International Issues: Tropical neurology in Vietnam

During the last elective period of my neurology residency, I went to Vietnam. My reasons for choosing Vietnam were twofold. First, David Warrell, Professor of Tropical Medicine at Oxford, suggested Vietnam because of its abundance of tropical neurology and because he loves venomous snakes, such as kraits, cobras, and vipers, which flourish in the region. My other motivation for this location was the Vietnam veterans whom I had treated at the Boston VA. Their stories about tropical jungles, unbearable humidity, and armies of blood-sucking insects, and the horrors of a war they were still coming to terms with so many years later, had piqued my curiosity.

Times have changed in the 35 years since the end of the war in 1975. Bomb craters still pockmark the landscape. Children still regularly lose their limbs to land mines. There are still humidity and blood-feasting mosquitoes. However, the ghosts of the past are slowly being laid to rest.

According to UNICEF statistics, Vietnam is one of the poorest countries in Asia. With a population of 87 million, it has a lower average personal income (US $800–$900/year) than India (US $1,070/year). Almost one-quarter of the population live below the international poverty line of US $1.25/day.¹

The introduction of “Doi Moi” (literally translated as “renovation”) in the mid-1980s produced a dramatic change in the societal landscape of communist Vietnam, including its previously universal health care. Doi Moi instituted economic reforms, including the end of party central planning, and opened the country to foreign investment. The United States lifted its embargo against Vietnam in 1993, ushering in remarkable economic growth and the development of a middle class that became increasingly able to afford luxury goods and services, including private health care.² ³

In the wake of this change, health care became less of a government priority and was no longer fully subsidized, which has had positive and negative results. The country is doing well on certain UNICEF health indicators such as infant mortality rates and life expectancy (74 years), whereas other measures, such as a relatively low rate of childhood tetanus vaccination of about 84%, still need some work.¹ The cost of health care is partly to blame. Only a select few are insured, i.e., party cadre and people who are employed. However, even for these individuals, insurance does not fully cover costs. In fact, over the last 20 years, out-of-pocket payments have become the largest contributor to the country’s health care costs. Fees must be paid in advance of any hospital or clinic visit, and patients are often turned away if they cannot pay. There is a formal government program to waive fees for the poor, but, in practice, those who are willing to pay up front are preferentially seen.³ Furthermore, recent efforts have focused on building new health care facilities, but often the budget is not adequate to maintain the structures or to staff them with trained employees.³ Thus, most doctors employed in government hospitals earn a monthly salary of approximately US $100–$200 and are forced to supplement their income by running private clinics from their homes after hours.

This was the backdrop against which I visited several hospitals in Ho Chi Minh City, a 6 million–person (and about half as many mopeds) megalopolis in the Mekong Delta. I was able to visit inpatient wards and outpatient clinics in diverse hospitals, including the Infectious Disease Hospital and associated MRC Wellcome Trust Unit (figure) and the Cho Ray and Gia Dinh Hospitals. Most of these institutions were similar to those I had seen during other trips to the tropics. On the public wards, the hot, humid air, saturated with the smell of sweat, sickness, and antiseptic, was being propelled around in slow circles by old, tired-looking ceiling fans. Paint was peeling off the walls, and large numbers of people crowded the rooms. There were usually 2 patients in each of the beds lined up against the walls, and there was barely enough space for the attending relatives to help with the washing, toileting, feeding, and comforting of their loved ones. Men and women shared these confines without refuge for privacy and
modesty, their pain and plight a curious spectacle to
the hapless collection of people who found them-

The private wards provided a startling contrast, even
more so than that posed by the gleaming penthouse
locations of Boston's private wards. Just down a corri-
dor and past fancy glass doors were air conditioning, a
sparkling white environment, and a sense of exclusive-
ness. There was one patient per bed and, at most, 6 beds
per room. The cost was at least 3 times as much as a stay
on a regular ward. These patients were the hitherto non-
existent middle class that was slowly emerging after de-
cades of war and still-palpable communist rule. These
separate worlds of the regular and private wards were
connected by a thread of nurses in white uniforms re-
plete with starched white caps and doctors in white,
embroidered coats who moved swiftly back and forth
between them, uncomfortably aware of this duality in
their professional lives.

There are probably fewer than 100 fully trained
and fewer than a half-dozen subspecialty neurologists
in Vietnam (Dr. L. Thao, personal communication). Neurology training begins after a 6-year medical de-
gree and has 2 tracks: regular and academic. Both are
2-year programs, although the academic track re-
quires a doctorate and further clinical training. A
program established by the University of Paris is
striving to increase the number of neurologists by
offering an accelerated curriculum; however, a main
training concern remains the need for subspecialists.

Despite these worries, my Vietnamese colleagues
had an impressive amount to teach me. I had expected
to see mainly diseases such as Japanese encephalitis and
cerebral malaria, but in fact I saw a huge variety of trop-
ical neurologic conditions. The largest burden of infec-
tious neurologic disease is now due to the complications
of HIV infection, often in combination with tuberculo-
sis, with large numbers of patients with cryptococcal
and tubercular meningitis. An entire ward was full of
patients with tetanus, mostly poor, unvaccinated farm-
ners who had stepped on a nail and developed trismus a
few weeks later. Most of these patients required inten-
sive care and received meticulous nursing care, inge-
nious nasogastric feeding with a high-calorie soup
cooked in the local kitchen, and ventilator support that
was often provided by relatives squeezing ventilator bags
at the bedside.

I saw only one case of cerebral malaria which, due
to the effectiveness of artemisinin-based compounds,
seems to be rare these days. The incidence of head
injuries has also decreased since a recent law made
moped helmets mandatory.

Other conditions commonly seen in Boston, such
as Parkinson disease, brain tumors, epilepsy, and
strokes, are also seen in Vietnam. One particularly
memorable patient was a 54-year-old man with a
complete left middle cerebral artery territory infarct.
He was in the intensive care unit and was being ven-
tilated by his relatives, when his condition worsened.
Rapid imaging and neurosurgery were unavailable in
the hospital to address his brain edema, and the pa-
tient was proclaimed to be terminal. His relatives
proceeded to load him—still intubated—onto a mo-
torbike, sandwiched between the driver and a relative
who held him upright and continued to ventilate
him, so that he could die at home, the only place
where his soul would find peace.

The doctors I met work hard. They continue to
take night calls throughout their attending lives, and,
bound by the necessity to survive, they have to sup-
plement their meager income with work in private
clinics. Many physicians had studied or trained
abroad in France, Germany, Russia, or Cuba for at
least 1 year, but they opted to return home, despite
having to face enormous challenges.

Vietnamese neurologists continue to encounter
multiple obstacles during and after training. One of
the ways to empower local physicians is to support
education and make Web-based, current medical in-
formation more easily available. Another important
and mutually beneficial training strategy has been re-
ferred to as North–South partnerships that foster ex-
change programs between physicians in our
institutions and physicians in the tropics. The logical
next step, however, is to expand on what David
Weatherall has called South–South partnerships that,
to some extent, have already started to develop. In
these relationships, a specialized local center provides
aid to hospitals in surrounding regions that lack this

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expertise. For example, the Wellcome Trust has a flourishing Tropical Diseases Unit in Ho Chi Minh City that has close ties to units in Thailand and Laos. This type of networking and infrastructure also is needed in neurology because it confers the added benefits of developing a reciprocal learning process and interpersonal relationships and is far more instructive than journal articles in teaching about the complicated and enriching world that surrounds us.

After the trip, Professor Warrell asked about the snakes I had seen. He was disappointed that I had not seen a single one. I have to admit that I did not share his disappointment.

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REFERENCES
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