



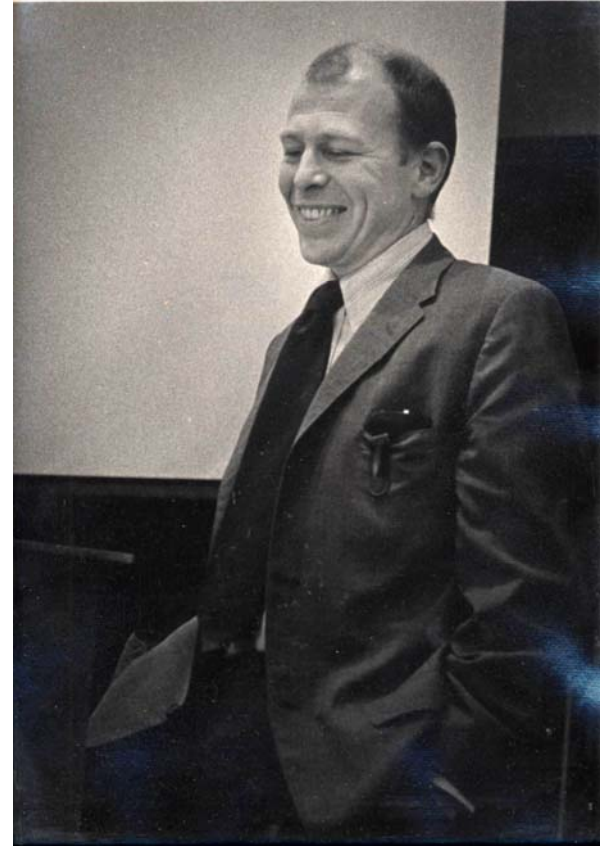
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# Nick Anthonisen: A most uncommon man



CANADIAN THORACIC SOCIETY  
SOCIÉTÉ CANADIENNE DE THORACOLOGIE



On November 10<sup>th</sup> members of the Canadian Thoracic Society , Pulsus Group Inc & the Canadian Respiratory Journal (CRJ) as well as University of Manitoba faculty and staff gathered at the Inn at the Forks in Winnipeg to honor Nick Anthonisen's major contributions to the CTS, the CRJ and to the Canadian and international respiratory community. During the luncheon in Nick's honor Peter Paré, the new editor of the CRJ gave a short talk highlighting aspects of Nick's contributions. A summary of that talk is reproduced here.

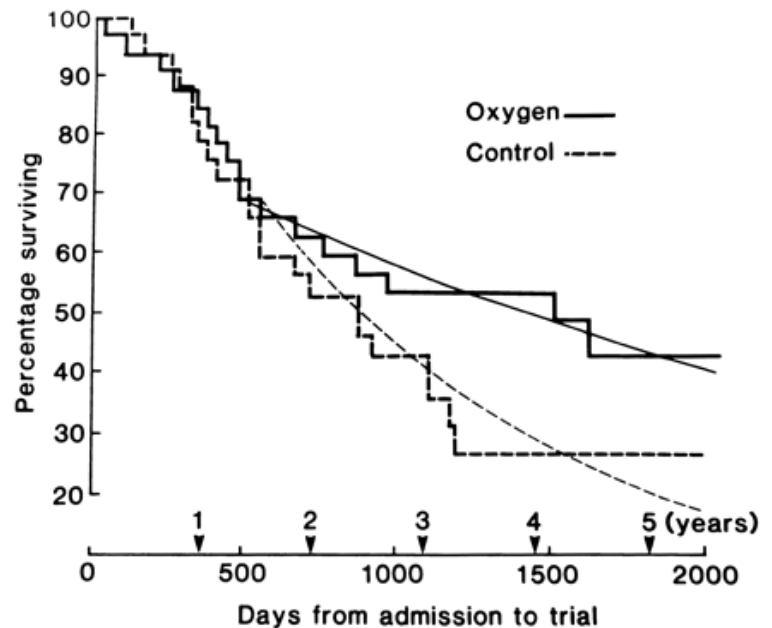
“ Nick has had enormous impact during his career. I could talk about his impact on any number of fronts including as a mentor, teacher, role model, fundamental basic science researcher, training program director, respiratory division head, Dean, Editor of the Canadian Respiratory Journal (CRJ), chair of the ATS Asthma Clinical Research Centers, fisher, Boston Red Sox fan and/or a shaper of clinical practice. While his contribution to all of these spheres is impressive I want to concentrate on his impact in changing how we manage patients who have COPD.

