

CIHI's Health System Capacity Planning Tool



Building on previous work and experience in forecasting demand for health system capacity, the Canadian Institute for Health Information (CIHI) has developed the interactive Excel-based Health System Capacity Planning Tool. The tool is designed for decision-makers, who can use it to understand expected health resource demands and supply shortfalls related to the COVID-19 pandemic.

Overview of the planning tool

The tool's foundation is a deterministic SEIR model that separates the population into **susceptible**, **exposed**, **infected** and **recovered** compartments, and then models the spread of the disease and the movement of the population among the compartments.

It predicts the number of new daily COVID-19 cases, the number of individuals requiring treatment in critical care and non-critical care beds with or without a ventilator, and the number of other hospital resources required to treat these individuals. Users can input their population size and other parameters about the historical progression of COVID-19 cases in their population.

The tool outputs information in tabular and graph formats on the duration and peak of the pandemic wave, potential demand for each resource, the gap between capacity and demand, the potential time when capacity will be reached, short-term projection of demand and other parameters.

By adjusting the input parameters, users can perform sensitivity analysis, and show varying scenarios of disease progression and sensitivity of expected resource demands.

Forward direction

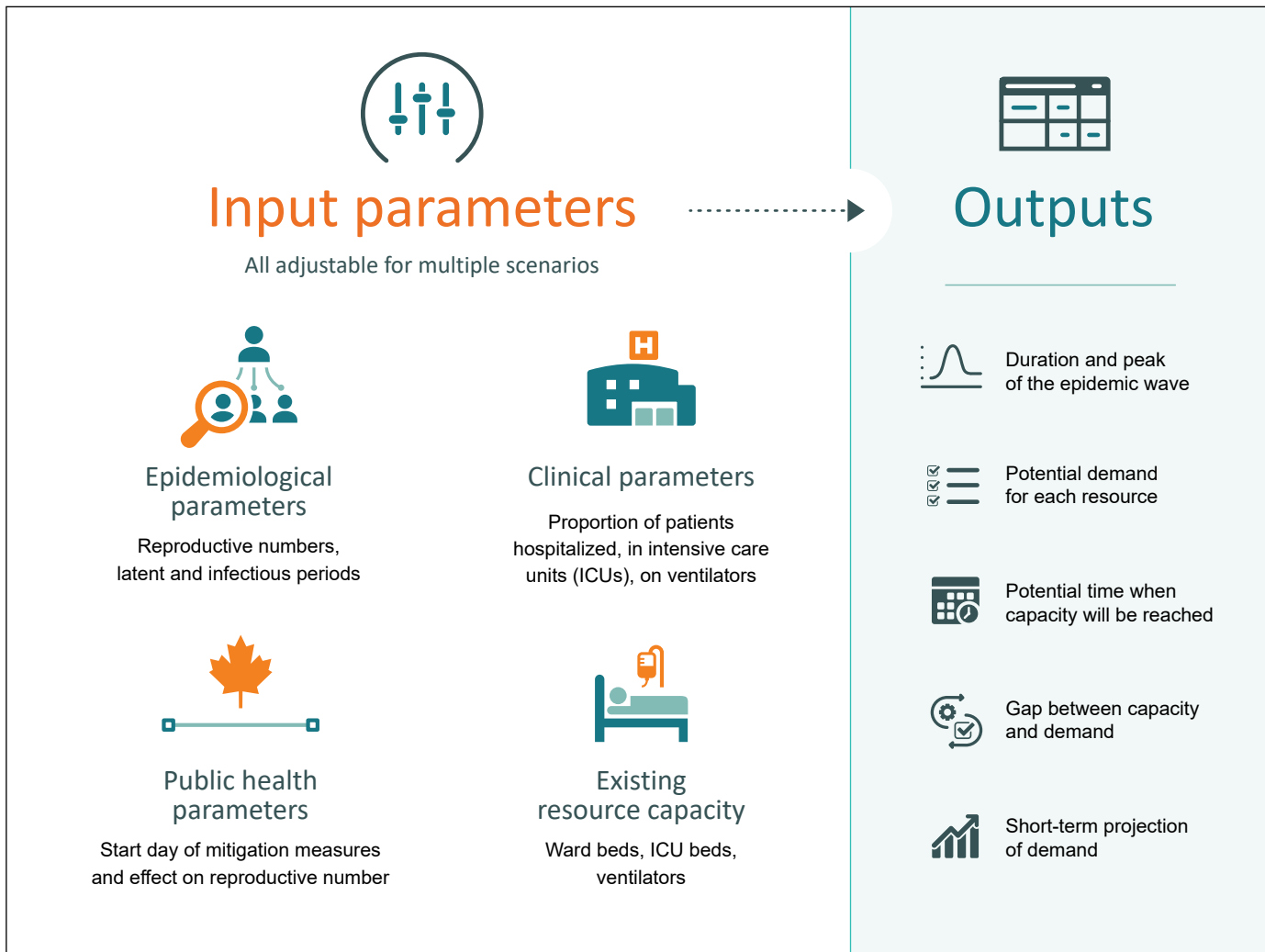
CIHI is continuing to enhance the tool. Considerations include the evolving progression and future waves of COVID-19, as well as policy discussions around such things as easing of public health measures, the upcoming influenza season, health human resources capacity, vulnerable populations (e.g., seniors) and the optimization of health system capacity for other urgent and elective care.

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Using the planning tool

The tool is available to provinces and territories, health regions and hospitals to support health system planning in response to COVID-19 and to inform decisions about planning for future waves of the disease. CIHI also works with users of the tool to support them. Providing the tool and client support is part of CIHI's ongoing efforts to build capacity to use health system data.



About CIHI

CIHI provides comparable and actionable data and information that are used to accelerate improvements in health care, health system performance and population health across Canada. For more information on how CIHI's Health System Capacity Planning Tool can be used in your jurisdiction or organization, email help@cihi.ca.

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For data-specific information:

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