

Margot Becklake: looking back on a forward-thinking occupational health scientist and workers' advocate

MB BCh Wits (1944), MD (1951), FRCP UK (1972); CM (Member of the Order of Canada) (2007), GOQ (Order of Quebec) (2011)

Margot (Margaret) Becklake – inspirational teacher, exceptional mentor, internationally-acclaimed epidemiologist, philosopher and ethicist – passed away on 17 October last year, at the age of 96. Margot was not only an advocate for workers' health; she also promoted women in science and the medical field, particularly in public health, at every opportunity.

Margot was born in London, but moved to South Africa at an early age, later studying medicine at the University of the Witwatersrand (Wits). After graduating in 1944, she moved to London to do a postgraduate degree in respiratory medicine. In 1949, she married Maurice McGregor, a young doctor whom she had met in England three years earlier. The following year, they returned to South Africa and Margot was employed as a lecturer at Wits. In 1954 she accepted a position as a physiologist at the Pneumoconiosis Bureau in Johannesburg, where she began her research on respiratory diseases in gold miners. At the Bureau, she had access to the annual clinical and chest X-ray records of almost half a million gold miners – an invaluable source of material for an epidemiologist. She published her first research paper in 1948¹ and her last, 62 years later, in 2010.² Margot was instrumental in getting chronic obstructive pulmonary disease (COPD) legislated as an occupational disease so that affected mine workers could get financial compensation. Until then, silicosis and tuberculosis were the only compensable occupational diseases in miners.

When Maurice accepted a position as a cardiologist at McGill University, Montréal, in 1957, he and Margot emigrated to Canada. Margot worked in the Departments of Medicine and Epidemiology at McGill, and at the Montréal Chest Hospital and the Royal Victoria Hospital. She returned to South Africa for a brief period from 1984 to 1985, while on sabbatical leave from McGill.

She was appointed as Head of the newly formed Epidemiology Unit at the National Centre for Occupational Health (NCOH) (now the National Institute for Occupational Health), where she mentored several young scientists, including Danuta Kielkowski, Freddy Sitas and Gill Nelson.

Margot's reputation preceded her: Tony Davies, then Director of the NCOH, said, "when I was told that Margot was coming to work with us at the NCOH, I set out to read all her previous work. It was an impossible task and showed that she was an incomparable source of inspiration and guidance for young scientists – and so it proved".

Despite moving back to Canada, Margot maintained her African connections. She continued to guide graduate students from Kenya; collaborated with colleagues from the Kenya Medical Research Institute in research in asthma in Kenyan school children; and enthusiastically participated as a Visiting Professor at institutes such as at the Nelson Mandela School of Medicine at the University of KwaZulu-Natal in Durban, South

Africa. She was also a regular contributor to the respiratory epidemiology courses sponsored by the International Union Against Tuberculosis and Lung Disease in sub-Saharan Africa, from 1995 to 2002. An additional focus was to facilitate the publication, in the English scientific literature, of papers from researchers living in low-income countries.



Margot (Margaret) Becklake

Photograph: Sourced

"Margot stimulated thinking about the meaning and limits of scientific method. One of her lectures that I attended that stood out for me was titled 'the lung as the ultimate confounder'. She spoke through causality and dose-response relationships. She took smoking as an example and her point was that if everyone smoked and was exposed to the same amount of smoke, we would never be able to identify smoking as a cause of lung cancer – ultimately it would be down to the genetics of each person – those that did and did not develop lung cancer would be determined by their intrinsic biology – their lungs."

Sharon Fonn, Professor: School of Public Health, University of the Witwatersrand

While at McGill, she was also Director of the Summer Program in Epidemiology and Biostatistics from 1987 to 2003, which attracted local, national and international registration (including South Africans whom she had mentored). When she retired, Margot was Emeritus Professor with appointments in the Departments of Medicine, and of Epidemiology, Biostatistics and Occupational Health.

Margot was held in high regard, as evidenced by the many awards and honours that she received in recognition of her contribution to respiratory medicine and epidemiology. Some are listed below:

- 1974: MD (honorary) degree from the University of the Witwatersrand, South Africa
- 1978: President of the Canadian Thoracic Society
- 1991: Fellow of the Royal Society of Canada
- 1997: American Thoracic Society's Distinguished Achievement Award
- 2001: American Thoracic Society's World Lung Health Award
- 2003: Doctor of Humane Letters (honoris causa) degree from Massachusetts-Lowell University
- 2006: Medal of the International Union Against Tuberculosis and Lung Disease
- 2007: Emeritus Population Health Researcher Award from the Quebec Population Health Research Network
- 2007: Member of the Order of Canada
- 2011: Grand Officer of the National Order of Quebec
- 2012: Queen Elizabeth II Diamond Jubilee Medal

Her 2001 award from the American Thoracic Society, for 'mentoring', is testament to her innate ability to mentor young scientists, instilling enthusiasm and training them to think as epidemiologists. Many of the (then young) researchers subsequently excelled in their own research careers, at 'home' in South Africa (Rodney Ehrlich, David Rees, Umesh Laloo, Rajen Naidoo) or further afield in Australia (Freddy Sitas, Anthony Zwi), and elsewhere.

"I had the distinct honour of presenting her credentials when she received the lifetime achievement award at the American Thoracic Society... if there ever was a sainthood in medicine it should go to Margot Becklake."

Umesh Laloo, Professor and Head of Dept. of Medicine, University of KwaZulu-Natal, South Africa

Her obituary in the Montréal Gazette stated, "She will be remembered as a physician, a teacher, an eminent researcher in respiratory medicine, and above all as mentor and role model to many people in many countries."³

She equipped those of us who were fortunate enough to be her mentees, with enquiring minds, and supported the research efforts of dozens of other would-be epidemiologists, worldwide. Her official South African MSc and PhD students included Anthony Zwi, Khathatso Mokoetle, Umesh Laloo, Sharon Fonn, Rajen Naidoo and Freddy Sitas, all of whom have gone on to excel.

"She was a wonderful mentor to me, putting order into my otherwise chaotic thinking."

Freddy Sitas, Director at the Centre for Primary Health Care and Equity, Sydney, Australia

During an interview in 2004, she said: "I would urge new epidemiologists to become involved in what you think are the important questions. Concentrate on the 'why' of what you are studying, not so much on the 'how'. The methods can nearly

always be worked out. Concentrate on the importance of the research question."⁴

Her 'apprentices' did not go unappreciated. She was inclusive when publishing, gladly giving the glory of 'first author' to her trainees when she had drafted a paper. Many of us published our first scientific papers with Margot as the senior author. Her South African co-authors included Tony Davies, Susan Landau, Gill Nelson, Malcolm Steinberg, Les Irwig, Danuta Kielkowski, Ian Webster, Magda de Beer, Clifford Goldsmith, Pat Hessel, Ruth Mkhwelo, Khathatso Mokoetle, Freddy Sitas, Umesh Laloo, Neil White, Sharon Fonn, and many others.

It is impossible to pay tribute to this wonderful, elegant and intelligent 'woman of science' in such a limited space. As Tony Davies put it, "If one starts to make a list of what we would say about her it is like starting a book."

Please refer to the references and the list of additional sources of information for more details about her dedication to improving the lives of workers.

ACKNOWLEDGEMENTS

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By Gill Nelson and Sharon Fonn, School of Public Health, University of the Witwatersrand

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Additional information can be found at:

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