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# HIV, DISEASE PLAGUE, DEMORALIZATION AND "BURNOUT": RESIDENT EXPERIENCE OF THE MEDICAL PROFESSION IN NAIROBI, KENYA

ABSTRACT. This paper describes the experiences of physicians-in-training at a public hospital in Nairobi, Kenya, where medical professionals practice in an environment characterized by both significant lack of resources and patients with HIV/AIDS in historically unprecedented numbers. The data reported here are part of a larger study examining ethical dilemmas in medical education and practice among physicians in East Africa. A questionnaire and semi-structured interview were completed by fifty residents in four medical specialties, examining social and emotional supports, personal and professional sources of stress, emotional numbing and disengagement from patients and peers, and symptoms of post-traumatic stress and depression. The factors affecting resident well-being are found in this study to be more complex than previous interviews suggested. This study highlights the fact that as a result of working in an environment characterized by poor communication among hospital staff as well as a lack of resources and high numbers of patients with HIV/AIDS, residents' perceptions of themselves – their technical proficiency, their ability to care and feel for others and themselves, and for some their entire sense of self – are significantly affected. Also affected are the patients they work to treat.

KEY WORDS: depression, HIV/AIDS, hopelessness, Kenya, medical education, narrative, physician burnout

## INTRODUCTION

Preliminary research with residents in training at Kenyatta National Hospital in Nairobi between 1997 and 1999 suggested that many physicians in specialty residencies and many attending faculty clinicians were experiencing profound professional and emotional distress (Good et al. 1999). These unsettling experiences were attributed to the HIV disease plague, scarce medical and economic resources, structural adjustment, and the clinical realities and intense personal dilemmas clinicians face in treating patients dying from AIDS. The conclusion of this initial research was that

> hospitals are overwhelmed by patients dying from AIDS, and physicians have few resources to respond. In such settings, not only do physicians face very specific moral dilemmas – how to ration scarce resources and acquire costly medications, how to inform

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families that a child is HIV positive – but the very moral foundations of medicine as a scientific and caring profession are called into question. Practicing medicine and training new physicians in such settings produce profound ethical dilemmas. (Good et al. 1999: 167)

These earliest studies were based on discussion groups, individual interviews with physicians and hospital administrators, and observations of clinical practice at Kenyan and Tanzanian teaching hospitals. The research was carried out together with participant observers, the clinicians living in the institutions being researched. Institutional culture and history combined with scarce medical resources and the limitations of professional power in the face of HIV disease were regarded by physicians as sources of hopelessness and "burnout." Limited in scope, these studies were preliminary, yet gave strong indications of a crisis centered around HIV/AIDS. One senior faculty surgeon interviewed at the time gave the following opinion:

Too much emphasis is directed at discussing and researching HIV/AIDS and related infections such that there is not much time left for other disease conditions. This is not fair to our students and of course to other patients who are suffering from other conditions. The future of the profession is in jeopardy. If no measures are taken to arrest the situation we are going to train doctors who know nothing else except HIV/AIDS. That is the danger I see. It is a big problem. Money and other resources are scarce, HIV/AIDS demands are growing and the future of medical care is grim. (Machoki 1999)

Through ongoing conversations, systematic observations, formal discussions, and interviews with medical students, residents, and senior physicians, it became evident that the demoralization of the medical profession was more complex and historically shaped than had previously been understood. Economic, social and even political stresses appeared to have serious negative consequences for the emotional and professional experiences of physicians. Building upon questions generated in earlier work, the present study investigates the complex relationships among these various factors and explores how physicians interpret the relationship of demoralization, depression, and "burnout" to larger social and disease-related forces. As John Iliffe, a historian of East Africa teaching at the University of Cambridge (UK) has noted,

There has been no study of the impact of AIDS on East African doctors. . . . In the West, the constellation of stress surrounding AIDS caused doctors and other health workers the emotional and moral exhaustion known as burnout. Remarkably little is known about this in East Africa, despite the greater scale of the epidemic there. Some suggest that the circumstances in poor countries are so different that Western experience of burnout might be irrelevant . . . . (Iliffe 1998: 240–241)

Iliffe's work provided valuable background to approaching this study. How does the HIV/AIDS pandemic affect physicians, and what other

factors play a role in how they perceive themselves? In particular how does institutional culture in the academic training hospital, which has been largely a government enterprise, affect physician experience in caring for patients and teaching students, and their moral and emotional lives? Through this study we have sought to understand the scope of these issues for physicians-in-training, and how widespread these perceptions and experiences really are. In this paper we present selected findings from this new research, which investigates hopelessness and demoralization and "burnout" among physicians in residency training at a major East African teaching hospital.

## STUDY METHODS AND IDENTIFYING DATA

Research began with participant observation in the various wards of Kenyatta National Hospital through visiting clerkships, conversations with residents, and informal discussions with colleagues. A self-administered questionnaire was developed based on the qualitative investigations, and on our preliminary studies with residents and attending physicians at KNH in Kenya and Muhimbili Medical College in Tanzania (Good et al. 1999; Mwaikambo 2000; Machoki 1998, 1999; Machoki et al. 1998, 1999).[1] Topics covered in the questionnaire included social supports, medical training, working with patients with HIV/AIDS, working with limited resources, resident perspectives on working relationships in the hospital, and questions about burnout. A standardized assessment of major depression and post-traumatic stress disorder drawn from the Structured Clinical Interview for DSM-IV Axis I Disorders (American Psychiatric Association 1994) was also included in the interview schedule (SCID-RV 1994). The instruments were pre-tested with ten residents and revised in accordance with suggestions. Participating residents were given a consent letter describing the project and its purposes as well as an oral explanation of the project goals. Residents were informed that they could discontinue the interview at any time. Fifty residents from pediatrics, obstetrics-gynecology, surgery, and medicine were recruited and interviewed for this study. All residents participating in the research were in either the third or fourth year of training in one of these specialties. The self-administered questionnaire and interview lasted on average two hours.

All participants completed the interview schedules. Upon completion of the interview nearly all residents said that the experience made them think about issues that are central to their lives in a way that was true to their experience. Many remarked that they felt that while difficult, the questionnaire and interview were helpful to them in identifying issues and

putting words to feelings they had been experiencing in their work and personal lives.

Identifying data indicate that the majority of residents interviewed were raised in the same towns where they were born (Table 1). The majority were raised by both parents, most of whom are still living. The residents not born in Nairobi moved to Nairobi at the average age of 19. The majority were married, with children. When asked to rank their most important sources of potential emotional and social support, residents most commonly identified marriage and spouse, faith in God, and family of origin as most important, followed by having children and maintaining relationships with close friends outside of medicine. The majority reported that these sources of emotional and social support taken together either significantly or very significantly compensated for the difficulties they face in their jobs and in the hospital. The average age of the residents interviewed was 33.

The questionnaires and interviews revealed that a large number of stresses play a role in the daily lives of these young physicians. The majority of residents reported greatly struggling to provide themselves and their families with food and clothing. Mean income for residents was 14,338 shillings (USD 183) per month from their work at Kenyatta; most of them were employed by the government. Most worked in other medical jobs, reporting a mean extra income of 12,250 shillings (USD 157) per month. Residents reported experiencing significant stress from the financial burdens of working for the hospital without direct reward, the need to work elsewhere to support the family adequately, cultural pressures to provide financially for large networks of people, and managing the health issues of extended family members; the majority of residents had served as a primary caretaker during the illness of a parent, relative, or friend during medical school or residency. Women reported experiencing added pressures from bearing the major responsibility for child-rearing and home-keeping, with the majority of the women reporting feeling a significant or very significant degree of low job satisfaction in medicine because their family commitments reduce the flexibility in their working hours and impair their career prospects. Several also described the challenges they feel to prove themselves to male peers. Residents on the whole therefore described significant social stresses at home.

