

we spark HEALTH INSTITUTE

IMPACT REPORT

2021-22

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Succeeding Together

WE-SPARK Health Institute is supported by an innovative research partnership between Hôtel-Dieu Grace Healthcare, St. Clair College, Windsor Regional Hospital, and the University of Windsor. WE-SPARK brings together health research strengths, expertise, and infrastructure from across the Windsor-Essex region. Since our formal launch in March 2020, we have grown to over 860 members. We accelerate and strengthen collaborations and provide tools and resources needed for local health research and training to excel.

WE-SPARK Health Institute is physically located on land and surrounded by water honoured by the Wampum Treaty; agreements between the Anishinaabe, Haudenosaunee, Lenni, Lenape and allied Nations to peacefully share and care for the resources around the Great Lakes.

We acknowledge the presence of the People of the Three Fires Confederacy (Ojibwe, Odawa, Potawatomi and Huron/Wendat) and the importance of reconciliation. Health research, care and training benefit from a deep appreciation of the past and present healing practises of Indigenous people. WE-SPARK recognizes the urgency for all areas of health to meet the needs of the Indigenous communities across Canada. As such, we are dedicated to meaningful consultation, building respectful relationships and the continued learning and education required for positive action toward reconciliation.

We are committed to providing equity, diversity, inclusivity, and support – all components of an environment that enhances excellence, innovation and creativity. We aim to develop and support policies and practices that strengthen the research community, as well as the quality, social relevance, and impacts of our research.

Igniting discovery, succeeding together, living better.

Year in Review

We began our third year on May 1, 2021 with 677 members. Since then, we have grown our membership by 27%. With the COVID-19 pandemic still impacting the community, we continued to host most of our events virtually and engaged with over 700 participants. We were thrilled to end the year with an in-person event, Cheers to Hope, to celebrate the successes of the health research community. We used new strategies to connect with our community through social media



$14,850,000
Total External Funding*
*Funding reflects the grant activity of the 30 Core Principal Members

14
WE-SPARK Grants Awarded ($280,000)

32
Clinical Trials

3,000+
Patients/Participants Involved in Research**
**Only includes fresh tissue, clinical trials & REDCap participants

860
Members

8
Staff

and shared our members' successes through mainstream media engagement and newsletters. We launched our WE-SPARK app to support rapid communication and new collaborations between our researchers. Our WE-SPARK office added three new staff members and took on nine interns. We hosted our 4th WE-SPARK grants competition and awarded over $280,000 to local research projects. Our Core Principal membership grew to 30 researchers, and we increased total external research funding by 67%. We are succeeding, together, in growing health research excellence and will continue to focus on the positive impact that research has on our local community. Research changes lives.



Social Media
1642
Followers

12,855
Engagements
1.5 million
Reach

87
Times in Mainstream News

8,250
Newsletter Engagements

42,000
Unique Website Visits

24
Events Hosted

730
Participants

9
Interns

42
Student Network members

13
Clinical Professorships Facilitated

3
Professors of Practice facilitated

Message from the Board of Trustees

During our first two years, we dedicated our efforts to establishing a strong common vision of a thriving and engaged research community. We focused on uniting our strengths to develop programs and processes that would allow us to drive advancements in health, now, and into the future.

This year, we continued to build upon our individual organizational strengths while working together to find efficiencies and advance discoveries. In the span of three short years, we have achieved remarkable results. This year alone, we awarded $287,000 in grants, attracted over $14 million in external funding to our region, increased our membership to 860 members, and established a robust student network. In addition, we hired personnel that support our research community, took a lead role in developing the University of Windsor's Masters in Translational Health Sciences Research program, and developed a plan with Invest WindsorEssex to connect and grow industry engagement in health research. These, and many other accomplishments highlighted in this report demonstrate our commitment to the health of our region and the values of WE-SPARK Health Institute - Accountability, Excellence, Collaboration, Innovation and Sustainability. We truly are succeeding, together.



