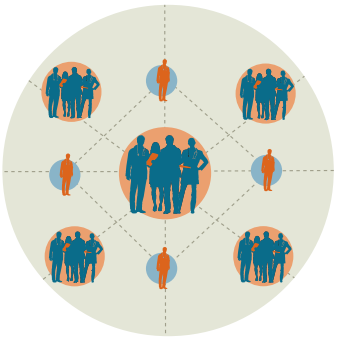
NEIGHBOURHOOD NETWORKS

WHITE PAPER
October 2016

Acknowledging that Richmond is comprised of many smaller, unique neighbourhoods, each with distinct socioeconomic, cultural, language and healthcare needs, the Richmond Division's Neighborhood Networks strategy saw the creation of geographically clustered GPs. By supporting the independence and potential interdependence of neighbouring GPs, the Division began to trial a more systematic approach to coordinated multidisciplinary care, patient attachment, physician recruitment, peer support and practice coverage. This paper is part of a series that highlight our processes and learnings.



Leveraging Data

Your zip code is a better predictor of your health than your genetic code.

Melody Goodman, Assistant Professor,
Washington University, July 24, 2014

Introduction

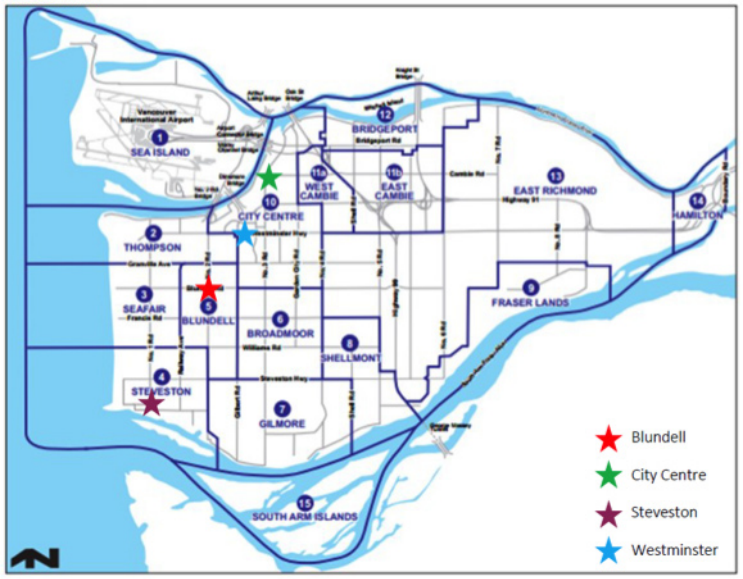
During the Assessment and Planning Phase of *A GP for Me*, the Richmond Division sought to learn more about the Richmond community through community and GP member surveys, stakeholder consultations and analysis of secondary data. The Division analyzed City of Richmond socio-demographic data (taken from a variety of sources, including BC Stats and Statistics Canada's Census) according to the City's fourteen planning areas. We discovered that Richmond, like so many cities, is comprised of distinct neighbourhoods that differ in their socio-demographic makeup and that physician, health authority and community services tended to cluster around the same building, block or neighbourhood. This natural organization of people and services offered the rationale to create networks of GPs based on geography (location of practice) rather than other groupings. The Division set Networks around the City's planning areas to ensure long-term alignment with communities, services and data. We anticipated that residents would have different health behaviours, health utilization patterns and health statuses based on the neighbourhoods where they lived. We also imagined that many individuals were attached to GPs that practiced in the neighbourhoods in which they lived. We needed data to confirm these beliefs and, if substantiated, saw significant opportunities to leverage equitable and responsive health resources such as existing programs and services from VCH, the City of Richmond and community based not-for-profits, and in neighbourhoods where there is an existing and expected future need.

