

An Unsafe Practice Turned Blood Donors Into Victims

As many as 250,000 paid donors may have been infected in the 1990s. The government is now making drugs available, and authorities are trying to make sure people take them

HENAN PROVINCE—With a morning chill still in the air, Wei Jianli leaves her home in the remote farming village of Donghu for another day of work. Toting a stack of notepads and dressed in a double-breasted pink blazer, Wei, 32, walks to her next-door neighbor's house and a ritual unfolds that she repeats twice a day, 7 days a week, at 10 different homes. As Wei makes a few notes on a pad, her neighbor opens a packet containing the anti-HIV drug ddI and pours the powder into a tin cup. The 36-year-old farmer adds water, and as he waits for the drug to dissolve, he swallows pills that contain two other anti-HIV drugs, d4T and nevirapine. After he gulps down the ddI, Wei says her goodbyes and heads to her next charge.

The direct observation of treatment (DOTS) program that Wei works with is one of many recent attempts by both the provincial and central government to help people caught in a tragedy that has devastated Donghu and many other villages in Henan Province. Wei, her next-door neighbor, and the nine others she'll visit twice today all became infected with HIV as a result of an unhygienic blood industry, which officials say they shut down in 1995.

More than 600 villagers in Donghu sold their blood, for about \$5 per donation. The blood centers pooled and centrifuged the blood, retained the plasma, and reinfused the donors with red blood cells from the pool, which enabled people to sell their plasma more frequently without developing anemia. The practice turned out to be an efficient way to transmit HIV. In Donghu village alone, 231 donors became infected; one-fourth of them already have died from AIDS. Wei says a total of 27 people are infected in the 53 families in her immediate neighborhood. At least 250,000 people in seven provinces may have been infected through this route, but the catastrophe in Henan is the most famous, in part because it was the first to come to public attention.

In 2000, enterprising Chinese journalists, in defiance of the Henan government, re-

ported on the "strange illness" that had suddenly surfaced in several of the province's poor farming villages (see sidebar). Chinese and foreign media soon flocked to Donghu and other remote villages, which led Henan officials to bar journalists, scientists, and even international aid workers. But, with Wang Zhe, deputy director of the Henan Center for Disease Control and Prevention (CDC), as a guide, province officials allowed *Science* to visit Donghu, Guotun, and Wenlou villages, and they led tours of the many new schools, clinics, and orphanages



On watch. As part of a program in Donghu village to improve adherence, Wei Jianli observes her neighbor drink a dose of the anti-HIV drug ddI.

under construction in these areas. "We are clear about the epidemic situation of HIV spreading in Henan, and I don't want to lie about it," says Liu Xuezhou, deputy director-general of the province's health bureau.

Liu is sensitive to what he asserts are exaggerated reports, which he says wrongly extrapolate from the hardest hit villages to the entire province. Provincial studies of blood donors, Liu says, show widely varying infection rates in different villages, with a range from 1% to 40%. He says their most recent tests found that Henan has a total of 35,000 infected people.

Liu also disputes widespread charges in the media that Henan attempted to hide the calamity. "Before the year 2000, there were not so many AIDS patients," says Liu, referring to the time lag between infection and disease. "We were not fully aware of the prob-

lem." A report issued by Human Rights Watch in September 2003, *Locked Doors*, faults China for the "lack of any government accountability" in the "Henan blood scandal" and calls on top leaders "to launch a complete, independent, and impartial investigation." (The provincial government clearly had ties to what it calls the "illegal" industry until shutting it down, but Henan officials referred *Science's* questions about this matter to the central government, which did not reply.)

In response to the crisis, the central government launched a program in March 2003 called China CARES (Comprehensive AIDS RESponse) that offered infected plasma donors in Henan and other provinces free anti-HIV drugs manufactured in China. Since the drugs arrived, Wenlou, which has 670 HIV-infected people, has seen deaths decline from as many as three a day to one a month.

But a serious problem soon surfaced: Many people only took the drugs intermittently—which can quickly lead to resistance (see p. 1433)—or stopped taking them altogether. Zhang Fujie, an AIDS clinician at the CDC in Beijing who directs China's treatment program, says that of the 7012 patients in various provinces who joined the treatment program, 19% dropped out. When a small group of infected villagers at the Wenlou clinic were asked about this, one 35-year-old farmer immediately spoke out. He took anti-HIV drugs for 1 month last year and then stopped. A father of two who says he no longer can work, the farmer has no plans to restart the treat-

ment. "My liver didn't function properly," he says. "I can't stand it."

Epidemiologist Ray Yip, head of the U.S. CDC's program in China, says, "People were not getting any adequate information." It particularly bothered him that patients did not realize the stakes of stopping treatment. "The message that 'this is your once-in-a-lifetime chance' did not get across," he says. Yip stresses that the problem stems from what amounts to an emergency relief program mentality: "The government was under tremendous pressure to get it out." Wang agrees that the overnight decision to launch the treatment program did not allow for the proper education of patients or local doctors about the importance of sticking with the treatment.

