

National sepsis strategy to improve knowledge, prevention and treatment

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Discover what you need to know about sepsis from a top group of experts, including their call for a national sepsis strategy to improve its knowledge, prevention, and treatment to save lives

Part 1: The most preventable cause of death in Canada is a little-known disease called sepsis

The rapidly evolving health information ecosystem describes how the public, healthcare professionals, scientists and policymakers exchange knowledge that influences decisions. Our research team at Sepsis Canada studies how knowledge about the body's response to infection permeates these groups. Sepsis is a costly severe response to infection that is a leading preventable cause of death in Canada.

Sepsis is difficult to detect; its symptoms, such as fever and fatigue, are often vague, shared by diseases that are often mild. This leads to patients seeking help late in the disease when it is more difficult to treat. This also means healthcare workers often underdiagnose sepsis or are delayed in its recognition. Lastly, there are gaps in how best to treat sepsis; targeted treatments elude scientists, and much is unknown about how to stop its deadly assault on the body.

Our national survey ⁽¹⁾ of Canadians revealed the public knows little about sepsis. While many Canadians have heard of sepsis, few understand its meaning or connect it to steps they can take to prevent it, such as vaccination, hygiene, and early treatment of infections.

When we interviewed Canadians who had suffered from sepsis, very few recognized that they had it prior to seeking care. Even after being diagnosed, there was limited education provided by healthcare providers. After recovering from the acute effects of sepsis, their lives were adversely impacted in often debilitating ways. Most expressed frustration that sepsis was not well understood amongst their acquaintances, desiring that the disease have a higher public profile.

In our interviews with healthcare providers, a common frustration emerged: the often-vague presentation of sepsis leads people to seek medical attention either too early or too late. This issue is exacerbated in an overwhelmed and under-resourced health system. To tackle these issues, experts suggested implementing pop-up alerts and targeted training. However, the absence of a rapid and specific sepsis "test" remains a significant concern.

Early identification is vital as it allows for prompt administration of treatments like antibiotics. Empowering frontline professionals such as paramedics and nurses to initiate these interventions could make a substantial difference. Providers also identified treatment pathways that were overly complex and difficult to implement in practice.

Part 2: Enhancing knowledge and integrating health systems will prevent deaths from sepsis

To save lives, sepsis must be identified early and treated quickly. Treatment consists of antibiotics, organ support therapy, and, sometimes, surgical control of the infection in an operating room or interventional radiology suite. Together, our body of work has found promising ways to close gaps in knowledge and empower patients, their families and healthcare providers to reduce the incidence and impact of sepsis.

We recommend a National Action Plan to improve sepsis outcomes. This strategy would focus on awareness, prevention, treatment, recovery, and equity.

A National Sepsis Awareness Campaign, as part of an Action Plan, could inform the public about what sepsis is, how to prevent sepsis, what it feels like to have sepsis, and when to seek help from a primary care practitioner, hospital or by activating 911. Care should be taken to prioritize equity by developing specific campaign interventions for populations at higher risk of sepsis, such as intravenous drug users, unvaccinated individuals, immunocompromised individuals, and older Canadians.

A parallel campaign to further knowledge among healthcare workers is also needed so that as patients come forward, healthcare workers at all stages of care recognize the subtle signs of sepsis.

National campaigns have positively affected public vaccination rates, access to palliative care, recognition of heart attacks and strokes, and healthy eating. Traditional marketing played a large role in the COVID-19 pandemic vaccination campaign; a two-pronged campaign is currently underway to inform the public and healthcare workers about palliative care choices; and charities have purchased advertisements to inform the public about how to spot heart attacks and strokes and activate an emergency response.

Health system integration should strategically align with sepsis touchpoints. Allowing paramedics and nurses to begin treatment of sepsis earlier in the care pathway is critical. Ensuring patients with sepsis are quickly assigned necessary resources, such as a staffed hospital bed, laboratory testing including modern microbiological testing, early initiation of guideline-informed medical interventions, and rapid surgical treatment when necessary to control the source of the infection will require strategic investments in emergency care, hospital care, and surgical care.

Lastly, a strategic approach to investing in sepsis research will benefit Canadians. Population research with a focus on equity through an epidemiologic registry will enhance our understanding of who gets sepsis and what happens to them. Funding basic science to better understand the mechanisms of sepsis will lead to more effective treatments.

Engineering novel tests, software, and devices that can recognize sepsis can prompt healthcare providers to act quickly. Investment in antibiotic and therapeutic advances, clinical research of organ support, and clinical interventions to speed recovery will benefit patient outcomes.

Part 3: Implement a National Sepsis Action Plan

We join other Canadian sepsis experts in calling on the federal government to develop and implement a National Sepsis Action Plan, including a public awareness campaign. ⁽²⁾ A successful model that could be replicated is the Palliative and End-of-Life Care Unit ⁽³⁾ within Health Canada's Health Care Policy Directorate and Framework on Palliative Care in Canada published by Health Canada. ⁽⁴⁾

We also call on provincial and territorial governments to develop a systems-based Sepsis Care Strategy with clear accountability frameworks and to invest in dedicated sepsis quality programs, as currently exist for many other disease-specific programs such as stroke and trauma. Through strategic planning and targeted investment, Canadians can become safer from the perils of sepsis.

References

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