

Education in Professionalism: Metrics or Culture?

Richard B. Gunderman, MD, PhD, MPH, Aleksandar Alavanja, BA

Department of Radiology, Indiana University School of Medicine, 702 North Barnhill Drive, Room 1053,
Indianapolis, IN 46202

The quality of a lamp's light depends on the quality of oil poured into it.

James Joyce, *Portrait of the Artist as a Young Man*

We rate radiology practices in all sorts of different ways—the number of radiologists they employ, the number of examinations they perform, total revenue, and so on. Based on such parameters, we can determine the largest practices, the busiest practices, and the most profitable practices.

However, the measurable aspects of a radiology practice tell only part of the story. There are many aspects of an organization's performance that do not lend themselves to measurement. In this discussion, we refer to these nonmeasurable aspects of an organization as its culture—the aspirations, vision, and patterns of thought and action that characterize an organization (1).

We believe that if we neglect culture in assessing the quality and performance of radiology organizations, we will inevitably end up with an incomplete and perhaps even distorted picture. In the following, we outline three key components of culture and their respective implications for the assessment of radiology organizations.

It is important to say at the outset that the concept of culture has a meaning and significance that extends far beyond assessment. Today, most organizational assessments tend to focus on what an organization is—a radiology department—and how well the organization is doing what such organizations do—performing and interpreting radiological examinations.

This is the author's manuscript of the article published in final edited form as:

Gunderman, R. B., & Alavanja, A. (2016). Education in Professionalism: Metrics or Culture? *Academic Radiology*, 23(5), 652–654. <http://doi.org/10.1016/j.acra.2015.12.003>

Culture goes far beyond the answers to what and how to who. Consider an admittedly extreme example. In the buildup to World War II, the German society was performing very well, having rebuilt itself from ruins. In many measurable respects—the growth rate of the economy, the expansion of its military, its rebirth as a European power—Germany was the European success story of the 1930s.

However, it was also home to Adolph Hitler and the Nazi party, and it was also laying the groundwork for some of the greater abuses of humanity of the 20th century. In terms of the measurements by which national economies, militaries, and influence are usually assessed, Germany was a wonder. But in terms of culture, something was very rotten at the core of the German nation. It is possible to generate great numbers but fail miserably.

The same can happen in radiology. Radiologists might be increasing their productivity, yet generating less and less accurate and clinically relevant interpretations. A radiology practice might be experiencing rapid growth in personnel, yet treating each of its members in an ever more dismissive way. The field might experience growth in revenues and compensation, yet make its members miserable (2).

In these kinds of situations, the signs of high performance can be deceptive. Merely posting high numbers does not prove that an organization is doing a good job. Over time, the performance of such an organization—even in narrowly quantitative terms such as productivity and profitability—often deteriorates, because those involved are failing to think about the cultural dimension.

Consider a business example. Strategies and tactics that pump up the quarterly report may turn out to be counterproductive, at least when they persist over multiple annual reports. Consider the so-called “pump and dump” strategies of generally short-lived corporate chief executive officers, in which executives took steps to increase share prices in the short run, then cashed out before deleterious longer term consequences became apparent.

Again, the same thing can happen in medicine. Many organizations track a variety of metrics that provide little benefit to patients or those caring for them. One such example is the rate at which forms designed

for coding and billing purposes are completed completely. These days, many health professionals spend more time filling out forms than caring for patients, and over time this can take a real toll on people who chose to pursue healthcare careers for the good of patients (3).

To gain a clearer sense of the vital role culture plays in the vitality of radiology organizations, it is helpful to consider some of the key features of an organization that define its culture. These include communication, cognition, and conduct.

Communication

One of the most important aspects of culture is communication, the ways in which an organization's members exchange thoughts and impressions. To a substantial degree, the communication of a radiology organization is shaped by the larger culture of which it is a part—the language of the hospital, medical school, the health system, and so on.

Much of this communication is representational, enabling us to express complex ideas in relatively simple forms. In clinical practice, we use terms such as contrast-opacified, hyperdense, and aggressive-appearing. As residents progress through their years of training, they become more and more adept at using such terms in communications with colleagues.