Of the residents interviewed, 80 percent reported that when they chose the medical profession, their main motivations, expectations, and aspirations were to help alleviate suffering and pain, or to fight disease. 90 percent reported that their main motivations, expectations and aspirations have changed since entering medical school. Inadequate hospital facilities

TABLE I

Resident background information

| **(n = 50)** | % |
|---|---|
| Born and raised outside Nairobi: | 94 |
| Born and raised in Nairobi: | 2 |
| Foreign-born: | 4 |
| Raised by both parents: | 94 |
| Raised by one parent: | 6 |
| Both parents living: | 76 |
| One parent living: | 24 |
| Married: | 82 |
| Involved in a significant relationship: | 8 |
| Not involved in a relationship: | 10 |
| Have children currently: | 74 |
| Do not have children: | 20 |
| Have had children, now passed away: | 6 |
| Have had a child pass away: | 6 |
| Have had a sibling pass away: | 40 |
| Living with spouse or partner: | 66 |
| Living with children: | 58 |
| Living with siblings: | 34 |
| Living with house-help: | 42 |
| Living alone: | 20 |
| Living in rented hospital housing: | 54 |
| Living in nearby rented lodgings: | 28 |
| Living in nearby hostel: | 6 |
| Live at home of relative: | 12 |

and congested, crowded wards were cited by residents as most contributory to such changes, closely followed by the poverty of patients and the overwhelming HIV pandemic (Table II). These perspectives are reflected in the number of residents expressing dissatisfaction with their choice of going into medicine. 68 percent of residents interviewed reported doubting their choice to practice medicine, and 58 percent reported thinking of leaving the practice of medicine altogether. 80 percent reported that they would

TABLE II

Factors affecting residents' motivations and aspirations to practice medicine to a moderate or high degree

| **(n = 50)** | % |
|---|---|
| Inadequate hospital facilities | 94 |
| Congested, crowded wards | 92 |
| Poverty of patients | 87 |
| Overwhelming HIV/AIDS infection | 82 |
| Frustrations of everyday practice | 82 |
| Incurability of many patients | 74 |
| Lack of societal respect for doctors | 68 |
| Fear of contamination with HIV | 52 |
| Violence within society | 40 |
| Prior experience in medical school | 28 |
| Personal lack of interest in patients as people | 10 |

discourage their children or close family members from pursuing medicine as a career.

Regarding stress and burnout, 62 percent of the residents reported that they are at least moderately affected physically by their anxiety. Regarding the degree to which any family member or close friend has called attention to the appearance of physical symptoms of anxiety in their interactions with the residents interviewed, 44 percent reported experiencing such feelings to a moderate, significant or very significant degree. The residents were presented with a definition of "burnout" as "a cumulative process leading to the loss of physical and mental energy, and to emotional exhaustion and withdrawal," that includes "the culmination of amassed stress for physicians who enter medicine with great idealism and high expectations of helping people," caused by "an erosion of professional autonomy, interference with the doctor-patient relationship, impeded ability to advocate for patients, and feeling that one's knowledge, skills and dedication are not sufficiently appreciated" (Jackson 1999: 587). 82 percent reported being at least moderately affected by burnout. 32 percent of the residents qualified for criteria of post-traumatic stress disorder, and 48 percent qualified for criteria of major depression. Resident testimonies provided qualitative data on how HIV both in and out of the hospital, lack of resources including drugs and equipment for working with an unmanageable patient load, as

well as other factors, have a significant effect on how residents perceive themselves.

## HISTORICAL BACKGROUND

"I think there is still what I would call the colonial attitude. Sometimes the students feel that the lecturers don't want the students to reach where they are . . . it is like you are down there and you must be shown that you really don't know . . . you are harassed even when you try as much as you can . . . ." (Machoki 1999)

The institutional culture and hierarchy within which medicine in Kenya has been taught, practiced and learned has been shaped by the historical realities of colonial rule and the role of an increasingly weak central government since independence, as well as by disease plague and scarce resources. British rule until 1963 set the precedent for the culture of medicine in Kenya over the past fifty years. While the idea of "a profession" emerged in Britain and the United States, where the major professions of medicine and law developed independent of state support through universities or government employment, in colonial and post-colonial East Africa medical professionalisation took place through an uneasy relationship with the state (Iliffe 1998: 3). According to Iliffe, the idealized notion of professional independence in Anglo-American culture is far more ambiguous than presumed. Noting that the ambiguity of the medical profession and the source of its invested power are relevant to the evolution of the medical profession in East Africa, he suggests that

> It is no longer helpful to see the essence of professionalism as either knowledge or power or something else. The essence of professionalism is ambiguity. It embraces specialized knowledge, altruistic service, thirst for power, and blatant self-interest. That is why it has been such a potent idea in East Africa, attracting the professionals by the promise of power and profit while attracting the poor by the promise of altruism and trustworthy care. . . . The notion that relations between professions and the state must be a zero-sum struggle in which one must lose anything the other gains is precisely the myth that has had such damaging effects in East Africa. In reality, professions and the state are in large measure symbiotic. (Iliffe 1998: 2–3)

Iliffe argues that professionalization in East Africa has been seriously misunderstood in the West, to the disadvantage of local medical practice (Iliffe 1998: 2). The crisis in professionalism is critical to understanding conflicts that have been perpetuated in East African medical practice since political independence. Such conflicts are exemplified by the doctors' strikes of 1971, 1981, and 1994, when physicians employed in government hospitals refused to work. Strikes such as these illustrate divisiveness between private practitioners and state employees, professional leaders

and discontented juniors, conservative upholders of inherited ethics and radical advocates of new ideas. The strikes underscored the progressive alienation of medical professionals from state-run institutions and larger challenges posed by an increasingly corrupt society. The strikes, in the end, led to increased chaos and preventable deaths on hospital wards, violence in the streets among medical personnel, the authorities, and innocent bystanders, and confusion and division among medical staff (Iliffe 1998: 183–184). The strikes ensured further deterioration in the relationships with government institutions and bureaucratic administrators.

Over the past twenty years more and more Kenyan doctors have withdrawn from public service into private practice (Iliffe 1998: 184). By virtue of the strong Kenyan capitalistic tradition, the burdens on physicians serving the public have been compounded by a general devaluation of public service versus private practice since the 1950s. This devaluation of public service multiplied in the 1980s and 1990s alongside urbanization, class differentiation, economic privatisation, and state decline (Iliffe 1998: 235). Iliffe notes that "most East African doctors ... were heirs to the entrepreneurial strand in East African medicine, displayed by the free-for-all competition among pre-colonial healers, the eager pursuit of advancement by tribal dressers and early medical students, and the pioneering practices of private European and Asian doctors" (Iliffe 1998: 245). Health service privatization, the World Bank's role in health policy, and structural readjustment have all had an impact on the decline of the public sector in Kenyan medicine at a time when falling living standards and access to health care and deteriorating health conditions for the poor in particular have created a high-risk setting for the spread of HIV/AIDS (Turshen 1999: 12). These overlapping issues have complex implications with regard to both the value and reward systems within the Kenyan medical world, and the burdens placed on trainees in such a system. An October, 2000, article in the national newspaper *Daily Nation* described the current pressures on public institutions like Kenyatta to accommodate greater numbers of patients with few resources:

> Impossible workload at Kenyatta National Hospital has compromised its quality of care and status as a specialized referral facility. ... In 1995, the number of patients who visited casualty was 62,586. It rose to 106,748 by the end of 1999. An increase of 70.6 percent. During the same period, the number at the children's section rose from 11,174 to 17,759, an increase of 58.9 percent. ... Medical experts acknowledge that even the best hospital with the best doctors will totter and wobble in its professionalism so long as the workload overwhelms its capacity. (*Daily Nation*, October 2000)

Resident physicians, many of whom entered medicine as students inspired by ideals and motivations of caring for the poor and sick, as well as financial rewards and societal respect, work with an awareness of these

issues. Even if they intend to pursue private practice, the public setting of their training leads them to experience devaluation of service in the public sector. Most residents have completed public service of a minimum of two years in government clinics, combining public clinical practice with private practice. Residents at Kenyatta spend the most hours in the hospital and bear the greatest responsibility for patient care in service of the government. Feeling underpaid and undervalued, they bear the burden of a medical system that is unable to financially reimburse or morally support its practitioners.

