

Sepsis Canada:
5-Year Strategic Plan (2021 – 2025)

Version 6.0
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BACKGROUND: In 2017, the World Health Organization (WHO) resolution identified sepsis as a global health priority urging “member states and the WHO director general to take specific actions to reduce the burden of sepsis through improved prevention, diagnosis and management”. In response to this resolution, the Canadian Institutes of Health Research (CIHR) funded the Sepsis Canada Research Network (herein referred to as Sepsis Canada) – a single nationally coordinated research network committed to understanding the causes of sepsis, improving the prevention, detection and management of sepsis as well as improving rehabilitation from this disease. Our network brings together experts from different disciplines working collaboratively on various inter-related projects under an integrated and unified program of research.

Sepsis Canada originally proposed strategic objectives in the grant application submitted to the CIHR. By working with the Network’s Executive and Steering Committee, the network’s strategic objectives have been updated and refined to better align with the research priorities of the network. Sepsis Canada’s updated strategic objectives are outlined within this document.

PURPOSE: In the following document, we outline our network’s guiding vision and mission, core values and focus areas. We also outline our strategic objectives and sub-objectives for each focus area, and the activities we will undertake to advance them.

This Strategic Plan is meant to be a complimentary document to the proposals submitted by each Team Lead. Within each proposal, team leads have outlined specific deliverables and timelines for their studies. Detailed deliverables and timelines can be found within the project proposals.

DEFINITIONS:

Focus Area: High-level categories which our network will focus on as we strive towards our vision.

Strategic Objective & Sub-Objectives: Define what our organization wants to achieve in a more specific manner than the Focus Area categories, in that they have activities and outputs associated with them.

Activities: Describe the projects we will support and activities we will undertake to achieve each objective / sub-objective.

SEPSIS CANADA

Vision: Suspect Sepsis, Save Lives, Support Recovery

Mission: We are a multi-disciplinary research network committed to reducing the burden of sepsis for all Canadians through research.

CORE VALUES

Capacity Building

Patient and Family-Centered

Equity, Diversity and Inclusivity

Communication & Collaboration

Knowledge Exchange

Research Excellence

FOCUS AREAS

Understanding the **causes** of sepsis

Improving the **prevention** of sepsis

Improving the **detection & identification** of sepsis

Improving the **management** of sepsis

Improving **rehabilitation** from sepsis

Educating the next generation

Core Values:

Capacity Building: Through the acquisition and retention of skills, knowledge, and attitudes, we will support researchers, health care providers, patients, and trainees in reaching their full potential.

Patient and Family Partnership: Patients and families have travelled the sepsis journey firsthand. They know best where research and care priorities and gaps exist. We will engage patients and families as partners in the research we do!

Equity, Diversity and Inclusivity: We will promote a network that embraces and respects the uniqueness of individuals, represents the diversity of Canada and creates equitable access to opportunities for all individuals. Additionally, we will ensure that research conducted by our network reduces health equity gaps that exist in sepsis in Canada and benefits a diversity of Canadians.

Communication & Collaboration: We will leverage communication platforms to unite network researchers and communities from across Canada. We will forge partnerships and promote collaboration between individuals and teams with unique expertise as we work towards a common mission.

Knowledge Exchange: We will transform existing and new knowledge generated into better policies, practices, procedures, products, and services for sepsis care across Canada.

Research Excellence: We will design, conduct, and implement high quality, transparent, rigorous, and impactful sepsis research.

Focus Area:

CAUSES

Strategic Objective: Better understand the pathogenesis and the social determinants of sepsis, and the complex interplay between diabetes, obesity, and sepsis.

Sub-Objective

Accelerate discovery, validation, and translation of sepsis laboratory research into clinical trials.

Sub-Objective

Develop a better understanding of the role social determinants of health have in the development of sepsis.

Sub-Objective

Improve the understanding of diabetes and obesity as risk factors for the development of sepsis.

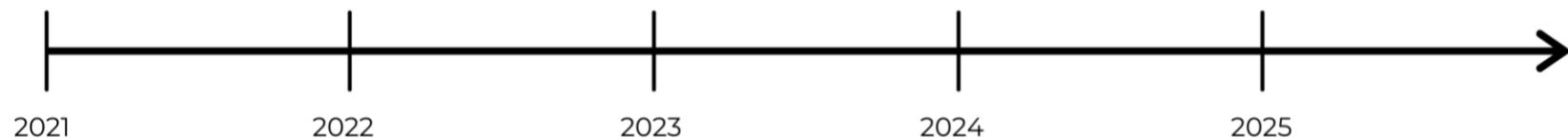
Activities & Outputs:

Project 10: Launch the national preclinical sepsis platform, conduct cooperative preclinical research at multiple centres across Canada, and create a pipeline for assessing novel therapeutics.

