shared savings to the ACO from CMS for meeting cost and quality targets [8]. Fee-for-service payments create little risk for providers, but the ability to share in the savings is small. As providers assume increasing risk, their likelihood to share in the savings would be expected to increase.

Because radiologists are critical to effective and efficient diagnosis and treatment of a large majority of patients with serious or chronic illnesses, radiologists should have an integral role in the success of an ACO. When properly aligned with PCPs, radiologists can serve an important role in the management of a variety of medical conditions and provide care that is efficient and effective. Radiologists can play a central role in the disposition of these patients by recommending the appropriate use of imaging studies, which, if their results are negative, could limit unnecessary referrals to specialists and unnecessary additional procedures by getting the right test done the first time. Such a consultant role becomes especially important, particularly as physician extenders, such as physician assistants and nurse practitioners, provide an ever increasing amount of primary care.

Radiologists and Imaging in an ACO

Radiologists are well positioned to assume leadership roles in the informational, triage, and decision support infrastructure of an ACO. Whenever possible, radiologists should seek leadership positions within local ACOs. Additionally, radiologists should strive to align themselves with any inte-

grated health care provider organization that either becomes or joins an ACO. If radiologists are unwilling to assume this role, imaging could become a marginalized commodity within the ACO. Such commoditization would negate radiologists' considerable contributions to both the patient-centered management process and the quality control of valuable technical resources.

To prevent marginalization, and to more clearly define and preserve the role of radiologists in an ACO model, certain fundamental concepts should be considered. The overarching message from these is that radiologists must be willing to provide the best possible care to patients in the most cost-effective way. This will most likely entail changing their focus from interpretive productivity, in the traditional sense of number of examinations interpreted, to becoming recognized as experts in noninterpretive areas that add additional value to the ACO.

FUNDAMENTAL CONCEPTS OF RADIOLOGIST PARTICIPATION IN AN ACO

FFS Payments for Radiologists in an ACO

When possible, payments to radiologists for imaging services should be allocated on the basis of FFS or a derivative thereof using FFS methodology internally, even though payment to the ACO as a whole may be bundled for an episode or based on simple capitation. The FFS model was the method of compensation for radiologists in the ACE demonstration projects, and this precedent can likely be duplicated in other environments. Our justification for suggesting continued FFS or derivative payment for radiologists is that if imaging is paid under a simplistic capitation arrangement without risk corridors that control for utilization history, there will be no incentive for referring physicians to limit the utilization of imaging services. In a non-FFS arrangement, inappropriate escalation in the utilization of imaging services will be harmful not only to radiologists but also to the ACO as a whole, as technical component utilization and costs soar as well. If imaging dollars are allocated under FFS or a derivative thereof, other physicians will be more motivated to appropriately limit utilization because increased costs attributable to imaging correspond to less shared savings for them. As part of an FFS arrangement, shared risk corridors or targets should be instituted. If these are met by the ACO, savings can be shared. But such a model will work only if radiologists are incentivized for and responsible for utilization management in a culture wherein requests for examinations are treated as requests for consultations, instead of mere orders.

Radiologists as Utilization Managers

Radiologists are the recognized experts in the appropriate use of imaging in clinical practice. In that regard, they

can serve as utilization managers for an ACO, particularly when assisted by tools, such as computerized order entry with decision support (OE/DS) based on appropriateness criteria. Working closely with referring physicians, radiologists can best ensure that the imaging studies performed are those that are most appropriate, thereby reducing the need for follow-up studies. The savings that will occur from associated reductions in inappropriate utilization can be shared by the entire ACO. Nonetheless, we believe that radiologists acting in such ways should garner the lion's share for their work administering the program and managing utilization. In this way, patients, their primary physicians, and their radiologists are all given incentive to work together to determine the most appropriate use of services. In exchange, radiologists must be willing to step up and serve as utilization managers, knowing that forward looking payment policy may reward the additional work of utilization management and coordination of imaging care. No matter what the individual ACO's payment model, the implementation OE/DS tools should enhance care, help the ACO manage its costs, and demonstrate to other members of the organization that its managing radiologists are committed to curbing inappropriate imaging utilization. A radiologist-managed imaging OE/DS system should be central to the decision support "hub" of an ACO. Regardless of whether the payment model is FFS or capitation, or whether a facilitating OE/DS system is in place or not, radiologists must lead the ACO's utilization management program. At present, such tools are not widely available in clinical practice and delays in the integration of such products into hospital and other facility information systems may create challenges for radiologists assuming such roles in the near future.