About the Institute

Since inception in 2019 and formal launch on March 7, 2020, WE-SPARK Health Institute has worked to bring together health research strengths across our region. Together we are pursuing a vision of a thriving and engaged community driving advancements in health.

What We Do

Enhance the health, well-being, and care of people through transformative research and knowledge translation. We accomplish this by:

- **Accelerating research activities and facilitating connections.**
- **Building a critical mass of health researchers.**
- **Providing local research funding opportunities.**
- **Offering research workshops, services, and consultations.**
- **Engaging student volunteers.**
- **Hosting events to engage community members in research.**
- **Establishing infrastructure capacity.**

Quarterly reports highlighting our metrics can be found at: **www.wesparkhealth.com/our-impact**

Why Local Research Matters

Research outcomes have a global benefit, but there are additional impacts felt when research is funded locally. Local research:

- **Keeps our health professionals and educators current.**
- **Attracts and retains the brightest students and professionals.**
- **Brings cutting-edge infrastructure, diagnostics, and treatments to our region.**
- **Increases access to clinical trials in Windsor-Essex.**
- **Reduces the number of patients that must travel out-of-town for care.**
- **Improves health outcomes for our community. Research saves lives.**

Budget & Funding

WE-SPARK is funded by contributions from four Institutions totaling $500,000 (Expenses: salaries, internships, operating costs, and grants program). The WE-SPARK Grants Program is also supported by donations from organizations and individual community members.



Patti France
St. Clair College
President



Robert Gordon
University of Windsor
President & Vice-Chancellor



Bill Marra
Hôtel Dieu Grace Healthcare
President & CEO



David Musyj
Windsor Regional Hospital
President & CEO

Our Team

Our team is comprised of dedicated and passionate people who are committed to working together to enhance the health, well-being, and care of people in our community.

