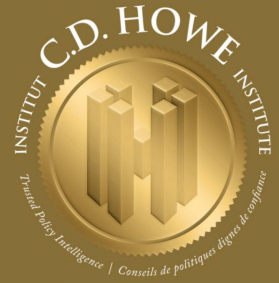


Intelligence MEMOS



From: Paul Grootendorst and Javad Moradpour

To: Public Health Agency of Canada

Date: July 14, 2022

Re: **RESURRECTING CONNAUGHT LABS NOT THE ANSWER FOR VACCINE SELF-SUFFICIENCY**

The COVID-19 pandemic has focused attention on Canada's preparedness for the next pandemic, especially in terms of vaccine development and self-sufficiency.

The mad scramble for vaccines early last year led many politicians, academics and pundits to call for a public agency to oversee pandemic vaccine production and possibly vaccine development.

These advocates frequently cite the historic example of Connaught Labs, which was founded in 1914 at the University of Toronto, and over the years made advances in the development and manufacture of vaccines for diphtheria, pertussis, tetanus, smallpox and polio, among others. In 1972, the federal government acquired Connaught Labs, making it a wholly-owned subsidiary of the Canada Development Corp. and transformed it from an academic enterprise into a profit-oriented company exporting vaccines to the US and elsewhere.

The story did not end well.

Connaught struggled to launch new products that could keep pace with global rivals. And it faced shrinking market share and industry-wide financial pressures, including production costs raised by heightened regulatory safety standards. Some drug firms exited the industry because of concerns over product liability exposure. Remaining firms grew large to amortize these growing overhead costs over a larger production volume. In 1989, the federal government agreed to the sale of Connaught.

When Canada faced delays in procuring COVID vaccines in late 2020, many commentators [suggested](#) the privatization of Connaught Labs and its Quebec counterpart, the Institut Armand Frappier (IAF), was to blame. Our view is that privatization of these two organizations was inevitable; it would have been difficult for them to remain independent, self-sustaining businesses given the industry's transformation.

Would it now make sense to create a new public vaccines agency – a Connaught 2.0?

No.

As we argue in our recent C.D. Howe Institute [report](#), the high failure rates for vaccine development projects and the logistical challenges in mounting a large-scale international multi-centre trial in short order, would make it very risky to rely on a Connaught 2.0 to rapidly develop and test a vaccine. Even a public agency that simply focused on producing vaccines licensed from domestic or international developers would face considerable challenges.

The primary problem is production readiness. Production facilities need to be operating continuously at or near capacity to hone the processes needed to meet stringent and evolving regulatory standards and ensure personnel have sufficient experience. Facilities also need a reliable supply of key inputs.

A public agency would need to be engaged in full-scale vaccine production even in non-pandemic times to maintain both production know-how and stable input supply chains. And it would need to do so in each of the vaccine production platforms – whole virus, protein, viral vector, and nucleic acid – that may be needed to produce vaccines for the next virus. This raises the question of which vaccines the agency would routinely produce, in non-pandemic times, and where the vaccines would be distributed.

Canada can achieve a more reliable and less costly supply of vaccines for future pandemics by contracting with existing commercial producers already engaged in continuous, full-scale production, who have thus demonstrated technical competency and have secure input supply chains.

There are two major vaccine plants in Canada, the GSK influenza vaccine facility in Ste Foy, Quebec and Sanofi's plant in Toronto. Several more facilities are planned, including Moderna's \$180-million mRNA vaccine manufacturing plant in Montreal, [announced](#) in April, and Medicago's virus-like-particle vaccine manufacturing facility in Quebec City. The government could purchase reserve capacity in these or other facilities or it could cover the cost of an adjacent modular production facility that could tap into the steam, gas and other utilities already available.

How many vaccine manufacturing platforms Canada needs and how big they should be depend on whether we can negotiate an agreement with other countries that allows each to specialize in a platform and share pandemic vaccines with partners should the need arise. Although a public vaccine manufacturer is not warranted, the federal government does need to work with vaccine manufacturers and international partners to prepare for the next pandemic.

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