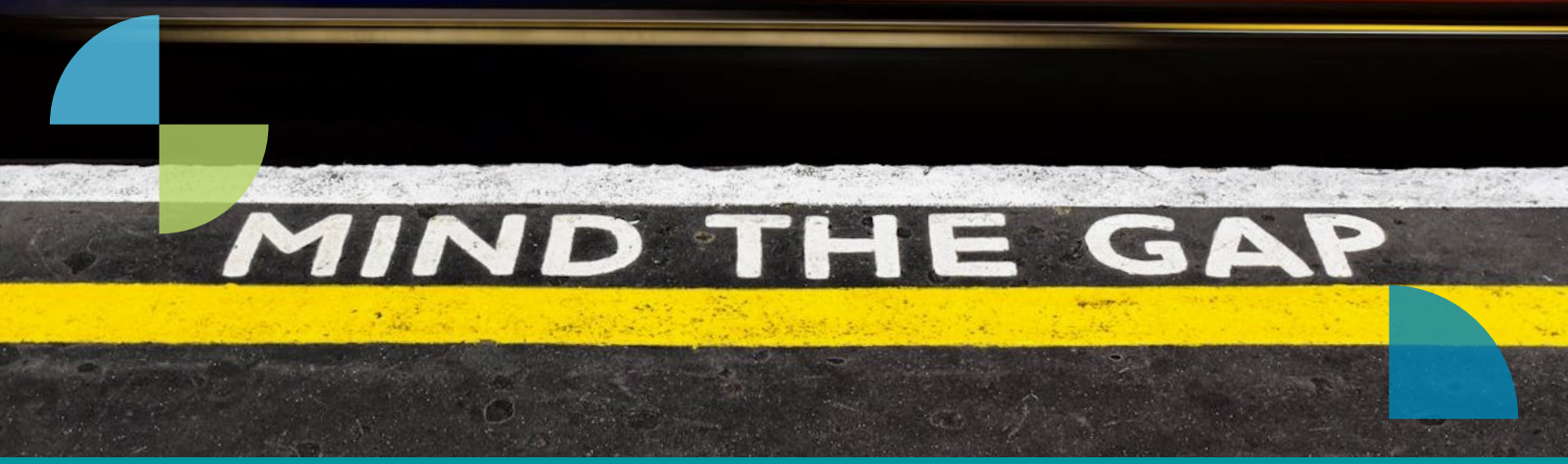

UNDERSTANDING THE DEMAND, SUPPLY, AND GAP IN CARE: HOW ANALYZING DATA CAN HELP

Health Data Coalition

Written by Dr. Melissa Duff

Dr. Melissa Duff joined the HDC Board last fall bringing over 15 years experience as a family physician and advocate for family medicine. She is also the Primary Care Network Physician Lead in Victoria and shares how data is inspiring her on a current project. Get to know Melissa and what led her to join us at HDC.

Incorporating data has become increasingly useful to me and my teams in recent years. Simply put, we are using aggregate physician Electronic Medical Record (EMR) data to plan community healthcare in an evidence-based way. That's inspiring. When I joined the Health Data Coalition (HDC) board last fall, I was excited to learn more about the history of the organisation, contribute my skills, and engage with more physicians around the province who similarly value using data to drive healthcare decisions.

Physicians I talk to find data very validating. For example, when they compare their clinic with others, it may become clear that they have an above average number of high-needs patients. This information helps physicians understand why they might be feeling more stretched or working longer hours. Through the HDC Discover application, we are able to look at the present as well as what has happened with a patient panel in the past. We can then better predict the future, improving healthcare for both patients and physicians across the province.

TEAM BASED CARE APPROACH, IN NUMBERS

In July 2021 I began my role as a Primary Care Network (PCN) physician lead in Victoria. This initiative aims to change family medicine into a team-based care approach. Our PCN involves a growing number of 150 physicians and nurse practitioners and a limited number of allied health professionals we can hire and embed within clinics. To spread these resources out equitably, we created a cohort model that groups three to five clinics together. This equals 15 to 20 family physicians or nurse practitioners, and allocates one mental health consultant and one social worker. My interest in data began as we tried to figure out how to allocate these resources in a meaningful way.

As we engaged with the clinics, it became clear that doctors are quite varied in their practice style and the types of patients they see. We noticed differences in the size of panels, the gender distributions, as well as the percentage of patients with mental health diagnoses like anxiety and depression.

We realized this panel data could help us figure out the degree of mental health diagnoses in each panel,

aggregate that with the other clinics in the cohort, and use that to ensure we allocate team members in an equitable way. Similarly, in HDC Discover, we aggregated clinic data into their cohorts, in order to compare measures across the cohorts. For example, we can determine how much anxiety or depression is in cohort one compared to the other cohorts, to investigate if the mental health demand of any given cohort exceeds the others. We also use billing data, particularly aggregate mental health visit histories of clinics and cohorts and can compare these across cohorts and across time. For example, we can see the average number of visits per patient with a mental health diagnosis and compare that across the cohorts both before and after their mental health consultant and social worker joined their team. All of these measurements help us understand the demand, which we compare to referral patterns to the mental health consultant and social worker, or in other words, the supply.

PHYSICIAN-LED, DATA DRIVEN DECISIONS

By understanding the demand and the supply, we can identify gaps in care. We need a way to effectively communicate to the ministry where the gap is and what is needed to fill that gap. Data is a tool we can use to make decisions and then justify these decisions to our funders.

It is really important that any handling of data is physician-led. When I go into clinics and talk to physicians about aggregate data collection, they understand immediately that I am their colleague, someone they can trust to use this aggregate data to improve patient care at a systemic level. Data is pulled from the EMR in a safe, confidential, and meaningful way, so that we can present it to the Ministry of Health to help them understand the needs of the community and make decisions that have the greatest impact on the ground.

The provincial PCN refresh will soon transform the initiative into primary care planning centres with the new steering committee being a representative sample of what primary care looks like in that community. I see a huge opportunity to use aggregate data at the PCN steering committee to help determine appropriate resource allocation and plan for the community's needs. This data can achieve QI at a PCN or community level and also be used to develop proper business proposals to the Ministry of Health to illustrate the need for additional funding or resources.

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A FUTURE PREDICTIVE MODEL

My hope is that we can create a predictive model. I would love to create a system where we can review a physician's patient panel and aggregate data and actually predict what Team-Based Care (TBC) resources are ideal to support that physician and that panel. The current reactive healthcare model is exhausting. Data allows for foresight and effective strategy. Information from HDC Discover is helping to create a plan for the future.

I'm inspired by the opportunities we have with HDC. HDC Discover is a tool that allows us to make better decisions for the healthcare system in our community. I'm looking forward to learning from the organisation and its people. I'm excited to see how my experience can support better patient outcomes and the sustainability of health care through trusted and meaningful access to health information.

Contact Us

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