Respiratory medicine in Saskatchewan: An historical perspective

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EARLY DAYS: 1905 to 1957

Saskatchewan (capital Regina) was created out of the Northwest Territories September 1, 1905, at the same time as Alberta, the second last provinces admitted to confederation. Its population has been relatively stable (one million $\pm 15\%$) since 1930. The University of Saskatchewan (U of S) was granted a provincial charter April 3, 1907, and, after considerable debate and controversy, Saskatoon was selected as the U of S site April 7, 1909. In 1912, the first building was opened and the first degree was awarded. A two-year preclinical school of medical sciences (total faculty of five for many years) opened in 1926, initially with classes in converted greenhouses (1); clinical years were completed elsewhere. A university teaching hospital was conceived in 1911 (1), excavation began in 1948; the cornerstone was laid September 19, 1952, by Tommy Douglas and the University Hospital (UH) opened May 14, 1955. The first class of MDs fully trained at the U of S graduated in 1957. The UH was renamed the Royal University Hospital (RUH) in 1990 (2).

RESPIRATORY MEDICINE IN SASKATCHEWAN (1970s)

The Saskatchewan Anti-Tuberculosis League, founded in 1911, unofficially known as the Saskatchewan Lung Association (SLA) from the 1960s and officially so renamed in 1987 (renamed the Lung Association of Saskatchewan in 2002) was responsible for many firsts in the diagnosis and management of TB; this history is detailed elsewhere (3). The first (nonphthisiologist) respirologist recruited to the Department of Medicine was Clive Deutcher in 1972; he left the university in 1976. In 1973, an agreement was signed between the League, the U of S and the UH to establish a respiratory disease unit in Saskatoon. The Ferguson Professorship, named after George Ferguson (superintendent of TB medical services, 1917 to 1948) was created and the first recipient was Jim Dosman, who joined the Division in July 1975; the pulmonary research laboratory at UH, dedicated to the memory of George Ferguson, was opened in November 1975. Brian Graham, biomedical engineer, was recruited in April 1976 and, with assistance of the League, David Cotton joined the Division July 1976. July 1977 witnessed the arrival of Vern Hoeppner and Don Cockcroft, both applicants for the single position to replace Clive Deutcher, both recruited with the help of the League. Remarkably, all five members recruited over that 24-month period remained active at the university 37 years later (mid-2014). All four clinicians have been the Division Head, all four have held the Ferguson Professorship, and three of the four have been the Head of the Department of Medicine.

Despite major teaching and clinical demands, this small group proved to be very productive. Jim Dosman pioneered studies of respiratory disease in agricultural workers (4-6) and, in 1986, founded what is now the Canadian Centre for Health and Safety in Agriculture (CCHSA), a separate division within the Department of Medicine. David Cotton and Brian Graham studied gas exchange and measurement of diffusing capacity measurement (7-9), leading to the development of

a three-equation (inspiration, breath-hold and expiration) method to more accurately calculate the diffusing capacity (8). Vern Hoeppner showed that high-pressure nocturnal ventilation was therapeutic rather than just supportive in respiratory failure due to kyphoscoliosis (10) and published work in TB (11,12) including validation of directly observed TB therapy. Don Cockcroft followed up on the observation that allergen challenge increased airway responsiveness to histamine and methacholine (13), and studied the effect of common asthma drugs on this important feature (14). While studying the development of tolerance to the bronchoprotective effect of inhaled β_2 -agonists, he made the reproducible observation that regular use of these agents caused significant increase in the airway response to inhaled allergen (15), a plausible explanation for β_2 agonist-induced worsened asthma control (16).

RESPIRATORY MEDICINE IN SASKATCHEWAN: 1980 TO 2014

In the years following the 1970s, our division has thrived and expanded, developing expertise in chronic obstructive pulmonary disease and exercise physiology (Darcy Marciniuk, Charlie Gallagher), sleep (David Cotton, Irv Mayers, Mike Fitzpatrick, Anil Nagpal, Brian McNab, John Reid, Rob Skomro, John Gjevre, Mark Fenton), lung transplantation (Mark Fenton), critical care (Irv Mayers, Karen Laframboise, John Gjevre), pulmonary hypertension (Karen Laframboise), interventional bronchoscopy (Chris Hergott) health economics (Erika Penz), basic immunology and allergy (John Gordon), health services research and the social dimensions of respiratory health (Donna Goodridge) and clinical laboratory features of asthma (Beth Davis). A clinical respiratory training program was started in 1983 and has trained 39 respirologists, 13 of whom are currently working in Saskatchewan (11 in respirology and two in general internal medicine) and six others who worked in the province for a time (four as academic division members). The division of Respirology, Critical Care and Sleep Medicine currently consists of eight university-based clinicians, five university-based non-clinicians (two emeritus) and 13 community-based clinicians, seven in Saskatoon and six in Regina, along with one Emeritus clinician in the CCHSA; this totals 22 clinical respirologists in the province.

The division has also been active nationally and internationally. The Division claims four past Presidents of the Canadian Thoracic Society (CTS), and one past President of the American College of Chest Physicians and is involved nationally in the CTS clinical assemblies, and internationally at various levels with the ACCP, the American Thoracic Society, the European Respiratory Society, the Forum of International Respiratory Societies and the American Academy of Allergy Asthma, and Clinical Immunology.

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