

Virtual Mentor

American Medical Association Journal of Ethics

November 2006, Volume 8, Number 11: 703-793.

Understanding the Illness-Poverty Relationship

From the Editor

Illness, poverty and the invisible patient 705
by Justin M. List

Educating for Professionalism

Clinical Cases

Managing chronic conditions in uninsured patients 709
Commentaries by Saul J. Weiner and Emily E. Anderson

Pediatric primary care in the ER: Is it better than waiting for an appointment? 717
Commentary by Marc Gorelick

Clinical awareness of occupation-related toxic exposure 723
Commentary by Leonardo Trasande

2006 John Conley Ethics Essay Contest Winning Entry 729
**Distributing drug samples in a free clinic:
A personal or policy decision**
by Amanda J. Redig

Medical Education

Ambulatory care elective in a resource-poor community 735
by Matthew Fitz

Journal Discussion

Social epidemiology: How socioeconomic risk factors become health realities 737
by Ken Fox

Socioeconomic determinants of health: The facts are in 744
by Vanessa Yasmin Calderon

Clinical Pearl

Prostatitis: Prevalence, classification and treatment 748
by Sarah Maitre

Law, Politics and Society

Health Law

- Defining hospitals' obligation to stabilize patients under EMTALA** 752
by Lee Black

Policy Forum

- Education and education policy as social determinants of health** 756
by Barbara J. Low and M. David Low

- Health communication and navigating the health system** 762
by Andrea M. Garcia

Medicine & Society

- Where you live matters to your health** 766
by Abigail Silva

- Crowded conditions: Coming to an ER near you** 771
by Jessamy Taylor

Resources

- Suggested readings and resources** 776

November Contributors

- About the contributors** 792

Upcoming Issues of *Virtual Mentor*

- December: Ethics of International Medical Volunteerism
January: Ethical Issues in Cancer Care
February: Technology in Medicine
March: Influences of the Media on the Practice of Medicine

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 705-708.

From the editor

Illness, poverty and the invisible patient

A line in Ralph Ellison's "Invisible Man" that I find particularly instructive reads, "All dreamers and sleepwalkers pay the price, and even the invisible victim is responsible for the fate of all" [1]. Although this line refers to issues of race in United States, it is an equally relevant commentary on the relationship between poverty and illness. Children, men and women from low socioeconomic backgrounds are among the invisible victims of society, while the sleepwalkers and dreamers are those who—willingly or unwillingly—neglect, oppress or forget their invisible neighbors. In the increasingly complex U.S. health care system, federal budget cuts to entitlement programs such as Medicaid [2], and well-documented racial, ethnic and class disparities in health outcomes, these invisible persons are often marginalized in the health care setting. Despite the structural marginalization of those with low socioeconomic status (SES) in our society, the fate of our invisible neighbors intertwines with the lives of us all in the public health realm and beyond. Disease and insecurity, not to mention injustice, impact all of us whether we choose to acknowledge it or not.

While low SES can be defined quantitatively, characterizing poverty is a more elusive task, given its multiple determinants. Scholars vary in how they explain who the impoverished are. Furthermore, competing political and cultural interpretations of poverty and how to rectify it often hinder its alleviation. Most unfortunately, the voices and experiences of those who live in poverty are often neither heard nor heeded by society's more powerful. Thus the people living with low SES experience violence that is built into the structure of our society in the form of neglect, denial of certain human rights and inadequate access to quality public and private services, to name a few of the social pathologies that constitute structural violence.

Volumes could be written here to elucidate a more thorough and just discussion of the definitions, causes and history of poverty in America. At the very least we should be able to agree as a starting point that living in poverty imposes *vulnerabilities* on those who experience it, vulnerabilities and often chaos that leave them without the means and tools that those in higher socioeconomic brackets depend on for human flourishing: reliable social networks, various human rights, housing, food, shelter, health and the list goes on. Christie Kiefer defines poverty "not as a simple economic condition, but as a state of demoralization, where people lack all or most of the minimum ingredients we accept as the basis of a decent life" [3]. Even this definition

leaves us wanting, but from here we can begin to understand the differences between the more financially privileged and the medical patient who is poor.

The articles selected for this edition of *Virtual Mentor* demonstrate how poverty (or low SES) is related to illness in the clinical context by exposing deficiencies in the current health care system and highlighting the nuanced understanding needed to care for patients whose backgrounds challenge clinical conventions that were designed for middle- and upper-class patients. Affordability and access to health services appear to be likely candidates for blame as to why patients with low SES experience worse health outcomes than those with higher SES, but to focus on these alone is to miss the point. While central to understanding the connection between poverty and illness, access and cost are only part of the clinical puzzle. A more comprehensive look at the social determinants of health serves as a better model, not only for acute treatment of patients but also as a way for physicians to learn to advocate for patients more holistically at social and political levels.

How we understand why people are living in poverty is just as important as finding innovative ways to provide care and advocate for them. This means clinicians must understand their patients' educational and cultural backgrounds, housing, race and gender issues, and historical, political and economic disenfranchisement. We also need to appreciate the more fundamental influences on their health behaviors, such as difficulties in finding transportation to the clinic and their degree of health literacy.

At the same time, physicians must explore their own lives, upbringing and attitudes because these shape and challenge their interaction with patients of low SES. David Hilfiker, a medical doctor who works with impoverished persons writes,

There is a belief woven intimately into our society that we live in a “meritocracy,” a community where people can make whatever they want of their lives, ending up where they do largely because of their own efforts and talents... . As a culture we are deeply invested in the belief that the individual can determine his or her destiny [4].

These values shape many of us in ways that do not resonate with the experiences of those born into poverty, a place where the playing field often lacks bases, a bat and teammates to help along the way. To complicate matters, those of us with advanced educations, though we may attempt to strip down our material comforts to live among the poor, can never enter into true poverty. Even in our solidarity, we can never be true “insiders” as Hilfiker discusses; yet all is not lost.

Physicians who are knowledgeable about the relationship between poverty and illness in a more comprehensive way will better understand why diseases such as tuberculosis and HIV/AIDS disproportionately affect the poor, for example, and can perhaps work out a more suitable treatment plan with patients who live without many social stabilities and access to services that we take for granted. Doctors who are

educated about the plight of the poor may better recognize the difficulties in treating patients at the margins of the health system who are living with chronic disease conditions, such as the substitute school janitor with chronic prostatitis who serves as the patient in the first case study in this issue. Most importantly, the burden of knowledge that comes with professional education in the social determinants of health may create a renewed or strengthened moral imperative for us all to become agents of social change in patients' lives outside and around the clinical encounter. This issue of *VM* intends to provide this burden of knowledge, knowledge that can be translated into action for justice and a more holistic approach to patient health.

Three clinical vignettes ranging from identifying pesticide poisoning in immigrant workers to the ethical dilemmas in triaging patients in the emergency room raise concerns that patients with low SES typically confront. Medical students and physicians will find the journal discussion articles useful tools for increasing their vocabulary about social determinants of health and interpreting research that suggests a relationship between SES and health outcomes. The medicine and society articles dispense important research findings on the geography of poverty and illness. This section also addresses the overcrowding in hospital emergency departments (ED) and dispels myths that the uninsured are the source of this problem while highlighting the additional attention needed to change the health care system so that patients in government entitlement programs (e.g., Medicare and Medicaid) are not "dumped" in the ED. The history of the present-day legislation against patient dumping, the Emergency Medical Treatment and Active Labor Act, is discussed in the health law section.

Complex social problems such as providing quality health care for persons of low SES and meeting them where they are in their lives demand solutions. This issue presents a host of dilemmas; while it is evident that physicians cannot solve these alone, they can play active roles, both inside and outside the confines of the clinic, to mobilize a call for change in how we as a society address poverty and the health of the invisible victims among us. Physicians can begin to network in communities to address these problems through other agencies. The Patient Navigator Act of 2005 signed into law and discussed in the policy forum is but one promise of a brighter future. Also covered in this month's policy forum is how a change in education policy can influence the health of people with low SES. Further, a medical education article explores how one medical school is bringing the care of the poor to the attention of its students.

A recent Institute of Medicine publication states, "Beyond the statistics, the suffering, disability, and death among large and growing segments of the population tear at the nation's conscience" [5]. If these problems truly tear at our conscience as clinicians and students (as they should), then we must listen to the poor and educate ourselves about the forces that shape their lives. Only then can we begin to form a more meaningful relationship with them that comprehensively seeks to promote health and human flourishing among some of the most difficult social odds imaginable. Given the rich ethical duties embedded in medicine as delineated from

the history of the profession, we must play our part in waking to the plight of the invisible impoverished patients for whom we care.

References

1. Ellison R. *Invisible Man*. New York, NY: Random House; 1980:14.
2. The Kaiser Commission on Medicaid and the Uninsured. *Deficit Reduction Act of 2005: Implications for Medicaid*. Available at: <http://www.kff.org/medicaid/upload/7465.pdf>. Accessed October 10, 2006.
3. Kiefer CW. *Health Work with the Poor: A Practical Guide*. New Brunswick, NJ: Rutgers University Press; 2000:78.
4. Hilfiker D. *Not All of Us Are Saints: A Doctor's Journey with the Poor*. New York, NY: Hill and Wang; 1994:152-153.
5. Thomson GE, Mitchell F, Williams MB, eds. *Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business*. Washington, DC: The National Academies Press, Institute of Medicine; 2006:15.

Justin M. List, MAR
MS2
Loyola University Chicago
Stritch School of Medicine

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 709-716.

Clinical case

Managing chronic conditions in uninsured patients

Commentaries by Saul J. Weiner, MD, and Emily E. Anderson, MPH

Mr. Jacob Rangston is a substitute janitor at a junior high school in Gary, Indiana. Because he is only employed part time, he is not eligible for insurance benefits. He does not qualify for Medicaid or, at 53 years old, for Medicare. He comes into a student-run free health clinic on Chicago's West side after a long commute from Gary. A year earlier, he had been referred to the clinic by a county public hospital. He had been diagnosed and treated for chronic recurrent prostatitis on multiple previous visits to the free health clinic, and on the current visit he reports having pain in his pelvic region and upon urination. He is sexually active but refrains from sex with his girlfriend when his symptoms flair up for fear of transmitting an infection.

During a recent visit to the clinic, Mr. Rangston tested negative for sexually transmitted infections, had a negative urine dip, no glucose in his urine, normal prostate specific antigen (PSA) levels and an enlarged prostate but no nodules. He has traveled to the clinic almost monthly during the past year and has kept all scheduled appointments but one. His health literacy appears high according to a triage volunteer who read his medical history, and he is conscientious about choosing healthy behaviors.

Usually, the physician or fourth-year medical student at the clinic recommends a course of antibiotics for Mr. Rangston, which helps relieve his symptoms during the treatment course. Some antibiotics have seemed to work while others have not. A few days or a few weeks after each antibiotic regimen his symptoms return. He has been experiencing this pattern for almost two years and takes Flomax regularly to help relieve his enlarged prostate. During his last visit, the physician recommended Levaquin, which the patient said worked best for him in the past. For some undocumented reason, the physician noted offering it to Mr. Rangston on this visit only if he could pay for a prescription. If not, the physician recommended doxycycline.

A fourth-year medical student, Blake Thierry, having just reviewed Mr. Rangston's chart and test results before walking into his room, felt the status quo needed to change starting with this visit. He was frustrated with the lack of continuity of care for Mr. Rangston and the often incomplete or inadequate documentation in Mr. Rangston's chart. Mr. Thierry noted that no referral had been suggested for Mr. Rangston. He thought he knew why since the average wait period for an urologist at

Cook County hospital for the uninsured was at least five months. Mr. Rangston was becoming increasingly frustrated, as he all too kindly let Mr. Thierry know.

Mr. Thierry researched chronic prostatitis quickly and determined that there were additional imaging services and procedural tests that might help diagnose Mr. Rangston's disease and treat it more effectively than the perpetual and often ineffective antibiotic treatments. None of these had been discussed with Mr. Rangston. Mr. Thierry explained that the clinic did not provide these services and recommended that Mr. Rangston approach Cook County hospital or a federally qualified health care center for more affordable, out-of-pocket testing if he did not feel he can wait the year or so it may take to eventually get the tests through Cook County.

The tests would be expensive, and Mr. Rangston expresses his concerns over his ability to pay for them. Mr. Thierry thinks Mr. Rangston should get tested sooner rather than later due to the recurring symptoms, and he ponders how he might be able to "hurry the system" along. It is apparent to Mr. Thierry that Mr. Rangston is not receiving the standard of care, given his symptoms. He does not know what other alternatives he can recommend to Mr. Rangston. Should he refer him to a private physician where he would accrue debt but at least receive more timely and comprehensive care? Should he just continue the status quo and prescribe yet another antibiotic? Should Mr. Thierry just accept the unfortunate aspects of the system for his patient?

Commentary 1

by Saul J. Weiner, MD

While we think of health insurance as a prerequisite to expensive high-tech medicine, it is important to recognize that the uninsured are often disproportionately deprived of another resource perhaps more valuable: access to a long-term therapeutic relationship with a primary care physician. The clinic that Mr. Rangston attends has fallen short in its care for him, not because it lacks subspecialty services but because of inadequate continuity and adherence to evidence-based primary care. Supporting and educating patients so that they have the best chance to adapt to a chronic condition requires an ongoing relationship and a foundation of interpersonal trust—it does not happen "on the fly."

Mr. Rangston has a condition that is now referred to as chronic prostatitis/chronic pelvic pain syndrome, or CP/CPPS, based on a classification approach supported by the National Institutes of Health to categorize prostate syndromes [1]. It has also been called abacterial prostatitis or prostatodynia. CP/CPPS is defined by symptoms of chronic pelvic pain for at least three months in the absence of other identifiable causes [2]. Although it is a diagnosis of exclusion, it can be made in the primary care setting based on a patient's history, physical exam and basic lab tests. Mr. Rangston's characteristic symptoms, negative urine analysis and culture are sufficient to make the diagnosis.

There is no strong evidence that a specialized urological evaluation for this condition improves patient care, although some guidelines recommend referral nevertheless [3]. Unfortunately, there is also a lack of evidence for any effective therapy [4]. The repeated use of antibiotics for recurrent CP/CPPS is considered inappropriate; studies show no additional benefit from antibiotics when compared with placebo [4]. Patients should be educated about their situation, which, while debilitating, is neither contagious nor associated with any malignancy or other progressive condition. That said, it is important to acknowledge and address the suffering the patient may be experiencing.

Instead of being educated about the often chronic, waxing and waning course of his condition, it appears that Mr. Rangston has been left wondering whether he is victim of a missed diagnosis and an easy cure. Furthermore, there is no mention that he has been reassured that it is safe to continue to have sexual relations with his girlfriend when his symptoms flair—there is no risk of her acquiring an infection [5].

While suboptimal care can occur in any office-based practice setting, it may be more common in the clinic setting described here, with a revolving door of volunteer providers, each with varying degrees of training and experience, little oversight or investment in quality and spotty record keeping. Hence, while Mr. Rangston may not need high-tech medicine, his lack of access to health insurance has deprived him of a good health care environment for the management of a chronic condition.

Paying for private care

Mr. Rangston may, in fact, have first sought care in a private setting. The majority of uninsured patients are actually cared for not in free clinics or public hospitals but in regular office-based practices [6]. Receiving care outside of the “safety net” when one is uninsured, however, creates its own set of challenges for both patients and providers [7]. While some patients receive all needed services regardless of their inability to pay, often they and their physicians factor in costs when creating treatment plans.

When considering the impact of nonpayment on both patients and those who care for them, it is useful to make a distinction between two kinds of uncompensated care: “Charity care” occurs when the physician, hospital or clinic opts not to charge for all or a portion of a service, so that the patient can receive that service for free or at a reduced fee. By contrast, “bad debt care” occurs when the physician charges the going rate but is never paid. Although precise figures are not available, it appears that about 80 percent of uncompensated care is bad debt care [8]. That means that in most cases physicians and hospitals generally attempt to collect payment, often with severe consequences for their patients. Unpaid medical bills are now the leading cause of personal bankruptcy in America [9].

Because of these financial tensions, indigent patients and their physicians often face three dilemmas when creating a treatment plan [10]: (1) whether to forgo appropriate tests and therapies because of cost, (2) whether to negotiate a reduced fee, or (3)

whether to attempt to locate the necessary services elsewhere at a lower cost. It would not be surprising if Mr. Rangston had originally sought care at a local practice and declined basic laboratory tests, such as urinalysis and culture, which on a substitute janitor's salary can rapidly eat up a month's rent. It is also possible that a local physician might have offered to reduce his professional fee, but would most likely not have been able to waive other expenses since most laboratory tests are outsourced. And finally, although we not are told how Mr. Rangston decided to travel all the way from Gary, Indiana, it would not be surprising if he had been referred to the free clinic.

Lack of insurance is a proven risk factor not only for worse outcomes from treatable conditions but also for higher incidence of a number of preventable illnesses [11]. For instance, because Mr. Rangston is a 53-year-old man, he should be screened for colon cancer according the U.S. Preventive Services Task Force [12]. At a cost of about \$800, it seems unlikely that colonoscopy will be offered to him or that he could afford it given his current financial situation.

I wonder if the desire of private physicians to send patients like Mr. Rangston "somewhere else" is motivated, however, not only by concerns about profit and loss or even access to care but also by the discomfort of having to confront financial hardship in one's patients, particularly when one may be contributing to it. Perhaps the greatest service we can provide for individuals who are struggling to receive care without coverage is to continue to care for them, offering expert counsel regarding their medical needs, eliciting their preferences regarding trade-offs between cost and quality (and documenting those preferences particularly for medicolegal protection), reducing fees when we can arrange to do so and picking up the phone to enlist the generosity of our colleagues during times of greatest need. Last but not least, let us not forget that we are dealing with an issue of social justice and have a responsibility as healers to advocate publicly for reforms that will broaden access to medical care and services for all.

References

1. Krieger JN, Nyberg L Jr, Nickel JC. NIH consensus definition and classification of prostatitis. *JAMA*. 1999;282:236-237.
2. Nickel JC, Nyberg LM, Hennenfent M. Research guidelines for chronic prostatitis: consensus report from the first National Institutes of Health International Prostatitis Collaborative Network. *Urology*. 1999;54:229-233.
3. Prodigy Guidance. Prostatitis: extended information. Available at: http://www.prodigy.nhs.uk/prostatitis/extended_information/management_issues. Accessed October 4, 2006.
4. Dimitrakov JD, Kaplan SA, Kroenke K, Jackson JL, Freeman MR. Management of chronic prostatitis/chronic pelvic pain syndrome: an evidence-based approach. *Urology*. 2006;67:881-888.
5. Mehik A, Hellstrom P, Sarpola A, Lukkarinen O, Jarvelin MR. Fears, sexual disturbances and personality features in men with prostatitis: a population-based cross-sectional study in Finland. *BJU Int*. 2001;88:35-38.

6. Lewin ME, Altman S, eds. *America's Health Care Safety Net: Intact but Endangered*. Washington, DC: National Academies Press, Institute of Medicine; 2000.
7. Mann JM, Melnick GA, Bamezai A, Zwanziger J. A profile of uncompensated hospital care, 1983-1995. *Health Aff*. 1997;16:223-232.
8. Weissman J. Uncompensated hospital care. Will it be there if we need it? *JAMA*. 1996;276:823-828.
9. Himmelstein DU, Warren E, Thorne D, Woolhandler S. Illness and injury as contributors to bankruptcy. *Health Aff*. Available at: <http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.63v1>. Accessed September 29, 2006.
10. Weiner S. "I can't afford that!": dilemmas in the care for the uninsured and underinsured. *J Gen Intern Med*. 2001;16:412-418.
11. Ayanian JZ, Weissman JS, Schneider EC, Ginsburg JA, Zaslavsky AM. Unmet health needs of uninsured adults in the United States. *JAMA*. 2000;284:2061-2069.
12. US Preventive Services Task Force. Screening for colorectal cancer. Available at: www.ahrq.gov/clinic/uspstf/uspstfscolo.htm. Accessed September 29, 2006.

Saul J. Weiner, MD, is an associate professor of medicine and pediatrics at the University of Illinois at Chicago and a senior investigator at the Veterans Administration Midwest Center for Health Services and Policy Research.

Commentary 2

by Emily E. Anderson, MPH

There are two key ethical dimensions to this case: physicians' obligations to individual patients and physicians' responsibilities to promote social justice. Although Mr. Rangston's situation is unfortunate, Mr. Thierry's ethical obligations to this patient are fairly straightforward. Prostatitis is a complicated condition with multiple etiologies and symptoms; treatments vary greatly in their effectiveness for individual patients. It is difficult to judge the extent to which Mr. Rangston's condition is exacerbated by other factors such as his financial situation, lack of health insurance, discontinuity of care, limited resources at the free clinic, treating physicians' attitudes toward low-income patients and physicians' reasonable differences in clinical judgment. Mr. Thierry believes that information about further tests that could improve diagnosis and treatment—information that could greatly benefit Mr. Rangston—has not been discussed during previous visits, and he is understandably concerned.

The ethical principle of respect for persons demands that physicians present all patients with the full range of reasonable treatment options, regardless of their cost or the patient's insurance status and ability to pay [1]. Although cost is an important consideration for Mr. Rangston and may ultimately constrain his range of choices, Mr. Thierry should still discuss the benefits of additional imaging services and tests

and the potential limits of antibiotics for treating chronic prostatitis. Only then will Mr. Rangston be able to make a fully informed decision about further diagnosis and treatment [2]. Most physicians are understandably hesitant to discuss patients' financial situations and are inadequately prepared to integrate financial matters into clinical decision making. However, for physicians to omit discussion of potential treatment options because they believe a patient cannot afford them is paternalistic and presumptuous (and potentially leaves them vulnerable to legal liability); altering the standard of care also circumvents patient informed consent. Mr. Thierry should recommend what he believes to be the optimal course of action, even if it is costly, but ultimately he must respect Mr. Rangston's decision [3].

Regardless of the course of treatment Mr. Rangston decides to pursue, Mr. Thierry should continue to advocate for him to the extent possible. As a future physician, Mr. Thierry should not simply accept the circumstances or blame the health care system for poor patient outcomes. If Mr. Thierry ignores Mr. Rangston's needs, he is complicit with an unjust system that discriminates against patients based on their ability to pay. Such discrimination further exacerbates the medical problems of patients whose low socioeconomic status contributes to their poor health. Although physicians have an ethical duty to advocate for individual patients and to provide a certain amount of charity care [4], working to improve access to health care for all people is also an ethical obligation [5]—and ultimately will be more effective than working around the system.

There is extensive discussion about universal access to health care and health care as a “right” in the medical literature, the popular press and in politics, but these primarily abstract debates do not offer useful guidance for individual clinicians currently faced with the problems of treating impoverished patients. Mr. Thierry seems already to understand that physicians must familiarize themselves with the special circumstances and needs of patients in their communities and with local safety net and social services. They also must remain committed to engaging in meaningful patient-physician communication to promote adequate informed consent and personal care for each patient [6].

