

Stickhandling my way to an unexpected career in academic paediatrics and research

Robert Bortolussi MD FRCPC

All I knew when I was 13 years old, given my boyhood heroes, was that I wanted to play hockey for a living. My dreams were modest: become a National Hockey League (NHL) star, win three or four Stanley Cups and score the winning goal for Canada against the Soviets. I knew it would be hard work, so I practiced from the time school ended until after dark, and on weekends from noon until my bedtime. My hard work paid off. That year I became the best player in my neighbourhood and was the first player chosen after the coin toss. But there was a problem: NHL scouts didn't visit my corner skating rink. I would never be discovered. I needed a plan to 'guarantee' I would be successful.

At that time, the Toronto Maple Leafs brought their top prospects, the Catholic ones that is, to a high school in Toronto. The St Michaels College School (Toronto, Ontario) team was one of the Leaf's two junior teams, and had produced super stars like Red Kelly, Dave Keon and Frank Mahovlich, to name a few. The school also had high academic requirements for students, so my parents were delighted, if a bit surprised, when I told them I wanted to go there. Until that point, my school grades were unimpressive. But with hockey as my secret motivator, my marks improved dramatically, and I gained entrance. The rest of my plan was simple, become a star on the B team and then move on to the Major A team, where the scouts would take notice.

So in my first year in high school, along with 30 or 40 others, I tried out for the school's B team. Among those on this 'try-out team' was Peter Mahovlich, younger brother of my hockey hero, Frank. Pete was a tall gangly kid, who in his early adolescent awkwardness was no match for his famous older brother. During warm up, I seized a chance and stole the puck from him as he neared centre ice. For a few seconds, it was as if I had stopped his older brother, the real Mahovlich. My joy was short lived; he overtook me and casually retrieved his puck. That day, I discovered that Pete, and everyone else on the try-out team, were faster, stronger and sharper than me. I was devastated, realizing for the first time that my hockey dream was a delusion.

At times like this, you look to reset your life's compass. I was ever so lucky, for at that same time, two incredible teachers entered my life, Hugh McDougall and John Eggard. History and mathematics became an obsession, and spawned a love for science. In applying to university, I sold myself as a science nerd and got into pre-medical at the University of Toronto. After two years, it was on to medical school, then internship and finally residency, where my passion for research was born. My original plan was to become a family physician. Later, I aspired to become a general



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paediatrician and, finally, an infectious disease specialist. Each change of career direction was inspired by a clinician, teacher or scientist whom I adopted as a role model.

My wife, Michele, and I moved around North America and Europe to pursue training and find opportunities to undertake research. Our family grew to include three sons over my years as a resident and fellow. Eventually we settled in Halifax, Nova Scotia, where I practiced pediatric infectious diseases happily for 37 years at Dalhousie Medical School and the IWK Health Centre, where teaching and research were supported and encouraged, if only at times, with a pat on the back. I watched as colleagues emerged to become wonderfully original researchers, coaches and teachers,

most notably, Andrew Issekutz, David Byers, Scott Halperin and Noni MacDonald.

Their prodding helped me venture in directions I would not have imagined, their collaboration helped me complete projects that I could not have dreamt of on my own, from fundamental to clinical research, to ethics. I am proud of our published research, but even more proud of a handbook to train clinician scientists that's now in its second printing, and used in every Canadian university and five countries in Africa. In the end, they made me a more inquisitive, enthusiastic and understanding human being.

Eventually, I was chosen as Vice President Research for the IWK Health Centre. This was a major shift in my career path, and was perceived by some of my colleagues as a move to 'the dark side'. Although there were disadvantages to administration, the major advantage was to become a builder, a key player in creating an exciting research environment from the ground up. To realize this would trump my personal ambition as a clinician scientist. Thank heavens for the support of the IWK Board and fellow researchers, together we developed strategies to lay a foundation for a solid future. We focused on recruiting young, promising researchers, supporting them through small grants, allowing them to explore new avenues for research and, above all, providing them with mentors committed to helping them achieve their goals. It was a huge success, with young investigators joining and staying to pursue innovative ideas. When I stepped down as VP Research, external research grants and publications were 15- to 20-fold higher than when the process began.

When I ended my tenure as VP Research, I found a new path to follow, "MicroResearch". With Noni MacDonald at Dalhousie University and Jerome Kabakyenga in Uganda, we formulated a program to train and mentor clinicians in East Africa to do community-based research. To date, more than 500 clinicians have been trained

A letter to my younger colleagues

and about 40 MicroResearch projects launched. Their work is already changing practice, policy and attitudes to improve health for millions of people in Africa.