Other Management Arrangements

Radiologists should develop arrangements with the ACO whereby they manage the entire imaging enterprise and receive a share of the organization's revenues to compensate them for their managerial and administrative duties. Such models are best implemented with shared risk or shared savings, depending on whether targets are met. Radiologists can be most effective if they are able to develop specific cost-saving ideas tailored to their practice that would benefit the entire ACO. To be successful, however, radiologists must demonstrate good administrative and management skills. The ACR and other organizations are providing management education to radiologists, and a management curriculum is being developed for residency programs. Radiologists assuming leadership roles in such organizations may want to seek advanced management degrees, but all radiologists assigned management tasks within the ACO should seek

basic training that will provide them with necessary skills to function as effective managers.

Capitation Arrangements

It is quite possible that capitation could be forced on radiologists by some ACOs, and therefore radiologists should prepare for that possibility. In a number of practices across the country, capitation has worked well and has been proven financially feasible. But in a capitation model, it is important that several safeguards be incorporated to protect patients, hospitals, and radiologists from overutilization. Robust utilization management, ideally supported by OE/DS, should be an integral part of any capitation model. This will aid in minimizing inappropriate utilization, and for examinations judged by the OE/DS system to be of low yield, a requirement for peer-to-peer consultation with a radiologist may further enhance the appropriate use of imaging. Radiologists asked to participate in a capitation arrangement should ensure that capitated payments to them are based on historical fee schedules and have built-in risk corridors. Although not a substitute for meaningful tort reform, imaging guidelines based on vetted appropriateness criteria could reduce the impetus for ordering unnecessary examinations because of malpractice liability concerns. Utilization rates for each ACO member should be monitored and benchmarks should be established.

Recently, CMS initiated its outpatient imaging efficiency metric program, retrospectively reporting selected measurements as surrogates of appropriate utilization. These include measurements of the frequency of MRI for low back pain without traditional conservative therapy and the concurrent performance of CT of both the brain and paranasal sinuses [9]. To date, the data have been reported by facility, but similar efficiency metrics could be calculated, along with total utilization rates, for each ACO member for monitoring purposes. Such metrics could serve as a basis for accountability assessment for ordering physicians, and also benchmark the effectiveness of radiologists in their utilization management activities.

Radiologists as Hospital Employees

In an ACO environment, radiologists may more frequently enter into employment arrangements with hospitals. Radiologists should prepare for this possibility by improving and strengthening their relationships with their hospital administrators and becoming more active in their hospital and medical staff governance. Integrated relationships with hospitals create opportunities for radiologists to garner appropriate reimbursement for participation in nonclinical activities such as enterprise administration, utilization management, quality control, radiation safety, technologist supervision and education, equipment selection and optimization, and educational

and regulatory oversight. These activities all bring value to the ACO as a whole. Radiologists considering employment arrangements, however, should be cognizant of the anecdotal experience of some physicians who have been offered enticing first-year employment packages, but less attractive compensation in future years, when their opportunities to return to independent contractor status in that community no longer exist. Although an ACO could contract with outside entities simply for image interpretation, such value-added services are much more difficult to outsource. If radiologists are willing to be involved in these tasks for their ACO, outsourced interpretation arrangements become less likely. Radiologists need to be cognizant, however, that just as imaging interpretation has become commoditized in many communities, so too could utilization management if it is seen as the product solely of software tools, such as OE/DS, rather than the work of expert local radiologists. Such tenets, we believe, hold true even when radiologists remain independent contractors, rather than employed physicians.