Although medicine has a strong tradition of encouraging social responsibility, professional codes of ethics emphasize physicians' duties to individual patients more than they do physicians' obligations to advocate for social change. The American Medical Association's *Code of Medical Ethics* states that physicians have an ethical obligation to “contribute their expertise at a policy-making level” to ensure that access to an adequate level of health care is available to all society's members [7]. Unfortunately, the specific mechanisms and activities through which individual physicians can and should achieve this goal are ambiguous.

What does it mean for a physician to be socially responsible or promote social justice? At a basic level, social justice means advocating for access to health care for all and personally working to eliminate disparities in health status. Defined that way, social justice may seem outside the sphere of clinical practice. Several practical and

conceptual barriers may prevent physicians from engaging in advocacy beyond the level of the individual patient. For example, many physicians are wary of getting involved in rationing decisions of any kind since rationing (especially when it is done “at the bedside”) is perceived as violating the ethical principles of beneficence and non-maleficence. Physicians also may avoid speaking publicly on issues for fear of being viewed by their patients and other community members as inappropriately involved in political matters. The bureaucratization of health care negatively impacts both physicians and patients. The complications of accessing services can be nearly as prohibitive for doctors as for their patients and can lead to learned helplessness. The common perception that nothing can be done to repair the broken health care system in the U.S. unfortunately functions as a barrier to action.

If physicians are to acquire the skills needed to promote social justice, medical school curricula must change. At minimum, physicians must have broad knowledge of the social, cultural and political factors that affect health. Discussions of the link between poverty and health must be included across the curriculum. Perhaps most importantly, physicians must be familiar with the economics and politics of the health care system in order to influence systemic factors effectively [8].

So what is Mr. Thierry to do? For this patient, his instincts are correct, and his heart is in the right place. However, without systemic change, such dilemmas will appear consistently throughout his medical career. Ultimately, Mr. Thierry must decide if he has the moral courage to take on such a daunting challenge.

References

1. American Medical Association. Opinion 2.09 Costs. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-2.09.HTM&s_t=2.09&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=1&. Accessed October 13, 2006.
2. American Medical Association. Opinion 8.12 Patient information. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-8.12.HTM&s_t=patient+information&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&st_p=15&nth=6&. Accessed October 13, 2006.
3. American Medical Association. Opinion 10.01 Fundamental elements of the patient-physician relationship. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/8313.html>. Accessed October 13, 2006.
4. American Medical Association. Opinion 9.065 Caring for the poor. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-9.065.HTM&s_t=caring+for+the+poor&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=2&. Accessed October 13, 2006.

5. American Medical Association. Principles of medical ethics. Principle IX. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=browse&doc=policyfiles/E-0.00.HTM&&s_t=&st_p=&nth=1&prev_pol=policyfiles/HnE/H-525.998.HTM&nxt_pol=policyfiles/E-1.00.HTM. Accessed October 13, 2006.
6. Weiner S. "I can't afford that!": dilemmas in the care of the uninsured and underinsured. *J Gen Intern Med*. 2001;16:412-418.
7. American Medical Association. Opinion 2.095 The provision of adequate health care. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E2.095.HTM&s_t=The+provision+of+adequate+health+care.&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=2&. Accessed October 13, 2006.
8. Coulehan J, Williams PC, Van McCrary S, Belling C. The best lack all conviction: biomedical ethics, professionalism, and social responsibility. *Camb Q Healthc Ethics*. 2003;12:21-38.

Emily E. Anderson, MPH, is a fellow in the Institute of Ethics at the American Medical Association in Chicago, Ill. She is completing her doctorate degree in health care ethics at the University of St. Louis in Missouri.

Related articles

[Social epidemiology: how socioeconomic risk factors become health realities](#), November 2006

[Socioeconomic determinants of health: the facts are in](#), November 2006

[Distributing drug samples in a free clinic: a personal or policy decision](#) November 2006

[Where you live matters to your health](#), November 2006

[Health communication and navigating the health system](#), November 2006

[Prostatitis: prevalence, classification and treatment](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 717-722.

Clinical case

Pediatric primary care in the ER: Is it better than waiting for an appointment?

Commentary by Marc Gorelick, MD, MSCE

Mrs. Assan took her son Seyed to an emergency room in rural North Dakota around dinnertime, shortly after she had come home from work. Seyed had a frequent dry cough but no fever. His symptoms had begun three days before. Although he was uncomfortable and coughed frequently, Seyed appeared to be hydrated and not in acute distress.

Ten-year-old Seyed was insured through North Dakota's CHIP (Children's Health Insurance Program) plan. Usually, Mrs. Assan took Seyed to his family doctor, but when she had called the physician's office earlier that evening, she had been told that the doctor could not fit Seyed in for several days at least. The person with whom she spoke recommended that Mrs. Assan take her son to the emergency room. There are few community health clinics in the area, and even fewer physicians in the area who accepted new Medicaid and CHIP patients. Mrs. Assan did not feel she could wait to have Seyed seen since his cough continued to get worse day by day.

Upon ER screening, Seyed's status was categorized as nonurgent by a fourth-year medical student, Nadia Patel. Mrs. Assan became angry when she was told that this hospital had recently instituted a policy under which nonurgent patients were sent to the financial desk, asked to pay a screening fee and provided with a list of local clinics. Mrs. Assan was told by the assistant at the financial services desk that she could continue to wait for Seyed to be seen, but she was discouraged from doing so. The hospital served a large geographic area, and the assistant predicted that the waiting time for Seyed on that particular evening would be four to five hours. Mrs. Assan had to work the next day, and she hoped that Seyed would be able to go to school.

Mrs. Assan didn't know whether to wait or not. She worried about letting Seyed's cough go until his regular doctor could see him. She saw Ms. Patel passing by and asked her what to do. Ms. Patel was torn. On one hand, she thought it would be better for Seyed to be seen in a more appropriate primary care setting, preferably by his own doctor. On the other hand, she understood Mrs. Assan's concern for her son's health. A parent with full-time employment could not simply go off to work for "several days at least" while her son was sick at home. But the ER was overwhelmed on the night the Assans were there. Patients had come in with conditions varying

from lacerations after a car accident to a slight fever to a suicide attempt. Ms. Patel had been told that under EMTALA (Emergency Medical Treatment and Active Labor Act) she must examine Seyed if Mrs. Assan requested it, but without Seyed's prior health history and because of the overload in the ER, Ms. Patel believed Seyed would benefit most from going to another clinic.

Some hospitals have a primary care focus incorporated into their emergency rooms, but the ER the Assans visited did not. All things considered, Ms. Patel did not know what she should recommend to Mrs. Assan.

Commentary

Emergency departments (ED) serve diverse patient populations with a wide variety of needs. There are patients with life-threatening or other emergent conditions, for which the ED is clearly the best source of care; there are patients with urgent but less critical conditions who could potentially be treated in a number of settings, but who choose the ED for a range of reasons. Finally, the ED provides a certain amount of safety-net care, including primary care services, to patients without access to any other source of health care. Estimates vary, but it is thought that between 40 and 80 percent of pediatric visits to EDs are “nonurgent” [1]. Is this a problem? If so, what are its causes and consequences and what can be done about them?

Consequences of nonurgent ED use

There are some myths about nonurgent ED use that bear close consideration. The first is that most such visits are “inappropriate,” where appropriateness is defined as the right care provided in the right place at the right time. Whether care provided during an ED visit is the right care in the right place at the right time depends on many factors, including the nature of the problem, the family's perception of its urgency, the resources available to the patient and family for dealing with it and the ready availability of other sources of quality care at the time it is needed. Studies have shown that, regardless of the criteria used, appropriateness is difficult to determine accurately—either prospectively or retrospectively—and, as a result, many experts have urged that the terms “appropriate” and “inappropriate” be avoided entirely [2].

A second myth is that nonurgent visits interfere with care for sicker patients. ED crowding has become a serious problem in recent years [3], and, while it is tempting to believe that substantial use of EDs for nonurgent care is a contributing factor, the available evidence does not support this belief. According to the American College of Emergency Physicians, “While nonurgent use of the ED is an important policy issue, there is no evidence that it is responsible for ED crowding” [4]. Other factors, particularly a lack of available inpatient beds for patients who require hospitalization, are far greater contributors.

Finally, there is the argument that care in the ED is unnecessarily expensive. This is a contentious issue, with different economic analyses reaching different conclusions [5]. There is some evidence, however, that, given the need for a well-equipped,

properly staffed emergency facility to be available 24 hours a day, 7 days a week to provide care for those with conditions that need immediate attention, the cost of providing care for additional patients with a nonurgent conditions is relatively small [6].

Still, there may be a financial impact from nonurgent ED visits. Contrary to many assumptions, the majority of nonurgent visits are made by white, insured, middle- and upper-class patients; at the same time, it is true that a disproportionately large percentage of uninsured and disadvantaged patients use the ED for nonurgent visits [7]. A law entitled The Emergency Medical Treatment and Active Labor Act (EMTALA) was passed in 1986 in an effort to prevent hospitals from “dumping” uninsured emergency patients. EMTALA requires EDs to screen and stabilize patients who present for emergency care, regardless of their ability to pay [8]. Hospitals are not compensated for this mandated care to the uninsured, and Medicaid reimbursement is typically inadequate to cover the costs of the screening and testing that the hospitals run. EMTALA may therefore place a financial burden on hospital EDs that see large numbers of uninsured patients with non-urgent conditions. Moreover, a financial burden may be passed on to patients; patients without adequate insurance have a right to be seen, but are still generally responsible for payment. In addition, there is no obligation to prioritize patients with less acute problems, so those with nonurgent complaints may well have prolonged waits which can interfere with work time while more acute patients are being treated.

Another consequence of using the ED for nonurgent care is the potential loss of continuity of care. Pediatrics in particular, emphasizes patients’ having a “medical home,” that is, a place where the child receives the bulk of his or her health care and where the responsibility for coordinating that care is willingly accepted [9]. In addition to potentially weakening the bond between family and physician, when children receive nonemergency treatment in the ED, opportunities may be missed for preventive care and counseling and maintenance treatment for those with chronic medical conditions. Children with asthma, for example, who are frequent users of the ED for acute treatment may be less likely to be placed on and monitored for proper use of controller medications [10]. In this case, it appears that Seyed Assan has a “medical home,” but one that is not meeting his current need. While referring him to a different primary care clinic that can see him now for the cough may seem an attractive alternative, it may in fact adversely affect his relationship with his current physician.

Reasons for nonurgent ED use

Despite the myths, we have seen that there may be actual adverse consequences to going to the ED for nonurgent care, especially for patients and their families. Why, then, does it occur? Many reasons have been discovered during research on the topic. Regardless of their ultimate triage assignment or disposition, most patients believe their problem requires urgent attention. Many patients lack any other source of care. For others, it is a matter of availability or convenience. In this case, for example, Mrs. Assan might be willing to wait for an appointment under different

circumstances, but she doesn't feel as though her son can wait the several days until he can be seen by the primary physician. Convenience may be an important factor; suppose an appointment at the pediatrician's office means Mrs. Assan must miss a day of work (and pay)? Further, a recent study shows that many patients perceive that the ED provides better quality care [11]. A lack of continuity of care and dissatisfaction with primary care have been shown to lead to greater use of the ED for nonurgent problems [12, 13]. It seems clear that most patients who seek nonurgent care at the ED do so because it is the place that is most likely to meet their needs at the time. Even when it is not their first choice, in the fragmented U.S. health care system, the ED is a reliable, available and convenient place where patients with any type of problem can be seen.

What to do about nonurgent ED care

Until 1986, a commonly used solution for EDs was simply to deny care to patients with nonurgent conditions who could not afford to pay. Under EMTALA, however, this practice is illegal. The required medical screening exam is not a simple matter of triage. It includes whatever evaluation is necessary, by a qualified provider and within the capabilities of the hospital, to determine whether a patient is stable. In this case, it is not clear if that obligation has been met, since a medical student would not be considered a "qualified provider" for EMTALA purposes. If Mrs. Assan perceives that she has not been accorded the proper evaluation because of the type of insurance she has, she could file a complaint, leaving the hospital open to substantial penalties if it is found to be out of compliance.

Financial consideration

In recent years, hospitals have begun to insist on payment up front after the minimum medical screen, as in this case, with a goal of minimizing the cost of the encounter and, more importantly, to discourage future use [14]. Whether this is successful or not remains to be determined. Besides, for most nonurgent conditions, once the medical screen has adequately determined that the problem is not an emergency, most of the work has been done and there may be relatively little additional cost. Referring patients away without making alternative arrangements may also violate the ethical obligation of emergency physicians "to act as advocates for the health needs of indigent patients" [14].

What should Nadia Patel do?

This situation is a difficult one. However, Ms. Patel's obligation is to the patient, not the hospital. She should attempt to elucidate better the Assans' relationship with their primary care physician. Is it someone in whom they have confidence and trust and who is normally available when needed, or is there a pattern of unmet needs? If the former is true, maintaining that relationship is important, while help in finding a different "medical home" might be useful in the latter circumstance. If Mrs. Assan is primarily concerned about the screening fee, consulting a social worker or a financial service representative may be helpful. Finally, if the only reasonable way for Seyed's problem to be addressed is for him to be seen and treated in the ED, that decision

should be supported. We should never make families feel guilty about taking up our time or crowding our ED when they are in need.

It is increasingly clear that nonurgent use of EDs is a societal problem, one that will not be solved through punitive measures against patients and families, or by shifting the problem to other providers. If the Assan family's plight moves Ms. Patel, she should advocate for systematic change in the way health care is delivered.

References

1. Mistry RD, Hoffmann RG, Yauck JS, Brousseau DC. Association between parental and childhood emergency department utilization. *Pediatrics*. 2005;115:e147-151.
2. Abbuhl SB, Lowe RA. The inappropriateness of "appropriateness." *Acad Emerg Med*. 1996;3:189-191.
3. Committee on the Future of Emergency Care in the United States Health System Board on Health Care Services. *Hospital-Based Emergency Care: At the Breaking Point*. Washington, DC: National Academy Press, Institute of Medicine; In Press.
4. American College of Emergency Physicians. *Responding To Emergency Department Crowding: A Guidebook for Chapters*. Available at: <http://www.acep.org/NR/rdonlyres/F816F22E-1E8A-43BC-8357-5F6DC966C349/0/edCrowdingReport.pdf>. Accessed October 4, 2006.
5. Kellerman AL. Calculating the cost of emergency care. *Ann Emerg Med*. 2005;45:491-492.
6. Williams RM. The costs of visits to emergency departments. *N Engl J Med*. 1996;334:642-646.
7. Lowe RA, Localio AR, Schwarz DF, et al. Association between primary care practice characteristics and emergency department use in a Medicaid managed care organization. *Med Care*. 2005;43:792-800.
8. American College of Emergency Physicians. EMTALA. Available at: <http://www.acep.org/webportal/PatientsConsumers/critissues/UninsuredUnderinsured/emtala.htm>. Accessed October 4, 2006.
9. Starfield B, Shi L. The medical home, access to care, and insurance: a review of evidence. *Pediatrics*. 2004;113:1493-1498.
10. Cydulka RK, Tamayo-Sarver JH, Wolf C, Herrick E, Gress S. Inadequate follow-up controller medications among patients with asthma who visit the emergency department. *Ann Emerg Med*. 2005;46:316-322.
11. Ragin DF, Hwang U, Cydulka RK, et al. Reasons for using the emergency department: results of the EMPATH study. *Acad Emerg Med*. 2005;12:1158-1166.
12. Brousseau DC, Bergholte J, Gorelick MH. Decreased primary care satisfaction is associated with nonurgent emergency department utilization [abstract]. *Pediatr Res*. 2003;53:267A.

13. Brousseau DC, Meurer JR, Isenberg ML, Kuhn EM, Gorelick MH. The association between infant continuity of care and pediatric emergency department utilization. *Pediatrics*. 2004;113:738-741.
14. Bitterman RA. EMTALA and the ethical delivery of hospital emergency services. *Emerg Med Clin N Am*. 2006;24:557-577.

Marc Gorelick, MD, MSCE, is medical director and Jon E. Vice Chair in Pediatric Emergency Medicine at the Children's Hospital of Wisconsin in Milwaukee and professor of pediatrics and chief of pediatric emergency medicine at the Medical College of Wisconsin.

Related article

[Crowded conditions coming to an ER near you](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 723-728.

Clinical case

Clinical awareness of occupation-related toxic exposure

Commentary by Leonardo Trasande, MD, MPP

Mr. Angelo Juarez went to a local community clinic in south central California as a new patient because he was experiencing a slight but persistent cough, shortness of breath, headache, fatigue, muscle weakness and eye irritation. He was not febrile and reported occasional nausea during the preceding two weeks, although not at the time of the visit. He was seeing the physician as a self-pay patient.

Mr. Juarez had come to the United States recently to find work and build a family in California. The physician, Dr. Matthew Franzen, entered the room and introduced himself to the patient. After the brief introduction, Dr. Franzen realized Spanish would be the preferred language for this encounter. Thankfully, Dr. Franzen had a working knowledge of Spanish and began to converse with Mr. Juarez. He performed a typical history and physical. He noticed that Mr. Juarez's eyes were red and heard wheezing in his chest. Mr. Juarez shared with Dr. Franzen that he had come to the U.S. with his wife and had found work on a farm near where he lived and that he missed the rest of his family back in southern Mexico.

Dr. Franzen was experiencing a particularly hectic day at the clinic, and Mr. Juarez's symptoms could have been due to any one of many causes. Since Mr. Juarez was 27 and had an otherwise unremarkable health history, he diagnosed Mr. Juarez with hay fever, thinking it was possible that he was reacting to certain allergens for the first time.

Realizing that Mr. Juarez would be paying out-of-pocket for his medications, Dr. Franzen gave him a sizable amount of a generic antihistamine and a prescription for more. Dr. Franzen was used to seeing patients in Mr. Juarez's circumstances, many of whom never came back to the clinic. He had seen a few patients sporadically with similar symptoms but many never followed up, so he continued to diagnose them with hay fever.

Mr. Juarez did not improve over the next week, but he could not afford to take another day off to go back to Dr. Franzen. Interestingly, he noticed that there were a number of other farm workers who had symptoms similar to his. Many of them had not visited a physician, so he thought he would wait longer before going back to Dr. Franzen.

Commentary

The case of Mr. Juarez is unfortunately all too common, as toxic chemical exposures occur with increasing frequency, both in the home and in the workplace. There are some 90,000 chemicals licensed for use in the United States by the Environmental Protection Agency, and 1,000 to 3,000 new chemicals are approved for use each year [1]. Because the Toxic Substances Control Act does not require that chemicals be proven safe before they are allowed to be marketed, it is not surprising that diseases of occupational and environmental origin are prevalent in the United States [2]. More than 800,000 illnesses and 60,000 deaths annually are attributable to occupational exposures in the United States [3], and diseases of environmental origin among American children cost our nation \$54.9 billion annually [4]. These data should convince physicians to consider the possibility of toxic chemical exposure, especially when they are assessing the health of farm and factory workers.

It is true that Mr. Juarez's symptoms could be interpreted as signs of a new onset allergy. Indeed, atopy is common in adults—with a prevalence as high as 20 percent according to one report [5], and, as the adage goes, hoof beats represent horses more often than they represent zebras. However, a number of aspects of this case make a more complete differential diagnosis and investigation of possible work and home exposures critical. First, toxic chemical exposures disproportionately affect workers [6] and communities of low socioeconomic status [7, 8]. In addition, language barriers [9], lack of health insurance [10] and fear of job loss [11] make a follow-up visit nearly impossible for Mr. Juarez.

A brief environmental and occupational history [12], which can be obtained through a questionnaire completed in the waiting room [13, 14] would have allowed Dr. Franzen to identify and prevent potential further toxic exposures in Mr. Juarez's case. The clinical encounter with Mr. Juarez should be conducted at a level that matches his health literacy. Many workers do not know all the chemicals being used or the names of the chemicals to which they are exposed, so the occupational and environmental history [15] should seek to uncover possible etiologic associations when patients present with symptoms that suggest a disease of environmental origin. Unfortunately, because most physicians have little training in environmental health, these diseases are often misidentified and misattributed to allergic and infectious causes [16, 17]. Some U.S.- accredited medical schools still fail to include occupational and environmental medicine in the curriculum, and those that do provide an average of seven hours over the four years of medical school [18]. Fewer than half of pediatric residency programs offer training in environmental issues other than lead poisoning and asthma [19].

This particular case is classic for acute pesticide toxicity, though the exact causative agent cannot be readily identified except by an investigation of the work and home environments. Pesticides were first developed in World War II as nerve gas agents. Organophosphate pesticides in particular are well known for their phosphorylation of the acetylcholinesterase enzyme, leading to an accumulation of acetylcholine that stimulates a wide array of nicotinic, muscarinic and other receptors. The Mad Hatter

in “Alice in Wonderland,” although he was poisoned by mercury, provides a useful mnemonic for the anticholinergic symptoms of organophosphate poisoning: mad as a hatter, blind as a bat, dry as a bone, red as a beet, hot as a pistol [20].

To evaluate for organophosphate poisoning, Dr. Franzen could have measured Mr. Juarez’s serum acetylcholinesterase level or screened his urine for pesticide metabolites [21]. However, a normal acetylcholinesterase level does not eliminate pesticide poisoning, inasmuch as a number of other pesticides have similar health effects but do not directly rely upon acetylcholinesterase inactivation [20].

It would be unfair to expect Dr. Franzen to know the toxic effects of all of the 90,000 chemicals that are widely produced in the United States, but there are a number of readily accessible resources at the disposal of clinicians who evaluate environmental or occupational exposure. The Occupational Health and Safety Administration mandates that physicians have access to the Material Safety Data Sheets for chemicals to which their patients are exposed [22]. These data sheets contain important information about toxicity that can be useful in assessing symptoms that do not fit a typical clinical pattern.

The Centers for Disease Control and Prevention ToxFAQ Web site [23] provides useful information about the toxic effects of environmental chemicals. Immediate clinical consultation about acute exposures can be obtained from the national network of Poison Control Centers on a 24-hour, 7-day-a-week basis [24].

For evaluation of chronic exposures that are more complex, the Association of Occupational and Environmental Clinics can connect health professionals to occupational medicine specialists. They in turn can help the primary physician decide whether the clinical scenario represents an occupational disease and whether further referral or intervention is necessary.

Occupational clinics also have social workers, nurses, industrial hygienists and lawyers on their staffs to provide comprehensive care and to protect workers from the potential consequences of calling attention to an occupational hazard [25]. If a workplace investigation is necessary, state and local public health officials often work closely with the National Institute of Occupational Safety and Health and the Agency for Toxic Substances Disease Registry to collect the environmental samples and guide further clinical investigation of others who were exposed.

Mr. Juarez and his coworkers are not the only ones who are likely to be affected by pesticide exposure in this case. Workers can also carry toxic chemical residues on their clothing that then cause damage to others in the home [26]. Children are especially vulnerable to pesticides because their nervous systems and other organs are undergoing rapid development. If cells in an infant’s brain are destroyed by chemicals or if connections between neurons fail to form, permanent neurological or cognitive dysfunction may result [27]. In the first two years of life, the blood-brain barrier is also more permeable, so toxins can enter the cerebrospinal fluid more

readily [28]. Lead [29], mercury [30], polychlorinated biphenyls [31] and pesticides [32] have all been proven to cause cognitive impairment. Rising rates of childhood cancer, birth defects, asthma and developmental disabilities have been increasingly linked to chemical factors in the environment [33]. Workers who use these materials should change their clothing before going home and can take other steps such as showering prior to entering their homes to minimize inadvertent exposure to their families [20].

