

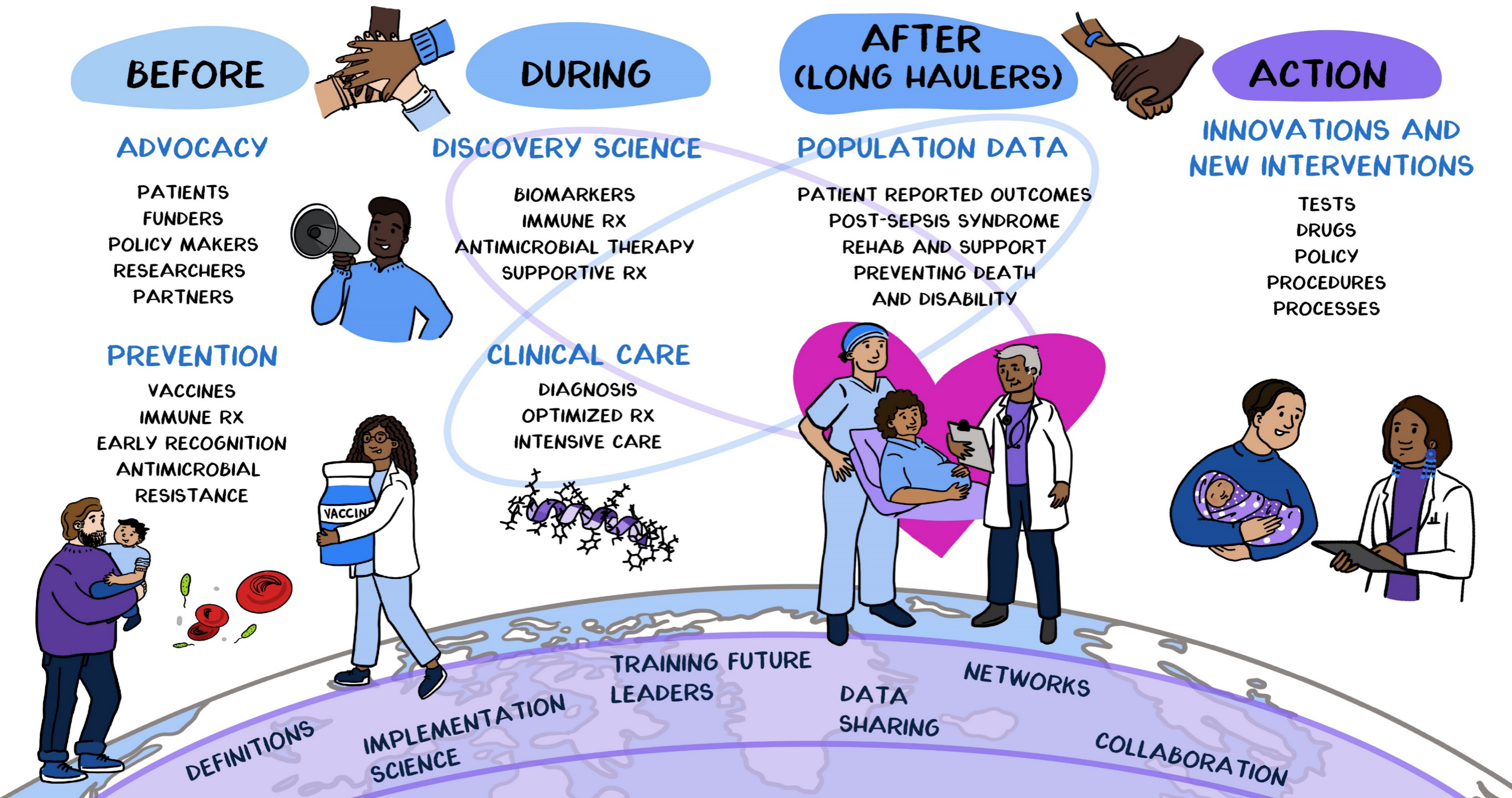
# ACTION ON SEPSIS

THROUGH COLLABORATION AND INNOVATION WE WILL CONQUER SEPSIS



THE UNIVERSITY OF BRITISH COLUMBIA

Action on Sepsis  
Research Excellence Cluster



## 2020 HIGHLIGHTS

### Research through collaborative endeavors

Action on Sepsis Research Cluster is a **trans-disciplinary group** tackling the complex issue of **sepsis prevention, diagnosis, management, and long-term care across the entire lifespan.**

Our network brings together **clinicians, researchers, public end users, and health care policymakers** to tackle this critical local and global health issue.