Conflict of Interest

Self-referral by nonradiologist physicians for CT, MR, PET, and radiation oncology should be strictly prohibited by an ACO. For an ACO to be viable and benefit all its physicians, all opportunities for economically motivated self-referral should be removed from the organization. When payments for imaging are allocated on the basis of FFS, self-referring physicians have an economic incentive to siphon resources away from the ACO by performing unnecessary imaging studies. Such misaligned incentives are damaging to all other participants in the ACO. Whether Congress, CMS, third-party payers, or the ACOs themselves will have the political will to eliminate financial conflict of interest from the new payment systems remains to be seen. If self-referral is allowed to exist within an ACO environment, measures should be in place to tightly control utilization by self-referring physicians, and the resources allocated for such imaging must come from the ACO as a whole, and not just an imaging pool, so the entire ACO shares in the consequences of its decision.

Consolidation of Services in an ACO Model

ACOs will likely best succeed as they become larger integrated systems and as a result can control larger market shares. ACOs that become “must have” institutions for patients will maximize their leverage in negotiating contracts with the commercial payers. As plans for an ACO develop, organizers should incorporate the largest possible number of provider groups. As a result, radiology groups might find themselves participating with one or more large ACOs, encompassing multiple hospitals and thousands of physicians.

Conversely, more than one radiology group may be contracted by an ACO, or multiple radiology groups from the different hospitals could end up competing for the same ACO radiology contract, as could outside teleradiology companies. Quite unclear at this time, however, is how individual radiologists or practices would serve as utilization managers in such a pluralized marketplace. It is possible that radiology groups who actively embrace a utilization management role might serve in such a capacity for an entire ACO, with other groups relegated to simply providing interpretive services.

Radiologists must be prepared for strong competition for these contracts. No radiology group can afford to be complacent and assume it will be part of the ACO by simple virtue of a current provider services contract at a participating hospital. For radiologists to improve their leverage, radiology groups should consider strategically aggregating into larger or regional radiology entities to maximize subspecialization and efficiencies in the delivery of imaging care and minimize the risk for commoditization. This could help them offset the market power of their payers to at least some degree and leverage economies of scale for subspecialization, call coverage, and a variety of nonclinical functions.

Providing Value by Adhering to Rigorous Quality Standards

Radiologists must continue to promote safety, quality, and best practices in any payment environment. They must continue to be advocates for the safest, most accurate diagnostic tests regardless of the payment methodology. Although a detailed discussion of such patient advocacy is beyond the scope of this document, radiologists currently have access to a variety of tools to remain leaders in promoting quality and safety for imaging (Table 1).

Previous authors have promoted linking bonus payments to performance on quality measures [2]. Thus far, however, few programs exist, and there is a relative dearth of national measures appropriate for radiology participation in the CMS Physician Quality Reporting System. The ACR continues to work with organizations such as the National Quality Forum to develop meaningful measures for radiology. In the absence of national measures, however, radiology practices should institute their own measures to benchmark their practices and use those metrics as an ongoing demonstration of continuous quality improvement. Meaningful measures radiology practices could use for self-assessment include facility accreditation, robust MR and radiation safety programs, and evaluation of service to patients and referring physicians. A more comprehensive list is available on the ACR Web site.

Table 1. Promoting quality, safety, and best practices

- ACR accreditation programs
- Radiation safety programs and radiation dose index
- Maintenance of certification
- PQRS participation
- AART registered technologists
- ACR practice guidelines and technical standards
- ACR Appropriateness Criteria®

Note: AART = American Registry of Radiologic Technologists; PQRS = Physician Quality Reporting System.