Project 9: Launch a national sepsis network biobank, federate Canadian biobanks, and repositories, and collect meta-data on samples.

Project 4: Use Team 1 core infrastructure to assess the interactions of sepsis with diabetes mellitus and obesity.

Partner with organizations to advance strategic objective. Launch targeted funding calls to advance strategic objective.



Examples of Potential Outputs*: reports/ publications, public presentations, # of participating sites, # of samples, # of pre-clinical studies that advance into clinical trials

*Outputs will be tracked in real-time via the sepsiscanada.ca website.

Activities are listed in blue boxes. Outputs are listed in dark red boxes. Activities may be added throughout the life of this strategic plan to better meet the strategic objective and sub-objectives within each focus area.

Focus Area:

PREVENTION

Strategic Objective: Advance primary and secondary prevention of sepsis.

Sub-Objective

Promote vaccination, clean water, hand hygiene, safe childbirth and prevention of hospital acquired infections (primary prevention of sepsis).

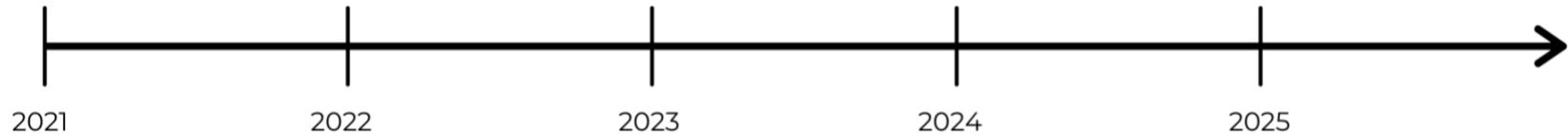
Sub-Objective

Create a culture of sepsis awareness across Canada leading to prevention of sepsis from infections (secondary prevention of sepsis).

Activities & Outputs:

Project 6: Create a culture of sepsis awareness through advocacy, health literacy and knowledge translation.

Partner with organizations to advance strategic objective. Launch targeted funding calls to advance strategic objective.



Examples of Potential Outputs*: reports/ publications, public presentations, # of Canadians that become sepsis literate, # of Canadians that can recognize the signs of sepsis, # of seed grant programs launched, # of seminars held with partner organizations

*Outputs will be tracked in real-time via the sepsiscanada.ca website.

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Focus Area:

