

# Transforming healthcare with data analytics

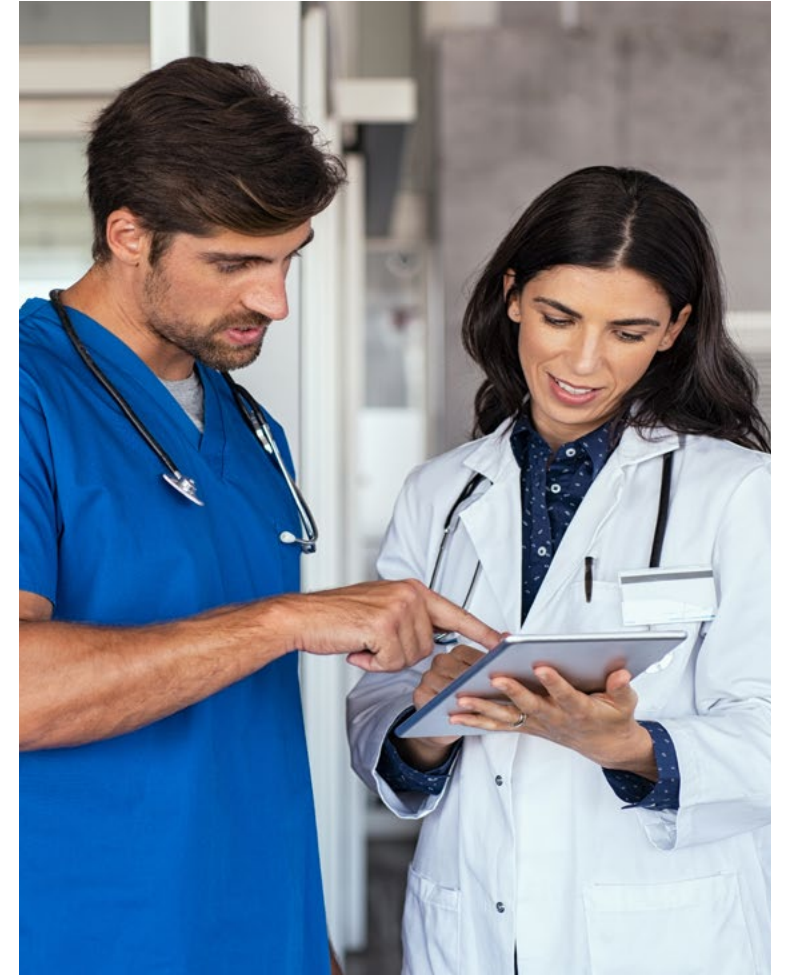
**CGI**



# Data analytics and AI

Healthcare is preparing to build back better with data. The pandemic put even more pressure on an already strained health care system, but it also pointed to a better way forward through collaboration and more informed decision-making.

The public health crisis forced a radical shift to virtual care, accelerating the adoption of digital transformation strategies and tools such as interactive devices and dashboards that were already on the rise. Data analytics is no exception. The healthcare sector was collecting and analyzing patient data long before the push for digital transformation. Now, as healthcare providers and companies continue the end-to-end data journey they can build on that momentum and use what they've learned to drive long-term improvements and build resiliency and adaptability into operations. From forecasting to further advancing digitization and telehealth to building resiliency into supply chains to improving patient outcomes, data analytics has paved the way for a new, more responsive, and better healthcare system.



# Data analytics and AI

There is no turning back.  
The success of the sudden and necessary move to digital care has forced a reimagining of what healthcare can look like and what it can achieve.

The sector will become increasingly data-reliant and data analytics will play a necessary and critical role deriving the insights that will find systemic wastes, track practitioner performance, monitor the health of individuals and populations, and predict who's at risk for a chronic disease. With this information, the health system can more efficiently allocate resources and become proactive in improving community health and well-being. Simply put, it's a brand new day for healthcare because of data analytics.



