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Agent Orange's lethal legacy: For U.S., a record of neglect Poisonous defoliants still exact a toll in U.S., Vietnam

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Tribune reporters

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Part 1 of a Tribune investigation finds that U.S. officials have neglected a lasting problem even as the health fallout has spread. [Complete coverage >>](#)

In central Indiana, two sisters struggle through another day, afflicted by a painful condition in which their brains are wedged against their spinal cords. They are in their 30s, but their bodies are slowly shutting down.

Thousands of miles away, amid the rice paddies of Vietnam, a father holds down his 19-year-old daughter as she writhes in pain from a seizure brought on by fluid in her skull, which has been drained four times in the past four years.

"The doctors said that they were sorry, but they could not cure her," the father says. "They told me I should take her home and that she would pass away very soon."

These women come from different cultures, from nations separated by more than 8,300 miles. Their fathers fought on opposite sides of the Vietnam War, but they are linked by the stubborn legacy of Agent Orange and other defoliants sprayed by the U.S. military decades ago.

Contaminated with dioxin, a chemical now considered the most toxic ever created by man, the defoliants are linked to a higher risk of multiple cancers, birth defects and other conditions that are contributing to a dramatic increase in financial compensation for U.S.



veterans and their families.

Service-related disability payments to Vietnam veterans have surged 60 percent since 2003, reaching \$13.7 billion last year, and now account for more than half of such payments the U.S. Department of Veterans Affairs provides to veterans of all wars. The average compensation payment for Vietnam vets is 41 percent higher than that for World War II veterans and 35 percent higher than for those who served in Korea. Those disability checks do not include the billions spent on health care for Vietnam veterans.

The price tag is only expected to escalate as scientists learn more about the effects of dioxin, as veterans are stricken late in life and as the children of veterans discover they are sick. In September, three more diseases were added to the list of illnesses for which the VA provides compensation -- an expansion the agency estimates will affect roughly 200,000 veterans and cost billions of dollars annually.

Meanwhile, untold numbers of Vietnamese -- including many who weren't even alive during the war -- also suffer from maladies associated with the defoliants. Tens of thousands more are at risk today from dioxin that remains in the environment at dozens of former U.S. military bases.

Yet in the 30 years since Agent Orange was recognized publicly as a potential health threat, the federal government has established a record of neglect.

U.S. veterans seeking compensation for their illnesses face delays and a maddening bureaucracy. Adding to their frustration, the federal government never has gotten to the bottom of Agent Orange's full impact, failing to follow through on requests for large-scale studies on how defoliants may have affected veterans' health.

In Vietnam, children sing songs of the devastation caused by Agent Orange and government officials wonder how the U.S. can avoid fully addressing the health and environmental havoc wreaked by the chemicals, even as the two nations foster stronger trade and military ties.

Since the countries normalized relations in 1995, Congress has allocated just \$6 million for herbicide-related issues in Vietnam, even though Vietnamese officials say addressing them will take tens of millions. The Ford Foundation, a philanthropic organization that has made Agent Orange a focus, has provided \$11.7 million.

With assistance from the Fund for Investigative Journalism, the Tribune spent a month traveling to eight provinces throughout Vietnam, conducting nearly two dozen interviews with civilians and former soldiers who say they were exposed to the defoliants.

The newspaper used a database of every spraying mission, mapping software and a GPS device to help corroborate their stories. And in the U.S., the paper researched thousands

of pages of government documents and traveled to the homes of veterans to gauge the impact and measure the cost in both dollars and human misery.

Some scientists remain skeptical that Agent Orange and other defoliants directly cause diseases. But with hundreds of independent studies completed in the years since the war ended, there is strong evidence that people exposed to the herbicides have a higher risk of contracting illnesses such as soft tissue sarcoma and non-Hodgkin's lymphoma. The number of medical conditions linked to the defoliants continues to grow.

The lingering controversy over the herbicides on both sides of the Pacific Ocean provides a sobering reminder of the often unforeseen consequences of war at a time when the country is fighting protracted conflicts in Iraq and Afghanistan.