## CURATIVE MEDICINE'S LIMITS

"There is nothing we can do here . . ."

In examining hopelessness among physicians in East Africa, a sense of the social environment within which physicians practice should be acknowledged. A typical rounding on the medicine ward at the Kenyatta National Hospital provides context. Ward 7D is an internal medicine floor at Kenyatta National Hospital. There is a strongly pungent smell of urine. The windows are open. Two patients occupy each bed. There are patients sitting and lying on mattresses on the floor. Bedding is limited to hospital blankets, some with holes, some blood-stained from previous patients. It is quiet, save for the occasional groan or cry. At the end of the hall soldiers linger, holding automatic rifles as they guard patients from the prisons. Patients cough, many are rail thin. Some lie in their own feces. Occasionally one hears the mutterings indicative of dementia. At the nursing station there is laughter, then silence.

At one patient's bed an attending physician conducts medical student teaching rounds. Five medical students stand at the foot of the bed. One student begins presenting the patient. Several times the student is interrupted by the sounds of the patient in the next bed, who is moaning, appears delirious, his wrists strapped to the bed, as he writhes on the mattress. The student continues his presentation. After several minutes the patient in the nearby bed begins coughing violently, his breathing becoming raspier, like a loud hacking saw. With his hand raised the attending physician signals for the student to stop the presentation. "That patient appears to have cryptococcal meningitis," the attending tells the group. The attention of the group shifts to the next bed. The patient's breathing becomes more labored, and the patient looks to be gasping for air. "He is aspirating," the attending comments. He moves to the next bed, undoes one wrist strap and by holding the patient's head seeks to comfort the patient who is struggling,

while requesting that a medical student get the nurse and an oxygen mask. The patient raises his free arm in the air. The attending tries to place an IV in the patient's arm, but stops as the patient begins to vomit and choke on the vomit. The entire room of patients, many of whom have similar diagnoses, observes silently. The attending becomes very agitated: "What is his name? . . . What is his name? . . . Where is the resident? Is he here? Get the nurse . . . Where is the nurse?!" Within a minute a medical student returns from the hallway having been unable to find a nurse at the nursing station, but having found an oxygen mask. The attending physician, his face expressionless, turns the patient's head to the side to drain the vomit. He hooks the mask nozzle into the wall, then puts the mask on the patient's face. Vomit continues to pour from the patient's mouth as he continues to writhe, his mouth opened wide. The patient's chest and abdomen become still, his mouth and eyes open. The flow of vomit from his mouth slows. As a nurse appears, the attending comments, "There is nothing we can do here."

While no one case can illustrate the myriad problems and issues that affect students, residents and attendings at a hospital such as KNH, this case gives one look at the hopelessness that affects all levels of the medical hierarchy.

## RESIDENT PERSPECTIVES ON HIV/AIDS

"The helplessness we feel as doctors is very discouraging."

"HIV is overwhelming. It sticks with you. Because of the controversies it involves. A woman whose husband had died of HIV came in with breast cancer. No one wanted to plan for surgery because she was HIV positive and her platelets were low. The tumor was operable. You know you could operate, but because her platelets were low . . . she wasn't operated on. She later died."

"Many HIV/AIDS patients are neglected by their families and so are not visited. Many suffer from depression and this is not addressed by the hospital. There is also the long protracted illness which makes us health workers feel hopeless. People may not be very aggressive as they feel the patients will die anyway."

"Regarding HIV/AIDS, it is impossible to go home and forget about it. Even the simplest opportunistic infections we have no drugs for. Even if we do there is only enough for a short course. It is impossible to forget about it. . . . Just because of the numbers I am afraid of going to the floors. It is a nightmare thinking of going to see the patients. You are afraid of the risk of infection, diarrhea, urine, vomit, blood. Some people pull out their lines. Just walking in a room you think you will get TB. It is frightening to think about returning."

The residents in this study described being significantly affected personally by the burden of HIV. One resident noted that there is "a lot of stress from close relatives who are either currently suffering from HIV/AIDS or have died in the recent past." Another resident, in medicine, alluded to the omnipresence of HIV/AIDS in the lives of many residents, both at home and in the hospital:

> My sister died last year. It did not affect me after, it was expected. ... In terms of HIV/AIDS, you don't know who has it, and you can't go around wearing gloves ... also Hepatitis B and C. 70 to 80 percent of the patients on the Medicine floors are HIV positive. ...

The pressures of working with a large number of patients and limited resources in the hospital contribute to creating a situation where residents have little time and energy to address the complex issues of many of their patients. 84 percent of the residents interviewed reported feeling added stress when working with patients with HIV/AIDS. All of the residents reported feeling added stress from the medical needs of their patients with HIV/AIDS to a moderate, significant, or very significant degree, and 92 percent of the residents reported feeling added stress from the emotional needs of their patients with HIV/AIDS to a moderate, significant, or very significant degree. As a resident in medicine described,

> A lot of HIV positive patients have multiple systems involvement, and they literally come to you at the end. ... And you are trying to make a diagnosis despite not being able to do anything. Your seniors come, you see the patient, but you just pass over the patient. ... There are many cases like that. It affects you a lot because you leave that patient not having made any decision, leaving him to die. You have no time to counsel the patient, to counsel the family. We don't prepare the relatives, tell them that the patient will die. It's only after the patient dies that the relatives are told. Of course we wish we had more time to care for the patients, give basic support, prepare the relatives for the death, handle the patient in a humane manner.

Almost all of the residents reported feeling added stress to a moderate, significant, or very significant degree because no cure currently exists for HIV/AIDS.

Physicians-in-training at KNH work with an awareness that there are drugs that can keep their patients alive. A resident in obstetrics-gynecology commented that

> Drugs that reportedly prolong life or are promising cures are not readily available. This is discouraging. If they were available and patients put on them are witnessed to be improving this could enlighten the physician's hope and be a source of encouragement.

Almost all residents reported that their awareness of peers or senior physicians contracting and dying of HIV/AIDS also contributes to the stress they experience in working with patients with HIV/AIDS.

Perhaps the greatest contributor to stress that residents experience in the hospital is fear of transmission through contact with patients. More than 90% of the residents interviewed reported feeling in danger when drawing blood with needles, placing lines, or handling blood products without gloves on. The great majority also reported feeling in danger even with gloves on. Some residents described how the HIV positive status of some patients affects their interactions with all patients. A resident in medicine gave the following account regarding HIV:

> It affects me a lot. I don't adequately examine the patients, so I leave out, exclude certain things. To get gloves you really have to search for them (they are available, but rare). For that reason I examine even fewer patients. I avoid examining patients. When you miss something you feel that you are being unfair to the patient, and incompetent.