Leadership

Executive Committee

Lisa Porter
WE-SPARK – Executive Director

Nicole Sbrocca (Chair)
Windsor Regional Hospital

Alison Murray
Hôtel Dieu Grace Healthcare

Jennifer Voth
Hôtel Dieu Grace Healthcare

Caroline Hamm
Windsor Regional Hospital

Heather Pratt
University of Windsor

Chad Sutherland
University of Windsor

Peter Wawrow
St. Clair College

Karen Metcalfe
WE-SPARK

Staff

Karen Metcalfe
Assistant Director

Adriana Grande
Knowledge Translation and NUCLEUS Coordinator

Linda Hudson-Chapman
Administrative Assistant

Kyle Lago
Translational Research Associate

Cathy Mombourquette
Special Projects – Media Relations

Devinder Moudgil
Medical Student Research Associate

Christopher Ng-Fletcher
Innovation Research Associate

Ryan Palazzolo
Student Network Coordinator

Interns/Studentships

Nellie Bordignon
Vaccine Hesitancy – Special Project

Mohamed Farjalla
Data Management

Eddie Grimmett
Cancer Education

Amy Llancari
Cancer Education

Zoë Millar
Caring for the Caregiver – Special Project

Sydney Reid
Vaccine Hesitancy – Special Project

Jaclyn Ruta
Vaccine Hesitancy – Special Project

Kaviya Selvaperumal
EDI – Special Project

Madhu Yadiki
Engage Program

Committees

Governance

Lisa Porter (Chair)
WE-SPARK

Alison Murray
Hôtel Dieu Grace Healthcare

Heather Pratt
University of Windsor

Nicole Sbrocca
Windsor Regional Hospital

Monica Tighe/
Monica Staley Liang
St. Clair College

Karen Metcalfe
WE-SPARK

Knowledge Translation

Peter Wawrow
(Co-Chair)
St. Clair College

Dora Cavallo-Medved
(Co-Chair)
University of Windsor

Dave Andrews
University of Windsor

Linda DiRosa
Hôtel Dieu Grace Healthcare

Jody Ralph
University of Windsor

Indryas Woldie
Windsor Regional Hospital

Lisa Porter
WE-SPARK

Karen Metcalfe
WE-SPARK

Nucleus

Adriana Grande (Chair)
WE-SPARK

Renee Biss
University of Windsor

Arezoo Emadi
University of Windsor

Jackie Fong
University of Windsor

Wendy Foote
St. Clair College

Phil Karpowicz
University of Windsor

Kyle Lago
WE-SPARK

Krista Naccarato
Windsor Regional Hospital

Michelle Nevett
University of Windsor

Ken Ng
University of Windsor

Christopher Ng-Fletcher
WE-SPARK

Ming Pan
Windsor Regional Hospital

Lisa Porter
WE-SPARK

Jody Ralph
University of Windsor

Chad Sutherland
University of Windsor

Peter Wawrow
St. Clair College

Community Engagement

Marla Jackson (Co-Chair)
Hôtel Dieu Grace Healthcare

Chad Sutherland (Co-Chair)
University of Windsor

Dora Cavallo-Medved
University of Windsor

Roseann Danese
St. Clair College

Allison Johnson
Windsor Regional Hospital

Karen Metcalfe
WE-SPARK

Research Development

Caroline Hamm (Co-Chair)
Windsor Regional Hospital

Ingrid Qemo
(Co-Chair until Jan. 2021)
University of Windsor

Jennifer Voth
(Co-Chair as of Jan. 2021)
Hôtel Dieu Grace Healthcare

Chris Abeare
University of Windsor

Jessica Bennett
Windsor Regional Hospital

Balraj Jhawar
Windsor Regional Hospital

Jody Ralph
University of Windsor

Simon Rondeau-Gagne
University of Windsor

Peter Wawrow
St. Clair College

Lisa Porter
WE-SPARK

Karen Metcalfe
WE-SPARK

Our Research Community

Everyone in our community has a role to play in health research. WE-SPARK members are a network of people dedicated to improving the health and wellness of our region. Our research activities are driven by our Core Members, people who work in the research field and are actively engaged on a daily basis. However, essential to our progress are those working behind the scenes to elevate research activities including healthcare providers, educators, students, volunteers and supporters.

860 Members:

Researchers who have a formal affiliation with one of our four partner institutions

30 — **Core Principal**
are funded by provincial or national health projects, or lead a clinical trial

178 — **Core Associate**
are actively engaged in research but do not yet hold provincially or nationally funded projects or are leading clinical trials.

247 — **Affiliate Researcher**
are associated with health research or healthcare locally or beyond; including administrative support

304 — **Affiliate Students**
post-secondary students in any discipline with an interest in health research

101 — **Community Members / Ambassadors**
individuals or organizations interested in the health landscape in Windsor-Essex

Research Activity of Core Principal Members

16
Awards/Recognitions

$14,850,000
External Grant Funding

207
Active Collaborations

3,000+
Patients/Participants Involved*
*Only includes fresh tissue, clinical trials & REDCap participants

92
Talks/Presentations Given

30
Core Principal Members

The successes here reflect those of our 30 Core Principal members who hold national/provincial funding or lead an investigator-initiated clinical trial

120
Peer Reviewed Publications, Books and Chapters

32
Clinical Trials

496
Students Trained

38
Grants Awarded

Biomedical Sciences
Dora Cavallo-Medved
Phillip Karpowicz
Lisa Porter
Munir Rahim

Chemistry & Biochemistry
Marcus Drover
Drew Marquardt
Kenneth Ng
Simon Rondeau-Gagné
Yufeng Tong
John Trant
Otis Vacratsis

Computer Science
Luis Rueda

Electrical & Computer Engineering
Arezoo Emadi
Mitra Mirhassani

Kinesiology
Francesco Biondi
Matthew Krause
Sara Scharoun Benson
Paula van Wyk

Mechanical, Automotive & Materials Engineering
Jalal Ahamed
Jill Urbanic

Nursing
Noeman Mirza

Cancer Program
Caroline Hamm
Ming Pan

Psychology
Jessica Kichler
Dana Menard
Lance Rappaport
Charlene Senn
Kendall Soucie