# Key trends that will impact data analytics leaders

- **Data science, AI and machine learning (ML) will advance virtual care.** By the end of 2024, 75% of enterprises will shift from piloting to operationalizing AI, driving a 5X increase in streaming data and analytics infrastructures. This supports and will further advance virtual care and telemedicine as this new, innovative technology will help practitioners deliver distanced, real-time care.
- **Connecting data insights to clinical and operational actions will fuel e-health.** Composable data and analytics is on the rise, enabling leaders to use parts of multiple data, analytics and AI solutions to easily connect data insights to organizational actions. This coincides with and supports the rise in e-health and finding ways to safely capture, store and provide access to patient information (e.g., electronic medical records, e-prescriptions, electronic vaccination records) across patients and providers.
- **Managing data from the cloud and onsite (aka data fabric) will enhance seamless, patient-centric care.** Integrating data from the cloud and Data fabric is emerging as the foundation for digital transformation and will further accelerate the health industry's growing focus on patient-centricity, breaking down silos and enhancing the delivery of seamless care. Data fabric reduces time for integration design by 30%, deployment by 30% and maintenance by 70% because the technology designs draw on the ability to use/reuse and combine different data integration styles.





# Key trends that will impact data analytics leaders

- **DevOps and MLOps practices will empower health care practitioners and patients.** XOps (data, machine learning, model, platform) will continue to grow in importance as a means to drive efficiencies, economies of scale, reliability, reusability and repeatability while reducing the duplication of technology and processes and enabling automation. Employing these best practices will give health care practitioners the tools they need to embrace new models of health care and to allow patients to take more control of their own health care journeys.
- **Details will create a big impact.** Small and wide data will help healthcare organizations understand the wealth of clinical data available within healthcare organizations and how to use it effectively, responsibly, and in accordance with government regulations.

These trends will further drive operational efficiencies, enhanced patient experience and outcomes, and pave the way for new, more collaborative, effective ways to work. The result: a healthcare system empowered for continuous improvement.



Our team of thought leaders understand current and emerging trends in data analytics and healthcare. More importantly, we know how to use data analytics to derive the insights that will improve patient outcomes. We can help you understand the present, predict the future, and make positive change.

# At CGI, healthcare transformation isn't just a project: it's personal.

Our CGI team reflects the  
diversity of our Canadian  
healthcare system.

In addition to health analytics, health informatics, and healthcare transformation experts, we have team members who are medical professionals, clinicians, and former administrators of healthcare organizations.

To us, healthcare isn't simply one of our areas of expertise. It's personal. We all have a vested interest in seeing our healthcare systems perform better and in helping healthcare organizations turn their future vision into tangible patient outcomes.



# How we can help

Our team of multidisciplinary Engineers and Data Scientists are passionate problem solvers grounded in technology and science.

We partner with our clients to co-create data, analytics, machine learning and AI strategy to help drive organizational objectives and identify opportunities to achieve better outcomes. More than setting strategy, we have the expertise to develop innovative data and AI solutions and to help you pilot, integrate, and execute. We can help your organization adopt a data mindset.

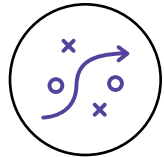
## Client case study: British Columbia's COVID-19 response

Responding to constituents' questions regarding their health and safety is a top priority for government agencies around the world. Drawing upon a long-term partnership with the British Columbia Ministry of Health, we collaborated with five provincial government agencies to rapidly develop a digital agent that answered constituents' and health workers' questions, while supporting hardworking government health helpline experts.

[Read more](#)

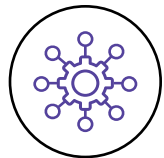


# What we do



## Strategy development

We partner with organizations to create a digital strategy roadmap that makes sense of data, takes it out of silos, and puts it to work to help you make better decisions.



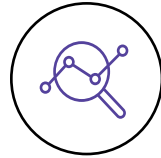
## Operationalization of data across the organization

Once the value and models for data are understood, we help you gain quick access to the data you need to address business issues by automating data capture and implementing interactive dashboards and technologies.



