

DAVID LEONHARDT

## Why Doctors So Often Get It Wrong

ATLANTA

ON a weekend day a few years ago, the parents of a 4-year-old boy from rural Georgia brought him to a children's hospital here in north Atlanta. The family had already been through a lot. Their son had been sick for months, with fevers that just would not go away.

The doctors on weekend duty ordered blood tests, which showed that the boy had leukemia. There were a few things about his condition that didn't add up, like the light brown spots on the skin, but the doctors still scheduled a strong course of chemotherapy to start on Monday afternoon. Time, after all, was their enemy.

John Bergsagel, a soft-spoken senior oncologist, remembers arriving at the hospital on Monday morning and having a pile of other cases to get through. He was also bothered by the skin spots, but he agreed that the blood test was clear enough. The boy had leukemia.

"Once you start down one of these clinical pathways," Dr. Bergsagel said, "it's very hard to step off."

What the doctors didn't know was that the boy had a rare form of the disease that chemotherapy does not cure. It makes the symptoms go

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away for a month or so, but then they return. Worst of all, each round of chemotherapy would bring a serious risk of death, since he was already so weak.

With all the tools available to modern medicine — the blood tests and M.R.I.'s and endoscopes — you might think that misdiagnosis has become a rare thing. But you would be wrong. Studies of autopsies have shown that doctors seriously misdiagnose fatal illnesses about 20 percent of the time. So millions of patients are being treated for the wrong disease.

As shocking as that is, the more astonishing fact may be that the rate has not really changed since the 1930's. "No improvement!" was how an article in the normally exclamation-free Journal of the American Medical Association summarized the situation.

This is the richest country in the world — one where one-seventh of the economy is devoted to health care — and yet misdiagnosis is killing thousands of Americans every year.

How can this be happening? And how is it not a source of national outrage?

A BIG part of the answer is that all of the other medical progress we have made has distracted us from the misdiagnosis crisis.

Any number of diseases that were death sentences just 50 years ago — like childhood leukemia — are often manageable today, thanks to good work done by people like Dr. Bergsagel. The brightly painted pediatric clinic where he practices is a pretty inspiring place on most days, because it's just a detour on the way toward a long, healthy life for four out of five leukemia patients who come here.

But we still could be doing a lot better. Under the current medical system, doctors, nurses, lab technicians and hospital executives are not actually paid to come up with the right diagnosis. They are paid to perform tests and to do surgery and to dispense drugs.

There is no bonus for curing someone and no penalty for failing, except when the mistakes rise to the level of malpractice. So even though doctors can have the best intentions, they have little economic incentive to spend time double-checking their instincts, and hospitals have little incentive to give them the tools to do so.

"You get what you pay for," Mark B. McClellan, who runs Medicare and Medicaid, told me. "And we ought to be paying for better quality."

There are some bits of good news here. Dr. McClellan has set up small pay-for-performance programs in

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# Business Day

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Medicare, and a few insurers are also experimenting. But it isn't nearly a big enough push. We just are not using the power of incentives to save lives. For a politician looking to make the often-bloodless debate over health care come alive, this is a huge opportunity.

Joseph Britto, a former intensive-care doctor, likes to compare medicine's attitude toward mistakes with the airline industry's. At the insistence of pilots, who have the ultimate incentive not to mess up, airlines have studied their errors and nearly eliminated crashes.

"Unlike pilots," Dr. Britto said, "doctors don't go down with their planes."

Dr. Britto was working at a London hospital in 1999 when a little girl named Isabel Maude was initially diagnosed with chicken pox. Only when her organs began shutting down did her doctors realize that she had a potentially fatal flesh-eating virus. Isabel's father, Jason, was so shaken by the experience that he quit his finance job and founded a company — named after his daughter, who is a healthy 10-year-old today — to fight

### ONLINE: AN AUDIO

*Listen to Jason Maude tell the story of his daughter, Isabel, at [nytimes.com/leonhardt](http://nytimes.com/leonhardt).*

misdiagnosis.

The company sells software that allows doctors to type in a patient's symptoms and, in response, spits out a list of possible causes. It does not replace doctors, but makes sure they can consider some unobvious possibilities that they may not have seen since medical school. Dr. Britto is a top executive.

Not long after the founding of Isabel Healthcare, Dr. Bergsagel in Atlanta stumbled across an article about it and asked to be one of the beta testers. So on that Monday morning, when he couldn't get the inconsistencies in the boy's case out of his mind, he sat down at a computer in a little white room, behind a nurse's station, and entered the symptoms.

Near the top of Isabel's list was a rare form of leukemia that Dr. Bergsagel had never seen before — and that often causes brown skin spots. "It was very much a Eureka moment," he said.

There is no happy ending to the story, because this leukemia has much longer odds than more common kinds. But the boy was spared the misery of pointless chemotherapy and was instead given the only chance he had, a bone marrow transplant. He lived another year and a half.

Today, Dr. Bergsagel uses Isabel a few times a month. The company continues to give him free access. But his colleagues at Children's Healthcare of Atlanta can't use it. The hospital has not bought the service, which costs \$80,000 a year for a typical hospital (and \$750 for an individual doctor).

Clearly, misdiagnosis costs far more than that. But in the current health care system, hospitals have no way to recoup money they spend on programs like Isabel.

We patients, on the other hand, foot the bill for all those wasted procedures and pointless drugs. So we keep getting them. Does that make any sense?

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