



Paramedicine in British Columbia:

A profile of current research and operational initiatives

By Dr Ron Bowles, with thanks to Peter Thorpe (BCEHS) and Dave Deines (APBC).

British Columbia is the westernmost province of Canada. BC Emergency Health Services (BCEHS) provides ground and air emergency medical services to BC's 4.75 million inhabitants (Statistics Canada, n.d.) through more than 180 stations in metropolitan, urban, rural, and remote communities throughout the province. BC's 4,600 paramedics and dispatchers are represented by the Ambulance Paramedics of BC (APBC). Justice Institute of British Columbia (JIBC) is a public post-secondary degree-granting institution providing paramedic education and continuing medical education for a wide range of health and community-based practitioners across the province and internationally. This article focuses on current research and operational initiatives, with a particular focus on a Paramedic Association of Canada-sponsored study that provided the foundation for the new Canadian Paramedic Profile.

BC Emergency Health Services (BCEHS) provides emergency patient care and inter-facility ground and air patient transfers, and emergency medical dispatch services across the province of British Columbia (BC). BC, Canada's westernmost province, covers 950,000 square kilometers and has a population of approximately 4.75 million (Statistics Canada, n.d.). BCEHS's 4,600 employees provide air and ground ambulance support, inter-facility transfers,



clinical oversight and research, with ambulance stations in over 180 remote, rural, urban, and metropolitan communities. Last year, the service responded to over 475,000 911 (emergency call) events and provided 96,000 patient transfers (BCEHS, 2015/2016).

In recent years there has been an increasing demand for emergency patient care. Without changes, provincial demand is projected to increase by 6.1% annually. In 2016, BCEHS released an action plan called *Transforming Emergency Health Services* that outlined key innovations and the strategic investment of additional resources to help improve patient care and ensure the provincial service is more sustainable moving forward.

In addition, BC is implementing community paramedicine in rural and remote communities throughout the province. The program aims to help stabilize paramedic staffing and bridge health service delivery gaps in communities that are sometimes underserved and have aging populations living with chronic and complex diseases. Community paramedicine will add at least 80 FTE community paramedic positions by 2018, with 76 communities selected to date.

Justice Institute of British Columbia is a public post-secondary degree-granting institution providing education and training for a wide range of community, health, justice, and public safety practitioners. The Health Sciences Division offers initial education for Emergency Medical Responders, Primary Care Paramedics, Advanced Care Paramedics, and Community Paramedics, as well as a Diploma in Health Sciences and a wide range of continuing and professional education for all health professionals.

JIBC has an active applied research program, with prehospital and paramedic-related research as one of four strategic priorities. In the last several years, JIBC has participated in several projects to support the evolution of paramedicine as a profession in Canada.

One study built on the Canadian EMS Research Agenda (Jensen et al., 2013) project by exploring the role of educational research in paramedicine. This study involved a review of then-current paramedic research and interviews with key stakeholders in Canadian paramedic education and practice, with the goal of identifying trends and gaps in education-related research that JIBC could contribute to.



The results of that study included the development of a model for describing four dimensions of paramedic practice: Who the practitioners are; What types of care they provide; Where they practice; and, What patient disposition options are available? This framework is useful for analyzing the evolution of paramedic practice into new practice settings, different types of care, and alternative outcomes (Bowles & Van Beek, in press).

JIBC also housed a national study, funded by the Paramedic Association of Canada

(PAC), to support the development of the new Canadian Paramedic Profile. Three paramedic researchers, Dr. Ron Bowles, Dr. Becky Donelon, and Dr. Walter Tavares conducted a mixed methods study to articulate the key attributes and characteristics required of paramedics in Canada, regardless of their certification level or practice setting. The study included concurrent streams: a discourse and content analysis of how paramedics are described in academic, professional, and grey literature; and in-depth semi-structured interviews with twenty-one key stakeholders in Canadian paramedicine. The results were analyzed individually, then combined for more in-depth analysis. Following a process of inductive analysis, the study identified a series of framing concepts, cross-cutting themes, and roles that describe current and anticipated paramedic practice in Canada to 2025 (Tavares, Bowles, Donelon, 2016).

The study found three framing concepts that are essential to understanding paramedicine in Canada: paramedics now practice in a diverse and growing set of practice contexts (e.g., industry, community, in-facility), paramedics engage in multiple

and embedded sets of interpersonal relationships, and a recognition that all patient encounters have both a medical/health and a social/cultural context which must be considered. The four cross-cutting themes included patient safety, compassion, communication, and adaptability/problem-solving. The study identified six roles that paramedics assume: Clinician, Professional, Educator, Team Member, Advocate, and Reflective Practitioner. These roles are integrated within the overall role of Paramedic Practitioner. These roles form the structure of the recently released Canadian Paramedic Profile (Paramedic Association of Canada, 2017).




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JIBC is also engaged in research that supports individual paramedic, allied health and public safety practitioners. Recent and current studies include an exploration of precipitates to workplace violence against paramedics. The study explores what factors, if any, are associated with propensity for the violent victimization of paramedics in Canada. In this study, violence is defined as verbal assault, intimidation, physical assault, sexual harassment, and sexual assault. A second study addresses the development of personal resilience. This study evaluates an open-access course on building and

strengthening personal resiliency that has been designed, from the ground up, by experts in emergency response, for persons who are employed or volunteer in professions that require them to respond to a wide range of emergency situations.

Paramedicine is a rapidly evolving discipline, with paramedics taking on new job functions in non-traditional contexts while continuing to provide urgent and emergency care in the out-of-hospital setting. Within British Columbia, key stakeholders in paramedicine including BC Emergency Health Services, Ambulance Paramedics of BC and Justice

Institute of British Columbia are working to better prepare and support paramedic practitioners through innovative operational initiatives, advanced education and training programs, and ongoing applied research.

For more information please see the websites below:

BC Emergency Health Services:
www.bcehs.ca

Ambulance Paramedics of BC:
www.apbc.ca

Justice Institute of British Columbia:
www.jibc.ca

References

- BCEHS (2016). *Transforming Emergency Health Services action plan: A response to Demand Modeling Study*. Victoria, BC: British Columbia Emergency Health Services. Retrieved June 12 from: <http://www.bcehs.ca/about-site/Documents/transforming-emergency-health-services-action-plan.pdf>
- Bowles, R. & Van Beek, C. (in press). Four Dimensions of Paramedic Practice. *Australasian Journal of Paramedicine*.
- Jensen, J. L., Bigham, B. L., Blanchard, I. E., Dainty, K. N., Socha, D., Carter, A., ... & Morrison, L. J. (2013). The Canadian National EMS Research Agenda: a mixed methods consensus study. *Canadian Journal of Emergency Medicine*, 15(02), 73-82.
- Paramedic Association of Canada. (2017). *Canadian Paramedic Profile*. Ottawa, ON: PAC.
- Statistics Canada (n.d.). BC Annual Population Estimates. Retrieved June 9, 2017 from: <http://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>.
- Tavares, W., Bowles, R., & Donelon, B. (2016). Informing a Canadian paramedic profile: framing concepts, roles and crosscutting themes. *BMC Health Services Research*, 16(1), 477.



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