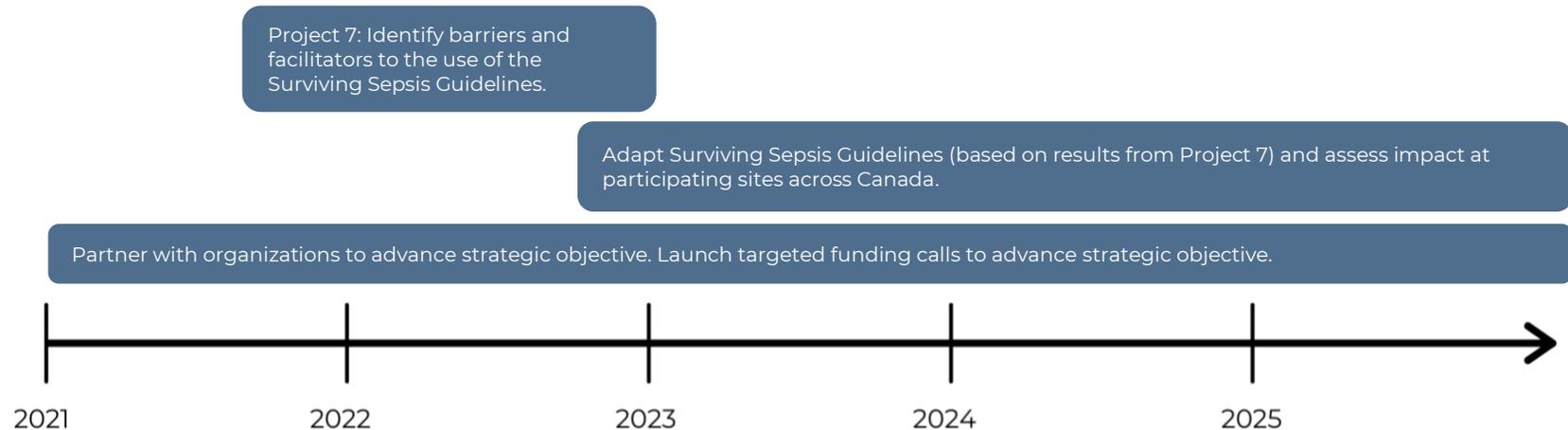
DETECTION & IDENTIFICATION

Strategic Objective: Ensure sepsis cases are identified and managed early.

Sub-Objective

Promote early detection and better management of sepsis.

Activities & Outputs:



Examples of Potential Outputs*: report on facilitators and barriers, publications, knowledge translation bundle targeting facilitators and barriers, public presentations, time to sepsis detection reduced
*Outputs will be tracked in real-time via the sepsiscanada.ca website.

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Focus Area:

DETECTION & IDENTIFICATION

Strategic Objective: Understand the epidemiological and economic burden of sepsis in Canada; Ensure homogenous sepsis surveillance at the population level across Canada.

Sub-Objective

Accurate and effective measurement of the incidence of sepsis leading to improved surveillance of sepsis nationally.

Sub-Objective

Develop an accurate understanding of the economic consequences of sepsis.

Sub-Objective

Improve accessibility to epidemiological sepsis knowledge.

Activities & Outputs:

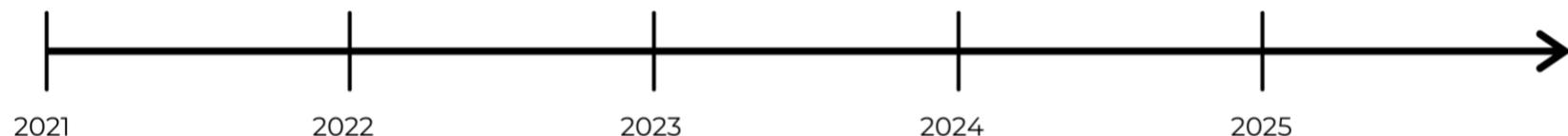
Project 1: Refine and compare clinical and epidemiologic definitions of sepsis.

Project 2: Create a freely available, searchable metadata catalog of existing relevant sepsis Canadian datasets.

Project 3: Identify, collate, and catalogue the scope of sepsis knowledge via a living scoping review.

Project 5: Assess economic consequences of sepsis to inform policy-development / health economic evaluations.

Partner with organizations to advance strategic objective. Launch targeted funding calls to advance strategic objective.



Examples of Potential Outputs*: reports/ publications, public presentations, measurement of population-based incidence rates of sepsis, determination of the burden of sepsis hospitalizations and sepsis deaths in Canada, # of published studies included in living scoping review.
*Outputs will be tracked in real-time via the sepsiscanada.ca website.

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Focus Area:

MANAGEMENT

Strategic Objective: Advance evidence-based management of sepsis and improve patient health outcomes.

Sub-Objective

Facilitate and support the coordination of clinical studies to improve sepsis research efficiency.

Sub-Objective

Improve the alignment between sepsis research agenda and the priorities of multiple stakeholders.

Sub-Objective

Improve patient health outcomes.

Activities & Outputs:

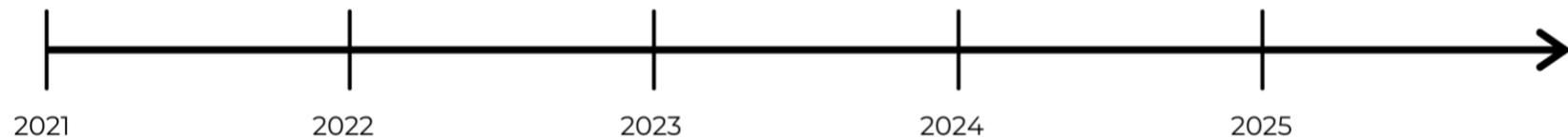
Project 7: Identify barriers and facilitators to the use of the Surviving Sepsis Guidelines.

Adapt Surviving Sepsis Guidelines (based on results from Project 7) and assess the impact at participating sites across Canada.

Project 9: Launch the Canadian clinical research network, monitor clinical research efficiency, and create meta-data on clinical data.