Social Work
Adrian Guta
Jayashree Mohanty

2021 Grant Competition Results

$287,000
Funding Disbursed

50+
Collaborators Involved

14
WE-SPARK Grants Awarded

11
Collaborating Institutions

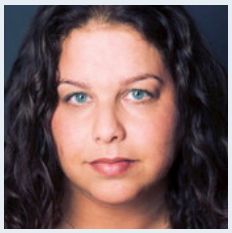
Behind each Project Lead is a team of people from diverse backgrounds and experiences. WE-SPARK focuses on funding projects that bring together experts from the four supporting institutions, and collaborators across the region, province, nation and world!

Igniting Discovery Grant Recipients

Sponsored by WE-SPARK Health Institute



Jalal Ahamed
Development of an innovative and cost-effective sleep monitoring tool to better understand breathing related sleep disorders.



Naomi Levitz
Exploring the lived experiences of Windsor-Essex County's Street Involved .



Rosanne Menna
Children's Technology and Media Use During the COVID-19 Pandemic.



Noeman Mirza
Exploring the role of Designated Care Partners pre and post-discharge.



Hali Sitarz
Empowering and educating nursing students to intervene in the poverty landscape.



Jennifer Voth
Exploring the implementation of a family navigation service in Windsor-Essex

Sponsored by Windsor Cancer Centre Foundation



Drew Marquardt
Realizing Boron Neutron Capture Therapy.



Kathy Pfaff
Improving the holistic health, social support, and healthcare utilization of the LGBTQ+ people experiencing cancer



Munir Rahim
Improving prognosis and therapy for people with colorectal cancer.

Sponsored by Windsor Cancer Research Group



Sahar Khan
Using mobile technology to identify potential neurocognitive change in cancer patient

Sponsored by WE-SPARK and University of Windsor (Office of the Vice President, Research and Innovation; Faculty of Engineering; Faculty of Human Kinetics)



Francesco Biondi
Developing a machine vision eye-blink detection application for the monitoring of Zoom fatigue.



Matthew Krause
Exploring the pathophysiological mechanisms underlying poor muscle repair in aging and diabetic myopathy.



P. Moradian Zadeh
Development of an AI-based platform to address social isolation and improve health in community dwelling seniors.



S. Rondeau-Gagne
Developing new treatments for Glioblastoma.

WE-SPARK Grants Program

The WE-SPARK Grants Program is designed to support local health researchers at all stages of their career. All grants are adjudicated by a rigorous external peer review process.

The program began in 2020 and since then 52 projects have been awarded totaling $776,725 in local grant funding. Research takes time but we are already seeing the impact of this investment. In just 2 years, these projects have leveraged the local funding into an additional $1.8 million in national grant funding.

IN 2 YEARS, LOCAL

LEVERAGED INTO

$1.8 M

IN NATIONAL G

$776,725
Local Grant Funding Awarded

2 YEARS
Research Time

52
Projects

2020
Program Launch



FUNDING HAS BEEN
AN ADDITIONAL
ILLION
RANT FUNDING



Cheers to Hope

This year we had the opportunity to come together to celebrate research and thank our donors personally at Cheers to Hope, our annual fundraising event.

WE-SPARK donors provide the funding that fuels critical local research projects. This year special thanks goes to:

Windsor Cancer Centre foundation

University of Windsor

Windsor Cancer Research Group

Scan the QR Code below to watch our "Thank You For Your Support" video highlighting the value of research, our impact, and how our supporters make the difference.

Research Drives Discoveries & Provides Solutions



Spotlight on Cancer

Research is an ongoing process that builds on the discoveries of the past. Several decades of research have led to the understanding that rather than being one unique condition, cancer is a group of diseases that require different approaches for their diagnoses and treatments.