Many of the residents described their experiences with needle sticks, and the difficulties in managing the stresses involved while trying to remain productive. One resident described feeling frustration at the lack of consistent availability of antiretroviral drugs in the hospital for accidental needle stick injuries. Another resident, in obstetrics-gynecology, gave the following account:

> One incident really sticks out, a needle stick. . . . I went through testing and anti-virals. It was a traumatic experience, taking the drugs and the worry. . . . I didn't even stop working. I was in the theatre, and had to continue working. . . . We don't test patients unless that happens. Working with HIV positive patients is a big challenge. . . . More than anything not knowing. . . . It is said that 30 percent of pregnant mothers we see are HIV positive, and you are blind to knowing.

According to a resident in surgery:

> HIV is especially worrisome with emergency operations. Other than spectacles we don't have a lot of protection. I always see specks of blood on my glasses, meaning that it's possible that it goes in my eyes.

And a resident in medicine noted that

> The main stress is when you, as a senior house officer, think to go for ELISA test for HIV due to occasional needle pricks or contaminated linen that you frequently touch, or come into contact with body fluids from the patient, [or fear] each coughing patient spits saliva to your eyes.

The majority of residents felt that the stigma associated with HIV/AIDS compounds other stressors and denies them external reinforcement and support. Residents in surgery described incidents where HIV-positive patients are kept off of crowded operating theatre lists by senior physicians who prefer to avoid performing surgery on such patients. As one resident noted:

HIV/AIDS is still stigmatized even by health professionals and that does not really help much on the quality of care we give to our patients – the reason we are practicing medicine.

A resident in obstetrics-gynecology noted that

There is a general neglect of patients with HIV/AIDS in the wards by medical personnel, especially the nurses, and this makes me feel guilty when dealing with these patients. You see, patients do not differentiate between the medical personnel.

Another resident alluded to the difficulties residents face in addressing the social and emotional issues of patients with HIV and AIDS:

Lack of acceptance about the reality of HIV/AIDS, the stigma associated with HIV/AIDS, [and] lack of proper counseling skills, make it very difficult to address some issues with the patients and their relatives, making it difficult to care for them and prevent further spread.

Most residents also felt that there is not enough dialogue and communication within the hospital about treatment and the difficulties involved in working with patients with HIV/AIDS. 42 percent of the residents reported that, throughout their medical education, they have felt that their instructors discouraged them from discussing HIV/AIDS with patients to a moderate, significant, or very significant degree. 18 percent reported that, throughout their medical education, they felt that their instructors discouraged them from discussing HIV/AIDS with peers to a moderate, significant, or very significant degree. Residents' perception of lack of commitment from within the hospital to address the problems of HIV positive patients is reinforced by the fact that they identify hospital administration as the institution that does the least to address the problem of HIV/AIDS (Table III). Several resident narratives describe the role of stigma in hospital communication regarding HIV/AIDS as well. For example, one resident in pediatrics said,

Disease is too stigmatized and health personnel still regard it as a top secret, e.g., no mention is made during ward rounds even after post counseling has been done. There's not ever communication regarding HIV/AIDS status.

Another resident commented that

All staff, residents, senior physicians, understand the difficulties facing the staff whilst working with HIV/AIDS patients, but there is no communication between the various groups to come up with a solution to this problem.

These data support the notion that the challenges of working with HIV positive patients contributes significantly to resident stress and hopelessness.

TABLE III

Asked whether institutions do enough to address the problem of HIVAIDS, residents responded that the following do not

| **(n = 50)** | **%** |
|---|---|
| Hospital administration | 76 |
| Kenyan government | 72 |
| Ministry of health | 68 |
| International community | 44 |
| National media | 38 |

## TOO MANY PATIENTS, TOO FEW RESOURCES

"They just die, and you feel to blame, that you didn't do as much as you could."

"Medicine wards. 30 beds, 110 patients. The least you get is 70. Always two patients to a bed."

"At any time, I carry an average of 100 patients, 60 on the ward. Admission nights of 40 to 60. Awaiting investigations, you have about 50 patients."

Interviews with residents for this study highlight the fact that the individual physician's capacity to provide timely and life-saving interventions at KNH is compromised by lack of access to medications and equipment necessary for curative treatment, as well as by the sheer impossibility of managing the ever-increasing volume of patients with life-threatening medical conditions. Residents at KNH identified lack of drugs, beds, equipment, and supplies as significant factors affecting their ability to care for patients (Table IV), many citing these factors as a major source of frustration and stress. As one medical resident recalled,

> Even basic things are lacking. Some nights there are no anti-malarials. You would expect that to be a priority. When you can't provide a simple antibiotic, simple anti-diarrheal, simple painkiller, it is frustrating. Especially now that care is not free, and people pay for a service.

Many residents noted that when resources are available, it is often poverty that in the end limits a patient's access to needed care. All of the residents interviewed reported the conviction that poverty makes their patients more susceptible to illness, as well as to HIV. A resident in surgery commented:

> The hospital lacks a sufficient amount of regular supplies and essential drugs and equipment. . . . [This is] a major stress [causing] factor while working at KNH. The hospital

TABLE IV

Percent of residents who reported that the following have affected their ability to care for patients to a moderate or high degree

| **(n = 50)** | **%** |
|---|---|
| Lack of drugs | 92 |
| Lack of beds | 76 |
| Lack of equipment | 68 |
| Inadequate personal collection of textbooks and journals | 68 |
| Inadequate library supply of books | 68 |
| Inadequate supplies for work (gloves and gowns) | 68 |
| Lack of hospital basics (e.g., bedding) | 66 |
| Lack of electricity at home | 64 |
| Lack of a quiet place to study without distractions | 50 |
| Lack of consistent mode of transportation to and from the hospital | 48 |

has lacked antibiotics for some time. . . . The time taken for the poor patients to buy the prescribed drugs, equipment and investigations compromises the level of care and both patients' and doctors' comfort.

In relation to feeling overworked and unable to help patients, some residents described feeling that they were not doctors. Others stated that they were no longer human beings. One medical resident gave the following perspective:

We are relief workers, but we are not volunteers. We come on our own accord, but there is no rest. After some time you wonder what kind of person you will become. You wonder why people aren't talking about it, aside from the few of us who are involved. When we get together we only talk about how long we worked, how many patients were admitted, the cases.

In this study the theme of too many patients and too few resources is implicit in the stories told by all of the residents interviewed, and serves as the subtext to many individual descriptions of memorable cases and situations confronted in the hospital. Residents are particularly affected by the perception of having done harm, or bearing the responsibility for having "killed" a patient. One resident described the following conundrum:

With the stress we go through we can't give our best to patients or family. We are moody and exhausted. Output is reduced. At the end of the day you aren't available for patients. You either lose a patient because you are not available or you make a mistake you didn't want to make. It's similar in most departments.

In some instances events of medical error resulting from patient volume and lack of resources are so common that some residents describe them as a particular type of event rather than as a specific incident. Through the use of this form of narrative the details of specific events and of the negative outcomes are replaced by the description of a common set of events that have recurred for the individual. For example, when asked to describe a particularly difficult situation that he has faced in the hospital, one surgical resident gave the following narrative:

> Patient very badly off . . . you want to operate. You cannot get a theatre due to a reluctance of staff. . . . You lose a patient on the table because you cannot get blood. A high percentage of our blood goes to waste. You lose a patient who you could save.

Lack of blood or, on occasion, refrigerated blood being given to patients without being re-warmed, in some cases resulting in hypothermia and death, was a story told by several of the residents in various specialties. Recurring stories depended on the specialty of the resident: several medical residents told stories involving overcrowded wards and particular patients being forgotten, to later die having not received treatment; residents in obstetrics-gynecology commonly told of patients dying in labor due to avoidable circumstances; and a number of surgical residents described how patients with AIDS die of other illnesses requiring surgery, having been kept off the operating room lists by senior physicians. One medical resident recounted the following story:

> When I am on call we sometimes get a patient whom you feel could have been saved if one or two things were done, for example, reaching the ICU. Many patients don't make it to the ICU because of space and they die. Diabetic coma, HIV – they just die and you feel to blame because you didn't do as much as you could.