Source: Global Sepsis Alliance, 2020, [bit.ly/3uwHjMj](https://bit.ly/3uwHjMj)

### Breaking down silos



Areas of expertise include:

- immunology
- genetics/epigenetics
- diagnostics
- antimicrobial resistance
- nutrition
- epidemiology & risk prediction
- digital health
- data science
- quality improvement & capacity-building
- emergency medicine and critical care
- neonatal and child development
- maternal health
- health economics



## 2020 HIGHLIGHTS

### Initiating high-impact research

Action on Sepsis aims to reduce the global sepsis burden through **high-impact research** projects involving **cross-sector collaborations** with key partners in **Canada** and in **LMICs**

A list of all 39 active projects taking place in BC and globally can be found [on our website](#).

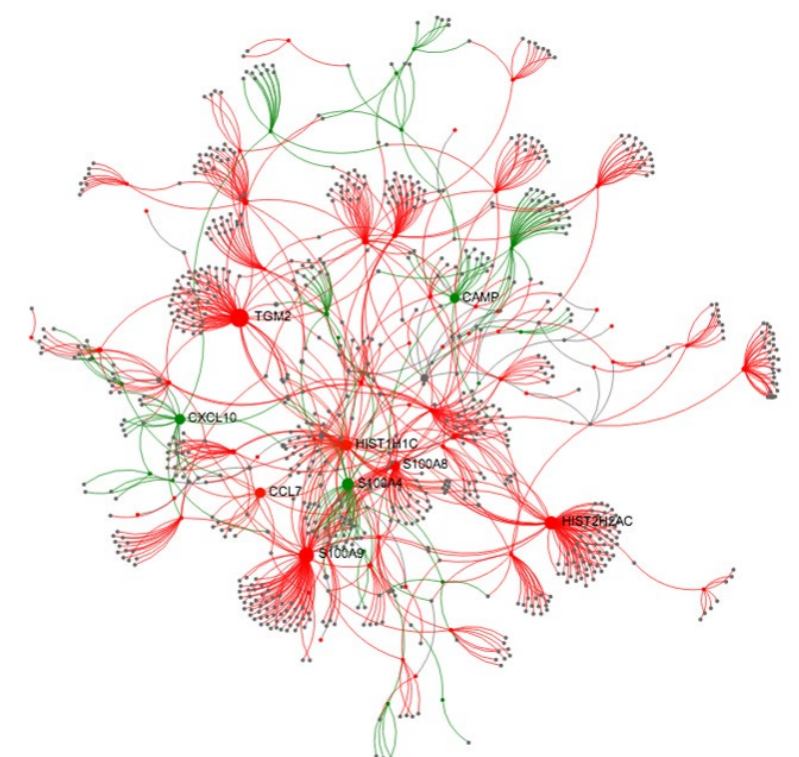
### In 2020:

We published **223 manuscripts** in collaboration with **local, national, and global health partners**, secured **\$14.8M** in funding, and supported **44 students and trainees** with our projects.

### Diagnostics & therapeutics

**Dr Goldfarb** initiated data collection for a project that aims to evaluate implementing an **automated blood culture system** at a hospital in Botswana, where manual blood culture testing is the standard, in collaboration with **BioMerieux Inc**, and the **Botswana- University of Pennsylvania Partnership**.

**Drs Hancock and Boyd** initiated a project to characterize **sepsis endotypes** in patients with **severe COVID-19**, establishing new collaborations with the **University of Toronto** and **Université Laval**.



**Drs Boyd, Russell, and Walley** established a new collaboration with the **National Research Council of Canada** and the **Black Tusk Research Group** to evaluate whether sepsis can be treated by inhibiting a gene involved in transporting lipids.