Ultimately, prevention of environmental hazards requires adequate testing of chemicals before they are brought to market and ongoing studies that assess health effects of exposure to those chemicals once they are in use. The National Children's Study is the first study ever to examine comprehensively the effects of toxic chemicals on human health and development. Congress should fully fund this landmark initiative, so that we can proactively prevent diseases of environmental origin. Otherwise, we will continue to embark upon a dangerous and unnatural experiment on our nation.

In the meantime, physicians in Dr. Franzen's situation should take an environmental and occupational history; be familiar with sources of information about chemical toxicity; order appropriate lab tests to rule out or confirm possible toxic disease; and, in cases where patients are indeed suffering from toxic exposure in the workplace, advise them how to minimize further exposure to themselves and members of their households. Physicians should also tell patients with work-related toxic illness that services are available to protect them from the consequence of calling attention to the occupational hazard.

References

1. Office of Pollution Prevention and Toxic Substances. Chemicals-in-commerce information system. Chemical Update System Database. Washington, DC; 1998.
2. Black H. GAO sounds off on chemical regulation. *Environ Health Perspect.* 2005;113:A828-830.
3. Leigh JP, Markowitz SB, Fahs M, Shin C, Landrigan PJ. Occupational injury and illness in the United States. Estimates of costs, morbidity, and mortality. *Arch Intern Med.* 1997;157:1557-1568.
4. Landrigan PJ, Schechter CB, Lipton JM, Fahs MC, Schwartz J. Environmental pollutants and disease in American children: estimates of morbidity, mortality, and costs for lead poisoning, asthma, cancer, and developmental disabilities. *Environ Health Perspect.* 2002;110:721-728.
5. Upton MN, McConnachie A, McSharry C, et al. Intergenerational 20 year trends in the prevalence of asthma and hay fever in adults: the Midspan Family Study surveys of parents and offspring. *BMJ.* 2000;321:88-92.

6. Murray LR. Sick and tired of being sick and tired: scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. *Am J Public Health*. 2003;93:221-226.
7. Bullard RD. *Dumping in Dixie: Race, Class and Environmental Quality*. Boulder, Colo: Westview Press; 1990.
8. Brown P. Race, class, and environmental health: a review and systematization of the literature. *Environ Res*. 1995;69:15-30.
9. Flores G. Language barriers to health care in the United States. *N Engl J Med*. 2006;355:229-231.
10. Traynor K. Uninsured numbers keep climbing. *Am J Health Syst Pharm*. 2006;63:1783-1784.
11. McCauley LA, Sticker D, Bryan C, Lasarev MR, Scherer JA. Pesticide knowledge and risk perception among adolescent Latino farmworkers. *J Agric Saf Health*. 2002;8:397-409.
12. Thompson JN, Brodtkin CA, Kyes K, Neighbor W, Evanoff B. Use of a questionnaire to improve occupational and environmental history taking in primary care physicians. *J Occup Environ Med*. 2000;42:1188-1194.
13. Frank AL, Balk S. *Case Studies in Environmental Medicine (CSEM). Taking an Exposure History*. Available at: <http://www.atsdr.cdc.gov/HEC/CSEM/exphistory/index.html>. Accessed October 18, 2006.
14. National Environmental Education and Training Foundation. Pediatric environmental history forms. Available at: <http://www.neetf.org/Health/PEHI/HistoryForm.htm>. Accessed October 12, 2006.
15. Lax MB, Grant WD, Manetti FA, Klein R. Recognizing occupational disease—taking an effective occupational history. *Am Fam Physician*. 1998;58:935-944.
16. Trasande L, Schechter C, Falk R, et al. The environment in pediatric practice: a study of New York pediatricians' attitudes, beliefs, and practices towards children's environmental health. *J Urban Health*. 2006;83:760-772.
17. Trasande L, Schapiro ML, Falk R, et al. Pediatrician attitudes, clinical activities, and knowledge of environmental health in Wisconsin. *WMJ*. 2006;105:45-49.
18. Schenk M, Popp SM, Neale AV, Demers RY. Environmental medicine content in medical school curricula. *Acad Med*. 1996;71:499-501.
19. Roberts JR, Gitterman BA. Pediatric environmental health education: a survey of US pediatric residency programs. *Ambul Pediatr*. 2003;3:57-59.
20. Etzel RA, Balk SJ, eds. *Pediatric Environmental Health*. 2nd ed. Elk Grove Village, Ill: American Academy of Pediatrics; 2003:324-360.
21. Kamanyire R, Karalliedde L. Organophosphate toxicity and occupational exposure. *Occup Med (London)*. 2004;54:69.
22. Occupational Health and Safety Standards. 29 CFR 1910.146, 1910.20 (1997).
23. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. ToxFAQs: frequently asked questions about

- contaminants found at hazardous waste sites. Available at: <http://www.atsdr.cdc.gov/toxfaq.html>. Accessed October 12, 2006.
24. American Association of Poison Control Centers. AAPCC homepage. Available at www.aapcc.org. Accessed October 12, 2006. In an emergency call 800-222-1222.
 25. Association of Occupational and Environmental Clinics. Clinic Directory. Available at: www.aoec.org/directory.htm. Accessed October 12, 2006.
 26. Coronado GD, Vigoren EM, Thompson B, Griffith WC, Faustman EM. Organophosphate pesticide exposure and work in pome fruit: evidence for the take-home pesticide pathway. *Environ Health Perspect*. 2006;114:999-1006.
 27. Bellinger D, Leviton A, Waternaux C, Needleman H, Rabinowitz M. Longitudinal analyses of prenatal and postnatal lead exposure and early cognitive development. *N Engl J Med*. 1987;316:1037-1043.
 28. Rodier PM. Developing brain as a target of toxicity. *Environ Health Perspect*. 1995;103(suppl 6):S73-S76.
 29. Laraque D, Trasande L. Lead poisoning: successes and 21st century challenges. *Pediatr Rev*. 2005;26:435-443.
 30. Trasande L, Landrigan PJ, Schechter C. Health and economic consequences of methyl mercury toxicity to the developing brain. *Environ Health Perspect*. 2005;113:590-596.
 31. Jacobson JL, Jacobson SW. Intellectual impairment in children exposed to polychlorinated biphenyls in utero. *N Engl J Med*. 1996;335:783-789.
 32. Berkowitz GS, Wetmur JG, Birman-Deych E, et al. In utero pesticide exposure, maternal paraoxonase activity, and head circumference. *Environ Health Perspect*. 2004;112:388-391.
 33. Landrigan PJ, Trasande L, Thorpe LE, et al. The National Children's Study: A 21-year prospective study of 100,000 American children. *Pediatrics*. In press.

Leonardo Trasande, MD, MPP, is an assistant professor in the Departments of Community and Preventive Medicine and Pediatrics at the Mount Sinai School of Medicine in New York City. He is also the assistant director of the Center for Children's Health and the Environment, the nation's first academic policy center devoted to the protection of children from environmental threats, and co-principal investigator of the Queens (N.Y.) Vanguard Center of the National Children's Study.

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 729-734.

2006 Conley essay contest

Distributing drug samples in a free clinic: a personal or policy decision

Response by Amanda J. Redig

Scenario

The accepted guideline for distributing free drugs at a particular community clinic for the uninsured is to dispense them according to clinical need, on a first-come, first-served basis. When the clinic is out of a drug, the physician writes a prescription if the patient can afford the medication for a short period of time, during which the physician tries to enroll the patient in the manufacturer-sponsored indigent drug program (IDP). The clinic has a limited supply of Viagra and Cialis samples from the manufacturers of those drugs. One physician breaks the first-come, first-served rule in distributing these drugs. He has several patients with erectile dysfunction, but one of them smokes heavily. The physician reckons that the patient spends about \$240 a month on cigarettes (if he is truthful about his smoking habits) and that if he did not buy cigarettes he could afford \$260 per month for the drug. The patient does not qualify for the manufacturers' IDP. Having discussed smoking cessation programs and other interventions like the nicotine patch with the patient for more than a year, the physician now tells him that he is withholding free supplies of Viagra and Cialis from him, giving them instead to patients with similar clinical indications who do not smoke and have greater financial need.

Response

The life of a physician is a never-ending series of exams, from medical school admission to board certification. The jargon of the tests—Step 1, surgery shelf, Internal Medicine boards—eventually becomes as familiar as the language of ACE inhibitors or PIC lines. Yet challenging as the knowledge-based demands of medicine can be, the ethical dilemmas of the profession are no less complicated. And for these situations there is no review book or UptoDate.com entry to provide answers. Instead, each physician must balance the duty to provide medical care with the equally compelling obligation to uphold the ethical tenets that lie at the heart of the profession of medicine. The true challenge for the physician lies in deciding what to do when these responsibilities collide.

In this scenario, the physician in question, henceforth referred to as Dr. X, confronts two related dilemmas. First, given limited resources, how does a physician best serve the competing needs of all of his patients? In an individual patient-physician relationship, both clinical judgment and ethics agree: the patient's well-being is the goal of the physician. But what happens when the best outcome for one patient

comes at the expense of another's? Dr. X's community clinic lacks sufficient free samples of erectile dysfunction medication for all those who need them. When Dr. X dispenses Viagra or Cialis to one patient, he knows that another clinic patient will probably go without.

This primary dilemma, however, leads to a second, even more troubling question. If we accept the reality that finite resources prevent all patients from getting the medical care they need, then how are the resources that are available allocated when demand outstrips the supply? In this case, given that some clinic patients will get the medicines they need and some will not, who decides—and on what grounds—which patients to treat? When patients must be hierarchically classified, what factors shape that decision? This community clinic has attempted to address the situation with a first-come, first-served policy for pharmaceutical assistance. Dr. X, however, has chosen to break with this policy and provide ED medication selectively to non-smoking patients with the greatest financial need, as judged by the doctor himself. His decision is presumably predicated on a cost-benefit analysis of beneficence as well as on justice, but a critical question remains. Is an individual physician's assessment of what is "fair" the best way to resolve the problem of limited resources and unlimited needs?

Considering patient equality

This case shows a physician casting himself in the role of arbiter with regard to resource allocation. An analysis of the physician's decision consequently begins with a basic question: are all patients created equal? From a human rights perspective, the answer is clearly "yes." Article 25 of the United Nation's Universal Declaration of Human Rights states, "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including...medical care..." [1]. More specifically, the profession of medicine has long recognized patients' inherent humanity and physicians' responsibilities to all their patients. The oft-quoted Hippocratic oath of ancient times reminds us, "Whatever houses I may visit, I will come for the benefit of the sick, remaining free of all intentional injustice..." [2]. In a more modern adaptation, the American Medical Association's "Principles of Medical Ethics" begins with Article I— "A physician shall be dedicated to providing competent medical care, with compassion and respect for human dignity and rights"—and ends with Article IX— "A physician shall support access to medical care for all people" [3, 4]. Seen in this light, the actions of Dr. X seem to be in opposition to longstanding professional ideals.

While the fundamental ideals of a profession should challenge us to strive for equity and justice, the application of such principles is far more complicated. The reality of life is that inequality occurs despite our best attempts to minimize it. For physicians, ethical standards of professionalism provide guidelines for operating in an imperfect world; they do not obviate the difficult decisions for which there is no perfect outcome. In the real world of medical decision making, hierarchies of patient need are routinely created and maintained as we attempt to best manage infinite needs and finite resources.

Indeed, such decisions influence medical care in numerous and varied settings on a daily basis. Age or comorbidities may disqualify a patient from receiving a life-saving organ transplant [5, 6]. It is a testament to the power of an ethically grounded argument that, in some patients, HIV infection can no longer be an excuse for *carte blanche* disqualification, but with a widening pool of potential recipients and a relatively steady level of donors, some patients are still chosen over others for life-saving treatment [7]. And the case of organ transplantation is not an isolated one: eligibility for care ranging from influenza vaccination to Medicaid is preferentially stratified [8, 9]. Although the medical needs of one individual are intrinsically no less valid than those of another, the profession of medicine—and individual physicians—must sometimes choose between patients. Accordingly, Dr. X’s actions are neither unique to him nor *prima facie* unethical but rather reflect the challenges of practicing medicine under less-than-ideal conditions. Instead, the more fundamental question this scenario challenges us to address is the grounds upon which such resource allocation decisions are based.

Ethics revisited

Although the idealism at the heart of ethical codes may not always be completely attainable, the value of such principles lies in their ability to provide a consistent framework for making difficult decisions. If the validity of selectively distributing free medication rests on the framework by which the choice is made, not on the decision itself, how does Dr. X’s thought process measure up to the “best practice” guidelines of medical ethics?

A closer reading of ethical principles does highlight the physician’s autonomy in providing patient care. Outside of emergency situations and as long as continuity of care is maintained, Article VII of the AMA’s “Principles of Medical Ethics” recognizes the physician’s right to choose the patients he serves [10]. A shift away from a paternalistic view of the physician also emphasizes the rights and corresponding responsibilities of the patient. The autonomy of the individual patient must be respected, but on the flipside of the physician’s obligations exist the patient’s “...responsibility to communicate openly, to participate in decisions about the diagnostic and treatment recommendations, and to comply with the agreed upon treatment program” [11].

Together, physician autonomy and patient responsibility have direct applicability to the challenge of fairly allocating a limited supply of free medication. On the one hand, it seems reasonable to withhold a non-life-sustaining medication from a patient with financial resources who is not committed to his own well-being despite concerted attempts by his physician to address a colossal health risk. This does not sever the patient-physician relationship, but it does lead to considering the patient’s financial needs when distributing manufacturer-donated prescription medication. In this case, Dr. X’s calculations concerning the cost of ED medication versus the amount his patient spends on cigarettes seem appropriate and are further validated when the patient does not qualify for the manufacturer-sponsored indigent drug program. If a patient allocates substantial financial resources to cigarettes, it seems

legitimate for a physician to allocate free ED medication to those patients whose financial inability to pay results from spending on food or rent.

Yet even as this logic appeals to our desire to be fair—and, perhaps, to a negative perception of those who smoke—it is also internally inconsistent. First, such a decision implies a professional mandate no individual physician can truly claim. It is legitimate to transfer care of a patient to another physician on the grounds that the patient's continued smoking prevents the maintenance of an effective patient-physician relationship. However, the physician's autonomy in this regard does not justify the manipulation of a patient's behavior through a carrot-and-stick maneuver that is grossly inappropriate in a medical context. Dr. X's desire to see a patient quit smoking is commendable, but his decision to effectively punish the recalcitrant patient by withholding medication is not. (It is also worth noting, as a not-insignificant aside, that nicotine addiction is extremely powerful. This patient may have refused the physician's attempts to help him quit, but can Dr. X be sure that he fully understands this patient's circumstances and the factors that contribute to his continued habit?)

Moreover, when a physician independently singles out smoking, or any other personal choice, as grounds for excluding a patient from subsidized medication, that physician is presuming to act on the basis of an omniscience he cannot possibly possess. Smoking is a costly habit and one that is detrimental to the health of the smoker, but does that mean that nonsmokers deemed worthy of free medication may not themselves maintain unhealthy personal habits that also require a financial investment? Is it fair to the smoker if the obese patient who spends an equivalent amount per month on movie rentals or junk food is prescribed a free medication the smoker is denied? What about the patient with a drinking habit about which the physician may be ignorant? It would be unfortunate indeed if the patient who trusts his physician enough to be honest about negative lifestyle choices winds up being penalized for it. As this case illustrates, the physician who decides to circumvent the accepted standards of a multi-physician clinic may be setting a dangerous precedent. Dr. X is projecting a personal bias into the patient-physician relationship without attempting to be either internally consistent in the way he evaluates his patients' habits or to seek out a more objective consensus from colleagues, even as he violates the very practice guidelines they supposedly share.

This, in fact, is the most compelling reason for consistency in distributing a service some patients will get and others will not. As a profession, we have to live with the reality of stratifying medical needs; such decisions can only be tolerated when their application is not arbitrary. Maybe the first-come, first-served policy is not the best paradigm for determining who gets free medication and who doesn't. Perhaps other factors, particularly the financial status of the patient, may provide a more consistent and just model with which an individual clinic can manage its resources. Such a change in policy, however, is a decision to be made by the leadership of the clinic, not by an individual physician who decides to become, in effect, a vigilante prescriber. In his attempt to be fair, Dr. X has instead created a double standard that

is a disservice both to the clinic's patients and to his own colleagues. Were he in solo practice, Dr. X would be free to change his policies independently; as a physician at a community clinic that is the beneficiary of donated medication, he is obligated to work within the professional guidelines of the clinic and to respect the institutional process by which those guidelines are amended. In the long term, the physician who works to improve the system is far more effective than the one who chooses to simply disregard it.

This clinical case is a compelling one because Dr. X stands as an example of the best and worst of his profession. As presented here, his actions are intended to convince a patient to quit smoking and to provide more equitable care for an economically disadvantaged community. The decision to withhold medication from one patient is based on a desire to be just with regard to all of his patients; his intentions, at least, are ethically sound. The problems his decision creates arise from the application of these initially noteworthy intentions. In this sense, the fictional Dr. X stands as a warning for his real-life counterparts: even that which seems like a good idea must be consistent with accepted professional guidelines to avoid creating more problems of equity than it solves. Justice is key to the professional integrity of the physician, but it is also a balance between being fair and being consistent.

References

1. United Nations General Assembly. Universal Declaration of Human Rights, adopted under Resolution 217 A (III), December 10, 1948. Available at: <http://www.un.org/Overview/rights.html>. Accessed October 12, 2006.
2. Hippocrates. Hippocratic oath. In: Edelstein, L, trans-ed. *The Hippocratic Oath: Text, Translation and Interpretation*. Baltimore, Md: Johns Hopkins Press; 1943. Translation available at: http://www.pbs.org/wgbh/nova/doctors/oath_classical.html. Accessed October 12, 2006.
3. American Medical Association. Principles of medical ethics. Article I. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/2512.html>. Accessed October 12, 2006.
4. American Medical Association. Principles of medical ethics. Article IX. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/2512.html>. Accessed October 12, 2006.
5. Cimato TR, Jessup M. Recipient selection in cardiac transplantation: contraindications and risk factors for mortality. *J Heart Lung Transplant*. 2002;21:1161-1173.
6. Matsunami H, Shimizu Y, Lynch SV, Balderson GA, Ando Y, Strong RW. Liver transplantation as a therapeutic option for hepatocellular carcinoma. *Oncology*. 2002;62:82-86.
7. Wyatt CM, Murphy B. Kidney transplantation in HIV-infected patients. *Semin Dial*. 2005;18:495-498.
8. Temte JL. Preparing for an influenza pandemic: vaccine prioritization. *Fam Pract Manag*. 2006;13:32-34.

9. Cawley J, Schroeder M, Simon KI. How did welfare reform affect the health insurance coverage of women and children? *Health Serv Res.* 2006;41:486-506.
10. American Medical Association. Principles of medical ethics. Article VII. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/2512.html>. Accessed October 12, 2006.
11. American Medical Association. Opinion 10.02 Patient responsibilities. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-10.02.HTM&s_t=patient+responsibilities&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=1&. Accessed October 12, 2006.

Amanda J. Redig is a fourth-year student in the Medical Scientist Training Program at Northwestern University's Feinberg School of Medicine in Chicago, Ill. She is currently conducting research on signaling pathways during normal and malignant hematopoiesis in the laboratory of Leonidas Plataniias at the Robert H. Lurie Comprehensive Cancer Center. Mandy hopes to combine clinical work and research in the field of hematology-oncology.

The John Conley Foundation for Ethics and Philosophy in Medicine has sponsored an ethics essay contest for medical students since 1994. John J. Conley, MD (1912-1999), was a head and neck surgeon and clinical professor at Columbia's College of Physician and Surgeons in New York City. A specialist in reconstructive and maxillofacial surgery, Dr. Conley was an author on more than 300 scientific articles and 8 books and was honored by Columbia through the establishment of the John Conley Lectureship in 1997. The John J. Conley Department of Ethics was established in 1998 at Saint Vincent's Hospital in New York City where Dr. Conley served as chief of head and neck surgery.

Winners of the Conley Ethics Essay Contest for Medical Students appeared in *msJAMA* for ten years and have been published in *Virtual Mentor* since 2005.

The call for applications and the writing prompt for the 2007 John Conley Ethics Essay Contest for Medical Students will be announced in the February 2007 issue of *Virtual Mentor*.

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 735-736.

Medical education

Ambulatory care elective in a resource-poor community

by Matthew Fitz, MD

There is an increasing need to train our undergraduate medical students to recognize the disparities that pervade our health care system. Many schools have recently adopted cultural competence curricula in an effort to address this need. This addition to the curriculum helps medical schools meet the new planning directives from the Liaison Committee on Medical Education for the competency it calls Social and Community Context of Health Care. As early as 2004, Loyola Stritch School of Medicine, in Maywood, Illinois, began addressing this competency with some distinctive components designed to provide students with both a far-sighted perspective on their role as future physicians and a specific skill set to deliver quality care to underserved populations.

An elective within the internal medicine clerkship allows interested students to pursue a 3-month-long ambulatory clinical experience in a resource-poor setting. While this opportunity is voluntary, approximately one-third of the students choose this clinical experience. Although many schools encourage or require their students to rotate through a clinic in a disenfranchised community, our elective is unique in several ways.

In parallel with the clinical experience, students participate in formal small group, case-based seminars facilitated by faculty and additional health care personnel on topics salient to the underserved community. These topics include but are not limited to access to care, pharmaceutical access, immigration policy, and stereotype and bias. Students are engaged in discussions that place health care and delivery in the context of economics, healthy policy and social justice. Thus, while cultural sensitivity is being addressed, it is only one part of a much larger perspective on the stressors this community experiences.

Secondly, this elective utilizes the talents and interests of faculty from both allopathic and osteopathic schools in the greater Chicago area and is not limited to the faculty at Stritch. This model allows for the exchange of ideas and information across institutions and specialties and limits the demands on any one faculty member. Many schools have not formalized the timing of the curricula that address the underserved and their access to care, but Loyola has been able to maintain a

schedule that allows other faculty members and outside educators to consistently contribute their various perspectives to this third-year learning experience.

Lastly, because we are attempting to train future physicians to be able to meet the needs of their many patients who will not have resources, this elective emphasizes both student and patient outcomes. Students' ability to uncover and address the needs of their patients is measured by standardized patient exercises at the end of the clerkship as well as by following end-point goals for patients during their longitudinal clinic experience. Students who complete this elective are measured against control groups (their peers) using standardized patient evaluations. Specific health outcomes, e.g., hemoglobin A1C and blood pressure, are measured in patients seen by students and compared to those outcomes in patients seen during the same period by resident physicians who work in the same resource-poor setting.

While numerous schools value placing students in resource-poor communities chiefly as a means to recruit them for future employment in those communities, this elective hopes to identify whether a formal training program helps students develop a skill set that enables them to better address their patients' needs.

