hospitals have back-up generators in case of power loss, so the heat wave did not affect medications stored in hospitals or pharmacies. It is doubtful that storage issues are a significant contributor to antimicrobial resistance and failure in the United States, and research within the United States would be more useful investigating other areas.

Because power is erratic in developing countries, and air conditioning may be unaffordable to many facilities, storage issues and resultant antimicrobial failure is more likely to occur in those countries. Certainly in those countries, such research should be undertaken and the author's suggestion of labeling medications with storage specifications may prove useful.

Degradation of antimicrobials due to improper storage in developing countries can indirectly affect the United States, because US residents may be purchasing these foreign-made and improperly stored drugs. It may be possible that the lack of or reduced potency of active ingredient detected in shipped foreign-made drugs mentioned in my paper is due, in part, to improper storage, rather than just improper manufacture.

Testing medication potency at point of usage is not feasible as one would need to develop an assay for every antimicrobial, and this assay would need to be available in every town or village in each country. The author fails to substantiate the statement that developing this assay "would be cost-effective."

Two of the suggestions mentioned in my paper can help counteract this storage issue. First is eliminating over-the-counter dispensation of antimicrobials and limiting them to licensed pharmacies, whose storage mechanisms are monitored by the government. Second is the regulation of the manufacture, storage, and distribution of drugs to ensure their potency at the point of distribution to hospitals and pharmacies. Again, the feasibility and costs of these suggestions are yet to be determined.

In the last paragraph, the author's suggestion of syndrome-wise categorization on an individual community/hospital basis is interesting and warrants further consideration and possible emulation. However, there needs to be research as to whether this system implemented in 2004 has resulted in reduced resistance in the surrounding community, or at the very least, in nosocomial isolates in the hospital.

As a final note, my paper could not encompass all the issues that may be contributing to resistance in the United States I would also suggest research into the effects of antimicrobial use in farm animals, as well as the appearance of antimicrobials in groundwater/rivers/streams resulting from the disposal of leftover antibiotics into sewage systems (ie, "flushing them down the toilet").

Addendum

On November 1, 2007, the United States Government Accountability Office (GAO) issued a report[1] stating:

1. Approximately 3000 foreign establishments are registered to market drugs in the United States in 2007, but 6800 foreign establishments may actually import drugs into the United States.
2. The FDA may only inspect 7% of foreign establishments in a given year.
3. In 2007, China and India had more establishments registered to manufacture drugs for the US market than any other country.

This raises the possibility that generic antimicrobials, sold by discount pharmacies and mail order programs, may originate from a foreign country whose manufacture and storage practices are unregulated and may result in suboptimal potency of antimicrobial drugs dispensed in the United States.

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African Family Medicine

To the Editor: "Shifting the world's paradigm to 'primary care access for all'" implies that family medicine provides an excellent means to facilitate this shift, even in Africa. Indeed, the evidence for the efficacy of primary care systems in improving health in the industrialized world is clear. Montegut[1] reviews 6 "practice characteristics" that are related to better health outcomes, and Beasley et al[2] describe 4 of them in some detail. The implication is that if primary care generally, and family medicine specifically, is to lead to better health outcomes, it should at least comprise these characteristics. So how closely does this fit with family medicine as it is developing in Africa?

It is difficult to say whether these 6 characteristics will be as beneficial in Africa; studies need to be done in Africa asking this question. But my experience in a new family medicine training program in Kenya, together with at least 1 continent-wide survey (so far unpublished), suggest that these particular characteristics are not always the first priorities for African family medicine.

First contact care and "gate-keeping," for example, is not a common characteristic of African family medicine; this is often done by nurses or physician assistant-level providers.[3] Longitudinal care is very difficult where chronic disease is uncommon, and the majority of patients come for acute episodic care. Comprehensive care is a goal, but African family physicians do not rank "preventive medicine" as their first priority. Rather, they are concerned with being good generalists, and in most African settings, this involves not only inpatient care but also major emergency surgery.

Of course it may be that these 6 characteristics could be conducted by other parts of the primary care systems in Africa, ultimately leading to improved health outcomes. Yet I suspect that in countries where half of the people live on less than a dollar a day, where roads are poor and transport expensive, where people do not have habits of "check-ups" or daily medicine-taking, these 6 characteristics may not be as important in improving

health as will overall improvements in their economies. To expect African family medicine to carry out the agenda of primary care described in these articles is to ask of it what it has neither chosen nor can deliver.

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Primary Care Is Important for Africa

To the Editor: The comments made by Dr. Downing in his communication regarding a need to evaluate the benefits of primary care are accurate. Studies do need to be conducted in the developing and emerging world to determine whether the principles of primary care and family medicine do improve health. As noted by Montegut,[1] it is unrealistic to expect that family physicians could be trained to offer primary care for all rural areas. The family physician can play a role, however, in the health care team that includes nurses and health care workers in the more remote areas. It is this delivery model which needs attention for the delivery of primary care.

Starfield, Shi, and Mancinko[2] review multiple studies from developing countries as they relate to primary care. One study describes a reduction in health disparities associated with socioeconomic disadvantage in 7 African countries as a benefit of primary care.[3] Another study which was an analysis of preventable deaths in children showed that 63% of these deaths could have been prevented by full implementation of primary care with interventions that included addressing diseases common to Africa such as diarrhea, pneumonia, malaria, and HIV/AIDS.[4]

In comparing health care systems, one must be careful in defining the principles of primary care. First contact care is not defined as "gate-keeping," longitudinal care is not related only to chronic disease, and comprehensive care including preventive health must account for the local diseases which in Africa include malaria, tuberculosis, and HIV/AIDS and not be viewed solely as related to "check-ups."

One needs only look at the Institute of Medicine's definition of primary care to understand how this approach to health care is applicable to all populations. "Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community."[5] This is what the family doctor and the health care teams should offer to all people.

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Integrative Medicine Increasing in Family Medicine Residency Programs

To the Editor: We commend and strongly support the effort of the *Journal of the American Board of Family* Medicine (*JABFM*) and the American Board of Family Medicine to address the issue of redesigning Family Medicine (FM) residency. Such forward and creative thinking has become essential in a rapidly changing era of health care and post-graduate medical education. The series of articles[1–5] presented a creative number of options for residency redesign. As a consortium of academic health centers committed to integrative medicine (IM), we wish to share another—that of incorporating a robust IM curriculum within the standard 3-year FM residency. As alluded to in Dr. David's article, several programs have created a 4-year FM residency which include IM or other areas of concentration such as sports medicine or a master's in public health.[2]

A group of 8 existing FM residency programs (University of Arizona, Tucson, AZ; Beth Israel, New York City, NY; Carolina's Medical Center, Charlotte, NC; University of Connecticut, Hartford, CT; Hennepin County Medical Center, Minneapolis, MN; Maine Medical Center, Portland, ME; Maine-Dartmouth, Augusta, ME; and University of Texas Medical Branch, Galveston, TX) are now participating in an Integrative Medicine In Residency (IMR) Project. They are currently in the process of developing a 3-year pilot curriculum to be implemented in July 2008 in which the didactics of both IM and FM are woven together via online curriculum support. The content of the curriculum is being informed by a needs assessment survey