Other white papers in the series include:

Richmond Division of Family Practice
A GPSC initiative

Our Approach to Gathering and Analyzing Data

The Division recognized the need to leverage further data to understand the health behaviours, health utilization patterns and health statuses at a neighbourhood-level and to ensure the best possible piloting of the Neighbourhood Networks. The Division's A GP for Me Physician Lead and the former VCH Richmond Medical Health Officer (MHO), who sat on our Planning and Assessment Committee, were both interested and available to invest considerable time into this exploration. In fact, as the MHO in 2006, Dr. James Lu proposed a similar model of neighbourhood-based GP networks to better meet the needs of Richmond residents. Not only could this model provide more tailored, responsive and preventative care but also better allocation and greater capacity of medical care services for vulnerable clients and those with chronic and/or complex conditions. (Lu, 2006)



City of Richmond's Planning Areas Map alongside the Richmond Division of Family Practice's Neighbourhood Networks

While EMRs offer an obvious data source, less than 70% of Richmond GPs were on EMRs at the time of the Assessment and Planning phase and many could not provide a coherent and complete picture of their patient panel from their EMR. The Division researched what differing datasets were available, what they measured and how they complemented one another. To confirm any assumptions about where individuals were attached and the neighbourhood differences in health behaviours and status and care utilization, the Division submitted a request to the Ministry of Health to attain access to its Blue Matrix data. All told, the Division was able to access robust neighbourhood-level data contained in the Blue Matrix datasets that led to unique insights and which supported data-driven decision-making for our Neighbourhood Networks project.

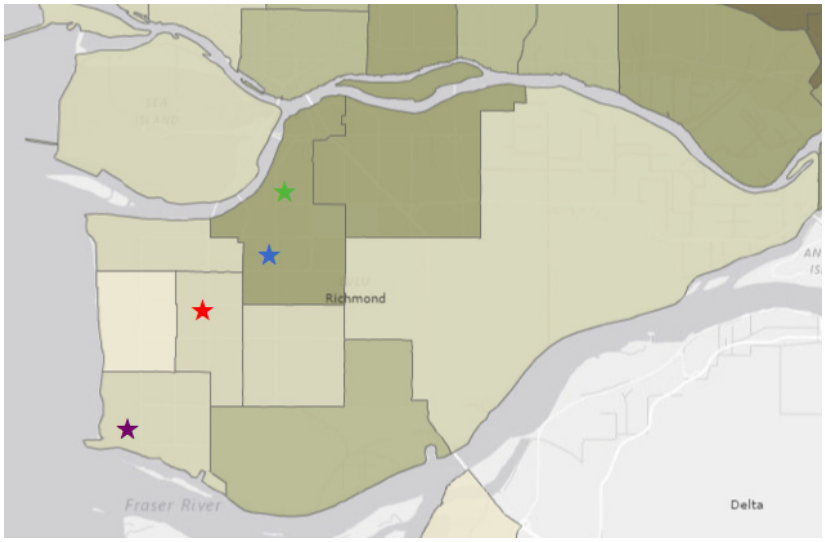
VCH My Health My Community Data

VCH My Health My Community (MHMC) data was accessed to understand health behaviours, including:

- Lifestyle – binge drinking, smoking, physical activity, fruit/vegetable intake, stress, screen time, physical wellness
- Built environment – mode of commute, second hand smoke exposure, amenities within walking distance, sidewalk maintenance, proximity to transit stop
- Community resiliency – emergency supplies, food security, community belonging, social connection

The MHMC data helped the Richmond Division understand how residents in each neighbourhood perceive and report their behaviours. Additionally, this self-reported behaviour data was compared with the Ministry of Health's health service utilization data which supports decision-making that responds

to utilization. MHMC data, like the City's socio-demographic data, is available at the neighbourhood level, however, the boundaries differ and data is segregated into fewer neighbourhoods, which makes meta-analysis and alignment less viable.



VCH My Health My Community
Richmond Neighbourhoods
★ Indicates Neighbourhood Networks

Ministry of Health Blue Matrix Data

Leveraging the perspective and wisdom of the Neighbourhood Network Working Group members to inform our requests to the Ministry of Health, we engaged in weekly meetings over a period of a few months with Ministry staff to better understand key trends and issues relating to the health status and health service utilization of specific neighbourhoods. We provided the Ministry with the list of postal codes affiliated with each neighbourhood based on the City of Richmond boundaries and the Ministry collated the data based on those parameters. The Ministry assisted readily, having never analyzed the data on this level. They were able to provide cross-sectional data from their Blue Matrix framework where BC residents are assigned to population segments including chronic conditions registries, diagnoses from physician MSP fee for service billings and hospitalizations, PharmaCare programs, and use of home and community care services. Each person is uniquely assigned to the one of fourteen population segments which represents their highest need for health care in the year, ranging from non-user to end of life. With these population segment numbers for the neighbourhoods, each Network could see, for example, the total number of residents in the mental health and substance use population segment or number of COPD residents that are frail with high complex chronic conditions.

