

pandemic: novel strains of influenza can cause severe illness in otherwise healthy, “low-risk” people, and vaccinating large numbers of healthy people protects others who are highly vulnerable to influenza and its complications.

Despite the importance of public acceptance, the science that would clarify the best ways of informing and motivating the public is severely underdeveloped. How can indifferent or negative attitudes toward vaccination be changed? A quick look at publicly funded research on the topic of influenza and influenza vaccination, made possible by the Research Portfolio Online Reporting Tool from the National Institutes of Health, indicates that over the past decade more than 95% of funding has been devoted to biomedical topics rather than to social and behavioral science. Clearly, cutting-edge lab-

oratory science to enhance the safety and effectiveness of vaccines is vital to public health. But it is equally important to understand the forces that shape public views about the risks and benefits of vaccination. Without this knowledge, it will be impossible to translate biomedical advances into effective action.

Investments that enhance public acceptance of vaccination will yield substantial returns, in the form of reduced incidence and severity of disease as well as enhanced pandemic preparedness. A more balanced research portfolio is likely to be more successful than one that is heavily weighted toward biomedical research alone. We are fortunate that the pandemic that just passed was milder than expected. Next time, we may not be so lucky.

The analysis and opinions presented here are those of the authors and do not necessarily represent those of RAND.

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From RAND, Arlington, VA.

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The Emerging Importance of Patient Amenities in Hospital Care

Dana P. Goldman, Ph.D., Mary Vaiana, Ph.D., and John A. Romley, Ph.D.

The Ronald Reagan UCLA Medical Center, an \$829 million replacement for a facility that was damaged in the 1994 Northridge earthquake, opened in 2008. Radio, print, and outdoor advertisements touted its “Better Way to Get Better,” with private and family-friendly rooms, magnificent views, hotel-style room service for meals, massage therapy, and “a host of other unexpected amenities.” Perhaps as a result, the proportion of patients who say they would definitely recommend UCLA to family and friends

has increased by 20% (from 71% to 85%), according to the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS).

In crowded hospital markets, especially in areas populated by well-insured patients, such amenities play an increasing role in the competition for market share. This development raises important questions about the definition of hospital quality and its benefits and costs to patients and society.

Before the 1990s, hospitals

were thought to attract patients by attracting physicians, which they often did by investing in high-tech medical capabilities. This “medical arms race” led many hospitals to offer a costly array of duplicative services. In the 1990s, managed care ushered in a new style of competition by injecting cost consciousness into the equation. Because insurers determined which hospitals would be included in their networks, they gained new leverage. To maintain market share, hospitals were forced to cut their prices.

Now, yet another style of competition appears to be emerging, in which hospitals compete for patients directly, on the basis of amenities. Though amenities have long been relevant to hospitals' competition, they seem to have increased in importance — perhaps because patients now have more say in selecting hospitals. And the hospital market is booming. National spending on hospitals exceeded \$700 billion in 2008 and is growing rapidly.

These high and rising costs have sparked concern. Gawande recently attributed out-of-control health care spending in McAllen, Texas, to profit-driven medicine: physician ownership of a local hospital, for instance, could create a financial incentive to provide excessive care.¹ To act on that incentive, the hospital would have to draw patients somehow, and the hospital's Web site advertised its amenities, including a lobby "like that of a five-star hotel."

Recent surveys also suggest the importance of amenities in choices of inpatient care venues.² Physicians said that when deciding where to refer patients, they placed considerable weight on the patient experience, in addition to considering the hospital's technology, clinical facilities, and staff. Almost one third of general practitioners even said they would honor a patient's request to be treated at a hospital that provided a superior nonclinical experience but care that was clinically inferior to that of other nearby hospitals. Patients themselves said that the nonclinical experience is twice as important as the clinical reputation in making hospital choices.

Empirical evidence seems to confirm that such a value system

is at work. For example, we did research to determine where Medicare patients with pneumonia had received care in greater Los Angeles between 2000 and 2004.³ We drew on a market survey's data about amenities and used pneumonia-related mortality as a measure of clinical quality. We found that patients often did not choose the closest hospital; they were willing to travel to get care at an alternative hospital. But their choices were only moderately correlated with the hospitals' risk-adjusted rates of death.

Clearly, these consumers valued some broad package of hospital characteristics, and the package included amenities. Indeed, we found that the quality of the amenities was strongly correlated with the proportion of patients who received care at a given hospital. Amenities even seemed to matter (albeit less) to patients with myocardial infarction, for whom clinical quality is an overriding concern.