Recently, interest in standardizing the use of terms has been strong, as in the reporting of breast imaging results and the use of reporting templates with fixed lexicons 4 and 5. Although some radiologists and clinicians have a favorable view of structured reports, such approaches may also have an adverse impact on quality 6 and 7.

It is not our intent to establish whether structured reporting is a good idea or not. But attempts to restrict the lexicon can be dangerous when applied to the management of a radiology practice, particularly when using one set of terms blinds the group's members to other important realities. Suppose, for example, that a practice adopted a management vocabulary that recognized only financial terms.

There are some things that good radiology practices do that do not necessarily lend themselves to financial description and analysis. Adopting such a restricted set of terms could prevent the group from recognizing and sharing many important ideas about its work (8). For example, requests for consultation might soon be labeled “interruptions,” fostering organizational layouts and workflows that make it more difficult for referring health professionals to speak with a radiologist.

Yet what from a financial point of view looks like inefficiency—a visit from a referring physician who wants to discuss a patient's diagnostic workup—could, from another point of view, turn out to be time well spent. Suppose, for example, that a radiologist who takes 20 minutes to discuss a case is able to contribute crucial insights to the patient's care, and to build the referral base of the practice? Without the vocabulary to recognize the importance of such interactions, a radiology practice might unwittingly extinguish them (9).

Cognition

Culture also includes a cognitive component, on which communication tends to rest. Simply put, we can only communicate what we recognize, and when we are not even aware of something's existence, we tend not to talk or even think about it. In this respect, radiologists cannot outperform the ideas with which they operate. To do good work, we need to operate with good ideas.

For example, a community radiology practice determined that, in the interests of fairness, it would begin compensating each of its radiologists according to the amount of clinical revenue they generated. Despite the fact that there was broad parity in how hard each member was working, this immediately introduced deep disparities in compensation across sections, and within a year, the group began to fall apart.

The problem was a deeply individualistic understanding of fairness that failed to take into account other important considerations such as biases inherent in the payment system, as well as the need for complementarity and comprehensiveness in radiology services. The current healthcare payment system tends to favor work that relies on expensive equipment, and to prioritize performing procedures on

patients rather than talking with them, but it would be a mistake to assume that payment and professional importance are necessarily aligned.

The cognitive component of culture includes more than just the meanings of terms and the accumulated knowledge of a person or a group. It also includes what is important to people. Radiologists and radiology groups should ask themselves some important questions—what is most important to us around here, and what price are we prepared to pay to pursue it?

Another way to approach the same question might be, what does a really great radiologist look like, and what steps can we take to enable more of the members in the group to approximate that ideal? Equally important is what the group wishes to avoid. Typically, such aspects of culture are embedded less in terminology than in the stories radiologists tell themselves and each other.

When people perform particularly well as radiologists, what are they doing and how do we explain their conduct? Are they working really fast or noticing things that others might miss? Are they attempting to maximize their compensation or focused on helping a patient or a colleague? As such stories are shared, they play an important role in shaping organizational culture, and organizations striving to improve should give some thought to the stories they are sharing (10).

Conduct

This leads to the third component of culture, conduct. Often referred to as a norm, conduct can be delimited in several different ways. One is the range of conduct that is prohibited. Some types of prohibited conduct are illegal, such as billing fraud. A group that promotes frankly illegal conduct is likely to destroy itself.

Other types of conduct are unethical, such as hiding important information from patients or colleagues. Still other types are disreputable, such as treating colleagues as mere stepping stones to advance a career. Again, a culture that fosters such conduct is pursuing a self-destructive course, likely to harm not only the organization as a whole but everyone who works within it.

Another segment of the spectrum of conduct is required. Among the things members of radiology practice may be required to do are show up to work on time, abide by protocols, and maintain records in a timely fashion. Recent efforts to increase accountability have in many cases dramatically expanded this sphere of conduct, dramatically lengthening policy and procedure manuals and the like (11).

A third part of the range of conduct is permitted, and this is the domain in which widest discretion is possible. Some radiologists may treat referring physicians brusquely, whereas others may exhibit more warmth and cordiality. From some points of view, such as statistical process control, permitting such diversity smacks of a quality control problem. From the perspective of culture, however, it is important that individuals have an opportunity to express their distinctive style.