Matthew Fitz, MD, is an assistant professor in medicine and pediatrics at Loyola University Chicago Stritch School of Medicine in Maywood, Ill.

Related article

[Medical student-run clinics for the underserved](#), July 2005

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 737-743.

Journal discussion

Social epidemiology: how socioeconomic risk factors become health realities

by Ken Fox, MD

Lu N, Samuels ME, Wilson R. Socioeconomic differences in health: How much do health behaviors and health insurance coverage account for? *J Health Care Poor Underserved*. 2004;15:618-630.

Isaacs SL, Schroeder SA. Class—the ignored determinant of the nation’s health. *N Engl J Med*. 2004;351:1137-1142.

Once when I was caught in the wretchedness of an intern’s post-call haze, the attending physician posed a haunting question: “What does death tell us about how we live?” Like a tolling bell, his words brought our sleepy team to rapt attention. Looking back, I realize how much my moral compass as a doctor was shaped by that mentor in that moment. Though I didn’t fully appreciate his stature at the time, my attending physician was the pre-eminent pediatrician Paul Wise, and this was my introduction to social epidemiology. Over many years and at many stages in my professional development, I came to appreciate the importance of his work, the power of the field it exists within and the vitality of practice it inspires.

The purpose of this essay is to comment on two journal articles that are very much in dialogue with the discipline of social epidemiology and address the relationship of poverty to health as both an intellectual problem and a challenge for public policy. The first is “Socioeconomic Differences in Health: How Much Do Health Behaviors and Health Insurance Coverage Account For?” [1] by Ning Lu, et al. The second is “Class—The Ignored Determinant of the Nation’s Health” [2] by Stephen L. Isaacs and Steven A. Schroeder.

Health risks + behaviors = health outcomes

The aim of the study by Lu and colleagues was to quantify the degree to which health behaviors and health insurance (or lack thereof) contribute to differences in health status across socioeconomic groups. Investigators used cross-sectional data from the Kentucky Behavioral Risk Factor Surveillance System, a random-dial telephone survey.

Researchers assessed socioeconomic status using employment status, three levels of educational attainment and three levels of income (less than \$15,000, \$15,000-

34,999 and more than \$35,000). Risk factors that were taken into account included smoking, physical inactivity, inadequate fruit and vegetable consumption and overweight. The health of respondents was self-assessed as either “good” or “poor,” and their insurance status was documented. The demographic factors of age, gender, marital status and family size served as control variables in the analyses.

Investigators deployed a series of multivariate logistic regression models, controlling for employment status and the demographic variables to determine the contribution of risky health behaviors and lack of insurance to health status across SES. They found that lower levels of education and income were strongly related to higher prevalence of risky health behaviors, lower rates of insurance coverage and overall poorer health status. However, risk behaviors and lack of coverage accounted for only a small proportion (10-16 percent) of the large disparities in health status between higher and lower income groups.

The study’s significant limitations were amply discussed by the authors. First, health status and behaviors were self-reported rather than directly measured. Second, the select health behaviors surveyed might not be those that matter most in shaping disparate risks. Third, because the data were cross-sectional rather than longitudinal, investigators could not comment on causality in the relationship between socioeconomic status (SES) and health status. They also pointed out that the degree to which SES and health status are associated may vary across populations. Since the subjects were all white adults older than 18 years with a mean age of 44.5 years, the findings may not be generalizable to different racial, ethnic or age groups.

Nevertheless, the main findings resonate with a large and important body of social epidemiology work on the determinants of health. This field has documented elevated rates of affliction, suffering and death among those of lower socioeconomic status compared to their more privileged peers. Excess health risk and poor health outcomes among those with low SES are rooted in what leading scholars Bruce Link and Jo Phelan call “fundamental social causes of disease,” namely lesser and inadequate access to resources like “knowledge, money, power, prestige and beneficial social connections” [3].

These fundamental relationships are extraordinarily robust and have been demonstrated many times in many places. One may turn, for example, to historic figures like early germ theorist Rudolf Virchow who wrote in 1848 that “Medicine is a social science, and politics nothing but medicine on a grand scale,” or to the famous work of Thomas McKeown who argued in *The Role of Medicine: Dream, Mirage or Nemesis?* that profound population growth, declines in infectious disease and improvements in health over the past two centuries are the consequence of improvements in nutrition and social and economic conditions rather than medical care. One may find documented evidence of these relationships in U.S. studies of socioeconomic gradients in health [4] or in international data [5]. No matter which source one turns to, the bottom line is that poverty matters greatly to health risk, status and care.

Important new foci within social epidemiology explore connections between overall income or wealth inequalities in a society and health outcomes [6, 7]. A relative deficit of resources compared to others in the society—rather than any absolute standard of living—may be an important source of health disparities and poorer health outcomes overall. For example, people in nations characterized by greater income equality have longer life expectancies than people in nations characterized by a broader spectrum of income and, hence, less income equality [6]. Similarly, within the U.S., states with greater income inequality are also notable for higher total age-adjusted mortality rates [8]. Finally, a sort of “dose effect” seems evident: each degree of increase in income inequality is associated with an increase in mortality rates [8].

At the cutting edge of social epidemiology are studies that explore the mechanisms by which social forces become material realities. How, for example, do racial and income inequalities become incorporated biologically? How do ideas find their way beneath the skin? “Embodiment theory,” [9] articulated by scholars like Nancy Krieger, is emerging as an important current within social epidemiology. The theory posits that early experiences influence the expression of genes that, in turn, affect how people respond to stress throughout their lives.

Never trust the bleary-eyed intern who thinks his medical skills can cure all who seek his care. He is noble but cursed. Any way you cut it, the clear-eyed gaze of social epidemiology reveals that medical care makes a relatively small contribution to overall health status on the population level. Scholars assess that only 10-15 percent of premature deaths in the U.S. could be averted by greater availability or higher quality of health care [10]. They cite a Department of Health and Human Services report from 1994 that estimates that only five of the 30 years of U.S. life expectancy gained during the twentieth century are attributable to medical care [11]. Moreover, argue Bunker et al., only 3 of 7 years gained since 1950 are due to medical care [12]. Therefore, access to traditional forms of medical care that insurance grants would not be expected to make much of a difference for the overall health status of adults—particularly in the context of vast social inequities. Thus, the findings of Lu et al. come as no real surprise.

The authors are left, then, to speculate on mechanisms key to the social production of health since their study fails to specify what matters most. In perhaps the most provocative sentence of the piece, the authors wonder about determinants of health they do not directly explore:

The construction, distribution, and institutionalization of economic resources, social relations, and cultural and psychological forces through social policy and political structure may account for more of the SES-related differences in health than health behaviors and health insurance coverage do [13].

But, as the saying goes, *I tell you what*: at the end of the day, the Kentucky state song—brimming with Southern melancholy and the sting of memory—seems to get it just right, even if Lu et al. do not: “By’n by hard times comes a-knockin at the door...in my Old Kentucky home” [14]. Hard times, indeed, for some more than others.

The role of class

Isaacs and Schroeder are masters of the American health policy universe and their thought piece, “Class—The Ignored Determinant of the Nation’s Health,” is a useful commentary, both pragmatic and revealing. Isaacs is an attorney and an accomplished consultant to the Robert Wood Johnson Foundation, which gives away nearly \$400 million per year, making it the nation’s largest philanthropic organization committed to U.S. health and health care. Schroeder is the foundation’s former president. These wise playmakers are well placed to profess a particular reading of social epidemiology and to urge a rethinking of policy priorities.

Isaacs and Schroeder offer a concise review of a superb bibliography on socioeconomic gradients in health. The work they cite ought to be on the tip of the tongue of every serious health scholar, teacher and clinician. Their thesis is that greater attention should be paid to “the reality of class and its effects on the nation’s health.”

But Isaacs and Schroeder fascinate most when they speculate on why *class* can’t get “the props” it deserves in American public policy discourses. Here they offer a menu to suit a range of political palates: They note Americans’ beliefs in fairness and upward social mobility, our alleged discomforts with the concept of class (“which smacks of Marxism”) and our collective fear of “economic warfare” [15]. Or perhaps our preoccupation with race is to blame—“Concentrating mainly on race as a way of eliminating health disparities downplays the importance of socioeconomic status on health.” Maybe, as they claim, it’s the inherent difficulty in defining the word “class,” though it is measured typically in epidemiology according to education, occupation and income.

Despite the difficulties, much is at stake in the details of definitions. And this is where Isaacs and Schroeder leave me wanting more. Like Lu et al., these authors round up all the usual suspects to explain the social gradient: health behaviors and lifestyles of the poor, unemployment or low wages, lack of health insurance, poorer education. Laudably, they go beyond Lu and colleagues to note that the poor live in “worse neighborhoods and are exposed to more environmental hazards.” Yet a great puzzle remains for Isaacs and Schroeder even as they note the society’s widening economic inequities: “Beyond that, however, there is *something* about lower socioeconomic status itself that increases the risk of premature death” [15]. *Something*, indeed.

The most incisive commentators on the problem of class and health define class as “social groups arising from interdependent economic relationships among people”

forged by a society's fundamental "forms of property, ownership and labor and their connections through production, distribution and consumption of goods, services and information" [16]. The key here is *interdependence* among the groups. From these relationships—signified by ownership, control or possession of capital, skills or credential assets [16]—profits and privileges arise. In short, one group is defined by its relationship to others.

And, according to an increasingly visible cadre of scholars in social epidemiology and medicine [9, 17], just as profits and privileges arise through these relationships, so, too, do burdens. In the tradition of Virchow and all who follow, they assert that sickness, suffering and death loom large among those burdens. Moreover, these insights are often rendered visible by "studying up"—by fixing the disciplinary gaze on corridors of power and the privileged who walk them—as well as through fine-grained analyses of "social suffering" among the poor gained by "a view from below" [18] of the people and policies that oppress and immiserate them.

Just as privileges and burdens arise from these relations of power, so, too, must claims of social justice [19]. But the phrase "social justice" is impossible to find in the piece by Isaacs and Schroeder, even when their reasoning marches intrepidly toward it. Instead, their prescription for the predicament of health disparities lies in "enabling" the poor "to adopt more healthy behavior" and "attending to those social and economic factors that encourage healthy behavior." In short, they call most explicitly for greater "attention"—more and better *data*—rather than more and better *justice*.

Which brings me back to my mentor, his question about death and the approach to doctoring they inspire. The wisest make no bones about it: "Bodies tell stories about the social conditions of our existence" [9]. Those conditions, more and more, are marked and driven by social inequities. And the most powerful strategies to address health disparities forged in this crucible recognize that "the pursuits of efficacy and justice are inextricably linked" [20].

In my final hour let it be said: He was a witness to stories and a partner for social justice in health.

References

1. Lu N, Samuels ME, Wilson R. Socioeconomic differences in health: How much do health behaviors and health insurance coverage account for? *J Health Care Poor Underserved*. 2004;15:618-630.
2. Isaacs SL, Schroeder SA. Class—the ignored determinant of the nation's health. *N Engl J Med*. 2004;351:1137-1142.
3. Link BG, Phelan J. Social conditions as fundamental causes of disease. *J Health Soc Behav*. 1995;80-94. See also, Link BG, Phelan JC. McKeown and

the idea that social conditions are fundamental causes of disease. *Am J Public Health*. 2002;92:730-732.

4. For example, see Adler NE, Boyce WT, Chesney MA, Folkman S, Syme SL. Socioeconomic inequalities in health: no easy solution. *JAMA*. 1993;269:3140-3145. Adler NE, Newman K. Socioeconomic disparities in health: pathways and policies. *Health Aff*. 2002;21:60-76. Pappas G, Queen S, Hadden W, Fisher G. The increasing disparity in mortality between socioeconomic groups in the United States, 1960 and 1986. *N Engl J Med*. 1993;329:103-109. Also: Backlund E, Sorlie PD, Johnson NJ. The shape of the relationship between income and mortality in the United States: evidence from the National Longitudinal Mortality Study. *Ann Epidemiol*. 1996;6:12-20; McDonough P, Duncan GJ, Williams D, House J. Income dynamics and adult mortality in the United States, 1972 through 1989. *Am J Public Health*. 1997;87:1476-1483; Lantz PM, House JS, Lepkowski JM, Williams DR, Mero RP, Chen J. Socioeconomic factors, health behaviors and mortality: results from a nationally representative prospective study of US adults. *JAMA*. 1998;279:1703-1708.
5. Black D, Morris J, Smith C, Townsend P. *Inequalities in Health: Report on Research Working Group*. London, UK: Department of Health and Social Security; 1980. See also, Marmot M. Inequalities in health. *N Engl J Med*. 2001;345:134-136.
6. Wilkinson RG. *Unhealthy Societies: The Afflictions of Inequality*. New York, NY: Routledge; 1996.
7. See also Kim JY, Millen J, Greshman J, Irwin A, eds. *Dying For Growth: Global Inequality and the Health of the Poor*. Monroe, Me: Common Courage Press; 2000. Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. *Challenging Inequities in Health: From Ethics to Action*. New York, NY: Oxford University Press; 2001.
8. Kennedy BP, Kawachi I, Prothrow-Stith D. Income distribution and mortality: cross sectional ecological study of the Robin Hood Index in the United States. *BMJ*. 1996;312:1004-1007.
9. Krieger N. Embodiment: a conceptual glossary for epidemiology. *J Epidemiol Community Health*. 2005;59:350-355.
10. McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff*. 2002;21:78-93.
11. Department of Health and Human Services. *For a Healthy Nation: Returns on Investments in Public Health*. Publication No: 0-16-045143-4. Washington, DC: US Government Printing Office; 1994.
12. Bunker J, Frazier H, Mosteller F. The role of medical care in determining health: creating an inventory of benefits. In: Amick B, Levine S, Tarlov AR, Walsh DC, eds. *Society and Health*. New York, NY: Oxford University Press; 1995:305-341.
13. Lu, et al., 626.
14. Foster SC. *My Old Kentucky Home*. Available at: www.50states.com/songs/kentucky.htm. Accessed October 18, 2006.
15. Isaacs S et al., 3.

16. Krieger N, Williams DR, Moss NE. Measuring social class in US public health research: concepts, methodologies and guidelines. *Ann Rev Public Health*. 1997;18:341-378.
17. Farmer P. *Pathologies of Power: Health, Human Rights and the New War on the Poor*. Berkeley: University of California Press; 2003.
18. Farmer P, Gastineau-Campos N. Rethinking medical ethics: a view from below. *Developing World Bioeth*. 2004;4:22-41.
19. Krieger N. Theories for social epidemiology in the 21st century: an ecosocial perspective. *Int J Epidemiol*. 2001;30:668-677.
20. Wise PH. Confronting racial disparities in infant mortality: reconciling science and politics. *Am J Prev Med*. 1993;9:7-16.

Ken Fox, MD, is a community pediatrician in Chicago, Ill.

Related articles

[Socioeconomic determinants of health: the facts are in](#), November 2006

[Where you live matters to your health](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 744-747.

Journal discussion

Socioeconomic determinants of health: the facts are in

by Vanessa Yasmin Calderon

Cohen A, Houck PR, Szanto K, Dew MA, Gilman SE, Reynolds CJ 3rd. Social inequalities in response to antidepressant treatment in older adults. *Arch Gen Psychiatry*. 2006;63:50-56.

Miech RA, Kumanyika SK, Stettler N, Link BG, Phelan JC, Chang VW. Trends in the association of poverty with overweight among US adolescents, 1971-2004. *JAMA*. 2006;295:2385-2393.

Shishehbor MH, Litaker D, Pothier CE, Lauer MS. Association of socioeconomic status with functional capacity, heart rate recovery, and all-cause mortality. *JAMA*. 2006;295:784-792.

It has been observed time and again that those with low socioeconomic status suffer poorer health outcomes than individuals with higher socioeconomic status (SES). If there was doubt about the truth of the anecdotal evidence, that doubt has recently been dispelled. With an increase in diversity in the scientific community and the louder voice of communities that suffer social inequalities, more attention is being paid to the health care injustices experienced by lower income individuals. Mainstream media have also recognized the importance of this issue. In an interview between its physician correspondent, Dr. Sanjay Gupta, and former President Bill Clinton, CNN highlighted the relationship between poverty and poor health in September of this year. And in 2006 alone, the *Archives of General Psychiatry* and the *Journal of the American Medical Association* have published research articles linking poorer health outcomes with low SES [1-3].

These articles examine the environmental and cultural factors that often act as causal agents or contributors to the disparity in question. In “Trends in the Association of Poverty with Overweight Among US Adolescents, 1971-2004,” Richard Miech and his colleagues report that between 1994-2000, 50 percent more 15- to 17-year-olds living in poor families suffered from obesity than did adolescents in non-poor families. This was true for male, female, non-Hispanic white and non-Hispanic black adolescents [4].

The authors noted physical inactivity as one possible explanation for their finding. Why do adolescents in poor families exercise less than those in non-poor families?

The authors postulate that economically disadvantaged neighborhoods often have higher crime rates, leaving adolescents who live there without a safe space for physical activity. These areas also tend to lack local community recreational centers or a sufficient number of parks. In their comment section, Miech et al. also suggested the lack of nutritious, low-calorie food as another possible cause for the obesity epidemic that disproportionately affects adolescents in low SES households [5]. Poorer neighborhoods tend to have grocery stores with inadequate food choices and are plagued with a higher density of fast food restaurants than non-poor neighborhoods.

In “Association of Socioeconomic Status with Functional Capacity, Heart Rate Recovery, and All-Cause Mortality,” Mehdi Shishehbor and his co-authors also recognized that individuals with lower SES lacked adequate nutritious food choices and safe options for outdoor exercise [6]. This group of authors further noted that the individuals in their study had a higher exposure to tobacco vendors and were more likely to suffer from psychosocial stress and depression as a direct result of their environment [7]. Shishehbor’s study linked these variables to increases in impaired functional capacity, abnormal heart rate recovery time and, most astounding of all, all causes of mortality. Thus, according to this study individuals have a higher likelihood of dying at any given time simply by being economically disadvantaged [8].

Physical health is not the only measure negatively effected by low SES; in “Social Inequalities in Response to Antidepressant Treatment in Older Adults,” Alex Cohen and his co-authors showed the association between poorer mental health outcomes and low SES. The study demonstrated that response to treatment and suicidal ideation were inversely proportional to SES. Subjects residing in low income tracts were less likely to respond to treatment and were two-and-a-half times more likely to report suicidal ideation during treatment when compared to subjects in middle and high income tracts, respectively [9]. It is important to note that individuals with low SES had both an increased risk of experiencing a first depressive episode and greater severity in the course of depression (as measured by episode duration and recurrence) [10]. In addition, being economically disadvantaged put study subjects at higher risk for psychosocial stress which can contribute to depression [11].

The strong association between membership in racial and ethnic minority groups and low SES is well established. Recognizing this, all three articles advocate for further research into the connection between race and ethnicity and health disparities. Unfortunately, due to many barriers including a deep mistrust of American medicine, the number of minorities who participate in research studies continues to be minute, which hinders the collection of this data [12]. The scientific and medical communities must continue to work to gain the trust of ethnic minority groups. Providing culturally sensitive outreach staff and resources has been shown to successfully address the loss of trust for the medical profession among ethnic minority groups [13].

Moving forward

Studies of low SES provide important information for developing the needed policy to reduce or prevent health disparities between those at different socioeconomic levels. Efforts to prevent obesity in adolescents must look beyond education about the food pyramid and examine the need for an environment that offers safer options for outdoor exercise and abundant sources of nutritious food. Including an identifier for low SES in a risk assessment for functional capacity and heart rate recovery would have positive public health implications and would allow researchers to identify and treat those at greater risk for poor health outcomes. Improving psychosocial environments and social support networks would help to eliminate the widening mental health disparity across the SES spectrum. With this concrete and factual data, it should be less difficult to convince policy makers that grave health injustices exist. Thus, the importance of this research is clear. However, it is imperative to realize that, as long as poverty and the division of social classes exist, the struggle to eliminate health disparities and achieve health equity will be a challenging one.

References

1. Cohen A, Houck PR, Szanto K, Dew MA, Gilman SE, Reynolds CJ 3rd. Social inequalities in response to antidepressant treatment in older adults. *Arch Gen Psychiatry*. 2006;63:50-56.
2. Miech RA, Kumanyika SK, Stettler N, Link BG, Phelan JC, Chang VW. Trends in the association of poverty with overweight among US adolescents, 1971-2004. *JAMA*. 2006;295:2385-2393.
3. Shishehbor MH, Litaker D, Pothier CE, Lauer MS. Association of socioeconomic status with functional capacity, heart rate recovery, and all-cause mortality. *JAMA*. 2006;295:784-792.
4. Miech et al., 2389.
5. Miech et al., 2392.
6. Shishehbor et al., 784.
7. Shishehbor et al., 784, 790.
8. Shishehbor et al., 787-790.
9. Cohen et al., 52-53.
10. Cohen et al., 50.
11. Shishehbor et al., 790.
12. List JM. Histories of mistrust and protectionism: disadvantaged minority groups and human-subject research policies. *Am J Bioeth*. 2005;5:53-56.
13. Woods DV, Montgomery SB, Belliard JC, Ramirez-Johnson J, Wilson CM. Culture, black men, and prostate cancer: What is reality? *Cancer Control*. 2004;11:388-396.

Vanessa Yasmin Calderon is the 2006-2007 Jack Rutledge Fellow for Universal Healthcare and Eliminating Health Disparities at the American Medical Student Association. In June 2007, she will be returning to the Charles R. Drew Program at

the David Geffen School of Medicine at UCLA to complete her last two years of medical school. She will receive her medical degree in 2009.

Related articles

[Social epidemiology: how socioeconomic risk factors become health factors](#),
November 2006

[Where you live matters to your health](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 748-751.

Clinical pearl

Prostatitis: prevalence, classification and treatment

by Sarah Maitre

Prostatitis is an inflammatory condition that is not well understood. It has multiple etiologies, both infectious and noninfectious, which have been and continue to be the subject of much investigation. Due to the complex, multifactorial origin of this condition and the variety of presenting symptoms, its precise prevalence in the U.S. is uncertain, but has been estimated at 9 percent [1]. A 2002 epidemiology review found the prevalence of prostatitis-like symptoms ranged from as low as 3 percent to as high as 16 percent, depending on the definition used by the evaluating physician [2]. Of note, African American males suffer disproportionately from prostate disease. The incidence of prostate cancer, a potential etiology for prostatitis, is 274.3 per 100,000 African American men, while white men have an incidence of 171.2 per 100,000. For African American men under the age of 65, the incidence of prostate cancer is double that of whites. Mortality statistics are even worse: between 1997 and 2001 the death rate from prostate cancer for African American males was three times that for whites [3]. The exact reasons are not known, but contributing factors may include genetics, morbidity from other disease states, socioeconomic status and access to health care.