Since I have taken over as Editor in Chief of the Canadian Respiratory Journal I have had to think about ways of measuring impact a lot. There is the impact factor for journals but there is also the h-index which measures the impact of specific authors of scientific papers. The h-index is compiled by the Web of Science (<http://wokinfo.com/>) and calculates the number of citations to a specific author's work. An h-index of 10 means that the author has published 10 papers that have been cited at least 10 times each, an index of 100 means 100 papers cited at least 100 times each. Nick's h-index is 55 which is impressive by any yardstick, but it is only by a closer look at the number of citations and the content of his most cited papers that one gets an appreciation of his true impact on the practice of respiratory medicine and on the lives of people who suffer from lung disease, especially COPD.

Nick's early work dealt with fundamental aspects of how the lung works. He made seminal contributions to our understanding of the distribution of ventilation in the lung, airway closure and the control of breathing. His classic paper; Airway Closure as a Function of Age (Respiration Physiology 8: 58-65, 1969/70) has been cited more than 430 times.

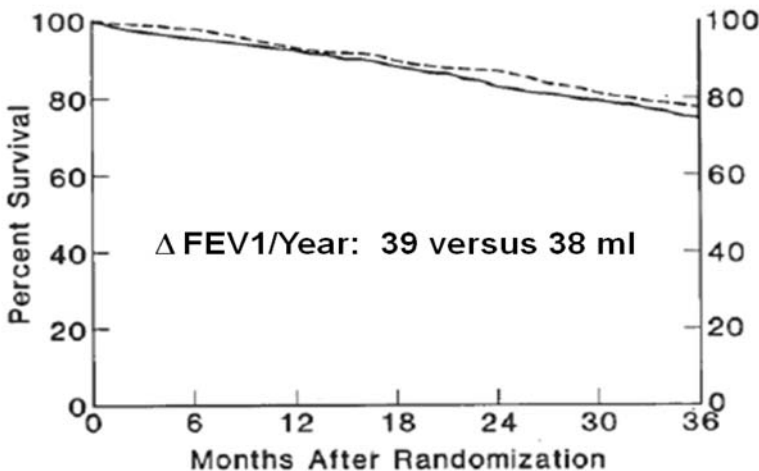
Soon after he moved to Winnipeg as Division Head Nick realized that the centralized clinics and broad catchment area served by the University Hospital afforded an excellent opportunity to conduct clinical research. With the encouragement of Ruben Cherniack then Chairman of Medicine at the University of Manitoba Nick applied for funding from the National Institutes of Health in the United States. He became involved and played a leadership role in major clinical trials involving large numbers of patients who had COPD. These trials have been among the largest and most impactful of any respiratory clinical trials conducted.

His first major trial was on the use of oxygen therapy in patients who had COPD. The results were published in the Annals of Internal Medicine (Continuous or Nocturnal Oxygen Therapy in Hypoxemic Chronic Obstructive Lung Disease. Annals Int Med. 93: 1980) and convincingly showed that oxygen therapy prolonged life. The paper has been cited more than 1300 times!



Next Nick challenged the efficacy of the widespread practice, at the time, of offering intermittent positive pressure breathing (IPPB) therapy to patients with advanced COPD. More and more clinics were offering this therapy which consisted of

administration of bronchodilators via a positive pressure ventilator which forcibly inflated the lung. The cost of the rapidly escalating practice was enormous. Nick led a large multisite study which showed definitively that the



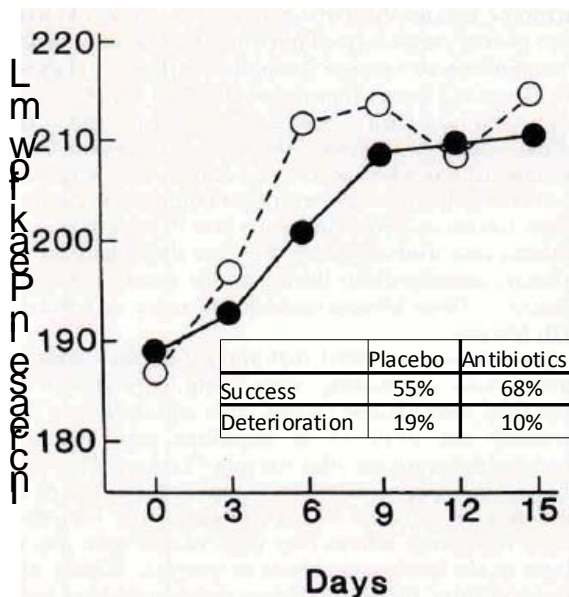
therapy was not effective. Survival and the rate of decline in lung function was the same in treated and untreated patients (Intermittent Positive Pressure Breathing Therapy of Chronic Obstructive Pulmonary Disease. Ann Intern Med 99:612, 1983).