"We do not know the answer to the question: What happened to Vietnam veterans?" said Jeanne Stellman, an epidemiologist who has spent decades studying Agent Orange for the American Legion and the National Academy of Sciences. "The government doesn't want to study this because of international liability and issues surrounding chemical warfare. And they're going to win because they're bigger and everybody's getting old and there are new wars to worry about."

A deadly defense

The U.S. military began spraying herbicides in South Vietnam in 1961, as the Cold War raged and America seemed beset on all sides by the threat of communism. Vietnam, a sliver of a country hugging the South China Sea, was split in half, with communists controlling the north. Led by nationalist leader Ho Chi Minh, the communists sought to reunite the country by toppling the U.S.-backed Republic of Vietnam in the south.

The greatest asset of the armies fighting the U.S. may have been the landscape of South Vietnam. Triple-canopy jungles cascading down mountainsides, patchworks of rice paddies and dense forests covered a battlefield where the line between enemy and civilian was often blurred.

The verdure allowed North Vietnamese forces to harass, resupply and melt back into the thick vegetation while surviving on food grown by local supporters.

The U.S. countered with chemical defoliants aimed at destroying the natural fortresses protecting the enemy. Over 10 years, U.S. and South Vietnamese forces released nearly 20 million gallons of herbicides in Southeast Asia, enough to blanket Lake Michigan four times. The vast majority of the missions took place in South Vietnam, but border areas in Cambodia and Laos were also sprayed.

Though Agent Orange was the most widely used herbicide, there were actually a half-dozen "agents," including White, Blue, Purple, Pink and Green. About 65 percent of them

were contaminated with TCDD, a highly toxic form of dioxin, while more than 1 million gallons of Agent Blue contained arsenic.

The U.S. military stopped using Agent Orange in 1970 after a study for the National Institutes of Health showed that a chemical found in some of the compounds caused birth defects in laboratory animals. Soon after, the U.S. surgeon general halted the domestic use of that chemical, a dioxin-tainted compound known as 2,4,5-T.

Some limited spraying continued in Vietnam for another year, but only with agents that did not contain dioxin. The herbicide program, known as Operation Ranch Hand, stopped in 1971, four years before the war officially ended.

'We're a mess'

Nearly four decades later, on a quiet street in Brownsburg, Ind., Carrie Price-Nix and Amanda Price Palmer have resigned themselves to a life of prolonged fatigue and permanent disability. They've had 41 surgeries between them in the past 20 years, including five brain operations, two spinal cord surgeries and one hysterectomy.

Their father, Stephen Price, was an Air Force mechanic who served at the U.S. air base in Da Nang in 1967. Even today, the site is contaminated with levels of TCDD that are as much as 365 times higher than what the World Health Organization deems safe.

Price died in April 2008 after fighting leukemia, diabetes and chloracne, all of which are associated with the herbicides used in Vietnam. He began receiving full disability compensation from the VA in 2005, after waiting two years for his claim to be approved.

His daughters both have Chiari malformation, a structural defect in the base of the brain associated with spina bifida, which the VA recognizes as a defoliant-related birth defect in the offspring of male veterans.

Price filed a claim with the VA for Price-Nix in July 2002. Three and a half years later, she was approved for partial compensation. By that time, her bladder had shut down, and her father was dying.

Palmer, who has similar health problems, has spent six years seeking compensation from the VA. "They're waiting for you to die," her sister said. Last week, the agency denied Palmer's claim, ruling her illness is not related to spina bifida.

The deterioration of Palmer's abdominal muscles forces her to remove her feces manually. Price-Nix has a pacemaker-like device to regulate her bowels and must catheterize herself daily.

"We're a mess," Palmer said jokingly. Then the sisters began weeping as they pondered

the reality that there is no recovery from their conditions.

[See video of the sisters discussing their family's health issues](#)

Far away from Brownsburg, in central Vietnam's Quang Binh province, Do Thi Hang, 19, suffers from symptoms similar to the sisters'. She has regular seizures caused by the fluid that accumulates in her brain. She can't walk and has trouble controlling her bowels.

