

An expanded role for blood donor emerging pathogens surveillance

We agree with Berry and colleagues that reassessment of how we monitor emerging pathogens is needed.¹

We note that the authors did not specifically mention blood donor surveillance in their article. From May 2020 (continuing until March 2023), Canadian Blood Services, in partnership with the COVID-19 Immunity Task Force, tested samples from all Canadian provinces (not Quebec and the territories) for SARS-CoV-2 antibodies.^{2,3} Monthly reports were openly and routinely distributed to provincial and national public health professionals, posted on the COVID-19 Immunity Task Force website (<https://www.covid19immunitytaskforce.ca/seroprevalence-in-canada>) and used to estimate the population prevalence of SARS-CoV-2 in mathematical models.

The authors note that wastewater surveillance provides an excellent immediate indicator of increased infections but not the proportion of people infected. We believe that blood donor serosurveillance can provide timely, geographically broad, regular measurement of nucleocapsid and spike antibodies.³

An ideal detection system for emerging pathogens would link health administration data (e.g., vaccine history and results of molecular testing). Canadian Blood Services is undertaking a pilot study to link SARS-CoV-2 seroprevalence data to administrative data from at least 1 province. Blood samples are collected from donors from most regions of Canada almost every day.⁴ Canadian Blood Services is responsible for blood collection in all regions except

Quebec and the territories. About 850 000 donations per year are collected in all larger cities and many towns, and residual samples are available for public health surveillance from about 80% of these. Donors must be at least 17 years old, in good general health and at low risk of blood-borne infections. However, donor health criteria are less restrictive than many realize.^{4,5} For example, people may donate if they have a history of cardiovascular disease, hypertension or diabetes, as long as these are under control. Most people who have had cancer are also eligible after successful treatment. Many donors take prescription medications. Although donors are not fully representative of the general population, they have been valuable for SARS-CoV-2 seroprevalence during the pandemic and yield similar seroprevalence estimates to randomized general population studies.⁶

Berry and colleagues focus on surveillance for emerging and re-emerging respiratory pathogens but point out the value of wastewater surveillance for a broad range of other pathogens. We agree with this viewpoint and, in the past, have collaborated with wastewater researchers. Canadian Blood Services has a long history of contributing to public health surveillance for vector-borne pathogens such as West Nile virus and *Babesia microti*, and food-borne illnesses such as hepatitis E.⁴ We believe it makes sense for blood donor surveillance to take on an expanded role in surveillance for emerging and re-emerging pathogens.

Sheila F. O'Brien PhD

Associate director, Epidemiology and Surveillance, Donation Policy and Studies, Canadian Blood Services, Ottawa, Ont.

Mindy Goldman MD

Medical director, Donation Policy and Studies, Canadian Blood Services, Ottawa, Ont.

Steven J. Drews PhD

Associate director, Microbiology, Donation Policy and Studies, Canadian Blood Services, Edmonton, Alta.

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