Many residents discussed the issue of lack of resources in terms of lack of concern on the part of both fellow physicians and hospital administration. A resident in surgery noted that

> There is poor handling of the patients by the doctors, due to the various specialties that are in the hospital, thus increasing the mortality rates which could be avoided (for example if a patient is accidentally admitted in a medical ward with an emergency surgical or gynecological problem – more often than not these patients die before they are attended to). . . . In the long run we lose patients whose lives could be saved sometimes waiting for days for a consultation to be attended to. This in itself causes one to lose morale in the little good one can do.

One resident in surgery implied that the central issue for residents' morale and hopefulness is not the problem of resources, but having a sense of support in the hospital:

There are patients you need to take to theatre to save, and you have to wait several hours to get there. By that time the patient is unable to be saved. To compound this, the most difficult part of our training, you don't get any support.

The theme of lack of support from senior physicians and hospital administration was consistently expressed by residents both in the questionnaires and interviews.

## EVIDENCE OF A FRACTURED HIERARCHY

" All we get for doing our best is ridicule and abuse . . ."

"The method of training at times is not understandable. . . . They don't expose us to various things that they definitely bring in exams."

"One night I made a diagnosis of hepatitis, which is related to high mortality. Therapy is conservative. The senior instructed me on the phone to open the patient. I opened the patient, and found necrotizing pancreatitis. I called the senior but he wouldn't come. The patient ended up in the ICU, and died three days later. I saw the senior later, who told me I should have stuck to my guns about not opening the patient."

"The public ward rounds are too public. Seniors make comments like, 'There is nothing to do for this patient,' and it is said directly in front of the patient. The patients speak English! There is very little privacy. There has to be a change in attitudes among senior physicians. We are very stressed. How am I supposed to go on, to progress?"

Previous discussions with senior physicians at KNH did not reveal the degree of dissatisfaction of physicians-in-training regarding their relationships with both senior physicians and hospital administration. Data collected on resident perceptions of how their ability to care for patients was affected by a sense of a lack of commitment by senior physicians or nurses show that not only is residents' discontent with senior physicians widespread, but also that residents perceive this as the most significant barrier to their providing quality care to their patients (Table V). Aside from a lack of drugs, more residents described lack of commitment by nurses, as well as a lack of sufficient staff, as affecting their ability to provide quality care for their patients in the hospital. A pediatric resident expressed the opinion that

The consultants are not dedicated and basically abandon the students as they do their private practice, and basically you must learn things from books or nurses, and not necessarily what should be practiced in our set-up with limited resources.

Initial discussions with residents hinted at widespread discontent with what many residents appeared to perceive as a lack of accountability by senior physicians in resident education, well-being, and the care of

TABLE V

Comparison of resources and perception of staff commitment. Percent of residents who reported that the following have affected their ability to care for patients to a moderate or high degree

| (n = 50) | % |
|---|---|
| **Lack of commitment by senior physicians** | 94 |
| Lack of drugs | 92 |
| **Lack of commitment by nurses** | 90 |
| Lack of sufficient staff | 84 |
| Lack of beds | 76 |
| Lack of equipment | 68 |
| Inadequate personal supply of textbooks and journals | 68 |
| Inadequate library collection of books | 68 |
| Inadequate supplies for work (gloves and gowns) | 68 |
| Lack of hospital basics (e.g., bedding) | 66 |
| Lack of electricity at home | 64 |
| Lack of a quiet place to study without distractions | 50 |
| Lack of consistent mode of transportation to and from the hospital | 48 |

patients. While expressing their disappointment with the level of investment by senior physicians and hospital administration in their lives, 72 percent of the residents reported that senior physicians expect too much of them, and 68 percent felt the same about hospital administration. This was in contrast to their feelings about working with medical students, with 70 percent enjoying teaching medical students, but approximately half complaining that the expectations of medical students were too great. When asked to rate senior physicians and hospital administration based on various criteria, residents overwhelmingly gave a response of inadequate to all criteria they were asked to evaluate (Table VI). A resident in surgery commented:

My seniors are basically unavailable and, when available, only come to ridicule. They do not treat me as one of their own, they have no concern about my social domestic problems. The teaching institution likewise is only happy about the work I offer them. Otherwise, they don't care about me but for my absence. BUT I LOVE MY PATIENTS – I WILL SERVE THEM.

And a resident in obstetrics-gynecology noted the following:

The hospital should take personal interest in the training of residents. It should know that we are humans and not slaves or robots. It should know that we deserve an allowance in

TABLE VI

Attitudes Toward Senior Physicians and Hospital Administration; percent of residents giving response of inadequate

| **Attending Physicians: (n = 50)** | **%** |
|---|---|
| Dedication to instruction of residents | 94 |
| Genuine concern for residents | 94 |
| Understanding for challenges residents face outside the hospital | 92 |
| Understanding for challenges residents face within the hospital | 90 |
| Leadership for residents | 86 |
| Moral support and encouragement | 86 |
| **Hospital Administration: (n = 50)** | **%** |
| Dedication to instruction of residents | 100 |
| Genuine concern for residents | 100 |
| Understanding for challenges residents face outside the hospital | 100 |
| Understanding for challenges residents face within the hospital | 96 |
| Leadership for residents | 96 |
| Moral support and encouragement | 96 |

terms of financial support. This hospital should know that to be a teaching institution it should support rather than antagonize residents.

In initial discussions a number of residents spoke of feeling "ridiculed" by seniors on a regular basis. Asked to identify which factors have negatively affected residents' motivations and aspirations to practice medicine, the number of residents who ranked ridicule by senior physicians as moderately or significantly contributory was the same as of those who identified overwhelming HIV/AIDS infection as contributory (Table VII). Level of staff support by the hospital ranked above both of these, while quality of teaching ranked above all of these. In interviews many residents described their feelings about ridicule in the hospital environment. As one resident in medicine commented:

All we get for doing our best is ridicule and abuse from the senior colleagues – in the wards, clinics, grand rounds, etc.

78 percent of the residents reported that the way senior physicians and hospital administration treat them moderately or significantly decreases

TABLE VII

Which factors have been moderately or highly contributory in affecting residents' motivations and aspirations to practice medicine

| (n = 50) | % |
|---|---|
| Low pay | 100 |
| Inadequate hospital facilities | 94 |
| Congested, crowded wards | 92 |
| **Quality of teaching** | **90** |
| Poverty of patients | 87 |
| **Level of staff support by hospital** | **84** |
| **Ridicule by senior physicians** | **82** |
| Overwhelming HIV/AIDS infection | 82 |
| Frustrations of everyday practice | 82 |
| Incurability of many patients | 74 |
| Poor resources outside hospital | 74 |
| Lack of societal respect for doctors | 68 |
| **Hierarchy within the hospital** | **68** |
| Violence within society | 56 |

their hope to have a successful future as practitioners of medicine (Table VIII).

Also of note, when asked whether there is enough dialogue and communication within the hospital about issues regarding the conditions under which residents train, resources available to residents, and working with patients with HIV, the majority of residents responded "a little bit" or "not at all" (Table IX).

## RESIDENT HOPELESSNESS AND "BURNOUT"

"We are abandoned. . ."

"The resident is grossly overworked and taken to task if things go wrong in the wards. One is expected to do the work of everybody, e.g., getting blood specimens and rushing them to the lab . . . removing drains . . . seeing all patients and clerking. . . . The above examples compounded with mental and emotional stress leave the resident with very little time to read and acquire good skills."

