

KEY BENEFITS

- Identified efficiency measures through in-depth analysis and comparison with other EMS providers.
- Forecasted future demand levels, and the impact these would have on BCEHS.
- Results informed BCEHS's five-year strategy to meet best practice performance standards.



Deploying resources efficiently in a metropolitan ambulance service

KEY FACTS

- Population = 4,631,000**
- Area Covered = 944,000 km²**
- Annual Incidents = 296,000**
- Operational Staff = 4,300**
- Stations = 37**

ABOUT BCEHS

BCEHS is the largest provider of emergency medical services in Canada and one of the largest in North America, serving over 4.4 million people. BCEHS responds to calls for emergency 911 and inter-hospital transfer services across six health authorities, however, 85% of demand originates in the Metro Vancouver area.

THE CHALLENGE

BCEHS faced increasing demand from an ageing population and growing rates of complex chronic disease. The objective was to forecast ambulance demand levels for Metro Vancouver over five years and model

different options for service delivery (including new station locations, new types of vehicles and different staff deployment) in the Lower Mainland and Greater Victoria areas.

ORH'S APPROACH

ORH analyzed current demand, resources and performance, and then benchmarked BCEHS against other Canadian EMS providers to help identify potential efficiencies. Using historical and projected population figures combined with patient data, ORH projected future demand levels. This included different demand rates by age and by gender.

A model of emergency ambulance cover was built and validated. In consultation with BCEHS, ORH then tested a series of resourcing options using the projected demand levels before going on to model a final trajectory to meet performance targets.

RESULTS

ORH's benchmarking identified internal efficiencies that could be made by BCEHS to mitigate some of the performance falls arising from expected demand growth, including improvements to activation, mobilization and hospital turnaround times.

BCEHS used ORH's modelling results to develop a multi-year strategy which formed part of their Action Plan for improving response times.



We must continue to modernize our pre-hospital emergency services and integrate them better with other parts of the health system, to create a more patient-centred, sustainable ambulance service for the province. This review gives us valuable information to achieve this goal.

Terry Lake, Health Minister



About ORH

PLAN. PREPARE. PERFORM.

ORH helps emergency services around the world to optimize resource use and respond in the most effective and efficient way.



We have set the benchmark for emergency service planning, with a proven approach combining rigorous scientific analysis with experienced, insightful consultancy. Our expert team uses sophisticated modeling techniques to identify opportunities for improvement and uncover hidden capacity. Simulating future scenarios ensures that solutions are objective, evidence-based and quantified.

Every organization faces a unique set of challenges, so remaining independent and flexible allows us to deliver an appropriate solution every time. The outputs of our work enable clients to make robust, data-driven decisions and explain them clearly to stakeholders.

ORH's approach is always tailored to the needs of the client. Above all, we are committed to getting it right, for the good of our clients and the people who rely on their services.

ORH WORKS WITH PARAMEDIC SERVICES TO:

- **Project future demand and the implications for resources**
- **Optimize response locations**
- **Assess pre-hospital CTAS standards**
- **Benchmark services to identify efficiencies**
- **Determine the potential for new vehicle types or response models**
- **Evaluate options for standby moves**

For dispatch centres, ORH provides its DCT software to support dynamic decision making and enable effective and efficient resource use.



**Emergency
Service Planning
Case Study**

www.orhltd.com
t.+44 (0)118 959 6623

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