As I moved ahead toward my adopted career, my hockey 'alter ego', Pete Mahovolich, was moving on in his chosen one. Fast, strong and an adept stick handler, with good coaching, he advanced from Junior B to Junior A status by the time he was in Grade 11. He became a star in the Ontario Hockey League Junior A league and was drafted by the Detroit Red Wings in the first round of the entry draft. But, at this point, his career stalled, as he bounced between NHL and minor league teams. After four years of this he seemed washed up. But then he was traded to the Montreal Canadiens, where his older brother Frank played. His career turned around with the help of Frank's mentoring and a superb coach, Scotty Bowman. He became a star, scoring more than 30 goals for each of the next five seasons, and collecting three Stanley Cups. In 1972, he played for Canada in the famous Canadian-Soviet series and scored a short-handed, winning goal in game three. Without that win, Paul Henderson's heroics in the final game would have been meaningless.

Neither I, nor my hockey buddy Pete, could have foreseen the twists our separate lives would take. My own career was not planned. I was naive about academia. But, in a way, my inexperience protected me. I followed in the direction that my passion and my interests led me. I found my way with some help from coaches, but mostly by listening to the wisdom of my mentors, and doing what I could with the resources available.

Lessons learned:

- Identify what gets you excited. Discover the 'fire in your belly' that drives you. Then follow your passion.
- Plan to follow your dreams, but be prepared to move in a new direction if circumstances and opportunities change. It's been said, "When one door closes, a new one opens". In truth, I believe that one door's closing merely opens ones eyes to alternative paths that were always there.
- Train at the absolute best centre you can to achieve your goal. Even if this may entail significant challenge, the sacrifice will eventually reward you.
- Seek the best coaches to teach you the skills needed for your next stage in life.
- Learn from the wisdom of others. At every turning point in your career, find a mentor whom you respect, and who has the honesty to tell you what they think, even if it hurts. And listen.

(**Editor's Note:** I had the honour to play ice hockey against both the author, Bob Bortolussi, and his hero, Frank Mahovolich. Two things made an impression. Bob never relished embarrassing me with a clean deke, while Big Frank deked me with abandon, but not once did he ever offer me wise, helpful pediatric ID advice.)

BIOGRAPHICAL NOTE: DR ROBERT BORTOLUSSI

Dr Robert (Bob) Bortolussi is Professor Emeritus in the Department of Pediatrics at Dalhousie University (Halifax, Nova Scotia). After pediatric training at the University of Toronto (Toronto, Ontario) and McGill University (Montreal, Quebec), and a research fellowship in Infectious Disease at the University of Minnesota (Minneapolis, Minnesota), he settled in Halifax in 1978 as the Maritime's first Pediatric Infectious Disease specialist. There, he practiced, taught and conducted research in neonatal host defence and infectious diseases, receiving more than \$3 million discovery research grants from the Medical Research Council, the Canadian Institutes of Health Research and other agencies. He's authored more than 100 papers on infection, vaccines and neonatal host defence, and 35 chapters in Infectious Disease textbooks. In 2005, he was awarded the Canadian Paediatric Society's (CPS) highest research award for his discoveries in neonatal host defense, and in 2010, the CPS Award of Merit for leadership during the H1N1 epidemic. Bob also Chaired the CPS Infectious Disease and Immunization Committee (2007-2011) and the CPS Awards Committee (2006-2010).

As Vice President Research at the IWK Health Centre (Halifax, Nova Scotia) (1992-2007), Bob led its research program to national prominence, including the construction of the \$20 million, Richard B Goldbloom Centre for Research and Clinical Care.

Bob also developed a curriculum for the Canadian Child Health Clinician Scientist Program, a Canadian Institutes of Health Research training initiative. In 2008, he edited *The Handbook for Clinician Scientists* as a reference for the program, and later adapted the curriculum for African clinicians. The handbook and web-based curriculum are used in 14 Canadian and six African universities. Bob's mentoring initiatives and leadership were recognized in 2010, by the IWK Health Centre, when it named the institution's annual Mentorship Award in his honour.

In 2008, with Noni MacDonald and Jerome Kabykayenga, he co-founded "MicroResearch" (www.microresearch.ca) to train and mentor clinician researchers in East Africa.

Bob also played for the IWK pick-up hockey team from 1980 until 1999, and then as a referee until 2013.