### Health-system strengthening

**Drs Kisson, Ansermino, and Dumont** began scaling the **Smart Triage** project in collaboration with the **Uganda Ministry of Health** and **Uganda Catholic Medical Bureau**. Smart Triage aims to improve triage and management of children with sepsis in low-resource settings using data-driven quality improvement.



## 2020 HIGHLIGHTS

### Post-sepsis care

**Drs Wiens** initiated the next phase of a program to enhance and personalize post-discharge care for children treated for sepsis in Uganda (**Smart Discharges**), with the support of the **Uganda Ministry of Health** and **Walimu**, a Ugandan NGO.

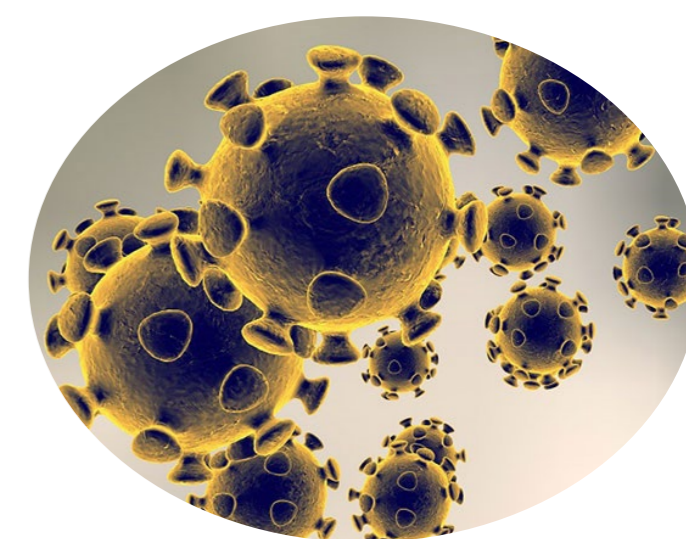


**Dr Holsti** and **Dr Ansermino** secured funding to validate a tool for **assessing neurological development** following critical illness in children in **low-resource settings**, through a collaboration with **Harvard Medical School**.

**Dr Boyd** is leading the developing of a **sepsis survivorship clinic** at **St Paul's Hospital**, with the **Black Tusk Research Group** and **MITACS** providing support with training post-doctoral fellows.

### Responding to a global pandemic

**Dr Sadarangani** established the **COVID-19 Immunology Consortium-BC** to build research capacity and enhance translational educational opportunities for UBC students.



**Drs Russell, Boyd, Walley, and Murthy** initiated a clinical trial (**CORONA I & CORONA II**) to evaluate whether modulation of the host response to COVID-19 can improve short and long term outcomes, using a pan-Canadian cohort, biomarkers, and an **international randomized controlled trial**.

**Dr Murthy** is collaborating with and the **Sunnybrook Health Sciences Centre** to co-lead the Canadian arm of the **WHO's Solidarity Trial** to evaluate treatments for severe COVID-19. This global clinical trial includes **500 participating hospitals** and **30 countries worldwide**, with **15 sites in Canada**.

**Dr Goldman** established a new international collaboration with **16 hospitals across 6 countries**, to **evaluate family attitudes** towards COVID-19 vaccines, participation in COVID-19 trials, and actions related to COVID-19

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## 2020 HIGHLIGHTS

### Local and global partnership

In 2020, members served on **34 working groups or committees**, including numerous **COVID-19 Task Forces** at the local, national, and international level. Through these partnerships, they are guiding development of clinical guidelines and allocation of health resources.



**Child Health BC** is developing a **pediatric sepsis screening tool** at hospitals in BC in collaboration with **Dr Meckler and, Dr Johnson** at **BC Children's Hospital**, and **Fraser Health**. In 2020 this partnership expanded to **Interior Health, Northern Health, and UBC-Okanagan**.

Leadership from the **First Nations Health Authority** joined us at our 2020 Strategic Planning Workshop, and identified **the need for sepsis protocols for rural, remote and isolated communities** as an objective that Action on Sepsis can support. In 2021, we will move forward with identifying key collaborative activities.



