**Researcher profile**

Dr. Samuel So addresses an epidemic of a preventable disease

Samuel So, MD, FACS, Director of the Asian Liver Center, Director of the Liver Cancer Program, and the Liu Hac Minh Professor of Surgery at the Stanford University School of Medicine, was recruited to California as a liver transplant surgeon, an ambition he had worked hard to fulfill. Yet he was not far into his practice in the Golden State when he found his true calling.

“We were spending hundreds of thousands of dollars to save one life [through a liver transplant],” he said, “when we could spend far less to save thousands and thousands of lives.”

He explained that the preponderance of his transplant patients had chronic hepatitis B virus (HBV), an infection for which there has been a safe, effective, and inexpensive vaccine for more than 30 years. And, yet, an estimated 800,000 to 1.4 million Americans have chronic hepatitis B. Approximately one in 10 Americans of Asian and Pacific Islander descent have chronic HBV infection as compared to one in 1,000 of white Americans.

One challenge to stemming the spread of HBV is that many people are symptom free and do not know they have the disease until they have significant liver damage. Another challenge, especially in the U.S., is that neither at-risk groups nor their healthcare providers recognize that they should be screened and vaccinated for HBV.

The at-risk groups include individuals born in countries with high incidences of HBV and hepatitis C (HCV), and anyone who might be exposed to contaminated blood by handling needles or other sharp objects. The second group includes healthcare providers, tattoo artists or clients, and illegal drug users. Individuals born in the U.S. before 1990, when HBV vaccine was added to the infant immunization schedule, and whose mothers were born in another country, also should be screened, So said.

Screening for the disease requires a simple blood test, “like the one the Red Cross uses before accepting blood donations,” So said. In fact, being turned away at the Blood Mobile is many patients’ first indication that they have a hepatitis infection. If the blood test comes back negative, the patient should be vaccinated. If the test comes back positive, the patient should be screened periodically for changes in his or her liver health. People with chronic HBV should also protect their livers by not drinking alcohol and take measures to ensure that they do not infect others.

To raise awareness of HBV and liver cancer, especially among the Asian American communities in the Bay Area, So founded and became director of the Asian Liver Center at Stanford School of Medicine in 1996. The center focuses on outreach and education, research and advocacy, and it is reaching wider audiences every year. For instance, the center’s Jade Ribbon Campaign is working with Asian communities the length of California as well as across the country and around the world.

The center is drawing on the energy and creativity of youth members with programs such as the Jade Ribbon Youth Council (JRYC), which moves HBV awareness and discussion into homes, churches and other gathering places. One cultural factor in the fight against HBV is that having the disease is a stigma in Asian countries. Young family members who have accurate information and a passion to make a difference in the health of their communities can change perceptions and behaviors, So said.

On the policy front, So has been an active supporter of state legislation that would help eradicate the disease here. He has worked with Assemblywoman Fiona Ma in drafting a couple of HBV-related bills. Ma, who herself has chronic HBV, in 2008 introduced

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**California Hapatitis B & C Figures**

Up to 5.3 million Americans – 2 percent of the U.S. population – are living with chronic HBV or HCV.

Viral hepatitis is the fourth leading infectious cause of death.

California is home to about 40 percent (or 6.7 million) of the nation’s Asian American population and 150,000 people of Pacific Islander ancestry.

San Francisco and Santa Clara counties experience some of the highest rates of chronic HBV and liver cancer in the United States.

Unaware that they have been infected with hepatitis B, one of 10 Asians and Pacific Islanders lives with the chronic infection – the leading cause of liver cancer.

Liver failure from chronic hepatitis C is one of the most common reasons for liver transplants in the United States.

In 2007 alone, HBV and HCV-related hospitalization costs in California totaled $2 billion.
Assembly Bill 158 to require the Department of Health Care Services (DHCS) to apply for a federal waiver to expand Medi-Cal eligibility for individuals with chronic hepatitis B. AB 158 did not make it through the legislative process due to costs associated with the bill. In 2009, Ma introduced a resolution declaring May 2009 as Hepatitis B Awareness Month in California. The resolution supports collaborating with all interested parties to raise public awareness about HBV. It also supports the development of a comprehensive, statewide HBV prevention and treatment plan. So said that “profiling” by physicians in the case of Asian and Asian-American patients could save lives. “In a lot of cities in California, more than 50 percent of the residents are Asian,” So said. “Doctors practicing in those cities everyday miss opportunities to save a life.” He added that physicians may automatically check cholesterol, blood sugar, blood pressure, weight, and mass. “For Asian patients, they should add a hepatitis test.”

So is acting globally as well as locally. As the founder and executive secretary of the Asia and Pacific Alliance to Eliminate Viral Hepatitis, he is building a public private partnership to eliminate the transmission of viral hepatitis and to increase access to anti-viral treatment. Using seed money from the Clinton Global Initiative, the coalition helped fund a WHO epidemiologist to be stationed in China to oversee the program.

“That action alone doubled the WHO staff committed to hepatitis,” So said. “One in 12 people in the world has chronic hepatitis, and WHO had only one full-time employee dedicated to the disease.”

The China project that So worked with provided catch-up vaccinations for children. The program vaccinated more than 600,000 youngsters under 16 years old. Moreover, through the program the group was able to educate the youth about HBV so that they could dispel some myths and, perhaps, lessen the stigma within their own homes and villages. The program was carried out in a remote, sparsely populated province of China, where 50 percent of the residents are Tibetans and Muslims, making it a diverse and potentially more complex region in which to implement a public health program.

“The idea was that if we could conduct a successful program there, China should be able to implement an immunization program across the whole country.” Indeed, in June 2009 the Chinese Ministry of Health announced a catch-up program to protect another 85 million children. The CDC estimates that less than 1 percent of children under five are infected with HBV as compared to 10 percent a decade ago.

In his work with the Institute of Medicine (IOM), So helped author a recent report, “Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C.” Through the report, the IOM recommends increased knowledge and awareness about chronic viral hepatitis among healthcare providers, social service providers, and the public; improved surveillance for hepatitis B and hepatitis C; and better integration of viral hepatitis services.

For a transplant surgeon, success is watching a patient recover and thrive. For Dr. Samuel So, success would be eliminating HBV as a cause of liver cirrhosis, cancer, and failure altogether.