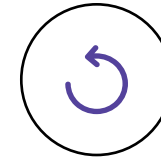
## Build insights and information products and ecosystems

Advance data-driven decisions that improve outcomes, reduce costs, and drive process efficiencies. For example, we use AI and RPA to improve workflow and productivity.



## Design, leverage, and implement AI and ML capabilities to gain data insights

We can help uncover non-obvious relationships and patterns buried in the data to provide new perspectives and to accelerate processes such as procurement and finance, for example.



## Create a 360-degree view of your organization and leverage enterprise view on business and operational impacts

We use enterprise data, advanced analytics and AI/machine learning to provide a cohesive, holistic view of all aspects of operations and patient care.





# What we do



## Track, monitor and measure performance

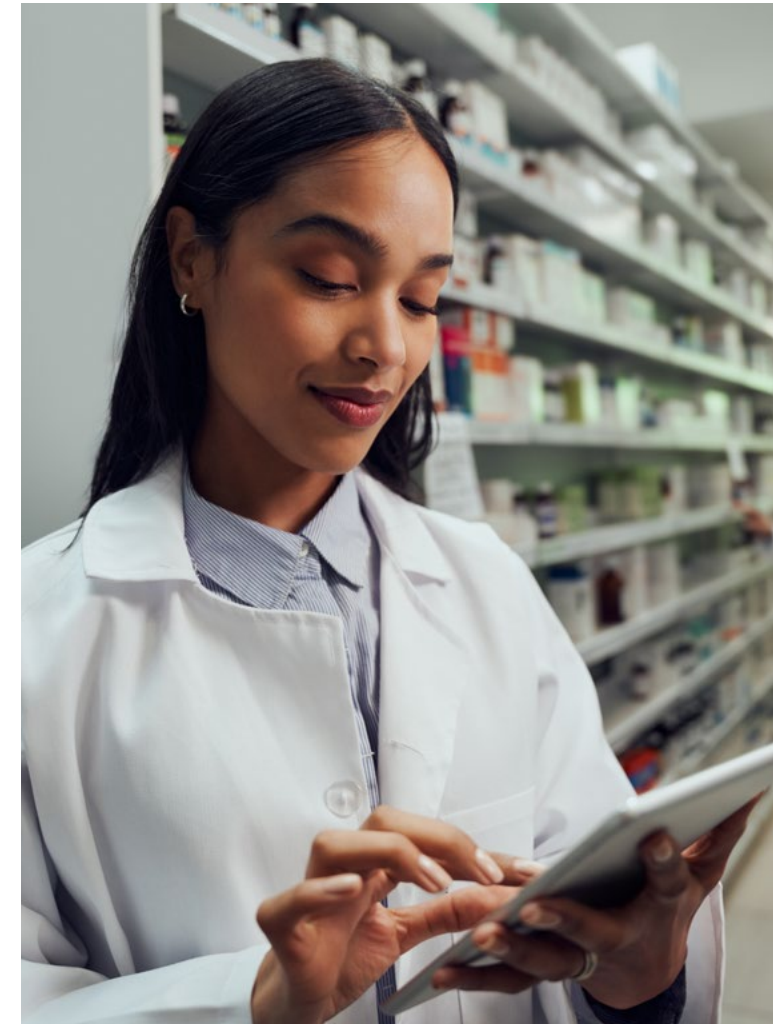
We use data analytics and AI/machine learning to establish benchmarks and metrics to measure incremental success and added value.



## Create the framework for ongoing improvement and capacity building

We use machine learning to continuously learn from historical data and user decisions. In this way, we enable you to further optimize processes, insights and recommendations.

The need to digitize and implement emerging technologies such as machine learning, AI and data analytics in healthcare took on an added urgency during the COVID-19 pandemic. The accelerated move to digital transformation and adoption of these technologies is positioning healthcare for the future. But only if organizations are able to adopt a data culture and harness the power of the data they are collecting to make better decisions. We are a leader in the field of data analytics and can provide an end-to-end solution, from developing strategy to innovating solutions to implementation and execution, all while helping coach you to develop internal capacity.



## About CGI

### **Insights you can act on**

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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