Why do amenities matter so much? Perhaps patients simply don't understand clinical quality. Data on clinical quality are complex, multidimensional, and noisy, and they have only recently become systematically available to consumers. Consumers may be making choices on the basis of amenities because they are easier to understand.

Are amenities a valuable part of the hospital experience? One could argue that they're an important element of patient-centered care. If amenities create environments that patients, providers, and staff members prefer, then providers and staff members may give better care and service in those environments, and patients may have better health outcomes.

On a societal level, the value of amenities is important because our health care system currently pays for them. Under its prospective payment system, Medicare pays hospitals by the discharge. Each hospital receives the same amount of reimbursement for each patient with a given diagnosis and is free to decide what mix of resources to devote to clinical quality and what to spend on amenities. In our research, we found that improvements in amenities cost hospitals more than improvements in the quality of care, but improved amenities have a greater effect on hospital volume. So a hospital seeking to strengthen its financial position might view investment in amenities as a sound strategy. The question is what effect such a strategy might have on patients' welfare, as well as on overall health care costs.

Amenities may complicate the measurement of inflation in medical costs. The difficulty of measuring over time the price of products or services that rely on rapidly evolving technology is well recognized. For example, if the retail price of computers rises, is it because the price of computers with particular capabilities has increased or because computers are somehow better? The analogy in medical care might be measurement of the price of treatment for myocardial infarction: inflation over time looks very high but may be more moderate when technological improvement is accounted for.⁴

Amenities may raise a similar measurement problem: if hospitals are providing more amenities and a better experience, then estimates of inflation of health care costs would arguably be biased upward, since price indexes don't

account for amenities. The same issue pertains to gauging productivity. The recently enacted Patient Protection and Affordable Care Act reduces growth in Medicare reimbursement on the grounds that hospitals should be able to achieve productivity gains similar to those in the rest of the economy as a whole. But if amenities are important — and aren't included in performance assessments — then the productivity of hospitals that offer greater amenities is being understated. Hospitals that are focused on this part of the patient experience may therefore suffer under the new law.

At present, our health care system seems conflicted about the patient experience. Under health care reform, Medicare will begin paying hospitals on the basis of value. Some experts have contemplated using data from the HCAHPS survey to inform a

value-based payment system. This survey may tap into patients' assessments of the nonclinical experience, particularly with its questions about overall hospital ratings and willingness to recommend a given hospital.

On the other hand, process measures of quality have also been proposed. Their inclusion could persuade hospitals to shift their focus from amenities toward clinical quality. Such a shift seems more in keeping with the overall spirit of the HCAHPS survey, whose designers explicitly ruled out including amenity-focused questions, believing that only clinical aspects of the patient experience matter and citing patients saying, "I know this isn't a hotel."⁵ We doubt that everyone feels that way, however, and the behavior of many hospitals suggests that they doubt it, too.

As health care reform moves forward, we need to decide wheth-

er amenities are a valuable part of the hospital experience. If they are, we must account for them in the ways that we measure overall quality, prices, and productivity.

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From the Leonard D. Schaeffer Center for Health Policy and Economics, University of Southern California, Los Angeles (D.P.G., J.A.R.); and RAND, Santa Monica, CA (M.V.).

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BECOMING A PHYSICIAN

Gratitude, Memories, and Meaning in Medicine

Hasan Bazari, M.D.

The card, with its picture of a bouquet of flowers, was on my desk when I arrived at the hospital on Monday morning. I opened it, assuming it was a thank-you note from an interviewee for our residency program. But the handwriting was that of an elderly person who had taken the pains to write, with slants and slopes necessitated by decreased mobility. Under the printed lines, "A little ray to brighten your day. Thinking of you," the sender had written, "My mother, Mary Louise Kelly, '83-'84, would be pleased with your role at MGH. Please re-

member to wear a coat in this cold weather. Respectfully, Ella Kelly Fletcher." Stuck inside was a pink Post-it note that read, "Hasan, I am a patient at the MGH. I will be admitted 02/04/2010 to the Orthopedics Service for a left shoulder replacement. We have always truly appreciated your care and concern for her. May God continue to bless your work."

Not immediately recollecting Ms. Fletcher, I set the card aside to attack my daily deluge of e-mails. Mondays are always a whirl of conferences, challenging patient interactions, and admin-

istrative meetings. I soon received a call from the family of a patient with severe cardiomyopathy, end-stage renal disease, and a renal-cell carcinoma, who had had cognitive decline after starting hemodialysis; his family wanted him transferred from the rehab facility back to the hospital to sort out end-of-life issues and withdrawal of dialysis. My day passed quickly.

The next morning, the card still lay on my desk, and a faint memory started to gather in my mind; 1983 was the year I started as an intern. It dawned on me