The DOTS program in Donghu, which Yip helped start, is one of several efforts to reduce the high dropout rate. Since it be-

A Scoop of International Proportions

BEIJING—A chance encounter on a train in October 1999 led Zhang Jicheng, then a reporter for *Henan Science and Technology Daily*, to uncover a huge AIDS scandal that would shake China and attract intense international attention—and cost him his job.

On a train ride from southern Henan back to his home in the province's capital, Zhengzhou, Zhang met two couples from a remote village called Wenlou who said they were heading to Beijing. Others in Wenlou had tested positive for HIV after selling their blood, and the couples wanted authoritative medical tests for themselves. Zhang decided to visit Wenlou the following day.

Zhang spoke with several HIV-infected people who had sold blood, and he interviewed teachers at the village school. "Many told me children already had lost parents and didn't know which disease had taken their lives," says Zhang. He dropped in on the director of health for the county. "The director was drunk at the time I went there, so he was not on guard," Zhang says. The man showed off pamphlets the health bureau had printed to educate villagers about HIV/AIDS.

Four years earlier, epidemiologist Wu Zunyou of the Anti-Epidemic Station in neighboring Anhui Province and Roger Detels of the University of California, Los Angeles, had published a paper in *The Lancet* about a mother and her two daughters who became infected with HIV after selling plasma. Several provinces immediately shut down these businesses (they were formally outlawed the next year but continued operating in many places), and the Anhui cases appeared to be isolated accidents. But now Zhang had stumbled upon strong, if anecdotal, evidence of a much larger problem. In November 1999 his paper submitted a draft of his story to officials at the Henan Provincial Committee of the Communist Party, who blocked its publication. "If I was younger and an activist, I would have gone to the street," Zhang says.

Zhang did the next best thing: He sent a copy of his story to *Huaxi Metropolitan News*, a paper across the country in Sichuan Province, which on 18 January 2000 ran "Strange Disease in a Henan Village Shocks Top Officials." When Henan officials learned of the sto-



Dogged reporter. Zhang Jicheng was fired after breaking the Henan blood donor story.

ry, they told Zhang's editors to fire him. But Zhang had always written under a pen name for the Henan paper, and his editors kept him on. He continued to visit Wenlou and other villages hard hit by HIV, but his paper could not publish the stories.

To Zhang's surprise, his *Huaxi* story appeared on the U.S. Embassy Web site. Liu Jianqiang, a correspondent with China's bold *Southern Weekend*, who wrote a chronology of how this story unfolded, says the Chinese mainstream media had "turned a deaf ear to the AIDS reporting in Henan." That August, *China News Weekly* published "AIDS National Disaster,"

but the Henan story didn't become huge news until October, when *The New York Times* began in-depth reporting on the problem.

The debacle, which *Southern Weekend* soon reported reached far beyond Henan, made minic celebrities—and state pariahs—out of several doctors who helped expose it. It also pushed the government to deal more aggressively with the country's AIDS epidemic. Reporter Zhang Jicheng, however, has received next to no attention for his major scoop, which he shrugs off.

In the summer of 2001, Henan Province held a meeting called the Marxist Concept of News Reporting at which each journalist received marks from the local propaganda office. "I was given no score," laughs Zhang, whose pen-name ruse by then had been discovered by the authorities. So Zhang was fired a second time, and he moved to Beijing, where he published several of the stories that he had been forced to withhold. Although he now covers other subjects, he remains keenly interested in his old home. "Henan is a rich mine for reporters," says Zhang.

—J.C.

gan, "adherence rates have risen dramatically," says Wang.

Guotun also launched a DOTS program, with help from the Chi Heng Foundation in Hong Kong. It offers a special incentive for patients who adhere: free eggs every 2 weeks. Wu Zongren, the doctor who runs the program, says that 100 patients now receive treatment, and not one has died since the program began. As Wu speaks in the village clinic, his son and grandson drop by. The son was married to a woman who became infected from selling blood and since died. HIV infected both Wu's grandson and his son, who now helps run the DOTS program. "It's like a war, and we are the commanders," says the elder Wu.

The Global Fund to Fight

AIDS, Tuberculosis, and Malaria recently approved China's application for \$98 million to vastly expand and improve treat-

ment to blood donors. The money also will help monitor CD4 white blood cells in treated people, a critical measure of whether the drugs are working. And it explicitly calls for more DOTS programs.

If Donghu is an indicator, the DOTS programs ultimately may lead to the type of complaints from patients that caregivers want to hear. After Wei Jianli watches another neighbor, Wang Xiuzhi, swallow her medicine, the 45-year-old mother of three grouches about the need to have someone observe her. "How can I not take my medicine on time?" she protests. "I'm concerned for my life." Wei patiently listens, and then walks away with a satisfied smile.

—JON COHEN



Side effects. Experts worry that misunderstandings about toxicities led many ex-blood donors with AIDS like this Wenlou village farmer to reject the free anti-HIV drugs offered.