Classification of prostatitis

Due to the numerous processes and symptoms that define and accompany prostatitis, determining a classification system that adequately and usefully describes this disease state has been challenging. Under the traditional classification system, symptomatic patients were placed into four categories: (1) acute bacterial prostatitis (acute urinary tract infection (UTI)), (2) chronic bacterial prostatitis (recurrent UTIs caused by the same uropathogen), (3) nonbacterial prostatitis (lower GU tract symptoms with prostatic inflammation), and (4) prostatodynia (lower GU tract symptoms without prostatic inflammation) [4]. Established in 1978, this method of classification, with its emphasis on the presence of bacteria in the urine, resulted in a rational diagnosis and treatment for patients with acute or chronic bacterial prostatitis, and, in turn, led to the development of specific criteria for clinical trials, which further improved treatment outcomes and advanced the medical profession's understanding of these conditions. It did little, however, to shed light on the etiology of nonbacterial prostatitis or prostatodynia which constitute 90 percent of all prostatitis cases [5]. As a result treatment options for these conditions have changed little over the years. A study at the University of Washington found that only seven

percent of patients evaluated for chronic symptoms at their prostatitis clinic were diagnosed with bacterial prostatitis [4].

Diagnosis

In 1995 the National Institutes of Health convened a consensus conference to re-evaluate the utility of the existing classification system. The result was a refinement of the traditional classification of prostatitis syndromes that allowed for standard inclusion criteria for participants in clinical trials for chronic nonbacterial prostatitis and prostatic pain [6]. The new system also has four categories. Category I, acute bacterial prostatitis, refers to a combination of lower urinary tract and systemic infectious symptoms such as fever and chills.

Category II, chronic bacterial prostatitis, is characterized by culture-documented recurrent urinary tract infection combined with symptoms of acute or chronic pelvic pain without the systemic component demonstrated in category I.

Category III, known as chronic prostatitis (CP) or chronic pelvic pain syndrome (CPPS), lacks an infectious component and is subcategorized as inflammatory or noninflammatory based on the findings of leukocytes in a urine sample and expressed prostatic secretions. Symptoms, however, can be similar to those found in categories I and II and include perineal or low back pain, lower urinary tract symptoms and painful ejaculation. The existence of pelvic pain is a requirement for diagnosis of category III prostatitis regardless of the level of urinary symptoms [7]. Due to the differences in presenting symptoms among patients, the National Institutes of Health-Chronic Prostatitis Symptoms Index (NIH-CPSI) was created to quantify and determine the effects of the presenting symptoms for category III patients. The NIH-CPSI asks questions that are tabulated into three domain scores: (1) pain, (2) urinary symptoms and (3) quality of life. The index can be helpful in differentiating the levels of CP-CPPS while also quantifying an individual's quality of life. A limitation of the index is that it was validated by a population of mostly white, educated men and may not be as useful in other patient populations.

Finally, category IV refers to asymptomatic inflammatory prostatitis. It is usually found incidentally through biopsies of patients being evaluated for benign prostatic hypertrophy (BPH) or an elevated prostate-specific antigen (PSA). It has been estimated that category IV prostatitis may affect one-third of all patients who present with prostatitis [8].

Treatment

Given the varying and complex etiology of prostatitis, it is not surprising that treatment options differ by category. The recommended treatment for acute bacterial prostatitis—category I—in the setting of systemic symptoms, is intravenous (IV) antimicrobials in concert with supportive measures such as IV hydration and catheter drainage if the patient cannot void. The causal agents are *Escherichia coli*, *Klebsiella spp*, *Pseudomonas aeruginosa*, *Enterobacter spp* and *Serratia marcescens*. The

antimicrobials of choice are an aminoglycoside and beta-lactam combination or a fluoroquinolone with two to three weeks of outpatient treatment.

The most common pathogen in chronic bacterial prostatitis, category II, is *E. coli* (80 percent). *Klebsiella spp*, *Pseudomonas aeruginosa*, and *Proteus spp* have also been isolated. Treatment involves a 4-to 8-week course of a prostate-penetrating antimicrobial like a fluoroquinolone. In about one-third of these patients symptoms return, and they may require long-term, low-dose antimicrobial prophylaxis or radical transurethral prostatic resection to remove infected tissue.

There are no U.S. guidelines for treatment of category III CP-CPPS. British guidelines state that “The lack of knowledge of the etiology of these conditions means that no specific recommendations can be made and treatment of choice is usually trial and error” [6]. Although this condition is considered nonbacterial, there is some evidence that bacteria may exist at counts too low to be detected. A single 4-to 6-week course of antimicrobial therapy may be beneficial. In addition, alpha-blockers, such as terazosin, may relieve some symptoms and improve quality of life. The debate regarding the use of nonsteroidal anti-inflammatory medication is ongoing, and thus far results are not promising. Allopurinol, biofeedback and pelvic floor training may be helpful for some patients [6, 7].

Category IV prostatitis requires follow-up for its underlying etiology (i.e., BPH or elevated PSA). Since it is asymptomatic, there are no treatment recommendations, though it has been found that chronic inflammation of the prostate can lead to elevated PSA. Treatment with antimicrobials and anti-inflammatory medications can help to lower PSA.

References

1. Roberts RO, Lieber MM, Rhodes T, Girman CJ, Bostwick DG, Jacobsen SJ. Prevalence of a physician-assigned diagnosis of prostatitis: The Olmsted County Study of Urinary Symptoms and Health Status Among Men. *Urology*. 1998;51:578-584.
2. Krieger JN, Ross SO, Riley DE. Chronic prostatitis: epidemiology and role of infection. *Urology*. 2002;60(6 Suppl):8-12.
3. French DB, Jones LA. Minority issues in prostate disease. *Med Clin North Am*. 2005;89:805-816.
4. Krieger JN. Prostatitis revisited: new definitions, new approaches. *Infect Dis Clin North Am*. 2003;17:395-409.
5. Krieger JN, Nyberg L Jr, Nickel JC. NIH consensus definition and classification of prostatitis. *JAMA*. 1999;282:236-237.
6. Meza J, Alam S, Martin S. FPIN’s clinical inquiries. Treatments for chronic prostatitis. *Am Fam Physician*. 2006;74:475-477.
7. Hua VN, Schaeffer AJ. Acute and chronic prostatitis. *Med Clin North Am*. 2004;88:483-494.

8. Carver BS, Bozeman CB, Williams BJ, Venable DO. The prevalence of men with National Institute of Health category IV prostatitis and association with serum prostate specific antigen. *J Urol*. 2003;169:589-591.

Sarah Maitre is a fellow in the Institute for Ethics at the American Medical Association in Chicago, Ill. She will receive her medical degree from Oregon Health Sciences University in 2007.

Related article

[Managing chronic conditions in uninsured patients](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 752-755.

Health law

Defining hospitals' obligation to stabilize patients under EMTALA

by Lee Black, LLM

Congress enacted the Emergency Medical Treatment and Active Labor Act (EMTALA) [1] in 1986 to address the growing concern that hospitals were discharging patients before stabilizing them and refusing to care for poor people with medical emergencies. Although a general duty for hospitals to provide emergency care had been established a few decades prior to the passage of EMTALA, Congress believed that the common law rule, as well as various state statutes mandating care, did not go far enough to prevent “patient dumping” practices.

EMTALA applies to any hospital that has an emergency department and participates in the Medicare program. The act directs hospitals to conduct an appropriate medical screening examination if a request is made on behalf of any person—the statute is written broadly to cover more than just uninsured and poor patients. This requirement, however, is not absolute; a hospital is obliged to provide only examinations that are within the capabilities of its emergency department. If the examination indicates that an emergency medical condition exists (including the active labor of a pregnant woman), the hospital must stabilize the patient or provide for transfer to another medical facility.

The medical examination is considered sufficient if the hospital uses the same exam on all patients regardless of their ability to pay. While it has been the subject of much litigation, this requirement is straightforward: if the hospital treats a patient differently for any reason and provides an insufficient screening examination, that hospital violates EMTALA [2]. The obligation to stabilize, even though it is defined in both the statute and the accompanying regulations, has led to disparate interpretations.

“To stabilize” is defined as:

to provide such medical treatment of the condition as may be necessary to assure, within reasonable medical probability, that no material deterioration of the condition is likely to result from or occur during the transfer of the individual from a facility, or, with respect to [a pregnant woman having contractions], to deliver (including the placenta) [3].

This definition seems clear: a patient is stabilized when his or her condition, or that of a fetus or newborn, will not worsen upon leaving the facility. Over the years, though, courts have interpreted the language differently before finally determining exactly when a hospital's duty to stabilize has been satisfied.

In 1990, the 6th U.S. Circuit Court of Appeals heard the case of Elease Thornton, who spent a total of 21 days in the hospital following a stroke [4]. Eventually, she was discharged from the hospital in favor of home nursing care, where her condition deteriorated. Ms. Thornton was then admitted to a rehabilitation center after previously being denied admission by that center due to lack of insurance coverage. She later sued the hospital, claiming she had been discharged in an unstable condition. The Circuit Court of Appeals (or appellate court) came to the same conclusion as the district court—that the hospital *had* stabilized Elease before discharging her—but the two courts interpreted the stabilization requirement differently. The district court took a narrow view of the stabilization requirement, finding that “the Act was not intended to require hospitals to bring patients to complete recovery, but to...give emergency room treatment” [5]. Under this interpretation, stabilization occurs only in the emergency room.

The appellate court interpreted the language of the statute to mean that a person found to be suffering from an emergency condition during the ER exam “cannot be discharged until the condition is stabilized, regardless of whether the patient stays in the emergency room” [5]. The appellate court's decision recognized that a strict interpretation of the statute—that stabilization referred only to emergency room treatment—could be circumvented by a hospital: it could admit a patient into a unit (and therefore away from the emergency room) and then immediately discharge him or her.

The 6th Circuit's interpretation of the statute created additional uncertainty in the mostly untested law. The original purpose of EMTALA—to prevent the dumping of patients who could not pay for medical care—was satisfied by the district court's interpretation that hospitals must provide care in the emergency room only. Despite the fact that the congressional documents noted by the appellate court used the term “emergency room care,” the court found that emergency room care meant “emergency care” and therefore extended the hospital's duty to stabilize beyond the emergency room.

In 2002, the 9th U.S. Circuit Court of Appeals interpreted the stabilization requirement much differently than the 6th Circuit had. In *Bryant v. Adventist Health System*, the patient was treated and discharged after being diagnosed with pneumonia [6]. Later that day, the patient was asked to return to the hospital after a second physician examined his x-ray and discovered a lung abscess. After spending time in the ICU and then being transferred to another hospital, the patient had surgery, was eventually released and subsequently died.

This issue in *Bryant* was again the hospital's duty under EMTALA to stabilize the patient. The 9th Circuit directly addressed the 6th Circuit's decision in *Thorton* and disagreed with its conclusions. For the *Bryant* court, EMTALA's duty to stabilize ended when a patient was admitted for inpatient care. The court noted that "the term 'stabilize' was not intended to apply to those individuals who are admitted to a hospital for inpatient care" (although an improper motive for admitting a patient—to avoid the requirements of EMTALA—would leave the hospital open to liability) [7]. While the concerns of the 6th Circuit were valid, the 9th Circuit viewed EMTALA's purpose as creating a cause of action for the failure to treat; its purpose was not to duplicate existing causes of action covered by medical malpractice law for cases in which a hospital undertook inpatient or longer-term treatment and then discharged the patient before he or she finished treatment.

The interpretation of the stabilization requirement in *Bryant* is what most courts are likely to follow today, and it makes the most sense in view of the wording and purpose of the act. Once an emergency medical condition is confirmed, the hospital must treat that condition until the patient is stable. After the hospital provides appropriate examination and stabilizing treatment, anything else that happens to the patient as an inpatient or after discharge becomes a medical malpractice issue, a realm of law that remains solely within the state's—not federal—prerogative. EMTALA was created to ensure that patients receive appropriate emergency care, not that the care is provided without error.

References

1. Examination and Treatment for Emergency Medical Conditions and Women in Labor. 42 USC 1395dd (2005).
2. See for example, *Collins v DePaul Hospital*, 963 F2d 303, 307 (10th Cir. 1992).
3. 42 USC 1395dd(e)(3)(A) (2005).
4. *Thorton v Southwest Detroit Hospital*, 895 F2d 1131 (6th Cir 1990).
5. *Thorton*, 1134.
6. *Bryant v Adventist Health System*, 289 F3d 1162 (9th Cir 2002).
7. *Bryant*, 1167.

Lee Black, LLM, is a policy analyst for the Council on Ethical and Judicial Affairs at the American Medical Association in Chicago, Ill. Prior to joining the AMA, he was a staff attorney with the Legislative Reference Bureau in Springfield, where he drafted legislation for the Illinois General Assembly.

Related articles

[Understanding EMTALA](#) (PowerPoint)

[Emergency treatment for patients who cannot pay](#), June 2001

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 756-761.

Policy forum

Education and education policy as social determinants of health

by Barbara J. Low, DrPH, MPH, and M. David Low, MD, PhD

Education is a strong predictor of long-term health and quality of life [1]. At least one investigator [2] has argued that education *causes* health, but the pathways through which it leads to better health and longer life expectancy are not yet clearly understood. What *is* clear is that health, human development and well-being are dynamic processes that are closely related to socioeconomic status (SES) and educational attainment. An individual's health is highly correlated with his or her social position, and success in school and years of schooling are major factors in determining social and occupational status in adulthood [3].

Biological, environmental and social experiences that occur throughout the entire lifespan influence well-being and illness, but the first few years of a child's life represent a crucial period during which the roots of learning, literacy and the adaptive behaviors that sustain physical and mental health must be nourished. Data from epidemiologic research [4] suggest that these early experiences exert important influences both on adult health and, ultimately, on community and societal function [5].

Education and socioeconomic inequality as health risk factors

In clinical medicine, we learn of the importance of risk factors in understanding and managing disease. Among the best examples are tobacco smoking, lack of regular aerobic activity and other lifestyle behaviors that often begin during childhood and adolescence. Medical literature rarely informs us about the risk factors most vital to human health and development: income, education, the family environment and work conditions. Low SES together with inadequate employment, family function and educational attainment are associated with compromised health across the entire life span. Low SES alone is one of the strongest predictors of poor health and development, not just because material deprivation constrains behavior and lifestyle choices among those living in poverty, but because neuroendocrine responses to the stress that SES imposes influence psychosocial well-being [6].

Early learning: a protective factor for lifetime health

The effects of the early environment, both negative and positive, are long lasting [7]. There is a close relationship between early life conditions, performance in school, adult literacy, health status and mortality [5, 8]. Appropriate stimulation and positive early experiences have profound impact not only on the development of the neural

systems involved in cognitive, emotional, neuroendocrine and neuroimmune functions [5], but also on the expression of genetic factors that modify the effects of hormone receptors and influence an individual's response to stress throughout life [9]. This biological embedding of reaction to stress helps set developmental trajectories for acquisition of competence and coping skills and regulation of responses to new or challenging experiences [10].

Health is not distributed evenly across the population, but along a gradient, with those at lower SES levels having poorer health outcomes than those at higher levels [11, 12]. European [13] and American [14] studies indicate that children whose parents have low levels of education tend to do poorly themselves unless there are programs in place that help to mitigate the negative effects. These studies provide strong evidence that child resilience and adult health are rooted in a dynamic developmental process fostered by individual biologic, home and school influences [15].

Current U.S. policy strengths and limitations

In view of the central importance of education to human development, existing U.S. educational policies have been shown to be effective for some children but quite ineffective for others. The country's near-universal commitment to publicly supported basic education from age 5 or 6 through age 16, and the strong policy support for access to post-secondary education, results in one of the highest rates of university and post-secondary enrollment in the world. Results of the National Assessment of Educational Progress (NAEP) tests, however, reveal a range of educational attainment across state school districts that, like health status, correlates strongly with SES [16]. Poor children, especially poor black children, do not do as well as their white peers, on average, unless educated within a multi-level support system such as the one provided by the U.S. Department of Defense schools [17]. This disparity in achievement is often viewed as a failure of public schools to do their job, but our research and that of others shows that the real problem with poor educational achievement is multifactorial: the home and neighborhood environments are at least as important as what happens in the school.

Policy-related limitations on education are in part conceptual and in part political-economic. The former limitations arise from incomplete understanding of the foundational importance of early childhood influences on success in the educational system and in life. Political-economic limitations are artifacts of our country's education financing system. In the United States, education and child care are the responsibility of the state, and in most states this responsibility is passed down to municipalities. Outside of the federal programs described below, funding for early child care is largely from private sources, while primary and secondary schooling is supported by local taxation and sometimes other state tax-funded supplements. Poorer communities that must operate their schools from a tax base much smaller than their wealthier neighbors are seriously disadvantaged unless there is some kind of equalization formula.

The largest early childhood intervention programs in the United States are Head Start, created by the federal Department of Health and Human Services in 1965 for children four and five years old, and Early Head Start created in 1994 for pregnant mothers, toddlers and children up to 3 years of age. These needs-tested programs provide comprehensive child development, educational, health, nutritional, social and family services to those who qualify, but serve fewer than one million American children, a fraction of those who could benefit.

A few states have made progress in dealing with this challenge. Georgia's Bright from the Start program [18] stands out as an excellent example: by coordinating funding, intake and referral, public/private partnerships and oversight of standardized curricula, it offers integrated child care, Head Start and early learning pre-kindergarten programs, as well as group and family day care, parent and teacher education and nutrition services.

Recommendations for human development-oriented health and education policy

One of the best ways for us to improve the health of the whole population is to focus on evidence-based policies that optimize both early childhood development *and* education. In one critical sense, they are the same thing; adequate social and cognitive development in childhood is a necessary foundation for success in education, which in turn is necessary for health and success in life. Large-scale, longitudinal, well-funded research should focus on early learning and its short- and long-term health effects in different settings and populations.

The essential elements of a human development-oriented health policy for the United States would, at a minimum, include appropriate prenatal care, provision for parent training and financial support where necessary, quality child care delivered by well-qualified child development specialists, progressive introduction of elemental education beginning at a few months of age and regular assessment to ensure that developmental and cognitive milestones are being met prior to a child's entering kindergarten. The National Center for Children in Poverty [19] recommends policy to assist low-income parents in meeting such basic childhood needs as preschooling, child care and health care by raising the minimum wage, expanding the federal Earned Income Tax Credit, decreasing the payroll tax burden on low-wage workers and providing health insurance for working parents [20].

To address the achievement gap between low-income children and their more economically secure peers more preschools are needed, especially those similar to Head Start that provide comprehensive services such as immunizations and parent education [21]. The funding for most federal education programs is currently inadequate, and some programs such as professional development for early childhood educators, special education grants for infants and families, and special education preschool grants have had their budgets cut since 2005. Some funding has been eliminated, as happened to the Early Learning Opportunities Act in 2006. According to the U.S. Department of Health and Human Services Child Care Bureau

policy summary [22], funding for every federal health and human service-related program, with the exception of hurricane recovery assistance, decreased from fiscal year 2005 to 2006.

Conclusion

Health practitioners need to pay attention to risk factors of inequality and offer their patients the information and resources they need to enroll in appropriate economic, education and child care programs that benefit families living in poverty. Medical professionals are encouraged to take the same kind of policy-related action to overcome these inequalities that they take when they advocate against smoking or in support of early childhood immunization. This means advocating for positive parental support, child nurturing and effective prenatal care. These protective actions can be integrated in each region and state as well as nationally by effectively linking corresponding services with existing education programs encompassing pre-kindergarten through grade 12.

References

1. Feinstein L. *Quantitative Estimates of the Social Benefits of Learning, 2: Health (Depression and Obesity)*. London, England: Centre for Research on the Wider Benefits of Learning; 2002. Available at: <http://www.learningbenefits.net/Publications/ResReps/ResRep6.pdf#search=%22quantitative%20estimates%20of%20the%20social%20benefits%20of%20learning%22>. Accessed October 3, 2006.
2. Lleras-Muney A. *The Relationship Between Education and Adult Mortality in the United States*. Princeton, NJ: National Bureau of Economic Research; 2002. Available at: www.nber.org/papers/w8986.pdf. Accessed October 3, 2006.
3. Ross CE, Wu CL. Education, age, and the cumulative advantage in health. *J Health Soc Behav*. 1996;37:104-120.
4. Kuh D, Ben-Shlomo Y, Lynch J, Hallqvist J, Power C. Life course epidemiology. *J Epidemiol Community Health*. 2003;57:778-783.
5. Keating DP, Hertzman C, eds. *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York, NY: Guilford Press; 1999.
6. Kristenson M, Eriksen HR, Sluiter JK, Starke D, Ursin H. Psychobiological mechanisms of socioeconomic differences in health. *Soc Sci Med*. 2004;58:1511-1522.
7. Carnegie Corporation of New York. *Starting Points: Meeting the Needs of Our Youngest Children*. Waldorf, Md: Carnegie Corporation of New York; 1999. Available at: www.carnegie.org/starting_points/index.html. Accessed October 4, 2006.
8. Evans RG, Barer ML, Marmor TR, eds. *Why Are Some People Healthy and Others Not? The Determinants of Health of Populations*. New York, NY: Aldine de Gruyter; 1994.

9. Meaney MJ, Diorio J, Francis D, et al. Early environmental regulation of forebrain glucocorticoid receptor gene expression: implications for adrenocortical responses to stress. *Dev Neurosci*. 1996;18:49-72.
10. Keating DP, Miller FK. Individual pathways in competence and coping: from regulatory systems to habits of mind. In: Keating DP, Hertzman C, eds. *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York, NY: Guilford Press; 1999:220-234.
11. Lawlor DA, Ebrahim S, Davey SG. Association between self-reported childhood socioeconomic position and adult lung function: findings from the British Women's Heart and Health Study. *Thorax*. 2004;59:199-203.
12. Mustard JF. What science says about the effects of early intervention: early child development and the brain: the base for health, learning, and behaviour throughout life. Paper presented at: World Bank Conference on Investing in Our Children's Future; April 10, 2000; Washington, DC.
13. Kuh D, Hardy R, Langenberg C, Richards M, Wadsworth ME. Mortality in adults aged 26-54 years related to socioeconomic conditions in childhood and adulthood: post war birth cohort study. *BMJ*. 2002;325:1076-1080.
14. Werner EE, Smith RS. *Vulnerable, but Invincible: A Longitudinal Study of Resilient Children and Youth*. New York, NY: McGraw-Hill; 1982.
15. Werner EE. Risk, resilience, and recovery: perspectives from the Kauai Longitudinal Study. *Dev Psychopathol*. 1993;5:503-515.
16. Low MD, Low BJ, Baumler ER, Huynh PT. Can education policy be health policy? Implications of research on the social determinants of health. *J Health Polit Policy Law*. 2005;30:1131-1162.
17. Anderson LB, Bracken J, Bracken MC. *Review of Department of Defense Education Activity (DODEA) Schools: Volume II: Quantitative Analysis of Educational Quality*. Alexandria, Va: Institute for Defense Analyses; 2000. Available at: [http://www.dodea.edu/communications/pdf/RDoDEASchoolsV2.pdf#search=%22review%20of%20department%20of%20defense%20education%20activity%20\(DODEA\)%20schools%22](http://www.dodea.edu/communications/pdf/RDoDEASchoolsV2.pdf#search=%22review%20of%20department%20of%20defense%20education%20activity%20(DODEA)%20schools%22). Accessed October 3, 2006.
18. Georgia Department of Early Care and Learning. *Bright from the Start*. Available at: <http://www.decal.state.ga.us/default.aspx>. Accessed October 3, 2006.
19. Cauthen NK, Lu HH. *Employment Alone is not Enough for America's Low-Income Children and Families*. New York, NY: National Center for Children in Poverty; 2003. Available at: www.nccp.org/media/lat03a-text.pdf. Accessed October 4, 2006.
20. Gershoff ET. *Low Income and the Development of America's Kindergartners*. New York, NY: National Center for Children in Poverty; 2003. Available at: www.nccp.org/medial/lat03a-text.pdf. Accessed October 4, 2006.
21. Irish K, Schumacher R, Lombardi J. *Head Start Comprehensive Services: A Key Support for Early Learning*. Available at: http://www.clasp.org/publications/HS_brf_4.pdf#search=%22head%20start%22

20comprehensive%20services

%3A%20a%20key%20support%20for%20early%20learning%22. Accessed October 4, 2006.