Imaging Center and Hospital-based Practice in ACOs

Although hospitals and hospital-based radiologists may, by necessity, become integrated into ACOs, there will likely remain significant roles for imaging centers under an accountable care model. In fact, because costs are arguably lower at outpatient imaging centers, there may be a renewed urgency for the development of outpatient sites. Imaging centers have the ability to improve the overall health care experience for patients in the ACO by providing easy access at convenient locations. Additionally, they can reduce the burden on hospital facilities so that inpatient and emergency department patients are imaged in a timelier manner. To demonstrate additional value, imaging centers will need to participate in accreditation, utilization management, and radiation safety programs. They can provide even more value by being multimodality and free from financial conflict of interest.

Hospital-based radiology practices have different challenges. They typically deal with a higher level of acuity in patients' conditions and generally must provide 24-hour coverage. The consultative role of hospital-based radiologists is particularly important. They often spend considerable time reviewing cases with referring physicians and are often asked to review or reinterpret studies performed at outside facilities. Such activities are potential metrics for basing value-based payments for radiologists and illustrate the need to distinguish metrics that will be applicable to both office-based and hospital-based radiologists from others that may be more appropriate to one site of service or another.

Becoming Properly Aligned Within the ACO

The necessity of radiologists' aligning themselves with hospital administration and ACO governance has been previously discussed, but appropriate alignment with PCPs will be important as well for radiologists. PCPs will likely assume a key role in ACOs through medical homes

and similar concepts and will garner leverage by their control of patients. It should also be recognized that as a result of the growing shortage of PCPs, nurse practitioners and physician assistants will likely provide an increased amount of primary care. As such, radiologists will assume a more complex role in education about the appropriate utilization of imaging and encourage participation in appropriateness criteria in OE/DS systems from a variety of referring practices. An opportunity for bridge building with PCPs will be to educate them about the value of working closely with radiologists. We believe that a PCP working together with a radiologist and a clinical laboratory can likely address and solve a large percentage of clinical problems that come their way without the need for specialist referral. As an example, a patient presents to his PCP with recent onset chest pain. The PCP suspects coronary artery disease but is also worried about other entities, including pulmonary embolism, aortic dissection, penetrating ulcer of the aorta, and pericarditis. Instead of referring the patient to a cardiologist for a lengthy and expensive workup, the PCP refers the patient to a radiologist who performs and interprets a single study (in this case, triple-rule-out CT angiography) that in most instances will either establish a diagnosis or clear the patient of a significant problem. If significant cardiovascular disease is found, the patient is then referred to for the appropriate specialist for treatment.

Electronic Health Records and Imaging

Considerable attention has been directed to improving care through use of electronic health records, even though this process may be very slow with regard to both implementation and impact. Radiologists have clearly taken the lead among physician specialties in promoting electronic health records by continually optimizing the function of their picture archiving and communication systems and radiology information systems, which integrate with hospital and other systems. Radiologists must become as active as possible in managing the ACO's IT infrastructure. The integration of the radiology information system, electronic medical record, and OE/DS across multiple sites within an ACO will be necessary, but not without challenges considering current privacy requirements. Such integration is highly dependent on the IT staff within an organization who may have various levels of commitment to clinical efficiency and excellence. The availability of useful information across sites, however, will be requisite for optimal management and use of resources. Timely, unambiguous, and secure transfer of information across the enterprise is essential for clinical effectiveness and both physician and patient satisfaction. An incomplete knowledge of a patient's imaging history can result in unnecessary repeat examinations

and associated radiation exposure. Robust availability of information across sites will eliminate the need for repeat examinations when patients are transferred. Currently, outpatients commonly have studies repeated when seeing a new physician, and this duplication can be minimized as well.

Radiologists have begun exploring ways to use networks for the secure transfer of electronic data, including images, from institution to institution. These systems will provide timely information to physicians and minimize repeat examinations. One such solution, ACR TRIAD, initially developed for use in clinical trials, is being tested for use for point-to-point image transfer, but others will likely evolve [10]. By reducing repeat examinations, providers can control costs, decrease radiation exposure, and expedite patient care. These all bring obvious value to an ACO which, if implemented appropriately, can be attributed to radiologists.