In Year 3, the WE-SPARK Cancer Research Program (formerly known as the Windsor Cancer Research Group – WCRG) continued to support interdisciplinary research projects. One newly funded study is a social intervention to improve the quality of life of LGBTQ2+ persons experiencing cancer. This pilot project utilizes an implementation science framework and has a strong team with multiple collaborators and organizations.

Project: Implementing and Evaluating a Compassionate Community Intervention to Improve the Holistic Health, Social Support, and Healthcare Utilization of the LGTBQ2+ People Experiencing Cancer

Funder: Windsor Cancer Centre Foundation, Seeds4Hope Program

Team lead: Dr. Kathy Pfaff

Co-Investigators: Shelley Evans and Drs. Jamie Crawley, Edward Cruz, Michael Boroughs, Jody Ralph, Suzanne McMurphy, Debbie Sheppard-Lemoine.

Collaborators: Janet MacIsaac, Dr. Caroline Hamm, Deborah Sattler.



Photo: **Discoveries and the next generation.** / Student Tiana Visconti working on a translational health project as part of a research team in the Essex Centre of Research (CORe), University of Windsor.

Over Year 3, our core members were awarded $650,000 in new cancer research funding, adding to the $5.3M in current cancer funding held locally. There are additional benefits when research is funded locally, including bringing cutting-edge infrastructure to the community, elevating the knowledge of all healthcare providers, and attracting and retaining the brightest professionals.

When funded locally, research also delivers the latest innovative treatments to local patients, with data showing that those treated in institutions with active research programs have improved outcomes.

In 2020, the Cancer Research Collaboration Fund provided the initial support to a local study on the cancer patient enrollment in clinical trials. Since then, the project has received more than $150,000 in additional national funding.

Project: Identify Barriers to Cancer Patient Clinical Trial Enrollment and Develop Interventional Education Program for Windsor-Essex

Funder: Cancer Research Collaboration Fund

Team leads: Drs. Caroline Hamm and Dora Cavallo-Medved

Collaborator: Dr. Abdulkadir Hussein

Canadian Cancer Clinical Trials Network

Research Drives Discoveries & Provides Solutions



Indigenous Peoples

The COVID-19 pandemic and its associated restrictions exacerbated the impacts of climate change issues on the health and well-being of Indigenous peoples from the Tl'etinqox and Qwelminte Secwépemc communities.

In Year 3, a local project based on Indigenous research methodologies received national funding to study (1) the complex interplay of climate change, the COVID-19 pandemic, gender and intersectional perspectives, and health; (2) the impact of such complexity on Indigenous peoples' response to climate change refugees or evacuees; and (3) potential sustainable community-led solutions for the current and future pandemics and health emergencies.

Project: Unpacking the Complexity Within Indigenous Communities Responding to Displaced Climate Change Refugees in Central British Columbia During the Covid-19 Pandemic

Funder: Canadian Institutes of Health Research

Team leads: Drs. Darlene Sanderson and Noeman Mirza

Co-Investigators: Drs. Roderick McCormick and Johanna Sam

THOMPSON RIVERS UNIVERSITY

University of Windsor

UBC

CIHR IRSC
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada



Photo: **Providing solutions to support all.** / COVID-19 Recovery Program at Hôtel Dieu Grace Healthcare.

Spotlight on COVID-19

In Year 3, Hôtel Dieu Grace Healthcare developed the COVID-19 Recovery Program, a comprehensive assessment to diagnose, treat, and rehabilitate individuals with complex and multiple medical, functional, and psychosocial issues related to COVID-19 infection. Individualized education, treatment, and other types of support were provided by interprofessional teams of health professionals in an outpatient setting.

The collected data during the evaluation stage seeks to impact decision making with regards to rehabilitation services for the recovery from COVID-19 infection among members of our region.

Project: COVID Recovery Program Evaluation

Funder: Hôtel Dieu Grace Healthcare

Team lead: Dr. Jennifer Voth

Project Team: Jason Petro, Sonya Vani, Rosie Pipitone-Middleton, Jenniffer Clifford, Janice Dawson, Bianca Pirillo, Rachel Gough, Marla Jackson.