"It is too much work. You are so fatigued that you don't care what happens to patients. It's not just fatigue. It's the workload. You can't cope. It reaches a point that you tend not to care. We are overworked. . . . The administrators and seniors don't consider the fact that

TABLE VIII

Degree to which residents would say that their feelings about the way senior physicians and hospital administration treat them affects the following; percent of residents giving response of moderately or significantly

| **Attending Physicians:** (n = 50) | % |
|---|---|
| Hope residents have for a successful future as practitioners of medicine | 78 |
| Energy residents invest in patients’ care | 64 |
| Emotional well-being in terms of how they feel about themselves | 62 |
| Quality of medical care that the patient receives from residents | 62 |
| Confidence and faith in their own skills as clinicians | 60 |
| Confidence residents have that they are doing the best for their patients | 58 |
| Amount of time in interacting with patients | 48 |
| Hope residents have that the patients they treat will get better | 44 |
| Behavior in interacting with patients | 42 |
| **Hospital Administration:** (n = 50) | **%** |
| Energy residents invest in patients’ care | 74 |
| Amount of time in interacting with patients | 66 |
| Behavior in interacting with patients | 64 |
| Emotional well-being in terms of how they feel about themselves | 62 |
| Quality of medical care that the patient receives from residents | 60 |
| Hope residents have for a successful future as practitioners of medicine | 38 |
| Confidence residents have that they are doing the best for their patients | 36 |
| Hope residents have that the patients they treat will get better | 32 |
| Confidence and faith in their own skills as clinicians | 18 |

TABLE IX

Percent of residents responding “a little bit” or “not at all” to questions regarding whether there is enough dialogue and communication within the hospital about the following

| **(n = 50)** | **%** |
|---|---|
| Conditions under which residents train | 98 |
| Resources available for ideal management of patients | 88 |
| Treatment of and difficulties involved in working with patients with HIVAIDS | 68 |

they expect you to do the work of the medical officers. The seniors aren't available (we ask ourselves why, I think they are busy looking for money elsewhere) and they want you to cover up for them. And they get so irritable if you call them for a second opinion for a patient. Some of them are so harsh."

"Before training we thought of doctors as supermen. Now we realize that our expectations to be held in high esteem is not the case. . . . I have no plan for the future. Life has lost meaning. Training has affected me. Life is strange – you are supposed to go from birth to death . . . [now] we are only mortuary attendants."

"Frequent episodes of feeling down . . . I look at my life and I wanted more. . . . Those achievements I wanted are not coming. The future doesn't look good."

Both written questionnaire responses and interviews revealed a remarkable degree of hopelessness among residents. To further develop our understanding of the sources and consequences of their sense of hopelessness and the degree it exerts an influence on their inner lives, residents were asked about their feelings relating to experiences of overload and exhaustion, apathy, despair, headaches, gastrointestinal disturbances, and other somatic manifestations of stress. They were also asked about longer and less efficient working hours, poor and irregular sleep and eating habits, disrupted family relationships, unaccustomed difficulties in memory and concentration, and suggestions by friends, relatives, or colleagues to seek help (Jackson 1999). In general many residents spoke openly about feeling a lack of intellectual and emotional investment in their work with patients. As one resident noted:

At the end of the day, people do not do a good job. They just want to get out . . . we are just running the clock.

The combination of high numbers of patients with HIV, the significant degree of patient morbidity and mortality, the reduction in the variety of case types, the stigma of HIV, and personal fears about contracting HIV, contribute to residents' feeling hopeless in their ability to help patients. One resident implied inevitable connections between experiences in the hospital and personal losses to HIV at home:

Especially if you know someone. Or if you lose a child [in the hospital], and that child reminds you of another child. The hospital occupies so much of my attention . . . Lost relatives to HIV – it was like any other death. I didn't have the feelings I used to . . . Hopeless, especially due to the death around me.

In discussing the death of patients, their frequent inability to help, and their ability to manage emotional reactions to such commonly occurring experience, residents often discussed the difficulty in not becoming emotionally "numb":

TABLE X

Resident responses to which of the following have been moderately or highly contributory to stress

| (n = 50) | % |
|---|---|
| Meeting expectations of senior physicians | 94 |
| Academia/research commitments | 94 |
| Meeting HIV/AIDS patients' emotional needs | 86 |
| Family/community/social responsibilities | 86 |
| Meeting HIV/AIDS patients' medical needs | 82 |
| The experience of everyday life in Nairobi | 82 |
| Meeting patients' medical needs | 76 |
| Meeting patients' emotional needs | 76 |
| Meeting expectations of hospital administration | 62 |

You get emotionally attached to patients . . . then you take them to [operating] theatre, then they die. It's very difficult. You feel incompetent.

For many residents, the knowledge of providing what they consider inferior care is particularly distressing. When this knowledge is combined with specific events that caused harm to patients and could have been avoided, the residents describe a situation particularly difficult to cope with emotionally. One resident in surgery gave the following description of his reactions to preventable patient deaths:

These things haunt you. . . . If you listen to registrars, that is all they talk about, even in the city centre. It will always degenerate to the sights you can't forget, experiences and mistakes. . . . You think, "I could have done this." . . . It is very common to be unable to remember some important part of what happened. You know you have a good memory, but you struggle to remember certain terrible things.

Most notable with regard to sources of stress, however, is the role that hospital relationships play in contributing to resident dissatisfaction and hopelessness. When asked about which of a particular set of factors have been most contributory to personal stress, the majority of residents identified all of the factors noted in Table X as moderately or significantly contributory to stress. Meeting the expectations of senior physicians, and the academic and research commitments of residents, accounted for more stress than their interactions with patients with and without HIV.

Issues revolving around hierarchy and professional training relationships, as well as a strong sense of lack of staff commitment and hospital inefficiency, were particularly connected to feelings of hopelessness.

While describing the larger issues, residents often came back to the feeling of lack of respect for their experiences by senior physicians and hospital administration as the most difficult thing to bear in their training and practice. As one resident noted:

> Excessive criticism even for work well done by senior colleagues really kills morale to do it well next time. Say after spending a sleepless night in the ward admitting sixty children, finding of one unclerked child next day may cause you a lot of trouble. Nobody wants to know what you went through.

Another resident commented that:

> As a resident you feel that you are in the middle of the seniors and the nurses. Nurses don't help, and you aren't working as a team. We pay the price for this with the seniors, when things don't get done on the ward. . . . Now, even if I have time to go out with friends, I don't want to. I don't enjoy myself or have fun. I get bored and want to go . . . I don't feel like eating. . . . During the last two to three months I have slept two to three hours per night out of eight hours available to sleep. . . . When I am doing procedures, I can't control myself because I am so fidgety, especially in the theatre . . . I have trouble assisting in surgeries. Sometimes I avoid scrubbing in not to draw comments. . . . Every evening after going home, I need to sleep one to two hours before trying to read, otherwise I can't. . . . At times I feel hopeless and helpless. The work conditions make me feel that way, especially in the tougher rotations when the seniors are particularly difficult. . . . The bosses make me feel useless, and blame one for things when one isn't even present in the theatre. . . . He keeps driving it in at every ward round. Also, this is in front of the patients' relatives. That makes it worse. If it were another society they, the relatives, could sue. . . . It has gotten a bit better recently, these feelings . . . but during internship I felt the same way . . . it correlates to the way I feel treated by the bosses. . . . It hurts me that there is no appreciation for good work, [they] only point out my mistakes.

Another resident spoke about the complex interactions between the pressures he feels to empty beds, the feeling of a lack of connection with patients, as well as the contribution of societal pressures to his sense of incompetence:

> Sometime I really don't care how I look so long as I still retain the capacity to clear the 'queue' and tell the senior what he wants to hear. Many times I have to remind myself that I should give quality care rather than quantity care. To save on energy I'm training myself to let my friends be few. With relatives and friends, I know they are likely to be coming for help rather than coming to bless me, so I often go straight and ask what they want. Sometimes without looking at them. This gives me trouble refocusing when dealing with private patients, who want more emotional care than physical material. It's like a dirty game!