DISCUSSION

The challenges to providing optimal health care in the United States are enormous and include controlling the rapidly growing costs of care, better integrating the currently fragmented delivery system, overcoming disparities in patient access to care and regional variations in utilization, and eliminating inefficiency and waste. The stated goals of recently implemented reform initiatives are to expand coverage, reward value over volume, and align payer and provider incentives. The Patient Protection and Affordable Care Act established Medicare shared savings programs and defined ACOs as entities for joint decision making [7]. As of January 2011, the provider community is still waiting for CMS to release its proposed rule for regulations defining and governing the operation of an ACO. However, in October 2010, CMS released a set of questions to the physician community indicating that they are struggling with how small and rural providers will be able to establish and participate in ACOs and how ACOs will be able to demonstrate quality (Table 2) [11].

The physician community needs to be prepared for the advent of ACOs in the near future, as the Patient Protection and Affordable Care Act also mandates that ACO demonstration projects and shared savings programs for early adopters begin in 2012 [8]. Although these and other concerns for widespread adoption have been voiced, shared savings programs such as ACE demonstration projects have already begun, so radiologists should assess their surroundings and identify potential niches in their local ACO environments. Because no single defined compensation model has yet been adopted, radiologists should prepare for a variety of options. Because payment increases for ra-

Table 2. CMS concerns regarding small practice participation and quality metrics in ACOs

- How can small practice providers have the opportunity to actively participate in the Medicare shared savings program and the ACO models tested by the Innovation Center?
- Many small practices may have limited access to capital or other resources to fund efforts from which “shared savings” could be generated. What other mechanisms could be created to provide access to capital?
- In order for an ACO to share in savings under the Medicare shared savings program, it must meet a quality performance standard determined by the secretary. What quality measures should the secretary use to determine performance in the shared savings program?

Note: ACO = accountable care organization.

diologist interpretations are unlikely, and imaging volume is likely to decline, radiologists need to also identify and promote noninterpretive value-added services that enhance the enterprise and allow radiologists a central leadership role within ACOs and related organizations.

Thus far, radiology participation in ACO demonstration projects has been slow to evolve. The fact that radiologist participation in the development of the ACE demonstration projects was all but absent should create concern for the entire specialty (Table 3) [5]. The unanimous conclusion among the radiologist participants was that radiologists need systematic education regarding ACOs, compensation methods, and strategies for success in an ACO environment.

Under shared savings programs, radiologist compensation should consist of more than just revenue derived from image interpretation. Fee-for-service payments have been declining since 2006, and this trend is likely to continue. Coupled with the flattening demand for imaging services, increasing productivity by interpreting more and more examinations will not be a realistic solution to declining reimbursement [12].

Accurate and timely interpretations will remain requisite in any payment model, but if this is a radiologist's only focus, price will become the primary differentiator between providers and place traditional providers at risk for replacement by outsourcing. If such a practice becomes widespread, imaging services could be reduced to merely a “report” service, and as such become a commodity within the ACO environment. Radiologists must provide and continue to develop new avenues of nonclinical service that place

them at the center of cost-effective imaging care. These services must be perceived as valuable enough to the health care enterprise to command appropriate compensation. The ability to garner value-based payments for performing management functions or demonstrating quality and safety for patients is one potential pathway. Participating in shared savings with payers or within an ACO based on effective utilization management is another, and likely has the most potential for reward. However, it also has the most risk, because if effective, it will limit radiologists' volume. Superficially, effective utilization management may be perceived as only a “software” solution that can be provided by stand-alone computer applications or outsourced to other entities. However, providing a utilization management solution within an ACO without radiologist participation only perpetuates the often criticized preauthorization programs used by radiology benefit management companies [13,14]. To be effective, utilization management solutions must be prospective, transparent, educational, and unobtrusive to the physician–patient relationship, and the incentives of ordering physicians, patients, and radiologists must be aligned. Many believe that preauthorization in its current form does not accomplish these goals. Having radiologists at the hub of utilization management will provide considerable value to the ACO. Radiologists are the recognized experts in the appropriate use of medical imaging and are best positioned to provide peer-to-peer interaction with referring physicians to provide transparency and education they desire. Equally important is that radiologist-administered utilization management programs will ensure that the interests of the referring physicians, radiologists, patients, and the ACO as a whole remain aligned [13]. One of the challenges facing the specialty of radiology in expanding such value-added services is that in the current FFS environment, many radiologists perceive such noninterpretive services as “no pay” work that takes them or their partners away from their “real job” of image interpretation. Success in an ACO environment will require a huge cultural shift for such radiologists. However, in the long run, these value-added activities must be promoted, recognized, and supported. Hopefully, they will eventually be funded, and if performed effectively, will be nearly impossible to duplicate by outsource companies.