Turning Data into Primary Care Improvements

The MoH data increased our overall understanding of health care utilization and offered information about how the data can be used to best determine treatment resources needs at a neighbourhood level. For example, where people within a neighbourhood are categorized as requiring high complex chronic care, the Ministry can forecast how many of those individuals will transition to the next highest population segment based on a predictive model of past behaviours. Not only can the province and Health Authority plan services and resource allocation, but Networks of GPs could tailor their service offerings accordingly and could work collaboratively to address this anticipated population segment efficiently.

Prior to seeing the MoH data, there were some presumptions about how residents and patients in Steveston and City Centre, our two pilot neighbourhoods, accessed services. It was presumed that many of the residents in those areas:

(1) Have various levels of chronic disease
(2) Are attached to a physician in their neighbourhood.

The MoH data proved our first assumption right, however our second assumption was partially disproved. The data showed us that City Centre residents were more likely to be attached to a physician close to where they live, however this was not completely the case in Steveston. Many who reside in the Steveston neighbourhood are attached to GPs elsewhere and as they age, they are more likely to become attached to a GP in their neighbourhood. The Ministry team advised that this phenomenon is not unique to Steveston and indeed for most British Columbians as they age they are more likely to seek care from a local physician. This supports a conclusion that as the needs for primary care services grow, having a GP closer to where you live becomes a bigger priority.

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With an understanding of the socio-demographics, health behaviours, health utilization patterns and health statuses of residents in each neighbourhood, the Division planned its first allocation of health services. Having learned that there was a high level of chronic disease in the low to medium stages across Richmond coupled with physician interest in having chronic disease nurses (CDNs) support their practice, we partnered with VCH-Richmond to deploy CDNs to the Neighbourhood Networks focused on self-management for low to medium chronic disease impacted patients. With a specific focus on self-management, it is hoped that a decrease in complex chronic disease health services are required. The impact of this service on patient health outcomes and health utilization (such as ED visits, admissions and average length of stay) can be measured on a longitudinal basis.

A future goal could be to integrate health resources on a neighbourhood by neighbourhood basis where there are statistically significant differences. The data can be used to determine the trajectory of socio-demographics and health status to forecast health utilization patterns and anticipate the resources a neighbourhood and network might need. By way of example, where a neighbourhood is made up of a significant number of Chinese residents, as is the case in City Centre, there is a higher prevalence of high blood pressure. Through partnership with the Health Authority, primary care focused on diet and physical activity can meet this neighbourhood challenge.

The Division shared the MHMC and Blue Matrix data with the Neighbourhood Network GPs. Data was presented according to the three neighbourhoods in which the four Networks reside: Blundell, City Centre and Steveston. One network GP explained how the data has changed the way they practice. Specifically, the GP wishes to identify new patients that live in the neighbourhood and during the initial visit ask about (1) their health and (2) their health behaviours. These questions, he surmises, help him understand the status of that patient and the potential future needs of the patient. Almost all the GPs who received the neighbourhood level MHMC data (n=12) reported that they had a better understanding of the socio-demographic,

health behaviour, health status and health utilization patterns of residents in their practice's neighbourhood (4.67/5), but fewer were able to make connections between the data and how it might support practice change (3.42/5). To address this gap, the Division is working alongside the VCH MHMC team to distil the data to its most relevant and pertinent metrics for each Network and to support GPs in understanding the issues in their practice neighbourhood and what resources and services might keep their patients healthier for longer. By understanding what resources and services are needed, the Division can then work alongside current partners to either promote existing programs and services that align with the data or work together to create programs and services to address outstanding and future needs.

Neighbourhood level data can be used to substantiate requests to stakeholders for the proactive and meaningful deployment of resources

Conclusion

Data has informed the Neighbourhood Network concept, and supports both the Division and GPs.

Neighbourhood level data can be used to substantiate requests to stakeholders for the proactive and meaningful deployment of resources so that they are being used in the neighbourhoods where residents need them the most.

Data also has the potential to support practice change. As GPs grow to understand their patients, practice and neighbourhood better, they can plan their service provision and anticipate future needs.

Optimizing EMRs in Richmond will allow for additional valuable data but for the purposes of developing and nurturing the Neighbourhood Networks, the Division's focus on analyzing diverse health behaviour, socio-demographic and health status and utilization data, on a neighbourhood level, informed our activities and helped the GPs, Division and our partners better understand primary care service delivery needs.

To learn more, please contact:
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