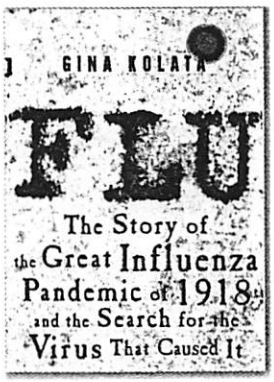
# The Great Pandemic... Same Time, Next Century?

By Elizabeth Whelan

**When is a nonfiction science book like a page-turning thriller? When it's the story of a mysterious virus that suddenly killed millions worldwide – and still exists, frozen in permafrost.**




Gina Kolata's *Flu: The Story of the Great Influenza Pandemic of 1918 and the Search for the Virus That Caused It* (Farrar, Straus & Giroux, $25, 330 pp) not only is an extraordinary account of one of the most significant events of this century, it also represents the first systematic attempt to chronicle efforts by medical detectives to unravel the mysteries that still shadow the tragic outbreak.

The statistics surrounding the 1918 flu are staggering. Estimates of worldwide deaths range from 20 million to 100 million. The disease affected 25 percent of all Americans, or nearly 700,000 people, targeting its fury on young, healthy adults age 20 to 40. More men died from influenza than in combat during World War I.

Kolata, a science writer for the *New York Times*, was struck by the lack of attention given this unprecedented event. She notes that as a student of virology and science history, she learned little about the pandemic. Likewise, I received advanced degrees from two major schools of epidemiology and public health and recall that the topic was covered only in the most superficial manner — a failure in priority that I now realize was shocking.

The author did some family research and found that her husband's mother was a young girl when her father died of the viral infection, leaving behind four children. I, too, did some family investigations: My mother, born in 1914, vividly recalls the fear of the flu years — fear that remained long after the pandemic subsided. She described a scene of panic in the fall of 1918 when my grandmother had rented a country house in upstate New York. The neighbor borrowed some clothes pins to do her laundry and tried to return them. Worried about contamination, my grandmother threw the clothespins back over the fence into the neighbor's yard.

The 1918 flu seemed to hit in two stages — a mild form in the spring of 1918 and the deadly form later that fall. What was unique about this virulent organism that allowed it to kill so many? Would it still be possible to isolate the virus, decode it and use that information to develop immunizations that could protect us from future epidemics?

It is this search for the virus which lends itself to the author's first-rate storytelling. Lung samples from two people who died of the flu had found their way to the laboratory of Jeffrey K. Taubenberger of the Armed Forces Institute of Pathology in Washington — one such sample preserved by an Army doctor who performed an autopsy of a flu victim, cut a slice of his lungs, impregnated it with formaldehyde and embedded it in candle wax. Taubenberger found the sample in a federal storehouse in 1966.

**Hard hit:** *A St. Louis flu victim is loaded up.*

Even before then, in 1950, a young pathologist in Iowa named Johan V. Hultin overheard a colleague say that the only way to find the 1918 virus would be in the bodies of victims who were buried in ice — "permafrost" that had never thawed since 1918. Using church records, Hultin identified possible flu victims in Alaskan villages and won permission to exhume bodies. He and his colleagues dug down in the ice and discovered perfectly frozen bodies — but to his dismay, Hultin did not have the sophisticated scientific tools necessary to identify the virus.

Fast-forward the story to 1997. Retired and living in San Francisco, Hultin read a scientific-journal article by Taubenberger and began to speculate that molecular biology had advanced to the point that it might be able to identify the virus — if they went back to the permafrost and dug up more frozen victims of the flu. Again, he asked permission to dig. Hultin found the body of an obese woman who was particularly well preserved. He removed her lungs — and they had the virus. Taubenberger's lab is using the samples to analyze the genetic puzzle of this deadly virus.

The book is an impressive, informative and sobering read. It's impressive because it is written by an accomplished journalist whose prose entices the reader to stay with her while she doggedly pursues this mystery. It is informative because it introduces us to real-life characters such as Hultin and Taubenberger who had a pure dedication to science. And sobering because researchers still do not have all the answers about why the virus killed millions — and if, when and where a similar virus might attack again.

The author leaves us with the comforting thought that if a similar flu did emerge again, we now have antibiotics that can block the pneumonia-causing bacteria that overwhelmed the 1918 victims and new drugs to lessen the effect of influenza infections. We have the option of making vaccines. But ultimately, she concludes, "vigilant surveillance" of emerging influenza agents is our best protection against "the most quotidian of infections."

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