HÔTEL-DIEU GRACE HEALTHCARE

Rehabilitative Care Alliance

Research Supports Health & Wellness

To understand the impact that social determinants can have on health, a number of our researchers focus on screening, nutrition, activity, and stress management. Often, some of the best solutions arise through longitudinal studies carried out by collaborative teams.



Photo: **This is why research matters**. / Dereck Lau, local high school student, health advocate and brain tumour survivor sharing his thoughts about the importance of health research.

Spotlight on Mental Health

Only 31% of children and young people with mental health and/or addiction disorder diagnoses receive formalized mental health services or supports. Help-seeking is often hampered by a combination of multiple factors, which, in turn, affect the scope and availability of resources. Most current service planning at a community level is based on past utilization, meaning that only those who receive service get counted as "needing" it.

Family navigation programs (FN) have recently emerged as one of the solutions. In Year 3, a collaborative team of WE-SPARK members launched an exploratory study to "fine tuning" a FN in our region.

Project: Exploring the Implementation of a Family Navigation Service in Windsor-Essex

Funder: WE-SPARK Health Institute

Team lead: Dr. Jennifer Voth

Co-investigators: Drs. Jessica Kichler and Kendall Soucie

Collaborators: Terra Cadeau, Marla Jackson, Jeanne Lucier



Physical Well-Being

Homelessness is correlated to a low sense of community belonging, which can lead to hopelessness, lower mental well-being, and drug use. **In Year 3, we supported a local project that is using storytelling and personal narratives to help identify opportunities to increase meaningful activity among individuals experiencing chronic homelessness and/or those recently housed.**

Project: Exploring the Lived Experiences of Windsor-Essex County's Street Involved

Funder: WE-SPARK Health Institute, Igniting Discovery Grant Program

Team lead: Naomi Levitz

Co-investigator: Elizabeth Strutt-Macleod

Collaborator: Allison Prieur

Tissue repair is essential to maintain optimal body function. In diabetic myopathy in type 1 diabetes mellitus (T1D), this repair is compromised, and it is not yet well understood why. **In Year 3, a local research project received an award to study the role of the sphingolipids, a family of biologically active signaling lipids, which are influential to the muscle repair process, insulin signaling, and vascular function, all negatively affected in diabetes.**

Project: Role of Sphingolipids in Muscle Repair and Function in Humans and Mice; Role of Type 1 Diabetes in Sphingolipid Levels

Funder: Faculty of Human Kinetics and Office of Research and Innovation Services, University of Windsor

Team lead: Dr. Matthew Krause

Co-investigator: Dr. Anthony Bain

Research Trains the Next Generation

In Windsor-Essex, our multi-disciplinary health training landscape spans from clinical and postdoctoral fellows to medical students and graduate and undergraduate students.



Student Network Successes

Our unique local partnership offers multiple opportunities for students to develop their interests, create connections, and improve career prospects while making a difference. We closed Year 3 with over 300 affiliate students, including 52 volunteers who are available to our research community to support their projects. **In the past year, a total of 3,200 hours were logged by our student network.**

Communication & Leadership Skills

Communicating research findings also includes being sensitive to the specific needs and cultural differences of each community, especially in times of challenge and vulnerability.

In Year 3, the Students Igniting Vaccine Confidence Program received a national award to continue inspiring trust in COVID-19 vaccines. The project engages a multidisciplinary and diverse team of postsecondary students to design activities, translate information, and educate all members of Windsor-Essex on this topic.

University of Windsor

ST. CLAIR COLLEGE

MULTICULTURAL COUNCIL OF WINDSOR AND ESSEX COUNTY



Infrastructure & Training

In the past year, researchers acquired new and essential equipment to create the best learning environments for students. From a multi-user high throughput flow cytometry system for drug discovery to an atomic force microscope that allows for imaging of almost any type of surface, cutting-edge infrastructure is key.