22. U.S. Department of Health & Human Services. Fiscal year 2006 federal child care appropriations. Available at: <http://www.acf.hhs.gov/programs/ccb/policy1/misc/approp06.htm>. Accessed October 4, 2006.

Barbara J. Low, DrPH, MPH, is an adjunct professor of epidemiology at the University of Northern British Columbia in the Health Sciences Faculty and a faculty associate at the Center for Health Promotion and Prevention Research at the University of Texas School of Public Health in Houston. Her current research concerns the impact of youth health-risk behavior and educational attainment on health status.

M. David Low, MD, PhD, is immediate past president of the University of Texas Health Science Center at Houston and professor emeritus in the University of Texas School of Public Health. He is a cofounder of the nationwide Medicine-Public Health Initiative and has served as policy adviser to numerous state and Canadian provincial governments, congressional committees and the White House.

Related articles

[Socioeconomic determinants of health: the facts are in](#), November 2006

[Where you live matters to your health](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 762-765.

Policy forum

Health communication and navigating the health system

by Andrea M. Garcia, JD

When the Office of Disease Prevention and Health Promotion, located within the Department of Health and Human Services (DHHS), released its Healthy People 2010 goals, “health communication” was listed as one of the new focus areas, making better communication one of the nation’s top health objectives [1]. The 2004 Institute of Medicine Report on Health Literacy stated that “clear communication is critical to successful health care” [2]. Unfortunately, within the current health care system those with the greatest burdens often have the least access to information and services.

Limited ability to read and understand health information makes it difficult to navigate the health care system and appears to contribute to health disparities [3]. In the United States about 90 million or 47 percent of adults have limited literacy skills [4]. According to the Health Resources and Services Administration (HRSA) limited health literacy is more prevalent among older adults, minority populations, the poor and the medically underserved [5]. Poverty has also been shown to be intertwined with many sociodemographic variables, which in turn are associated with limited literacy [6].

Fifteen years prior to the Institute of Medicine’s report on health literacy, the American Cancer Society in coordination with the National Cancer Institute and the Centers for Disease Control conducted fact-finding hearings to better understand the experiences of poor Americans who had been diagnosed with cancer [7]. Based on testimony heard during these hearings, the American Cancer Society issued “Cancer in the Poor: A Report to the Nation” [8]. The report’s findings suggested that:

- Poor people lack access to quality health care and are more likely than others to die of cancer.
- Poor people endure greater pain and suffering from cancer than most Americans.
- Poor people face substantial obstacles to obtaining and using health insurance and often do not seek needed care if they cannot pay for it.
- Poor people and their families must make extraordinary personal sacrifices to obtain and pay for health care.
- Cancer education and outreach efforts are insensitive and irrelevant to many poor people.

- Fatalism about cancer among the poor prevents them from gaining quality health care [7].

These findings led Harold P. Freeman to start one of the country's first patient navigator programs at Harlem Hospital Center in New York City in 1990. A patient navigator is defined as "someone who helps assist patients overcome barriers to care" [9]. Patient navigators provide individualized assistance such as coordinating appointments, maintaining communication to monitor satisfaction, helping patients understand medical jargon, arranging language translation, facilitating financial support, planning transportation or child care and establishing linkages for follow-up services [10]. Freeman's program demonstrated that those who received these services, primarily low income and medically underserved patients, had a significantly shorter time until follow-up services were received than those who did not have access to these services [11]. Similarly, a later study at Harlem Hospital attributed significant improvements in diagnosis and five-year survival rates among patients with breast cancer to patient navigation services [12].

Like the poor, those with low health literacy may benefit from patient navigator programs, inasmuch as they often have less knowledge about their medical conditions and treatment, worse health status, less understanding and use of preventive services and a higher rate of hospitalization than those with marginal or adequate health literacy [13]. In addition, the average annual health care costs of persons with very low literacy (reading at the grade level two or below) may be four times greater than those of the general population [14]. The barriers faced by those with limited health literacy along with the promising results of the earliest patient navigator programs has led to the call for more research on the effectiveness of such programs in overcoming health system barriers and reducing disparities in care.

The National Cancer Institute (NCI) currently sponsors eight institutions through its Patient Navigator Research Program which develops and tests interventions among populations that experience cancer health disparities, i.e., members of racial and ethnic minorities, individuals with lower socioeconomic status and residents of rural areas [10]. NCI also held a Patient Navigator Academy in 2005 which brought together patient navigators from across the country [11]. And HRSA's Bureau of Primary Health Care provides training to community health workers through their Migrant Health Program and their Healthy Communities Access Program, although the latter was unfunded in fiscal year 2006 [15].

Patient Navigator Outreach and Chronic Disease Prevention Act of 2005

The Patient Navigator Outreach and Chronic Disease Prevention Act of 2005 (Patient Navigator Act) was signed into law on June 29, 2005 [16]. Under this legislation, the secretary of Health and Human Services, acting through HRSA, may provide grants to eligible entities for the development and operation of patient navigator services for the purpose of improving health care outcomes [17]. These grants require recipients to recruit, assign, train and employ patient navigators who

have direct knowledge of the communities they serve to facilitate the care of individuals [18].

Duties of patient navigators include: (1) acting as contacts by assisting in the coordination of health care services; (2) facilitating the involvement of community organizations in helping individuals who are at risk for or who have cancer or other chronic diseases; (3) notifying patients of clinical trials and, upon request, aiding in enrollment of eligible individuals; (4) anticipating, identifying and helping patients overcome barriers within the health care system; (5) coordinating with the relevant health insurance ombudsman programs to provide information to individuals who are at risk for or who have cancer or other chronic diseases; and (6) conducting ongoing outreach to health disparity populations [19].

Those eligible for grants under the act include public or nonprofit health centers, health facilities operated pursuant to a contract with the Indian Health Service, hospitals, cancer centers, rural health clinics, academic health centers and nonprofit entities that enter into a partnership to provide patient navigator services [20]. Authorized appropriations for the Patient Navigator Act were: \$2 million for fiscal year 2006, \$5 million for fiscal year 2007, \$8 million for fiscal year 2008, \$6.5 million for fiscal year 2009, and \$3.5 million for fiscal year 2010. Although funding for the first year did not come through, the full \$5 million authorized for fiscal year 2007 was included in the Senate Labor, Health and Human Services Appropriations bill [21]. An evaluation component the Patient Navigator Act requires the secretary to study these demonstration programs, report to Congress on program results and make recommendations to improve patient outcomes in other public health areas [22]. Continued funding of the Patient Navigator Act is key to obtaining the data necessary to determine the effectiveness of and the need for patient navigator programs in the future.

References

1. Healthy People 2010. What is Healthy People? Available at: <http://www.healthypeople.gov/About/whatis.htm>. Accessed October 16, 2006.
2. Nielsen-Bohlman L, et al., eds. *Health Literacy: A Prescription to End Confusion*. Washington, DC: The National Academies Press, Institute of Medicine; 2004:xi.
3. Office of Disease Prevention and Health Promotion. Health communication. Available at: http://www.healthypeople.gov/document/html/volume1/11healthcom.htm#_ednref1. Accessed October 16, 2006.
4. Nielsen-Bohlman L, et al., 60-61.
5. Health Resources and Services Administration. Health Literacy. Available at: <http://www.hrsa.gov/healthliteracy/>. Accessed October 16, 2006.
6. Nielsen-Bohlman L, et al., 65.
7. Freeman HP. Poverty, culture, and social injustice: determinants of cancer disparities. *CA Cancer J Clin*. 2004;54;72-77.

8. American Cancer Society. *Cancer in the Poor: A Report to the Nation*. Atlanta, Ga: American Cancer Society; 1989.
9. Dohan D, Schrag D. Using navigators to improve care of the underserved patients: current practices and approaches. *Cancer*. 2005;104:848-855.
10. National Cancer Institute. Center to reduce health disparities. Available at: <http://crchd.nci.nih.gov/initiatives/pnp/>. Accessed October 16, 2006.
11. Fowler T, Steakley C, Garcia AR, Kwok J, Bennett LM. Reducing disparities in the burden of cancer: The role of patient navigators. *PLoS Med*. 2006;3:e193.
12. Freeman HP. A model navigation program. *Oncology Issues*. Available at: acc-cancer.org/ONIS/articles/sepoc04/freeman.pdf. Accessed October 16, 2006.
13. Nielsen-Bohlman L, et al., 82 (citing Parker RM, Ratzan SC, Lurie N. Health literacy: A policy challenge for advancing high-quality health care. *Health Aff*. 2003;22:147).
14. Weiss BD, Blanchard JS, McGee DL, et al. Illiteracy among Medicaid recipients and its relationship to health care costs. *J Health Care Poor Underserved*. 1994;5:99-111.
15. Health Resources and Services Administration, Bureau of Primary Health Care. Health center information. Available at: http://www.bphc.hrsa.gov/bphc/index_1.htm. Accessed October 16, 2006.
16. Patient Navigator Outreach and Chronic Disease Prevention Act of 2005. Pub L. 109-18.
17. Pub L. 109-18 Section 340A (a)
18. Pub L. 109-18 Section 340A (b)
19. Pub L. 109-18 Section 340A (b)(1-6) and (1)(2)
20. Pub L. 109-18 Section 340A (1)(1)
21. Senate Report 109-287—Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriation Bill 2007.
22. Pub L. 109-18 Section 340A (j)(1)

Andrea M. Garcia, JD, is a research associate in the Division of Medicine and Public Health at the American Medical Association in Chicago, Ill.

Related article

[Managing chronic conditions in uninsured patients](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 766-770.

Medicine and society

Where you live matters to your health

by Abigail Silva, MPH

Sociologists have long recognized the importance of geography, particularly neighborhood, in the lives of individuals. After all, as Peter Rossi noted, neighborhoods are the places in which we find medical facilities that tend to our health, schools that teach us, factories and businesses that provide jobs, and parks in which to play and socialize [1]. However, with a few exceptions [2-4], the examination of the role of “place” in an individual American’s health has been a focus of study only during the last decade. Recent interest in the social determinants of health has drawn attention to the role of environment [5, 6]. In fact, during this short span, numerous studies have found that neighborhood context may be related to health independently of individual-level attributes [7-32].

One neighborhood characteristic that has been repeatedly associated with poor health outcomes is poverty. After adjusting for individual-level risk, living in an economically disadvantaged (often defined by level of income, education, employment status and other variables) neighborhood has been found to increase the risk of mortality [7-11], low weight births [12, 13], coronary heart disease incidence [14, 15] and childhood asthma [16, 17].

Another related environmental factor shown to affect health is racial residential segregation. All residential segregation, although most dramatically in the African American community, has been shown to result in racial disparities in socioeconomic status and has been linked to health outcomes such as all-cause mortality [18, 19], premature mortality [20], infant mortality [21, 22] and tuberculosis [23].

Neighborhood stressors

While the exact pathways of stressors in economically disadvantaged and segregated environments may not always be clear, there are circumstances that are likely to affect health. For instance, it has been well established that the tobacco and alcohol industries market disproportionately to poor and minority neighborhoods [24-26]. These same disadvantaged neighborhoods are often plagued by high rates of violence, chronic illness and financial strain [27] that can contribute to increased levels of stress. Faced with these pressures, individuals often turn to tobacco and alcohol to cope. The combination of environmental stressors and the heavy advertising of alcohol and tobacco is not conducive to healthy behaviors.

Another characteristic of disenfranchised neighborhoods that impedes healthy behaviors is the paucity of supermarkets [28, 29]. While it is widely accepted that a nutritious diet is essential to good health, ready access to fresh produce and other healthful food often depends on where one lives. Many low-income and minority communities are plagued by vast fast-food choices and few alternatives [30]. Moreover, the price of fresh fruits and vegetables may be prohibitive to some low-income consumers [31, 32]. Combined, these conditions can lead to poorer nutrition.

Where one lives also partly determines access to medical care. For instance, it has been documented that health care facilities in poor and minority communities are more likely to close than those in higher income areas [33-35]. This leaves some neighborhoods with limited or no access to care. Those who live in such neighborhoods often delay treatment (and, even more so, preventive care) to the long-term detriment of their health.

It is vitally important to assess a patient's health risks and lifestyle stressors in the medical encounter in order to determine a diagnosis and prescribe treatment. Yet how often is the patient's environment assessed? Consider a patient with asthma who smokes. Why would anyone with this health problem take such a risk? Perhaps she lives in an environment with high rates of unemployment and crime, and smoking helps her cope with these conditions. How should a clinician use this information in the care plan? In this case a physician might deem it appropriate to refer the patient to a stress management program or a mental health professional who can help her find better ways of coping with stress. Another example is the patient whose health would benefit greatly by weight loss and a better diet. Such a patient might be willing to make these lifestyle changes but must overcome several barriers to do so. Suppose she lives in a neighborhood with poor recreational facilities and a limited number of supermarkets with fresh fruits and vegetables. These facts of the patient's life can be as important as the physical exam in creating a realistic treatment plan. And they most definitely influence whether the patient will be able to adhere to the plan.

Conclusion

It is widely recognized that disparities in health among individuals in different racial and ethnic groups and socioeconomic levels are pervasive and that the causes are multifactorial. Moreover, these differences tend to be most striking when geographic location is taken into account. Clinicians who consider the effects of both individual and environmental risks when assessing a patient stand a better chance of being effective with their treatment and help to reduce disparities in health.

References

1. Rossi PH. Community social indicators. In: Campbell A, Converse PE, eds. *The Human Meaning in Social Change*. New York, NY: Russell Sage Foundation; 1972:87-126.

2. Harburg E, Erfurt J, Chape C, Hauenstein LS, Schull WJ, Schork MA. Socioecological stressor areas and black-white blood pressure. *J Chronic Dis.* 1973;26:595-611.
3. James SA, Kleinbaum DG. Socioecologic stress and hypertension related mortality rates in North Carolina. *Am J Public Health.* 1976;66:354-358.
4. Kasl SV, Harburg E. Mental health and the urban environment: some doubts and second thoughts. *J Health Soc Behav.* 1975;16:268-282.
5. Krieger N. Epidemiology and the web of causation: Has anyone seen the spider? *Soc Sci Med.* 1994;39:887-903.
6. Kaplan GA, Lynch JW. Whither studies on the socioeconomic foundations of population health? *Am J Public Health.* 1997;87:1409-1411.
7. Haan M, Kaplan GA, Camacho T. Poverty and health. Prospective evidence from the Alameda County Study. *Am J Epidemiol.* 1987;125:989-998.
8. Anderson RT, Sorlie P, Backlund E, Johnson N, Kaplan GA. Mortality effects of community socioeconomic status. *Epidemiology.* 1997;8:42-47.
9. Waitzman NJ, Smith KR. Phantom of the area: poverty-area residence and mortality in the United States. *Am J Public Health.* 1998;88:973-976.
10. Winkleby MA, Cubbin C. Influence of individual and neighborhood socioeconomic status on mortality among black, Mexican-American, and white women and men in the United States. *J Epidemiol Community Health.* 2003;57:444-452.
11. Borrell LN, Diez Roux AV, Rose K, Catellier D, Clark BL, and Atherosclerosis Risk in Communities Study. Neighbourhood characteristics and mortality in the Atherosclerosis Risk in Communities Study. *Int J Epidemiol.* 2004;33:398-407.
12. Collins JW Jr, Schulte NF, Drolet A. Differential effect of ecologic risk factors on the low birthweight components of African-American, Mexican-American, and non-Latino white infants in Chicago. *J Natl Med Assoc.* 1998;90:223-229.
13. Baker AN, Hellerstedt WL. Residential racial concentration and birth outcomes by nativity: Do neighbors matter? *J Natl Med Assoc.* 2006;98:172-180.
14. Diez Roux AV, Merkin SS, Arnett D, et al. Neighborhood of residence and incidence of coronary heart disease. *N Engl J Med.* 2001;345:99-106.
15. Sundquist K, Winkleby M, Ahlen H, Johansson SE. Neighborhood socioeconomic environment and incidence of coronary heart disease: a follow-up study of 25,319 women and men in Sweden. *Am J Epidemiol.* 2004;159:655-662.
16. Litonjua AA, Carey VJ, Weiss ST, Gold DR. Race, socioeconomic factors, and area of residence are associated with asthma prevalence. *Pediatr Pulmonol.* 1999;28:394-401.
17. Pearlman DN, Zierler S, Meersman S, Kim HK, Viner-Brown SI, Caron C. Race disparities in childhood asthma: Does where you live matter? *J Natl Med Assoc.* 2006;98:239-247.
18. Polednak AP. Poverty, residential segregation, and black/white mortality rates in urban areas. *J Health Care Poor Underserved.* 1993;4:363-373.

19. Hart KD, Kunitz SJ, Sell RR, Mukamel DB. Metropolitan governance, residential segregation, and mortality among African Americans. *Am J Public Health*. 1998;88:434-438.
20. Cooper RS, Kennelly JF, Durazo-Arvizu R, Oh HJ, Kaplan G, Lynch J. Relationship between premature mortality and socioeconomic factors in black and white populations of US metropolitan areas. *Public Health Rep*. 2001;116:464-473.
21. Polednak AP. Black-white differences in infant mortality in 38 standard metropolitan statistical areas. *Am J Public Health*. 1991;81:1480-1482.
22. Polednak AP. Trends in US urban black infant mortality, by degree of residential segregation. *Am J Public Health*. 1996;86:723-726.
23. Acevedo-Garcia D. Zip code-level risk factors for tuberculosis: neighborhood environment and residential segregation in New Jersey, 1985-1992. *Am J Public Health*. 2001;91:734-741.
24. Hackbarth DP, Schnopp-Wyatt D, Katz D, Williams J, Silvesteri B, Pflieger M. Collaborative research and action to control the geographic placement of outdoor advertising of alcohol and tobacco products in Chicago. *Public Health Rep*. 2001;16:558-567.
25. Stoddard JL, Johnson CA, Sussman S, Dent C, Boley-Cruz T. Tailoring outdoor tobacco advertising to minorities in Los Angeles County. *J Health Commun*. 1998;3:137-146.
26. Moore DJ, Williams JD, Qualls WJ. Target marketing of tobacco and alcohol-related products to ethnic minority groups in the United States. *Ethn Dis*. 1996;6:83-98.
27. Evans GW, Saegert S. Residential crowding in the context of inner city poverty. In: Wapner S, Demisk J, Yamamoto T, et al., eds. *Theoretical Perspectives in Environment-behavior Research*. New York, NY: Kluwer Academic Publishers; 2000:247-267.
28. Morland K, Wing S, Diez Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. *Am J Prev Med*. 2002;22:23-29.
29. Zenk SN, Schulz AJ, Israel BA, James SA, Bao S, Wilson ML. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. *Am J Public Health*. 2005;95:660-667.
30. Block JP, Scribner RA, DeSalvo KB. Fast food, race/ethnicity, and income: a geographic analysis. *Am J Prev Med*. 2004;27:211-217.
31. Dibsall LA, Lambert N, Bobbin RF, Frewer LJ. Low-income consumers' attitudes and behaviour towards access, availability, and motivation to eat fruits and vegetables. *Public Health Nutr*. 2003;6:159-168.
32. Jetter KM, Cassady DL. The availability and cost of healthier food alternatives. *Am J Prev Med*. 2006;30:38-44.
33. Whiteis DG. Hospital and community characteristics in closures of urban hospitals, 1980-87. *Public Health Rep*. 1992;107:409-416.

34. McLafferty S. Neighborhood characteristics and hospital closures: a comparison of the public, private, and voluntary hospital systems. *Soc Sci Med.* 1982;16:1667-1674.
35. Rice MF. Inner-city hospital closures/relocations: race, income status, and legal issues. *Soc Sci Med.* 1987;24:889-896.

Abigail Silva, MPH, is an epidemiologist at the Sinai Urban Health Institute at Mt. Sinai Hospital in Chicago, Ill., where she assesses health disparities in Chicago and its communities using vital statistics and data from a community health survey. She has also gained extensive experience in evaluating rapid HIV testing programs in medical care settings.

Related articles

[Social epidemiology: how socioeconomic risk factors become health realities](#), November 2006

[Socioeconomic determinants of health: the facts are in](#), November 2006

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 771-775.

Medicine and society

Crowded conditions: coming to an ER near you

by Jessamy Taylor

Most people expect that their local emergency department will have the resources to give them high quality care in a timely manner when they are in urgent need. But, in reality, urban emergency departments (EDs) report difficulty in providing such care consistently. In many ways, EDs serve as a barometer of the state of the health care system, and their crowded conditions may represent not only the hospital's inefficiencies but also larger problems in access to primary and specialty care. The Institute of Medicine published a three-report series on the state of the U.S. emergency care system in June 2006 and concluded that hospital-based emergency care is "at the breaking point" [1].

Crowded conditions

ED crowding has several contributing causes: volume of visiting patients, the capacity of EDs to handle them, the acuity of cases, the efficiency of EDs in treating patients and the ED's ability to move admitted patients to other units of the hospital. Within each of these areas a number of other factors are at play. Visit volume, for example, is influenced by the number of hospital EDs in a given geographic area and the resources of each, the number of inpatient beds in the local health care market, community access to primary and specialty care (including mental health services), insurance coverage rates, the community's overall health status and the hospitals' obligations under the Emergency Medical Treatment and Active Labor Act (EMTALA) [2]. ED efficiency is affected by staffing levels of nurses, emergency physicians and on-call specialists, and by the turnaround time for diagnostic tests and lab work. The efficient transfer of patients from the ED depends on the availability of inpatient beds—especially intensive care unit beds—as well as the efficiency of the hospital's inpatient staff.

Demographics

Demand for emergency services is up while the number of emergency departments is down. Between 1994 and 2004 the annual number of patient visits jumped by 18 percent to 110 million. The visit rate per 100 persons rose 6 percent during that decade, whereas the number of EDs declined by 7 percent [3].

Conventional wisdom holds that more uninsured than insured patients use the ED for care. In reality, privately insured patients account for most visits, followed by those with Medicaid, the uninsured, and lastly, those with Medicare. However, when

looking at the number of visits per 100 persons with given insurance status, a different picture emerges. Medicaid beneficiaries have the highest visit rate (80.3 visits per 100), close to double that of the uninsured (44.6 visits per 100) and more than three times that of the privately insured (20.3 visits per 100) [4].

