

Researcher Patricia Martens Turned Dry Data into Stories*

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PATRICIA MARTENS'S PASSION FOR UNDERSTANDING AND SPREADING KNOWLEDGE about health research manifested itself in different ways throughout her life. She believed strongly in the power of such data to point to ways of improving health and reducing inequality.

A gifted and enthusiastic teacher, skilled academic and widely admired administrator, she served as the director of the Manitoba Centre for Health Policy (MCHP) from 2004 to 2014.

When she was diagnosed with mesothelioma, an aggressive form of cancer usually caused by exposure to asbestos, she recognized the opportunity to speak up and support the campaign to have Canada join other developed countries in banning asbestos. She sent a letter urging Prime Minister Stephen Harper to acknowledge that all forms of asbestos are hazardous to human health, though she only received a polite form letter in reply, her husband, Gary Martens, recalls.

Ever the curious researcher, she told local media soon after her diagnosis, "I want to try to understand this cancer-care journey, so this gives me an opportunity to put on my scientific hat and say, 'How could we do this a little better?'"

Focusing on her work kept her from dwelling on what she called the "yucky things" about her disease.

Patricia Martens died at the age of 62 on Jan. 10. "It is surely a tragic irony that someone who was such a proponent for public health would die from this illness," said David Henry, a Toronto academic, research scientist and friend of Dr. Martens.

Dr. Martens's first career was as a high school chemistry and mathematics teacher in Winnipeg. In 1978, however, she moved with her husband, Gary Martens, to work a farm in rural Manitoba. She returned to university when both her children were in school.

Consequently, she entered the research world late – she was 47 in 1999 when she was awarded her PhD in health sciences at the University of Manitoba. Though her academic career was relatively short, by the time of her death, Dr. Martens had presented at more than

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400 conferences and published more than 300 articles, reports, book chapters and abstracts. She became a fellow of the Royal Society of Canada and of the Canadian Academy of Health Sciences.

Dr. Martens was also admitted to the Order of Canada in 2013, received the R.D. Defries Award (the highest award from the Canadian Public Health Association) and was named the 2014 Justice Emmett Hall Laureate for contributions to health research.

Dr. Martens was famous in health policy circles for her lively and humorous presentations, often involving the use of unusual props.

She would distribute licorice sticks, for example, to help non-statisticians grasp the significance of the Lorenz curve, a graphical representation of income-related inequality. The more the curve sags, the greater the inequality. Dr. Martens would have audience members bend their licorice to mirror the curve on the slide of a graph she projected – a curve that revealed, in one instance, that rates of suicide (and suicide attempts) in Manitoba were much higher for people in the 20-per-cent-lowest-income category. This curve, she noted, suggested the need for targeted interventions. In contrast, an almost-straight line on another graph revealed that among people over 55, dementia affects all income groups in Manitoba almost equally, suggesting the need for universal interventions.

Dr. Martens also liked to show snapshots of a variety of deer-crossing road signs, to prompt reflection on whether deer actually look different in different provinces and countries, and to stress the importance of investigation and context.

Most memorable, however, was her trademark “squish and shift” gesture, in which she clasped her hands and raised her arms to form a triangle. She used this gesture to help audiences understand the significance of changing the position and shape of a bell curve representing the distribution of a particular health or social indicator in a population.

If the whole curve could be shifted in a positive direction (she would maintain the triangle proportions but shift her arms to the side) the overall population health gains could be significant, but the gap between the least and most healthy (the tails of the curve) would remain the same. Next, she would demonstrate the “squish” (she would bring her elbows closer together) to explain the importance of a targeted effort to reduce inequality by improving the condition of those who were least healthy.

“She was not as staid as some of her academic peers,” her husband, a retired University of Manitoba lecturer, wryly observes. (He abandoned full-time farming in 1996 and began commuting to Winnipeg with his wife.)

“Pat could take dry data, tables and graphs and make an engaging and compelling story,” says Brian Postl, dean of health sciences at the University of Manitoba. “And she was so credible – anyone working with large data sets recognizes this.”

She was a giant in her field as well as being remarkably selfless and generous, Dr. Henry added. He credits her with providing invaluable advice and guidance to him when he arrived from Australia in 2007 to become president of the Toronto-based Institute for Clinical Evaluative Sciences, a health research centre similar to the one Dr. Martens headed in Manitoba.

Yet asked what challenges Dr. Martens faced in her life, her husband said she would sometimes lament that women had trouble in high-level leadership roles. “She sometimes thought she was not taken seriously enough.”

Dr. Martens was born in Calgary on Jan. 25, 1952, the middle child of three. Her father, Howard, was an insurance salesman whose job saw the family move cities every five years or so. Her mother, Hazel, was a homemaker while raising the children and later worked in libraries.

Dr. Martens met Gary Martens when both of them were studying chemistry at the University of Manitoba. They married in 1974. She went on to become a teacher at St. Mary’s Academy, a private girls’ school in Winnipeg, while her husband took a job at a soil lab. But he yearned to be near the family farm, where he had grown up with his Mennonite parents. “Pat had always lived in cities and it took a year to convince her to move,” he said.

The couple bought and also rented farmland near Kleefeld, about 60 kilometres south of Winnipeg, and they worked as much as 640 acres.

Dr. Martens settled in quickly. She created her own community with other young mothers, became active in the local Mennonite church, assumed the role of farm bookkeeper, kept a large garden and took meals out to the field.

The couple had two large trucks, and Gary remembers them driving loads of oats to Winnipeg in tandem – he in one truck with their five-year-old son, John, and Pat in the other with Rebecca, their infant daughter.

Before returning to university, Dr. Martens became active with La Leche League, which promotes breastfeeding. For her master’s degree, she studied the barriers that helped explain the low (40 per cent) breastfeeding rate among Sagkeeng First Nations women. For her PhD thesis, she designed an intervention – her key innovation was the training of peer counsellors – that resulted in an increase (to 70 per cent) of breastfeeding rates among the women. Rates of low birth weight and premature births also dropped.

As director of the MCHP, Dr. Martens launched new programs of collaborative research. For example, she convened a Need to Know team, composed of two planners from each regional health authority in Manitoba, MCHP academics and staff from the province’s health ministry. They developed reports on subjects such as healthcare utilization and mental health. (The team won a Canadian Institutes of Health Research Knowledge Translation Award for regional impact.)

Dr. Martens’s personality was key to the success of her initiatives, maintains Monique Vielfaure Mackenzie, executive director of Regional Health Authorities of Manitoba. “She had a knack for making whoever she spoke with feel like the only person in the room. You just felt comfortable with her. She was never intimidating, despite all her accomplishments.”

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Dr. Martens died at her farm home, almost two years after she received her diagnosis of mesothelioma. She had continued to work and participate, as much as possible, in the activities of the MCHP until weeks before her death.

Dr. Martens once told a local reporter she was “a bit of scattered research scientist who also loves to be a farm lady and work in a church and do the local community stuff.”

Patricia Martens leaves her husband, Gary; children, John and Rebecca; grandchildren, Charlotte and Alexander; and extended family.