Residents noted that the feeling of a lack of respect outside of the medical community as well as inside the medical community contributes to individuals' sense of shame. Some residents commented on a lack of respect for physicians within the society at large as significantly affecting

their sense of empowerment as professionals. One resident commented that

> After failure for the government to finance the hospital, the politicians put blame on you, and also the surrounding community sees the doctors as the source of evils happening in the hospitals, to an extent that most of the time you feel like concealing your identity.

In interviews residents were asked about particularly difficult events they had experienced in the hospital, and about symptoms of post-traumatic stress. They were asked if they persistently re-experienced these events by having distressing recollections, dreams, illusions, hallucinations, dissociative flashback episodes; and whether they had avoided stimuli associated with the trauma or experienced a numbing of general responsiveness. They were finally asked about persistent symptoms, such as trouble sleeping, irritability, difficulty concentrating, hyper-vigilance, or exaggerated startle response. While a number of residents described having learned ways to cope with life in the hospital, nearly one in three described experiences indicative of some significant compromise in functioning on a daily basis both in their work in the hospital and at home. In response to being asked about the re-experiencing of events in the hospital, one resident commented:

> Nightmares and flashbacks . . . of course. . . . I avoid particular beds on the wards, where particular patients had been . . . I [notice a change in the way I plan for the future] especially in this country . . . there are no expectations for the future, no hope. . . . I don't sleep even when I have been on duty all day . . . I am jumpy even when reading, always checking the door.

Another resident responded:

> I'll be in a vehicle and things come back to me . . . dreams wake me up at night . . . desperate situations keep coming back to me such as patients requiring ICU facilities . . . these patients die in my hands. . . . I try to avoid thinking about things, but I cannot avoid it. . . . Many things no longer interest me . . . [Regarding a change in the way the resident thinks about the future] A lot. Life is not the same. Everything I do is with death in mind. This is not something I fear to say. I think about my death, that it could happen any day. . . . I no longer take life for granted, because of what I see here. People my age or younger, who come from a minor accident, who can be saved and who die so early. . .

A surgical resident noted that

> When I am on call I don't sleep well . . . I have very scary dreams. . . . Our theatre is a very difficult place, no one wants to work. You have to push people. I've become a radical. I long for a revolution because things don't work.

In response to questions regarding symptoms of depression, one resident described his general state of experience since the beginning of residency:

> I feel down most of the time, especially if I'm alone, away from my family. . . . My children distract me . . . I can't sleep longer than 4–5 hours even if I want to . . . When I am alone, by the third week I am very restless. I am blunted emotionally usually even when I am not restless . . . I feel worthless very occasionally. I live for my family, not myself. . . . I have a difficult time accomplishing things. I'm lucky to have good friends. . . . I get bad headaches, got medication from a psychiatrist which caused a loss of energy, so I stopped the medication . . .

Another resident described patient burden and the demands of everyday hospital practice, combined with ridicule from senior physicians, as major causes of feeling down:

> I have been particularly down lately. Major ward rounds, once per week, are the worst day of a resident's life. We wake up at 5.30, get to the hospital between 6 and 6.30, and we see the patients before the consultants come around 9 after you have seen 80 to 100 patients, alone. This is really stressful. . . . The ridicule is particularly bad and stressful. . . . I can't finish a newspaper. I've lost ALL interest and pleasure in things. . . . I feel so much anger. The people above cause it by ridiculing, and not wanting to help us . . .

Another resident gave a sense of the contributions of a lack of nearby social support, significant family losses, and fear of HIV:

> Since residency began, there is nothing to enjoy. I haven't been to my rural home in one year. . . . I feel hopeless and worthless. . . . it has gotten worse over the past year since my brother died, but it was bad before. . . . I fear AIDS, I have not been tested. I worry about splashes.

Another resident described the role of his financial troubles, and poor relationships with his seniors:

> Frequently down and depressed. . . . I attribute it to financial obligations I cannot meet. I am chronically in debt with no money or time to pay. What disappoints me most is that our senior physicians and lecturers do not guide us. They only look for opportunities to stop us from progressing. It makes us feel that our postgraduate training is not in our hands. They don't go out of their way to give us what we need to move ahead. You assume, when you study for exams, that your chances of passing are small. The other thing is that our seniors are not open to telling us what our weaknesses are. They don't take the responsibility as a teacher. Instead, they wait until the exam, and you fail . . .

And a resident in surgery alludes to the perceived role that ridicule plays for many physicians-in-training:

> When you are down, you want to blame it on so many things. You don't know what it is . . . the residency, financial issues, marriage problems. . . . All said and done, I think that residency is the primary contributor. . . . I go to bed thinking about how I am ridiculed, feeling incompetent and inadequate . . . and I can't sleep. I feel I have no business going home and telling my spouse how it should be when I have just been reduced to nothing. I told another colleague that I was treated so poorly on the ward, was so dehumanized, that I would never again argue or do the same to her [spouse] . . . and the fear of HIV/AIDS is real.

## CONSEQUENCES FOR FUTURE MEDICAL PRACTICE

"The 'saturation' of the patient population by HIV/AIDS 'cases' removes a lot of job satisfaction from future (especially) public practice. This compiled with poor remuneration to doctors both in private and government gives it a very bleak picture."

"It is hell and I just feel like quitting this profession . . ."

Regarding the degree to which residents feel a commitment to practice in a public hospital upon leaving residency, 68 percent reported feeling such a commitment to a moderate, significant or very significant degree. Yet only 8 percent feel to at least a moderate degree that it is possible to support themselves and their family financially if they devote themselves completely to public practice. 92 percent reported feeling more inclined to go into private practice to at least a moderate degree. None of the residents reported feeling that senior physicians are good role models in terms of showing commitment to public practice to at least a significant degree. The perception of public practice as financially untenable was widespread among the residents interviewed. As one resident commented:

There are doctors who are committed to serving in the public sector because this is where the less privileged are. However, financial remuneration from the government doesn't meet the basic social and family needs. This shall drive many to the private sector, or some in the middle, which evades commitment . . .

Another resident bluntly stated that "Public practice is the most unrewarding thing in this country." For many residents financial survival is the bottom line in career selection. One resident brought up the option of research:

The intention of going into private practice is solely for financial security. . . . Public practice is not honored by the government which pays very little and the workload is heavy with poor resource base. . . . The other alternative is to go into medical research which is more rewarding and highly recognized.

Another resident noted:

The strongest factor for wanting to go into private practice is the far much better income it provides, otherwise public service would be just as satisfactory, professionally.

And another resident made the following comment:

How much I shall make in a month, i.e., enough money to meet day to day needs, not to be a millionaire, shall be the main factor to dictate the future God wishes.

Many residents alluded to the way that their sense of hope in the society at large affects their sense of themselves in their work. As one resident commented,

If the health care system in the public sector improved with improved remuneration for healthcare providers one would consider only practicing in the public sector. But with the policy makers only awarding themselves hefty pays and allowances, one has to look for other survival techniques.