Project 10: Launch the national preclinical sepsis platform, conduct cooperative preclinical research at multiple centres across Canada, and create a pipeline for assessing novel therapeutics.

Partner with organizations to advance strategic objective. Launch targeted funding calls to advance strategic objective.



Examples of Potential Outputs*: reports/ publications, public presentations, time-to-site activation for clinical studies, monthly enrollment number for clinical studies, adapted surviving sepsis guidelines effectiveness in reducing 30-day mortality, ICU length of stay or ED length of stay.
*Outputs will be tracked in real-time via the sepsiscanada.ca website.

Activities are listed in blue boxes. Outputs are listed in dark red boxes. Activities may be added throughout the life of this strategic plan to better meet the strategic objective and sub-objectives within each focus area.

Focus Area:

REHABILITATION

Strategic Objective: *Objectives and sub-objectives to be set by the end of 2021.*

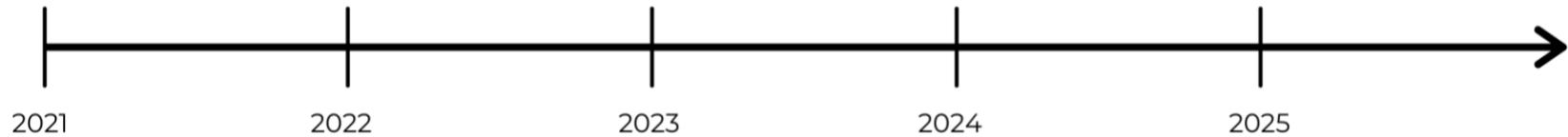
Sub-Objective

TBD

Sub-Objective

TBD

Activities & Outputs:



Focus Area:

EDUCATION

Strategic Objective: Train the current and next generation of sepsis researchers, clinicians, support personnel and patient partners (herein referred to as highly-qualified personnel – HQP).

Sub-Objective

Create a training program that facilitates skills and experience acquisition in sepsis research for HQP.

Sub-Objective

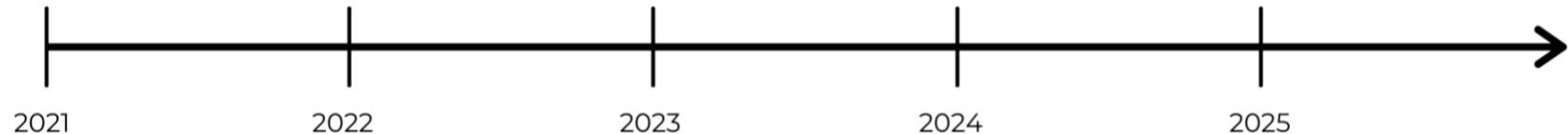
Evaluate and iteratively refine the training program to best meet the needs of HQP.

Activities & Outputs:

Project 8: Design, implement and evaluate Sepsis Canada Interdisciplinary Training Program to train HCP in clinical, population health and health system services research, biomedical research, and patient and family partnered research.

Project 8: Train patient researchers who will engage in, and actively design and implement sepsis research studies within the network.

Project 8: Provide experiential learning opportunities and ongoing mentorship for HCP.



Examples of Potential Outputs*: # of HCP employed 12-months after leaving program, # of HCP admitted / year, change in attitudes (e.g., in patient and family centered care) of learners, # of HQP pursuing careers in sepsis research or care

*Outputs will be tracked in real-time via the sepsiscanada.ca website.

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APPENDIX A: Sepsis Canada Seminal Projects

TEAM 1: Population Health, Economics & Policy



Project 1: Improving the Identification of Sepsis
Project 2: Creation of a metadata catalog and platform for sepsis epidemiology studies



Project 3: Scoping review and cataloguing of existing knowledge about the epidemiology of sepsis



Project 4: The impact of diabetes on sepsis-associated clinical outcomes



Project 5: The economic costs of sepsis

TEAM 2: Advocacy, Knowledge Transfer & Education



Project 6: Creating a culture of sepsis awareness through advocacy, health literacy and knowledge translation



Project 7: Addressing gaps in sepsis care with paramedics and Emergency Department staff



Project 8: Sepsis Canada interdisciplinary training program

TEAM 3: Translational Biology, Clinical Trials & Rehabilitation



Project 9: Clinical research network and biorepository



Project 10: National preclinical sepsis platform