

SANDEEP KISHORE

Mobilizing the Student Body

Sandeep Kishore is a student in the midst of a rigorous physician-scientist training program, but his work has already had a significant impact on global health.

He's expanded the curricula at his medical school to include neglected tropical diseases (NTDs); he's spearheaded the addition of cholesterol-lowering drugs on the WHO's essential medicines list; and now he's launched a new organization for young professionals to battle chronic disease in developing countries at the grassroots level.

For Kishore, born in Pittsburgh and raised in Radford, Virginia, it was a friend's untimely death of cerebral malaria in South India that cemented his decision to pursue a dual career in medicine and biomedical research.

During his second year as an M.D.-Ph.D. candidate at Weill Cornell Medical College in New York City, Kishore and fellow students staged a forum on NTDs—13 diseases that affect the world's one billion poorest people. The forum was designed to boost awareness among American medical students, revealing the biology of these diseases and their massive economic impact.

Interest stemming from the half-day forum led to a semester-long Global Health Curriculum that attracts 25-30% of the first year medical class.

"In part because of Sandeep's work, students are demanding science courses on neglected diseases," says Peter Hotez, of The George Washington University in Washington, D.C. At a very early stage in his career Kishore has a

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very solid base in science and is also devoting time to advocate for greater awareness of NTDs and their impact on poor people all over the world, Hotez adds. "That's a winning combination."

That same year, 2006, Kishore came across a shocking statistic that changed his perspective on neglected versus chronic diseases: Heart disease was the leading cause of death globally. "I didn't want to believe it at first because it challenged a lot of my background" he says. Cardiovascular disease (CVD) alone kills more than twice as many people as HIV/AIDS, malaria and TB combined.

First line therapy for CVD in the developed world are statins, drugs that lower both cholesterol and the risk of heart attack by 25-30%. Although these drugs hit the mar-

ket in 1987, they were largely unavailable to people in developing nations because of an annual price tag of \$1,200.

That struck Kishore as "a human rights issue." About 80% of heart attacks are happening in developing countries, and "no one was really talking about it."

His interest and outrage were well timed. On June 23, 2006, Merck's patent on Zocor, or simvastatin, expired and within six months the price of statins plummeted to \$40 per year.

Kishore contacted the student group Universities Allied for Essential Medicines, which strives to make critical drugs available to poor countries. He and the UAEM petitioned the WHO to add statins to the essential medicines list (EML).

Kishore and his colleagues argued that statins were universally effective for lowering cholesterol and CVD risk, were cost effective, and that there was a reliable generic supply. In April 2007, before he had even completed his second year of medical school, Kishore learned that the WHO approved the petition and added statins to the EML.

"Sandeep's work to add statins to the WHO EML will signal governments that heart disease is the biggest single killer in developing countries and requires the investment previously focused on selected infectious diseases," says Derek Yach, Senior VP of Global Health Policy at PepsiCo and former Executive Director at the WHO. "It also encourages them to provide statins in their clinics."

Two years later Kishore attended an Institute of Medicine meeting addressing the hurdles of fighting a CVD epidemic in developing countries. The committee challenged Kishore to explore whether young professionals were interested in chronic diseases. Kishore's gut feeling was that they were not. "It didn't have the appeal of some of the traditional plagues."

Kishore says that he was pleasantly surprised and he soon launched the Young Professionals Chronic Disease Working Group (YP-CDWG, www.ghdonline.org), an "incubator," which includes junior faculty, NGOs in the developing world, young policymakers at the World Economic Forum and the WHO, and medical students and residents in Rwanda, Uganda, Liberia, and Tanzania, who provide a field perspective vital for informing policy.

Kishore says that he is hoping, for example, that the YP-CDWG will be able to formulate strategies to broker more public bans on smoking, get more drugs on the EML, and figure out how to treat chronic diseases like hypertension in resource-poor settings including sub-Saharan Africa.

"[Kishore's] initiative is exciting young professionals about chronic diseases in ways that their peers were drawn to HIV/AIDS over the last two decades," says Yach. Kishore adds, "We will be collaborating 25 years from now, so why not begin and have a comfortable hub where we can share ideas?" —BIJAL TRIVEDI