Discretion highlights an important question. Is a radiology practice's goal to define and control conduct as tightly as possible, or to preserve for its members a fairly broad domain of professional discretion? In many respects, the current culture of medicine—and to a broader extent that of society—may be likened to a culture of compliance. In effect, many practices are seeking to diminish diversity, with predictably adverse consequences for organizational vitality and creativity.

Although likely unintended, such efforts tend inevitably to erode the professional autonomy of individual professionals and practices, by progressively reducing tolerance for variation and requiring the expenditure of more and more time and energy on compliance activities (12). A compliance culture may be effective at reducing error, but it is generally terrible at fostering innovation.

Conclusion

What does attunement to each of these components of culture look like in practice? In the case of communication, poor communication is likely to render an organization's culture stale and sterile, in part because no one knows what is really going on. Frequent and open discussion can often preempt obsolescence and enable the organization to take the initiative in seizing new opportunities.

In terms of cognition, practices can create a more robust culture by recognizing and taking advantage of the diverse interests and abilities of their members. When such differences are treated as diversity and not merely as variances from standard, the members of a group can complement one another, making the whole more than the mere sum of its parts.

In terms of conduct, a healthy culture requires people to treat one another with respect. Individuals may have opportunities to cut corners or take advantage of colleagues, but when the mutual respect and trust of a culture is strong, they choose not to do so because it would betray the esteem in which they hold the people they work with.

The implications of these components of culture for radiology practices and their leaders are deep and far-reaching. Efforts to create dashboards of quantitative gauges by which to evaluate the performance of radiology practices are doomed to fail, at least for those who suppose that any such dashboard could ever supply all the information needed.

Too many crucial factors, such as the stories members of the practice tell themselves and each other, simply cannot be represented on any dashboard. Merely adjusting quantitative inputs, such as compensation, paid time off, and allocation of effort will not necessarily translate into improved performance. To help people do better work, it is necessary to include a storyboard that includes the organization's aspirations and vision.

Really good work requires more than metrics. It includes other key factors, such as the degree to which people believe in what they are doing, see that it is making a difference, and feel recognized for doing it. Truly effective radiology leaders see past the narrow confines of statistical process control and appreciate that great organizations are built less on metrics than on culture.

REFERENCES

1. Thrall JH. Education and cultural development of the health care work force part I. The health professions. *Radiology* 2006; 239:621–625.
2. Peckham C. Medscape Physician Compensation Report 2015.
<http://www.medscape.com/features/slideshow/compensation/2015/public/overview>. Accessed July 15, 2015.
3. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. *Lancet* 2009; 374:1714–1721.
4. Burnside ES, Sickles EA, Bassett LW, et al. The ACR BI-RADS® experience: learning from history. *J Am Coll Radiol* 2009; 6:851–860.
5. Morgan TA, Helibrun ME, Charles J, et al. Reporting initiative of the Radiological Society of North America: progress and new directions. *Radiology* 2014; 273:642–645.
6. Schwartz LH, Panicek DM, Berk AR, et al. Improving communication of diagnostic radiology findings through structured reporting. *Radiology* 2011; 260:174–181.
7. Siström CL, Honeyman-Buck J. Free text versus structured format: information transfer efficiency of radiology reports. *Am J Roentgenol* 2005; 185:804–812.
8. Moskowitz PS. Gathering storm clouds suggest the need for a culture change in radiology: radiologist-centered imaging. *Radiology* 2015; 276:3–7.
9. Levin DC. The 2014 RSNA annual oration in diagnostic radiology: transitioning from volume-based to value-based practice—a meaningful goal for all radiologists or a meaningless platitude? *Radiology* 2015; 275:314–320.
10. Gunderman RB. The story behind the image. *Radiology* 2013; 268:312–314.

11. Centers for Medicare and Medicaid Services. EHR Incentive Programs. 2015. [Accessed 15.07.15]; Available from: <https://http://www.cms.gov/EHRIncentivePrograms>.

12. Yarnall KSH, Pollak KL, Østbye T, et al. Primary care: is there enough time for prevention? *Am J Public Health* 2003; 93:635–641.