Her parents have never been given a specific diagnosis because of Vietnam's underdeveloped health care system, but Hang's ailments mirror those of people suffering from spina bifida.

As a soldier fighting the U.S., Hang's father, Do Duc Diu, 58, was stationed for four years at an abandoned U.S. air base called A So, located in a valley where parts of the Ho Chi Minh Trail wound along the Laotian border. U.S. and South Vietnamese forces sprayed more than 400,000 gallons of herbicides in the Aluoi Valley, formerly known as A Chau.

New studies show that areas where the U.S. military stored chemicals on the A So air base are still contaminated with dangerously high levels of TCDD.

Since the war ended, Diu and his wife, Pham Thi Nuc, have had 15 children. Twelve died before the age of 3, all from illnesses similar to Hang's, Diu said. Their small graves sit atop a sandy hill behind Diu's home where he goes nearly every day to burn incense.

"I can say that I have no future, no happiness," he said.

[See video of Diu's family at home in Vietnam](#)

Invisible wounds

The compensation U.S. veterans now receive for herbicide-related illnesses was gained only after a long, hard-fought battle in which the lines between science and politics were often blurred.

Part of the problem was that veterans were returning home with invisible wounds. Their fight to receive recognition and compensation for their war-related illnesses, including post-traumatic stress disorder, opened the door for veterans of all wars.

"The better care that troops get now is owed to their Vietnam brothers," Stellman said.

New scientific studies, dogged investigations into political interference in government-sponsored studies and a \$180 million settlement in a veterans' class action suit against chemical companies paved the way for the Agent Orange Act of 1991.

Among other provisions, the legislation created a list of "presumptive illnesses" for which Vietnam veterans could be compensated. It directed the National Academy of Sciences to review studies on the chemicals found in the herbicides and, every two years, recommend additions to the list. Diseases or birth defects are recommended if exposure to defoliants is more likely than not to increase a person's risk.

Since then, the VA has added 15 diseases as well as 17 birth defects in the children of female veterans.

But veterans groups say as many as a dozen more illnesses could be associated with the herbicides, as could numerous birth defects in the offspring of male vets.

One reason for the slow pace in adding diseases is that the VA relies on outside research on workplace exposure and industrial accidents instead of conducting a broader epidemiological study on veterans, which Congress first asked for in 1979. For years the agency said it could not study the impact of the herbicides on veterans because it had no way of measuring their exposure.

But that excuse is no longer valid, according to Stellman, professor emeritus at Columbia University's school of public health.

With her husband, Steven, an epidemiology professor, she compiled a comprehensive database on spraying missions and used it to develop an exposure model that has twice been blessed by the Institute of Medicine, an independent panel of medical experts whose recommendations on health policy help guide the VA's decision-making.

The VA said in 2003 it would take the model under advisement. The agency is still evaluating it.

"I'm surprised that it hasn't been pursued more energetically," said Dr. David Savitz, a physician at Mount Sinai School of Medicine in New York City who chaired the institute's review panel.

In September, the VA announced a broad, three-year study on Vietnam veterans' health, but it won't look specifically at defoliants like Agent Orange. Coming more than three decades after the war ended, the plan has many veterans believing the government is simply waiting for them to disappear.

"The mantra of the VA is delay, delay, delay until they all die," charged Paul Sutton, a Vietnam veteran and former chairman of Vietnam Veterans of America.

Retired Army Gen. Eric Shinseki, now the secretary of veterans affairs, has acknowledged the adversarial relationship between the VA and former soldiers. A

Vietnam veteran who was wounded in combat, Shinseki has vowed to be more of an advocate for those who serve the country.

Members of Congress say much of the foot-dragging on studying Agent Orange is tied to the bottom line.

"I don't think they really want to know the answer," said Rep. Bob Filner, D-Calif., chairman of the House Veterans Affairs Committee. "The (financial costs) would be so high that they'd scare the hell out of everybody."

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Coming Sunday: U.S. vets battle for compensation

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