We support the **Pediatric Sepsis Data CoLaboratory (Sepsis CoLab)**, a partnership between the **Centre for International Child Health** at **BC Children's Hospital**, and the **World Federation of Pediatric Intensive & Critical Care Societies**, in developing a **virtual, collaborative network** to address the high burden of pediatric sepsis mortality and morbidity **globally**.



Centre for **Heart Lung Innovation**  
UBC and St. Paul's Hospital



World Federation of Pediatric Intensive & Critical Care Societies



Global Sepsis Alliance



African Sepsis Alliance



## 2020 HIGHLIGHTS

### Empowering patient voices

In May 2020, we established a **Patient Advisory Council**, a group of dedicated **sepsis survivors** who have a keen interest in **patient-oriented research** and **bridging the connection between academia and the public**:



Marie-Maxime Bergeron (QC)



Susan Korstad (BC)



Kristine Russell (AB)

The patient advisory council brings their **lived experience** and individual expertise to advance sepsis healthcare, advocacy, teaching, and research.

### Join our community

Visit our website ([sepsis.ubc.ca](https://sepsis.ubc.ca)) or follow us on Twitter ([@actiononsepsis](https://twitter.com/actiononsepsis)) to learn more about how we are working to reduce the global burden of sepsis.

Interested in joining the cluster? Contact Sela Grays, at [sela.grays@bcchr.ca](mailto:sela.grays@bcchr.ca).

### Leaders in sepsis advocacy

In 2020, our members:

- shared their work through **50 news stories** online and in radio, video, and print;
- co-authored the WHO's first **Global Report on the Epidemiology and Burden of Sepsis**;
- spearheaded a **month-long social media campaign** to coincide with **World Sepsis Day** (September 13) and **Sepsis Awareness Month** (September). Daily, we shared sepsis resources, virtual events, and sepsis survivor stories on our Twitter and Facebook pages. Collectively, **our posts were viewed >25,000 times**.



BC Place illuminating in pink for World Sepsis Day!



## Thank you to all those who made 2020 a success!

Since 2019, Action on Sepsis has been funded by the **Grants for Catalyzing Research Clusters (GCRC)** competition, jointly created by the Vice-President, Research & Innovation and the Provost & Vice-President, Academic at the **University of British Columbia**. This competition supports interdisciplinary networks of researchers who aim to solve critical societal challenges by transcending the traditional boundaries associated with departments, institutions, and funding agencies. This enables clusters to have more significant impact than otherwise possible.

### Cluster members

#### Investigators

##### \*Steering Committee Member

Mark Ansermino (Cluster Lead)\*

John Boyd\*

Melissa Coop

Guy Dumont\*

Rajavel Elango

Chelsea Elwood

David Goldfarb

Ran Goldman

Matthias Gorges

Bob Hancock\*

Kasra Hassani

Liisa Holsti\*

Wilf Jefferies\*

Kit Johnson\*

Niranjan Kissoon\*

Pascal Lavoie

Richard Lester

Garth Meckler

Craig Mitton\*

Srinivas Murthy

Gina Ogilvie

Beth Payne

Cheryl Peters\*

Jim Russell

Manish Sadarangani\*

David Sweet

Julie van Schalkyk

Joseph Ting

Marianne Vidler

Keith Walley

Matthew Wiens

#### Patient Advisory Council

Marie-Maxime Bergeron

Susan Korstad

Kristine Russell

#### Trainees

Omolabake Akinseye

Dr Soodeh Anani

Andy An

Arjun Baghella

Beverlie Baquir

Kyle Campebl

Rachel Chow

Haille Dau

Eric Deng

Mahin Delara

Dallas Genereaux

Kelly Genga

Vivek Gill

Parnian Hosseini

Tanielle Johnson

Akamdeep Kandola

Victor Lee

Alex Leung

Ed Li

Alishah Mawji

Kiran Parmar

Constatin Popescu

Imogen Porter

Stephanie Quon

Renee Reimer

Mahan Rihani

Nicola Symonds

Kantimas Sittikol

Caitlyn Southey

Anna de Waal

Christine Wang

Jeff Wong

Denise Wooding

Gavin Wooldridge

Ethan Zhang

Gary Zhu

#### Cluster coordination & grants facilitation

Teresa Johnson

Stefanie Novakowski