A significant percentage of ED visits are for nonurgent conditions that could be treated in other settings. In 2004 about 14 million visits, or 12.5 percent of all visits that year, were classified as nonurgent (requiring care within 2 to 24 hours) and thus treatable in the primary care setting. Another 22 percent of visits were considered semiurgent (requiring care between one and two hours) and thus potentially appropriate if the ED was visited outside of normal physician office hours [3].

Causes of crowding

One of the key reasons for boarding patients in the ED is a lack of inpatient beds for those who need to be admitted to the hospital; total staffed inpatient beds have dropped by about 13 percent across the country in the last 15 years [5]. Prospective payment systems (PPS) were implemented by Medicare for inpatient care in 1984. With a PPS, hospitals receive a predetermined payment rate for an entire episode of care. Private payers also began seeking and receiving PPS arrangements. These revenue constraints created an environment in which hospitals could earn profits by operating more efficiently. At the same time, clinical practice advancements shifted care to outpatient settings, thereby reducing the need for inpatient admissions. Together these trends produced an excess supply of beds that hospital administrators addressed by staffing fewer beds.

At many hospitals the surgery schedule limits inpatient bed availability, particularly intensive care beds. Scheduled surgeries are often bunched in the middle of the week, which creates an increased demand for operating room space and inpatient beds and leaves little inpatient capacity for emergency cases. Hospital administrators also blame staffing shortages, especially a lack of nurses, for their capacity problems.

It has been assumed that having a primary care physician or stable source of care reduces inappropriate ED use. A recent analysis, however, found that persons “without a usual source of care were less likely than those with a usual source of care to have had an ED visit,” and “persons without insurance were no more likely to have had an ED visit than those with insurance” [6]. Use of the ED for nonurgent care by those with a “medical home” appears to stem from dissatisfaction with their physicians. Long waits before getting an appointment or difficulties reaching their physician on the phone strongly correlate with ED use for nonurgent care. Private practices and primary care clinics typically offer little in the way of evening or weekend office hours. Community health centers can be equally limited in their after-hours availability. This barrier makes the no-appointment, “24/7” nature of the ED a relatively convenient and, in some cases, necessary place to receive primary care.

Many hospitals have difficulty complying with EMTALA because it means having appropriate specialists on-call for ED patients. EMTALA requires that all hospitals screen and stabilize any patient who comes to the ED regardless of that patient's insurance status or ability to pay. Hospitals, ED physicians and on-call specialists are typically paid separately, so all bear the financial losses of providing care to the uninsured and underinsured under this act. Hospital administrators face the challenge of balancing hospital finances, quality patient care and regulatory demands with physician compensation and lifestyle preferences.

Consequences

The consequences of crowded EDs for quality of care have not been studied comprehensively, so little scientific evidence is available to confirm the widely held assumption that crowding adversely affects the quality of patient care. The literature on crowding highlights potential negative consequences such as delayed treatment and prolonged pain and suffering for those who leave the ED before being seen and for those who stay and experience long waits, increased time in transport when ambulances are diverted to less crowded EDs and more waiting in hallways for inpatient beds. Overcrowding also adds to frustration among staff. One recent study of heart attack patients found that ED crowding delayed the administration of life-saving medications, resulting in quantifiable increases in mortality. Further study is needed to measure the effects of crowding both on the health of individuals and on overall public health in light of discussions about the adequacy of emergency capacity to respond to natural disasters, epidemics and terrorist events.

Solutions

Addressing ED crowding at the national policy level is challenging because crowding varies by geographic area and hospital, but a number of ideas have been discussed in the literature. Strategies intervene at different points in the flow of patients through the system—*input* or demand; *throughput* or ED procedures; and *output*, the ability of ED staff to admit, transfer or discharge a patient.

- One proposed intervention at the point of input is reducing demand for ED services by improving access to primary and specialty care and chronic disease management for the highest users—Medicaid beneficiaries. Medicaid reimbursement rates are relatively low, so improving them could encourage more provider participation [7].
- In the area of throughput, fast track-urgent care centers could be established for patients with less acute conditions. Dedicating lab and x-ray staff and equipment for the sole use of the ED would also improve throughput [1].
- A key solution for the output end of the problem would be to schedule surgeries more evenly throughout the week to allow for operating room space and inpatient beds for ED patients [8].

Conclusion

Preserving the adequacy and quality of emergency care is a community-wide concern. Many emergency departments across the country are struggling to meet

daily demand and have little surge capacity to handle a bioterrorist attack or influenza pandemic. Thoughtfully untangling and addressing the confluence of factors that creates crowded EDs is critical to preserving EDs and the safety net they provide for everyone.

Notes and references

1. Committee on the Future of Emergency Care in the United States Health System Board on Health Care Services. *Hospital-Based Emergency Care: At the Breaking Point*. Washington, DC: National Academy Press, Institute of Medicine; In press.
2. The most significant change in emergency treatment policy took place in 1986 when Congress passed the Emergency Medical Treatment and Active Labor Act (EMTALA). The law was enacted in response to highly publicized cases of hospitals turning away or inappropriately transferring patients who could not pay for their care, a practice known as “patient dumping.” Although there has been debate and litigation interpreting the statutory and regulatory language, broadly EMTALA creates an individual right to emergency services in Medicare-participating hospitals. The act applies to anyone presenting to the ED of a Medicare-participating hospital, not just Medicare beneficiaries. This instance of a legal right to health care for individuals is unique in the United States.
3. McCaig LF, Nawar EW. *National Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Summary*. Hyattsville, Md: U.S. Department of HHS; 2006. Available at: <http://www.cdc.gov/nchs/data/ad/ad372.pdf#search=%22national%20hospital%20ambulatory%20medical%20care%20survey%3A%202004%20emergency%20department%20summary%22>. Accessed October 5, 2006.
4. American Hospital Association. TrendWatch chartbook 2006. Available at: [http://www.ahapolicyforum.org/ahapolicyforum/trendwatch/content/CB06Appendices15.PPT#337,6,Slide 6](http://www.ahapolicyforum.org/ahapolicyforum/trendwatch/content/CB06Appendices15.PPT#337,6,Slide%206). See specifically slides 2.1 and 3.3. Accessed October 5, 2006.
5. American Hospital Association, Slide 2.2.
6. Weber EJ, Showstack JA, Hunt KA, Colby DC, Callahan ML. Does lack of a usual source of care or health insurance increase the likelihood of an emergency department visit? Results of a national population-based study. *Ann Emerg Med*. 2005;45:8.
7. Cunningham PJ. Medicaid/SCHIP cuts and hospital emergency department use. *Health Aff*. 2006;25:237-247.
8. Litvak E, Long MC, Cooper AB, McManus ML. Emergency department diversion: causes and solutions. *Acad Emerg Med*. 2001;8:1108-1110.

Jessamy Taylor is a research associate at the National Health Policy Forum, a nonpartisan research and public policy organization at The George Washington University, in Washington, D.C.

Related articles

[Defining hospitals' obligation to stabilize patients under EMTALA](#), November 2006

[Managing chronic conditions in uninsured patients](#), November 2006

[Understanding EMTALA](#) (PowerPoint)

[Emergency treatment for patients who cannot pay](#), June 2001

Virtual Mentor welcomes your response to recently published articles and commentaries. Send your correspondence to the *Virtual Mentor* e-mail address: virtualmentor@ama-assn.org.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 776-791.

Readings and resources

November 2006

Abbuhl SB, Lowe RA. The inappropriateness of “appropriateness.” *Acad Emerg Med.* 1996;3:189-191.

Acevedo-Garcia D. Zip code-level risk factors for tuberculosis: neighborhood environment and residential segregation in New Jersey, 1985-1992. *Am J Public Health.* 2001;91:734-741.

Adler NE, Boyce WT, Chesney MA, Folkman S, Syme SL. Socioeconomic inequalities in health: no easy solution. *JAMA.* 1993;269:3140-3145.

Adler NE, Newman K. Socioeconomic disparities in health: pathways and policies. *Health Aff.* 2002;21:60-76.

American Association of Poison Control Centers. AAPCC homepage. Available at www.aapcc.org. Accessed October 12, 2006. In an emergency call 800-222-1222.

American Cancer Society. *Cancer in the Poor: A Report to the Nation*. Atlanta, Ga: American Cancer Society; 1989.

American College of Emergency Physicians. EMTALA. Available at: <http://www.acep.org/webportal/PatientsConsumers/critissues/UninsuredUnderinsured/emtala.htm>. Accessed October 4, 2006.

American College of Emergency Physicians. *Responding To Emergency Department Crowding: A Guidebook for Chapters*. Available at: <http://www.acep.org/NR/rdonlyres/F816F22E-1E8A-43BC-8357-5F6DC966C349/0/edCrowdingReport.pdf>. Accessed October 4, 2006.

American Hospital Association. TrendWatch chartbook 2006. Available at: <http://www.ahapolicyforum.org/ahapolicyforum/trendwatch/content/CB06Appendices15.PPT#337,6,Slide 6>. See specifically slides 2.1 and 3.3. Accessed October 5, 2006.

American Medical Association. Principles of medical ethics. Article I. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/2512.html>. Accessed October 12, 2006.

American Medical Association. Principles of medical ethics. Principle IX. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=browse&doc=policyfiles/E-0.00.HTM&s_t=&st_p=&nth=1&prev_pol=policyfiles/HnE/H-525.998.HTM&nxt_pol=policyfiles/E-1.00.HTM. Accessed October 13, 2006.

American Medical Association. Opinion 2.09 Costs. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-2.09.HTM&s_t=2.09&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=1. Accessed October 13, 2006.

American Medical Association. Opinion 2.095 The provision of adequate health care. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E2.095.HTM&s_t=The+provision+of+adequate+health+care.&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=2. Accessed October 13, 2006.

American Medical Association. Opinion 8.12 Patient information. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-8.12.HTM&s_t=patient+information&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&st_p=15&nth=6. Accessed October 13, 2006.

American Medical Association. Opinion 9.065 Caring for the poor. *Code of Medical Ethics*. Available at: http://www.ama-assn.org/apps/pf_new/pf_online?f_n=resultLink&doc=policyfiles/HnE/E-9.065.HTM&s_t=caring+for+the+poor&catg=AMA/HnE&catg=AMA/BnGnC&catg=AMA/DIR&&nth=1&&st_p=0&nth=2. Accessed October 13, 2006.

American Medical Association. Opinion 10.01 Fundamental elements of the patient-physician relationship. *Code of Medical Ethics*. Available at: <http://www.ama-assn.org/ama/pub/category/8313.html>. Accessed October 13, 2006.

Anderson LB, Bracken J, Bracken MC. *Review of Department of Defense Education Activity (DODEA) Schools: Volume II: Quantitative Analysis of Educational Quality*. Alexandria, Va: Institute for Defense Analyses; 2000. Available at: [http://www.dodea.edu/communications/pdf/RDoDEAschoolsV2.pdf#search=%22review%20of%20department%20of%20defense%20education%20activity%20\(DODEA\)%20schools%22](http://www.dodea.edu/communications/pdf/RDoDEAschoolsV2.pdf#search=%22review%20of%20department%20of%20defense%20education%20activity%20(DODEA)%20schools%22). Accessed October 3, 2006.

Anderson RT, Sorlie P, Backlund E, Johnson N, Kaplan GA. Mortality effects of community socioeconomic status. *Epidemiology*. 1997;8:42-47.

Association of Occupational and Environmental Clinics. Clinic Directory. Available at: www.aoec.org/directory.htm. Accessed October 12, 2006.

Ayanian JZ, Weissman JS, Schneider EC, Ginsburg JA, Zaslavsky AM. Unmet health needs of uninsured adults in the United States. *JAMA*. 2000;284:2061-2069.

Backlund E, Sorlie PD, Johnson NJ. The shape of the relationship between income and mortality in the United States: evidence from the National Longitudinal Mortality Study. *Ann Epidemiol*. 1996;6:12-20.

Baker AN, Hellerstedt WL. Residential racial concentration and birth outcomes by nativity: Do neighbors matter? *J Natl Med Assoc*. 2006;98:172-180.

Bellinger D, Leviton A, Waternaux C, Needleman H, Rabinowitz M. Longitudinal analyses of prenatal and postnatal lead exposure and early cognitive development. *N Engl J Med*. 1987;316:1037-1043.

Berkowitz GS, Wetmur JG, Birman-Deych E, et al. In utero pesticide exposure, maternal paraoxonase activity, and head circumference. *Environ Health Perspect*. 2004;112:388-391.

Bitterman RA. EMTALA and the ethical delivery of hospital emergency services. *Emerg Med Clin N Am*. 2006;24:557-577.

Black D, Morris J, Smith C, Townsend P. *Inequalities in Health: Report on Research Working Group*. London, UK: Department of Health and Social Security; 1980.

Black H. GAO sounds off on chemical regulation. *Environ Health Perspect*. 2005;113:A828-830.

Block JP, Scribner RA, DeSalvo KB. Fast food, race/ethnicity, and income: a geographic analysis. *Am J Prev Med*. 2004;27:211-217.

Borrell LN, Diez Roux AV, Rose K, Catellier D, Clark BL, and Atherosclerosis Risk in Communities Study. Neighbourhood characteristics and mortality in the Atherosclerosis Risk in Communities Study. *Int J Epidemiol*. 2004;33:398-407.

Brousseau DC, Bergholte J, Gorelick MH. Decreased primary care satisfaction is associated with nonurgent emergency department utilization [abstract]. *Pediatr Res*. 2003;53:267A.

Brousseau DC, Meurer JR, Isenberg ML, Kuhn EM, Gorelick MH. The association between infant continuity of care and pediatric emergency department utilization. *Pediatrics*. 2004;113:738-741.

Brown P. Race, class, and environmental health: a review and systematization of the literature. *Environ Res*. 1995;69:15-30.

Bryant v Adventist Health System, 289 F3d 1162 (9th Cir 2002).

Bullard RD. *Dumping in Dixie: Race, Class and Environmental Quality*. Boulder, Colo: Westview Press; 1990.

Bunker J, Frazier H, Mosteller F. The role of medical care in determining health: creating an inventory of benefits. In: Amick B, Levine S, Tarlov AR, Walsh DC, eds. *Society and Health*. New York, NY: Oxford University Press; 1995:305-341.

Carnegie Corporation of New York. *Starting Points: Meeting the Needs of Our Youngest Children*. Waldorf, Md: Carnegie Corporation of New York; 1999. Available at: www.carnegie.org/starting_points/index.html. Accessed October 4, 2006.

Carver BS, Bozeman CB, Williams BJ, Venable DO. The prevalence of men with National Institute of Health category IV prostatitis and association with serum prostate specific antigen. *J Urol*. 2003;169:589-591.

Cauthen NK, Lu HH. *Employment Alone is not Enough for America's Low-Income Children and Families*. New York, NY: National Center for Children in Poverty; 2003. Available at: www.nccp.org/media/lat03a-text.pdf. Accessed October 4, 2006.

Cimato TR, Jessup M. Recipient selection in cardiac transplantation: contraindications and risk factors for mortality. *J Heart Lung Transplant*. 2002;21:1161-1173.

Cohen A, Houck PR, Szanto K, Dew MA, Gilman SE, Reynolds CJ 3rd. Social inequalities in response to antidepressant treatment in older adults. *Arch Gen Psychiatry*. 2006;63:50-56.

Collins JW Jr, Schulte NF, Drolet A. Differential effect of ecologic risk factors on the low birthweight components of African-American, Mexican-American, and non-Latino white infants in Chicago. *J Natl Med Assoc*. 1998;90:223-229.

Collins v DePaul Hospital, 963 F2d 303, 307 (10th Cir. 1992).

Committee on the Future of Emergency Care in the United States Health System Board on Health Care Services. *Hospital-Based Emergency Care: At the Breaking Point*. Washington, DC: National Academy Press, Institute of Medicine; In Press.

Cooper RS, Kennelly JF, Durazo-Arvizu R, Oh HJ, Kaplan G, Lynch J. Relationship between premature mortality and socioeconomic factors in black and white populations of US metropolitan areas. *Public Health Rep.* 2001;116:464-473.

Coronado GD, Vigoren EM, Thompson B, Griffith WC, Faustman EM. Organophosphate pesticide exposure and work in pome fruit: evidence for the take-home pesticide pathway. *Environ Health Perspect.* 2006;114:999-1006.

Coulehan J, Williams PC, Van McCrary S, Belling C. The best lack all conviction: biomedical ethics, professionalism, and social responsibility. *Camb Q Healthc Ethics.* 2003;12:21-38.

Cunningham PJ. Medicaid/SCHIP cuts and hospital emergency department use. *Health Aff.* 2006;25:237-247.

Cydulka RK, Tamayo-Sarver JH, Wolf C, Herrick E, Gress S. Inadequate follow-up controller medications among patients with asthma who visit the emergency department. *Ann Emerg Med.* 2005;46:316-322.

Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. ToxFAQs: frequently asked questions about contaminants found at hazardous waste sites. Available at: <http://www.atsdr.cdc.gov/toxfaq.html>. Accessed October 12, 2006.

Department of Health and Human Services. *For a Healthy Nation: Returns on Investments in Public Health*. Publication No: 0-16-045143-4. Washington, DC: US Government Printing Office; 1994.

Dibsdall LA, Lambert N, Bobbin RF, Frewer LJ. Low-income consumers' attitudes and behaviour towards access, availability, and motivation to eat fruits and vegetables. *Public Health Nutr.* 2003;6:159-168.

Diez Roux AV, Merkin SS, Arnett D, et al. Neighborhood of residence and incidence of coronary heart disease. *N Engl J Med.* 2001;345:99-106.

Dimitrakov JD, Kaplan SA, Kroenke K, Jackson JL, Freeman MR. Management of chronic prostatitis/chronic pelvic pain syndrome: an evidence-based approach. *Urology.* 2006;67:881-888.

Dohan D, Schrag D. Using navigators to improve care of the underserved patients: current practices and approaches. *Cancer.* 2005;104:848-855.

Ellison R. *Invisible Man*. New York, NY: Random House; 1980:14.

Emergency Medical Treatment and Active Labor Act. 42 USC 1395dd(e)(3)(A) (2005).

Etzel RA, Balk SJ, eds. *Pediatric Environmental Health*. 2nd ed. Elk Grove Village, Ill: American Academy of Pediatrics; 2003:324-360.

Evans GW, Saegert S. Residential crowding in the context of inner city poverty. In: Wapner S, Demisk J, Yamamoto T, et al., eds. *Theoretical Perspectives in Environment-behavior Research*. New York, NY: Kluwer Academic Publishers; 2000:247-267.

Evans RG, Barer ML, Marmor TR, eds. *Why Are Some People Healthy and Others Not? The Determinants of Health of Populations*. New York, NY: Aldine de Gruyter; 1994.

Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. *Challenging Inequities in Health: From Ethics to Action*. New York, NY: Oxford University Press; 2001.

Examination and Treatment for Emergency Medical Conditions and Women in Labor. 42 USC 1395dd (2005).

Farmer P. *Pathologies of Power: Health, Human Rights and the New War on the Poor*. Berkeley: University of California Press; 2003.

Farmer P, Gastineau-Campos N. Rethinking medical ethics: a view from below. *Developing World Bioeth*. 2004;4:22-41.

Feinstein L. *Quantitative Estimates of the Social Benefits of Learning, 2: Health (Depression and Obesity)*. London, England: Centre for Research on the Wider Benefits of Learning; 2002. Available at: <http://www.learningbenefits.net/Publications/ResReps/ResRep6.pdf#search=%22quantitative%20estimates%20of%20the%20social%20benefits%20of%20learning%22>. Accessed October 3, 2006.

Flores G. Language barriers to health care in the United States. *N Engl J Med*. 2006;355:229-231.

Foster SC. *My Old Kentucky Home*. Available at: www.50states.com/songs/kentucky.htm. Accessed October 18, 2006.

Fowler T, Steakley C, Garcia AR, Kwok J, Bennett LM. Reducing disparities in the burden of cancer: The role of patient navigators. *PLoS Med*. 2006;3:e193.

Frank AL, Balk S. *Case Studies in Environmental Medicine (CSEM). Taking an Exposure History*. Available at: <http://www.atsdr.cdc.gov/HEC/CSEM/exphistory/index.html>. Accessed October 18, 2006.

Freeman HP. A model navigation program. *Oncology Issues*. Available at: accr-cancer.org/ONIS/articles/sepoc04/freeman.pdf. Accessed October 16, 2006.

Freeman HP. Poverty, culture, and social injustice: determinants of cancer disparities. *CA Cancer J Clin*. 2004;54:72-77.

French DB, Jones LA. Minority issues in prostate disease. *Med Clin North Am*. 2005;89:805-816.

Georgia Department of Early Care and Learning. *Bright from the Start*. Available at: <http://www.dec.state.ga.us/default.aspx>. Accessed October 3, 2006.

Gershoff ET. *Low Income and the Development of America's Kindergartners*. New York, NY: National Center for Children in Poverty; 2003. Available at: www.nccp.org/medial/lat03a-text.pdf. Accessed October 4, 2006.

Haan M, Kaplan GA, Camacho T. Poverty and health. Prospective evidence from the Alameda County Study. *Am J Epidemiol*. 1987;125:989-998.

Hackbarth DP, Schnopp-Wyatt D, Katz D, Williams J, Silvesteri B, Pflieger M. Collaborative research and action to control the geographic placement of outdoor advertising of alcohol and tobacco products in Chicago. *Public Health Rep*. 2001;16:558-567.

Harburg E, Erfurt J, Chape C, Hauenstein LS, Schull WJ, Schork MA. Socioecological stressor areas and black-white blood pressure. *J Chronic Dis*. 1973;26:595-611.

Hart KD, Kunitz SJ, Sell RR, Mukamel DB. Metropolitan governance, residential segregation, and mortality among African Americans. *Am J Public Health*. 1998;88:434-438.

Health Resources and Services Administration. Health Literacy. Available at: <http://www.hrsa.gov/healthliteracy/>. Accessed October 16, 2006.

Health Resources and Services Administration, Bureau of Primary Health Care. Health center information. Available at: http://www.bphc.hrsa.gov/bphc/index_1.htm. Accessed October 16, 2006.

Healthy People 2010. What is Healthy People? Available at: <http://www.healthypeople.gov/About/whatis.htm>. Accessed October 16, 2006.

Hilfiker D. *Not All of Us Are Saints: A Doctor's Journey with the Poor*. New York, NY: Hill and Wang; 1994:152-153.

Himmelstein DU, Warren E, Thorne D, Woolhandler S. Illness and injury as contributors to bankruptcy. *Health Aff*. Available at: <http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.63v1>. Accessed September 29, 2006.

Hippocrates. Hippocratic oath. In: Edelstein, L, trans-ed. *The Hippocratic Oath: Text, Translation and Interpretation*. Baltimore, Md: Johns Hopkins Press; 1943. Translation available at: http://www.pbs.org/wgbh/nova/doctors/oath_classical.html. Accessed October 12, 2006.

Hua VN, Schaeffer AJ. Acute and chronic prostatitis. *Med Clin North Am*. 2004;88:483-494.