HOW IS THE ACR PREPARING FOR THE FUTURE?

Preparing its members for a changing reimbursement environment is critically important to the ACR. The College continues to interact with Congress, CMS,

Table 3. Survey of radiologist leaders participating in ACE demonstration

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am very familiar with the episode-of-payment plan and ACE.	1	1	1	2	0
The radiology group was consulted about the institutional involvement in ACE.	5	0	0	0	0
The radiology group was a core participant in the application process to ACE.	5	0	0	0	0
The radiology group was very involved in determining how financial gains to the demonstration site (hospital) are measured.	5	0	0	0	0
The radiology group was very involved in determining what proportion of the gain sharing and payments will go to the physician health organization and be shared with MDs.	5	0	0	0	0
The radiology group was very involved in determining how the payment and gain sharing will be distributed among physicians.	4	1	0	0	0
The radiology group was very involved in determining what quality metrics were used.	5	0	0	0	0
I feel that our interests were well represented in our institution's decision to participate in ACE.	5	0	0	0	0
I think radiologists should become more aware of episode-of-care payments and the results of ACE.	0	0	0	0	5

the Medicare Payment Advisory Commission, and other advisory commissions and continues to work with national quality groups such as the National Quality Forum to develop meaningful metrics for radiology. The College is supporting value-based and comparative effectiveness research and is participating in efforts to secure funding for this important work. The ACR is also interacting with a number of specialty societies, including other hospital-based providers such as anesthesiologists, pathologists, and emergency department physicians, to develop strategies to ensure a secure place for hospital-based physicians in the ACO structure. The College is also working with the American College of Physicians to promote the use of appropriateness criteria and decision support solutions for imaging and to begin efforts to develop collaborative relationships between primary care and radiology within an ACO structure. The ACR has also devoted considerable effort to prepare members for

new payment environments. Within the ACR Commission on Economics, the ACR Future Trends Committee has provided some of the initial work on ACOs and shared savings payment models. From that work, the College has created the ACR Accountable Care Committee and the Accountable Care Network, which will link radiologists across the country. This structure will hopefully engage discussion and facilitate the development of a repository of information, which will assist other radiologists as they begin participating in ACOs. The ACR also wants members to have the tools to become effective managers. Within the Quality and Safety Commission, the Appropriateness Criteria[®] Committee is working on the development of a decision support tool based on the ACR Appropriateness Criteria that can be used by radiologists to become effective utilization managers. The Commission on Practice and Leadership Development is creating a number of management and admin-



Fig 1. This illustrates the interrelationship between the various Commissions of the ACR in assuring ACR members are prepared for novel payment models that may be proposed.

istrative tools that can assist members in becoming more effective managers (Figure 1).

CONCLUSIONS

Strategies for successful radiologist participation in ACOs combine the traditional service of providing timely and high-quality image interpretation with a new set of services based on providing additional value and cost-effectiveness to the imaging portfolio of the ACO. The development and implementation of these value-added services may present challenges to radiologists and their practices because they require fundamental changes in culture from a current focus on productivity based on number of examinations interpreted to productivity based on the ability to provide cost-effective care and outcomes. The ACR is developing a number of tools that will assist members in this transition and will continue to advocate for radiologist compensation for these value-based services and shared savings.

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