For many residents, the loss of hope in future practice in the Kenyan environment is related not just to low pay, but also to a loss of hope in the political system. 12 percent of the residents interviewed reported having at most a moderate amount of faith in social justice in Kenya. 16 percent expressed the belief that the law protects the innocent to at most a moderate degree, and 8 percent stated that societal rewards are fairly associated with decent human behavior not at all, a little bit, or at most to a moderate degree. The majority reported that violence in the society at large, as witnessed in the newspapers, affects the faith they have that they can make a difference with patients at least moderately, or significantly. The majority also reported that corruption in the society at large, as witnessed in the newspapers, affects their faith that they can make a difference with patients. These data is corroborated by the testimony of the following resident, who stated:

I don't see a future for the medical profession here. Why? It is expensive. You have to invest a lot. There is no government support. People can't afford care here. Corruption is everywhere. People are not doing their work. I have worked in a district hospital. The budget is much bigger than in a mission hospital. But the mission hospitals perform better. Where is the money going in the district hospitals? Not the patient. Inflated costs, so that people can pocket them.

## CONCLUSIONS

Throughout sub-Saharan Africa physicians have been fleeing public service, and the medical profession, as a result of poor pay and the frustrations of everyday practice (*New York Times*, June 3, 2001). From the experiences of senior physicians at KNH interviewed from 1997 to 1999, discussions were initiated as to how the brute fact of AIDS, compounded by poverty, scarcity of resources, and deep inequalities of wealth within and between societies, has been stripping medicine of its instrumental efficacy as well as its cultural power over the past two decades (Good et al. 1999: 171). Articles in the Kenyan press have recently acknowledged the costs for physicians in Kenya's public hospitals of "long, traumatizing hours of seeing patients on the verge of death" (*Daily Nation*, September 2000). Given the incomprehensible conditions under which physicians practice in public hospitals in sub-Saharan Africa, we have tried to improve

our understanding of the experiences of residents at a public hospital in East Africa who practice in an environment of major disadvantage.

This study supports previous data suggesting that as the ability of physicians and physicians-in-training to respond to human suffering with medical interventions is compromised, so too is their emotional well-being as well as their sense of competence and empowerment as practitioners. Working in such an environment, residents' perceptions of themselves – their technical proficiency, their ability to care and feel for others and themselves, and for some their entire sense of self – are profoundly affected. This study also describes how, as a result of a loss of a sense of empowerment across the training hierarchy, hopelessness pervades all aspects of hospital life: medical education and commitment to teaching of students, professional relationships between junior and senior physicians, and patient care.

The data highlight the fact that the motivations and expectations of students coming into the medical profession are being dramatically altered by the conditions under which they are learning. While a deep chasm separates physicians' earnings in public and in private practice, the overriding incentive to move from the public to the private sector is not only financial self-interest, but also a basic psychological necessity. The study data support the premise that in an environment in which the ability to cure is more and more limited by the increasing number of people contracting HIV/AIDS, the very moral foundations of medicine are truly being called into question.

While HIV/AIDS is contributing to a demoralization of medical faculty and an erosion of fundamental intellectual assumptions about medicine as a system of knowledge, so too is the current culture of public hospital practice and the institutions under which students and residents train. In 1999 M'Imunya Machoki suggested the importance of issues such as mentorship, role modeling "good doctoring" in care of all patients including HIV-positive patients, changing communication flows through the training hierarchy, and examining faculty commitment, accountability, and obligation (Machoki 1999). The findings of this study emphatically support his observations.

The relationship between accountability and medical error in public hospitals such as KNH also deserves further consideration, as Kenyan medical institutions have been historically modeled on hierarchical Anglo-American medical systems where HIV/AIDS is not prevalent, where resources are readily avalable, and which have benefited from the support of strong central governments that have invested "the profession" of medicine with the sense of power, profit, altruism, and trustworthy care that

its complex definition includes. Until East African medical facilities are equal to the challenges of falling living standards due to contracting labor markets, deteriorating health conditions due to malnutrition and poor sanitation, shrinking access to health care for the poor, eroding public health services, increasing numbers of patients with HIV/AIDS, and rising morbidity and mortality, physicians will continue to struggle with a degree of preventable medical error that will continue to leave individual practitioners with wrenching personal moral and ethical dilemmas (Turshen 1999:12). With the intention of bolstering physician resilience in such a pervasive situation, further study goals might include finding practical and cost-effective ways to assist physicians in the East African and sub-Saharan African contexts to remain intellectually engaged in medicine despite the reduction in the variety of cases managed in the hospital environment; to maintain interest and enthusiasm for teaching diagnostic and curative medicine to students and physicians-in-training, given the frustrations of everyday practice; to maintain a personal sense of empathy for patients, not becoming "emotionally numb" to patients' subjective experience of suffering; and to retain a sense of hope and idealism while being witness to and participant in a hospital environment where the degree of human suffering due to poverty and HIV/AIDS is unprecedented.

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## NOTE

1. Sources helpful in developing the survey instrument included Jackson (1999), Leaning et al. (1999), Stern et al. (1998), SCID-RV (1994), and Winiarski (1997).

## REFERENCES

American Psychiatric Association
1994 DSM-IV. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington DC: American Psychiatric Association.
Daily Nation
2000 Why referral system at Kenyatta National Hospital has collapsed: Caseloads have increased by over 70 percent in the last five years (Thursday, October 26, 2000) 29.
2000 Doctors Also Cry (Wednesday Magazine, September 27, 2000) 1.
2000 Article boosted medics' morale (Friday, October 13, 2000) 7.
Good, M., M. Machoki, E. Mwaikambo and E. Amayo
1998 Clinical Realities and Moral Dilemmas: Contrasting Perspectives from Academic Medicine in Kenya, Tanzania and America. Daedalus: Journal of the American Academy of Arts and Sciences 128(4): 167–196.
Iliffe, J.
1998 East African Doctors: A History of the Modern Profession. Cambridge: Cambridge University Press.
Jackson, S.H.
1999 The Role of Stress in Anesthetists' Health and Well-Being. Acta Anaesthesiologica Scandanavica 43: 583–602.
Kibwana, K., S. Wanjala and Okech-Owiti, eds.
1995 The Anatomy of Corruption in Kenya: Legal, Political and Socio-Economic Perspectives. Nairobi, Kenya: Claripress, Ltd 27–87.
Leaning, J., S. Briggs and L. Chen, eds.
1999 Humanitarian Crises: The Medical and Public Health Response. Cambridge: Harvard University Press 143–175.
Machoki, M., M. Good, E. Mwaikambo and E. Amayo
1998 Ethical and Moral Dilemmas in Medical Training and Practice in Kenya, proposal.
Machoki, M., M. Good, E. Mwaikambo, E. Amayo and L. Muchiri
1999 Dilemmas in Medical Education and Practice, presentation.
Machoki, M.
1998 Doing Good. Is it possible in the HIV/AIDS pandemic? The impact of HIV/AIDS and depravity on physician practice in Kenya: pilot project, presentation.
1999 Moral and Ethical Dilemmas in Medical Training, paper presented at the conference on East African Health and Social Change sponsored by the Department of Social Medicine, Harvard Medical School (April 15, 1999).
Stern, T., J. Herman and P. Slavin
1998 MGH Guide to Psychiatry in Primary Care. New York: McGraw-Hill 667–672.
Mwaikambo, E.
2000 Medical Culture and Training-Ethical Issues and the Physician's Dilemmas of Disclosure in Tanzania, initial overview of interviews done.
New York Times
2001 Zimbabwe Doctors Flee As AIDS Crisis Widens, Poor Pay Tops List of Frustrations. New York Times International (Sunday, June 3, 2001) 12.
SCID-RV
1994 Structured Clinical Interview for DSM-IV Axis I Disorders-Research Version. (SCID-RV). Biometrics Research Department, New York State Psychiatric Institute.

Turshen, M.
1999 Privatizing Health Services in Africa. New Brunswick: Rutgers University Press.
UNAIDS
2000 Report on the Global HIV/AIDS epidemic, 96–97.
Winiarski, M., ed.
1997 HIV Mental Health for the 21st Century. New York: New York University Press.

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