Irish K, Schumacher R, Lombardi J. *Head Start Comprehensive Services: A Key Support for Early Learning*. Available at: http://www.clasp.org/publications/HS_brf_4.pdf#search=%22head%20start%20comprehensive%20services%20a%20key%20support%20for%20early%20learning%22. Accessed October 4, 2006.

Isaacs SL, Schroeder SA. Class—the ignored determinant of the nation’s health. *N Engl J Med*. 2004;351:1137-1142.

Jacobson JL, Jacobson SW. Intellectual impairment in children exposed to polychlorinated biphenyls in utero. *N Engl J Med*. 1996;335:783-789.

James SA, Kleinbaum DG. Socioecologic stress and hypertension related mortality rates in North Carolina. *Am J Public Health*. 1976;66:354-358.

Jetter KM, Cassady DL. The availability and cost of healthier food alternatives. *Am J Prev Med*. 2006;30:38-44.

The Kaiser Commission on Medicaid and the Uninsured. *Deficit Reduction Act of 2005: Implications for Medicaid*. Available at: <http://www.kff.org/medicaid/upload/7465.pdf>. Accessed October 10, 2006.

Kamanyire R, Karalliedde L. Organophosphate toxicity and occupational exposure. *Occup Med (London)*. 2004;54:69.

Kaplan GA, Lynch JW. Whither studies on the socioeconomic foundations of population health? *Am J Public Health*. 1997;87:1409-1411.

Kasl SV, Harburg E. Mental health and the urban environment: some doubts and second thoughts. *J Health Soc Behav*. 1975;16:268-282.

Keating DP, Hertzman C, eds. *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York, NY: Guilford Press; 1999.

Keating DP, Miller FK. Individual pathways in competence and coping: from regulatory systems to habits of mind. In: Keating DP, Hertzman C, eds. *Developmental Health and the Wealth of Nations: Social, Biological, and Educational Dynamics*. New York, NY: Guilford Press; 1999:220-234.

Kellerman AL. Calculating the cost of emergency care. *Ann Emerg Med*. 2005;45:491-492.

Kennedy BP, Kawachi I, Prothrow-Stith D. Income distribution and mortality: cross sectional ecological study of the Robin Hood Index in the United States. *BMJ*. 1996;312:1004-1007.

Kiefer CW. *Health Work with the Poor: A Practical Guide*. New Brunswick, NJ: Rutgers University Press; 2000:78.

Kim JY, Millen J, Greshman J, Irwin A, eds. *Dying For Growth: Global Inequality and the Health of the Poor*. Monroe, Me: Common Courage Press; 2000.

Krieger JN. Prostatitis revisited: new definitions, new approaches. *Infect Dis Clin North Am*. 2003;17:395-409.

Krieger JN, Nyberg L Jr, Nickel JC. NIH consensus definition and classification of prostatitis. *JAMA*. 1999;282:236-237.

Krieger JN, Ross SO, Riley DE. Chronic prostatitis: epidemiology and role of infection. *Urology*. 2002;60(6 Suppl):8-12.

Krieger N. Embodiment: a conceptual glossary for epidemiology. *J Epidemiol Community Health*. 2005;59:350-355.

Krieger N. Epidemiology and the web of causation: Has anyone seen the spider? *Soc Sci Med*. 1994;39:887-903.

Krieger N. Theories for social epidemiology in the 21st century: an ecosocial perspective. *Int J Epidemiol*. 2001;30:668-677.

Krieger N, Williams DR, Moss NE. Measuring social class in US public health research: concepts, methodologies and guidelines. *Ann Rev Public Health*. 1997;18:341-378.

Kristenson M, Eriksen HR, Sluiter JK, Starke D, Ursin H. Psychobiological mechanisms of socioeconomic differences in health. *Soc Sci Med*. 2004;58:1511-1522.

Kuh D, Ben-Shlomo Y, Lynch J, Hallqvist J, Power C. Life course epidemiology. *J Epidemiol Community Health*. 2003;57:778-783.

Kuh D, Hardy R, Langenberg C, Richards M, Wadsworth ME. Mortality in adults aged 26-54 years related to socioeconomic conditions in childhood and adulthood: post war birth cohort study. *BMJ*. 2002;325:1076-1080.

Landrigan PJ, Schechter CB, Lipton JM, Fahs MC, Schwartz J. Environmental pollutants and disease in American children: estimates of morbidity, mortality, and costs for lead poisoning, asthma, cancer, and developmental disabilities. *Environ Health Perspect*. 2002;110:721-728.

Landrigan PJ, Trasande L, Thorpe LE, et al. The National Children's Study: A 21-year prospective study of 100,000 American children. *Pediatrics*. In press.

Lantz PM, House JS, Lepkowski JM, Williams DR, Mero RP, Chen J. Socioeconomic factors, health behaviors and mortality: results from a nationally representative prospective study of US adults. *JAMA*. 1998;279:1703-1708.

Laraque D, Trasande L. Lead poisoning: successes and 21st century challenges. *Pediatr Rev*. 2005;26:435-443.

Lawlor DA, Ebrahim S, Davey SG. Association between self-reported childhood socioeconomic position and adult lung function: findings from the British Women's Heart and Health Study. *Thorax*. 2004;59:199-203.

Lax MB, Grant WD, Manetti FA, Klein R. Recognizing occupational disease—taking an effective occupational history. *Am Fam Physician*. 1998;58:935-944.

Leigh JP, Markowitz SB, Fahs M, Shin C, Landrigan PJ. Occupational injury and illness in the United States. Estimates of costs, morbidity, and mortality. *Arch Intern Med*. 1997;157:1557-1568.

Lewin ME, Altman S, eds. *America's Health Care Safety Net: Intact but Endangered*. Washington, DC: National Academies Press, Institute of Medicine; 2000.

Link BG, Phelan JC. McKeown and the idea that social conditions are fundamental causes of disease. *Am J Public Health*. 2002;92:730-732.

Link BG, Phelan J. Social conditions as fundamental causes of disease. *J Health Soc Behav*. 1995:80-94.

List JM. Histories of mistrust and protectionism: disadvantaged minority groups and human-subject research policies. *Am J Bioeth.* 2005;5:53-56.

Litonjua AA, Carey VJ, Weiss ST, Gold DR. Race, socioeconomic factors, and area of residence are associated with asthma prevalence. *Pediatr Pulmonol.* 1999;28:394-401.

Litvak E, Long MC, Cooper AB, McManus ML. Emergency department diversion: causes and solutions. *Acad Emerg Med.* 2001;8:1108-1110.

Lleras-Muney A. *The Relationship Between Education and Adult Mortality in the United States.* Princeton, NJ: National Bureau of Economic Research; 2002. Available at: www.nber.org/papers/w8986.pdf. Accessed October 3, 2006.

Low MD, Low BJ, Baumler ER, Huynh PT. Can education policy be health policy? Implications of research on the social determinants of health. *J Health Polit Policy Law.* 2005;30:1131-1162.

Lowe RA, Localio AR, Schwarz DF, et al. Association between primary care practice characteristics and emergency department use in a Medicaid managed care organization. *Med Care.* 2005;43:792-800.

Lu N, Samuels ME, Wilson R. Socioeconomic differences in health: How much do health behaviors and health insurance coverage account for? *J Health Care Poor Underserved.* 2004;15:618-630.

Mann JM, Melnick GA, Bamezai A, Zwanziger J. A profile of uncompensated hospital care, 1983-1995. *Health Aff.* 1997;16:223-232.

Marmot M. Inequalities in health. *N Engl J Med.* 2001;345:134-136.

Matsunami H, Shimizu Y, Lynch SV, Balderson GA, Ando Y, Strong RW. Liver transplantation as a therapeutic option for hepatocellular carcinoma. *Oncology.* 2002;62:82-86.

McCaig LF, Nawar EW. *National Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Summary.* Hyattsville, Md: U.S. Department of HHS; 2006. Available at: <http://www.cdc.gov/nchs/data/ad/ad372.pdf#search=%22national%20hospital%20ambulatory%20medical%20care%20survey%3A%202004%20emergency%20department%20summary%22>. Accessed October 5, 2006.

McCauley LA, Sticker D, Bryan C, Lasarev MR, Scherer JA. Pesticide knowledge and risk perception among adolescent Latino farmworkers. *J Agric Saf Health.* 2002;8:397-409.

McDonough P, Duncan GJ, Williams D, House J. Income dynamics and adult mortality in the United States, 1972 through 1989. *Am J Public Health*. 1997;87:1476-1483.

McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff*. 2002;21:78-93.

McLafferty S. Neighborhood characteristics and hospital closures: a comparison of the public, private, and voluntary hospital systems. *Soc Sci Med*. 1982;16:1667-1674.

Meaney MJ, Diorio J, Francis D, et al. Early environmental regulation of forebrain glucocorticoid receptor gene expression: implications for adrenocortical responses to stress. *Dev Neurosci*. 1996;18:49-72.

Mehik A, Hellstrom P, Sarpola A, Lukkarinen O, Jarvelin MR. Fears, sexual disturbances and personality features in men with prostatitis: a population-based cross-sectional study in Finland. *BJU Int*. 2001;88:35-38.

Meza J, Alam S, Martin S. FPIN's clinical inquiries. Treatments for chronic prostatitis. *Am Fam Physician*. 2006;74:475-477.

Miech RA, Kumanyika SK, Stettler N, Link BG, Phelan JC, Chang VW. Trends in the association of poverty with overweight among US adolescents, 1971-2004. *JAMA*. 2006;295:2385-2393.

Mistry RD, Hoffmann RG, Yauck JS, Brousseau DC. Association between parental and childhood emergency department utilization. *Pediatrics*. 2005;115:e147-151.

Morland K, Wing S, Diez Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food service places. *Am J Prev Med*. 2002;22:23-29.

Moore DJ, Williams JD, Qualls WJ. Target marketing of tobacco and alcohol-related products to ethnic minority groups in the United States. *Ethn Dis*. 1996;6:83-98.

Murray LR. Sick and tired of being sick and tired: scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. *Am J Public Health*. 2003;93:221-226.

Mustard JF. What science says about the effects of early intervention: early child development and the brain: the base for health, learning, and behaviour throughout life. Paper presented at: World Bank Conference on Investing in Our Children's Future; April 10, 2000; Washington, DC.

National Cancer Institute. Center to reduce health disparities. Available at: <http://crchd.nci.nih.gov/initiatives/pnp/>. Accessed October 16, 2006.

National Environmental Education and Training Foundation. Pediatric environmental history forms. Available at: <http://www.neetf.org/Health/PEHI/HistoryForm.htm>. Accessed October 12, 2006.

Nickel JC, Nyberg LM, Hennenfent M. Research guidelines for chronic prostatitis: consensus report from the first National Institutes of Health International Prostatitis Collaborative Network. *Urology*. 1999;54:229-233.

Nielsen-Bohlman L, et al., eds. *Health Literacy: A Prescription to End Confusion*. Washington, DC: The National Academies Press, Institute of Medicine; 2004:xi.

Occupational Health and Safety Standards. 29 CFR 1910.146, 1910.20 (1997).

Office of Disease Prevention and Health Promotion. Health communication. Available at: http://www.healthypeople.gov/document/html/volume1/11healthcom.htm#_ednref1. Accessed October 16, 2006.

Office of Pollution Prevention and Toxic Substances. Chemicals-in-commerce information system. Chemical Update System Database. Washington, DC; 1998.

Pappas G, Queen S, Hadden W, Fisher G. The increasing disparity in mortality between socioeconomic groups in the United States, 1960 and 1986. *N Engl J Med*. 1993;329:103-109.

Patient Navigator Outreach and Chronic Disease Prevention Act of 2005. Pub L. 109-18.

Pearlman DN, Zierler S, Meersman S, Kim HK, Viner-Brown SI, Caron C. Race disparities in childhood asthma: Does where you live matter? *J Natl Med Assoc*. 2006;98:239-247.

Polednak AP. Black-white differences in infant mortality in 38 standard metropolitan statistical areas. *Am J Public Health*. 1991;81:1480-1482.

Polednak AP. Poverty, residential segregation, and black/white mortality rates in urban areas. *J Health Care Poor Underserved*. 1993;4:363-373.

Polednak AP. Trends in US urban black infant mortality, by degree of residential segregation. *Am J Public Health*. 1996;86:723-726.

Prodigy Guidance. Prostatitis: extended information. Available at: http://www.prodigy.nhs.uk/prostatitis/extended_information/management_issues. Accessed October 4, 2006.

Ragin DF, Hwang U, Cydulka RK, et al. Reasons for using the emergency department: results of the EMPATH study. *Acad Emerg Med*. 2005;12:1158-1166.

Rice MF. Inner-city hospital closures/relocations: race, income status, and legal issues. *Soc Sci Med*. 1987;24:889-896.

Roberts JR, Gitterman BA. Pediatric environmental health education: a survey of US pediatric residency programs. *Ambul Pediatr*. 2003;3:57-59.

Roberts RO, Lieber MM, Rhodes T, Girman CJ, Bostwick DG, Jacobsen SJ. Prevalence of a physician-assigned diagnosis of prostatitis: The Olmsted County Study of Urinary Symptoms and Health Status Among Men. *Urology*. 1998;51:578-584.

Rodier PM. Developing brain as a target of toxicity. *Environ Health Perspect*. 1995;103(suppl 6):S73-S76.

Ross CE, Wu CL. Education, age, and the cumulative advantage in health. *J Health Soc Behav*. 1996;37:104-120.

Rossi PH. Community social indicators. In: Campbell A, Converse PE, eds. *The Human Meaning in Social Change*. New York, NY: Russell Sage Foundation; 1972:87-126.

Schenk M, Popp SM, Neale AV, Demers RY. Environmental medicine content in medical school curricula. *Acad Med*. 1996;71:499-501.

Senate Report 109-287—Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriation Bill 2007.

Shishehbor MH, Litaker D, Pothier CE, Lauer MS. Association of socioeconomic status with functional capacity, heart rate recovery, and all-cause mortality. *JAMA*. 2006;295:784-792.

Starfield B, Shi L. The medical home, access to care, and insurance: a review of evidence. *Pediatrics*. 2004;113:1493-1498.

Stoddard JL, Johnson CA, Sussman S, Dent C, Boley-Cruz T. Tailoring outdoor tobacco advertising to minorities in Los Angeles County. *J Health Commun*. 1998;3:137-146.

Sundquist K, Winkleby M, Ahlen H, Johansson SE. Neighborhood socioeconomic environment and incidence of coronary heart disease: a follow-up study of 25,319 women and men in Sweden. *Am J Epidemiol*. 2004;159:655-662.

Temte JL. Preparing for an influenza pandemic: vaccine prioritization. *Fam Pract Manag*. 2006;13:32-34.

Thompson JN, Brodtkin CA, Kyes K, Neighbor W, Evanoff B. Use of a questionnaire to improve occupational and environmental history taking in primary care physicians. *J Occup Environ Med.* 2000;42:1188-1194.

Thomson GE, Mitchell F, Williams MB, eds. *Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business.* Washington, DC: The National Academies Press, Institute of Medicine; 2006:15.

Thorton v Southwest Detroit Hospital, 895 F2d 1131 (6th Cir 1990).

Trasande L, Landrigan PJ, Schechter C. Health and economic consequences of methyl mercury toxicity to the developing brain. *Environ Health Perspect.* 2005;113:590-596.

Trasande L, Schapiro ML, Falk R, et al. Pediatrician attitudes, clinical activities, and knowledge of environmental health in Wisconsin. *WMJ.* 2006;105:45-49.

Trasande L, Schechter C, Falk R, et al. The environment in pediatric practice: a study of New York pediatricians' attitudes, beliefs, and practices towards children's environmental health. *J Urban Health.* 2006;83:760-772.

Traynor K. Uninsured numbers keep climbing. *Am J Health Syst Pharm.* 2006;63:1783-1784.

United Nations General Assembly. Universal Declaration of Human Rights, adopted under Resolution 217 A (III), December 10, 1948. Available at: <http://www.un.org/Overview/rights.html>. Accessed October 12, 2006.

Upton MN, McConnachie A, McSharry C, et al. Intergenerational 20 year trends in the prevalence of asthma and hay fever in adults: the Midspan Family Study surveys of parents and offspring. *BMJ.* 2000;321:88-92.

US Preventive Services Task Force. Screening for colorectal cancer. Available at: www.ahrq.gov/clinic/uspstf/uspscolo.htm. Accessed September 29, 2006.

US Department of Health & Human Services. Fiscal year 2006 federal child care appropriations. Available at: <http://www.acf.hhs.gov/programs/ccb/policy1/misc/approp06.htm>. Accessed October 4, 2006.

Waitzman NJ, Smith KR. Phantom of the area: poverty-area residence and mortality in the United States. *Am J Public Health.* 1998;88:973-976.

Weber EJ, Showstack JA, Hunt KA, Colby DC, Callahan ML. Does lack of a usual source of care or health insurance increase the likelihood of an emergency department visit? Results of a national population-based study. *Ann Emerg Med.* 2005;45:8.

Weiner S. "I can't afford that!": dilemmas in the care for the uninsured and underinsured. *J Gen Intern Med*. 2001;16:412-418.

Weiss BD, Blanchard JS, McGee DL, et al. Illiteracy among Medicaid recipients and its relationship to health care costs. *J Health Care Poor Underserved*. 1994;5:99-111.

Weissman J. Uncompensated hospital care. Will it be there if we need it? *JAMA*. 1996;276:823-828.

Werner EE. Risk, resilience, and recovery: perspectives from the Kauai Longitudinal Study. *Dev Psychopathol*. 1993;5:503-515.

Werner EE, Smith RS. *Vulnerable, but Invincible: A Longitudinal Study of Resilient Children and Youth*. New York, NY: McGraw-Hill; 1982.

Whiteis DG. Hospital and community characteristics in closures of urban hospitals, 1980-87. *Public Health Rep*. 1992;107:409-416.

Wilkinson RG. *Unhealthy Societies: The Afflictions of Inequality*. New York, NY: Routledge; 1996.

Williams RM. The costs of visits to emergency departments. *N Engl J Med*. 1996;334:642-646.

Winkleby MA, Cubbin C. Influence of individual and neighborhood socioeconomic status on mortality among black, Mexican-American, and white women and men in the United States. *J Epidemiol Community Health*. 2003;57:444-452.

Wise PH. Confronting racial disparities in infant mortality: reconciling science and politics. *Am J Prev Med*. 1993;9:7-16.

Woods DV, Montgomery SB, Belliard JC, Ramirez-Johnson J, Wilson CM. Culture, black men, and prostate cancer: What is reality? *Cancer Control*. 2004;11:388-396.

Wyatt CM, Murphy B. Kidney transplantation in HIV-infected patients. *Semin Dial*. 2005;18:495-498.

Zenk SN, Schulz AJ, Israel BA, James SA, Bao S, Wilson ML. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. *Am J Public Health*. 2005;95:660-667.

Copyright 2006 American Medical Association. All rights reserved.

Virtual Mentor

American Medical Association Journal of Ethics
November 2006, Volume 8, Number 11: 792-793.

Contributors

Vanessa Yasmin Calderon is the 2006-2007 Jack Rutledge Fellow for Universal Healthcare and Eliminating Health Disparities at the American Medical Student Association. In June 2007, she will be returning to the Charles R. Drew Program at the David Geffen School of Medicine at UCLA to complete her last two years of medical school.

Matthew Fitz, MD, is an assistant professor in medicine and pediatrics at Loyola University Chicago Stritch School of Medicine in Maywood, Ill.

Ken Fox, MD, is a community pediatrician in Chicago, Ill.

Andrea M. Garcia, JD, is a research associate in the Division of Medicine and Public Health at the American Medical Association in Chicago, Ill.

Marc Gorelick, MD, MSCE, is medical director and Jon E. Vice Chair in Pediatric Emergency Medicine at the Children's Hospital of Wisconsin in Milwaukee and professor of pediatrics and chief of pediatric emergency medicine at the Medical College of Wisconsin.

Barbara J. Low, DrPH, MPH, is an adjunct professor of epidemiology at the University of Northern British Columbia in the Health Sciences Faculty and a faculty associate at the Center for Health Promotion and Prevention Research at the University of Texas School of Public Health in Houston. Her current research concerns the impact of youth health-risk behavior and educational attainment on health status.

M. David Low, MD, PhD, is immediate past president of the University of Texas Health Science Center at Houston and professor emeritus in the University of Texas School of Public Health. He is a cofounder of the nationwide Medicine-Public Health Initiative and has served as policy adviser to numerous state and Canadian provincial governments, congressional committees and the White House.

Amanda J. Redig is a fourth-year student in the Medical Scientist Training Program at Northwestern University's Feinberg School of Medicine in Chicago, Ill. She is currently conducting research on signaling pathways during normal and malignant hematopoiesis in the laboratory of Leonidas Plataniotis at the Robert H. Lurie Comprehensive Cancer Center. Mandy hopes to combine clinical work and research in the field of hematology-oncology.

Abigail Silva, MPH, is an epidemiologist at the Sinai Urban Health Institute (SUHI) at Mt. Sinai Hospital in Chicago, Ill., where she assesses health disparities in Chicago and its communities using vital statistics and data from a community health survey. She has also gained extensive experience in evaluating rapid HIV testing programs in medical care settings.

Jessamy Taylor is a research associate at the National Health Policy Forum, a nonpartisan research and public policy organization at The George Washington University in Washington, D.C.

Leonardo Trasande, MD, MPP, is an assistant professor in the Departments of Community and Preventive Medicine and Pediatrics at the Mount Sinai School of Medicine in New York City. He is also the assistant director of the Center for Children's Health and the Environment, the nation's first academic policy center devoted to the protection of children from environmental threats, and co-principal investigator of the Queens (N.Y.) Vanguard Center of the National Children's Study.

Saul J. Weiner, MD, is an associate professor of medicine and pediatrics at the University of Illinois at Chicago and a senior investigator at the Veterans Administration Midwest Center for Health Services and Policy Research.

Staff contributors

Emily E. Anderson, MPH, is a fellow in the Institute of Ethics at the American Medical Association in Chicago, Ill. She is completing her doctorate degree in health care ethics at the University of St. Louis in Missouri.

Lee Black, LL.M., is a policy analyst for the Council on Ethical and Judicial Affairs at the American Medical Association in Chicago, Ill. Prior to joining the AMA, he was a staff attorney with the Legislative Reference Bureau in Springfield, where he drafted legislation for the Illinois General Assembly.

Sarah Maitre is a fellow in the Institute for Ethics at the American Medical Association in Chicago, Ill. She will receive her medical degree from Oregon Health Sciences University in 2007.

Theme issue editor

Justin M. List, M.A., a former fellow at the American Medical Association's Institute for Ethics, is a second-year medical student at Loyola University Chicago Stritch School of Medicine. He received his masters degree with a concentration in ethics from Yale University Divinity School and worked at Yale's Interdisciplinary Center for Bioethics. His academic and personal interests include the intersections between liberation theology and ethics and between social justice and human rights and the impacts of globalization. He recently co-edited the book "Globalization, Women, and Health in the 21st Century."

Copyright 2006 American Medical Association. All rights reserved.