Although a negative study it has been cited more than 250 times and more importantly put an end to this expensive but useless and potentially dangerous therapy. This study characterizes Nick's research contributions; he took on big

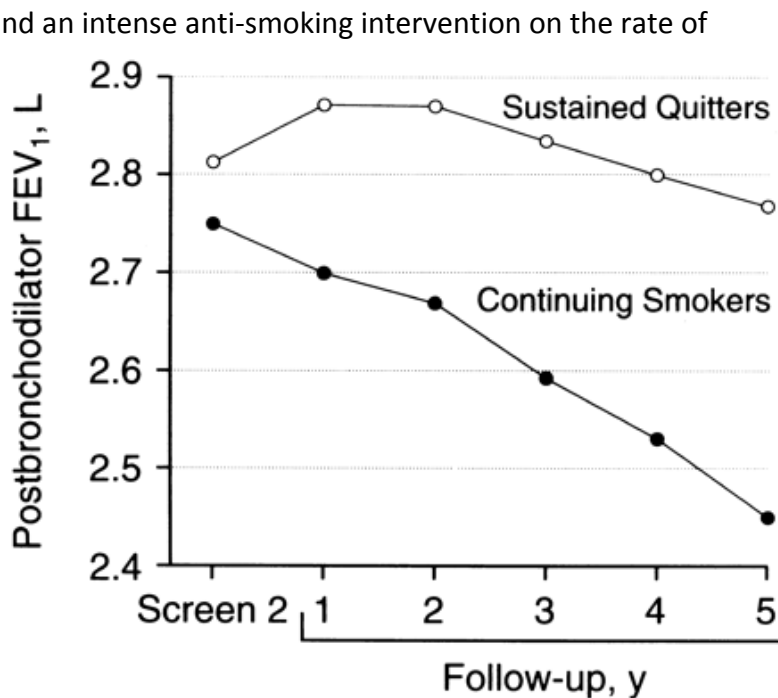
and important questions, led studies which had enough power to answer the questions and ultimately impacted the practice of respiratory medicine.

Nick's next landmark clinical trial was to test the effectiveness of the use of antibiotics in exacerbations of COPD. This was a single center study from Winnipeg but again was large and powerful. Approximately 360 exacerbations in 170 patients were treated with antibiotics or placebo and the antibiotics showed a clear benefit in terms of rapidity of recovery of lung function and other markers of success. (Ann Intern Med. 106, 196-204, 1987. Antibiotic therapy in exacerbations of chronic obstructive pulmonary disease.)

This study has been cited almost 1000 times according to the Web of Science and 1500 times according to Google Scholar.



Nick's most impactful study was the Lung Health Study. This large, NIH funded clinical trial was designed to test the effectiveness of a bronchodilator and an intense anti-smoking intervention on the rate of decline of lung function in smokers. The study enrolled almost 6000 smokers from 10 centers, Winnipeg was one of the sites and Nick the lead investigator. The results showed dramatic and definitive benefits of an intense anti-smoking intervention. Smokers who maintained abstinence over the 5 year follow up showed a return to normal of the age related decline in lung function. The first of many papers stemming from this study was published in JAMA and has been cited 800 times according to Web of Science and 1200 times according to Google Scholar. (JAMA: 272, 1497, 1994. Effects of smoking intervention and the use of an inhaled anticholinergic bronchodilator on the rate of decline of FEV1. The Lung Health Study.)



Nick has influenced a generation of Canadian and International respiratory health care professionals through personal interactions and mentoring. He single handedly ran the CRJ for 9 years and wrote a thoughtful and insightful editorial in almost every issue (a total of 61 editorials!). He guided the development of a highly successful Division of Respiratory Medicine and Faculty of Medicine. His contribution to the Boston Red Sox's eventual capture of the World Series in 2004 after an 86 year drought cannot be underestimated. But Nick's biggest impact has been to guide the way we treat

patients; virtually every effective therapy we use in the management of COPD has been carefully examined in studies led by Nick. , It is my privilege to say **Thanks Nick**, on behalf of your many admirers here today, across the country and around the world, but especially on behalf of those who suffer from Lung Disease."



Nick impacting fish stocks



Nick circa 1974



Nick November, 2011



Robert Kalina of Pulsus  
honoring Nick