Our local health researchers received a number of infrastructure grants. Dr. Drew Marquardt, from the University of Windsor, is part of a pan-Canadian team that received a $14M grant from the Canada Foundation for Innovation to expand Canadian research involving Neutron Scattering, including e-cigarette and vaping-associated lung injury (EVALI) as well as cancer.

The new Master of Science in Translational Health Science program closed Year 3 with a flourish. The first cohort, comprised of 20 students, successfully enrolled in the program in April and began classes in early May.

Medical Student Training

The Schulich - UWindsor Opportunities for Research Excellence Program (SWORP) is a unique grant opportunity for our local medical students to conduct research under the supervision of a University of Windsor faculty member. **Over Year 3, 10 awards were given to 17 students in total.**

One of the SWORP projects will be used to inform a larger, prospective study on the prevalence, risk factors, and health consequences of violence against paramedics that is currently underway in Ontario. The study is supervised by Dr. Elizabeth Donnelly from University of Windsor and led by medical student Robert Bradford.

Photo: **It's all about teamwork.** / Instructors and students from St Clair College's School of Health Sciences Program - Windsor at St Clair College.

Research Improves Health Outcomes & Saves Lives

Research is the vehicle that informs best practices, supports evidence-based decision-making, and improves health outcomes. Embedding research in clinical care, supporting clinician-led projects, and building multi-disciplinary, cross institutional research teams offers considerable hope for patients who are treated at our local hospitals every year.



Photo: **Attention, beach goers!** / Photo taken by Dr. Chris Houser for the project "Socially and Physically Based Surf Warning System to Improve Beach Safety."

Protecting the Front-Line

The COVID-19 pandemic has led to increased levels of depression, anxiety, traumatic symptoms, and burnout among front-line workers, including nurses. While we are experiencing staff shortages due to such devastating impacts, enrollment in Canadian nursing programs is higher than it was pre-pandemic.

After receiving an Igniting Discovery Grant in Year 2, a multidisciplinary team built on their findings and received national funding to develop a training program to prepare nursing students to work during this pandemic and/or other healthcare crises. The STRONG program will be piloted locally and at partner sites, ensuring its utility and applicability across nursing programs.

Project: Laying the Groundwork for Improved Psychological Preparedness and Adaptation of Canadian Nurses Working During Healthcare Crises: Simulated Training to Improve Resiliency of Nursing Groups (STRONG)

Funder: CIHR

Team lead: Dr. Dana Menard

Co-investigators: Amanda McEwen and Drs. Kendall Soucie, Jody Ralph, Laurie Freeman, Debbie Rickeard, Marian Luctkar-Flude, and Jane Tyerman.

Collaborators: Dr. Erika Kustra and Nick Baker

University of Windsor · Queen's University · uOttawa · CIHR IRSC



Multi-centre Observational Study

Very little was known about the impact the COVID-19 virus had on babies that had been exposed before being born. The lack of evidence meant variability in the clinical management of those affected. In 2020, Mount Sinai Hospital developed a study to fill this gap.

Locally, WE-SPARK member Dr. Sajit Augustine has led this study, contributing to the data being collected in Ontario, potentially driving recommendations for changes in identification, support, interventions, and follow-up.

Project: Surveillance of Short and Long-term Outcomes of Infants Born to COVID-19 Positive Mothers.

Sponsor: Mount Sinai Hospital

Principal Investigator: Dr. A. Kharrat, Mount Sinai Hospital

WRH Site Principal Investigator: Dr. S. Augustine

WRH Research Team (as of July 2021):
Jennifer Lenz (Occupational Therapist).

Unique System for Beach Goers

The economic burden of drowning fatalities in Ontario is the largest within the Great Lakes area ($38M). Last year, local researchers partnered with community organizations in Bruce County to create a real-time dynamic warning system to protect Great Lakes beach users from drowning.

The system uses automated beach activity cameras, sensors, meteorological stations and artificial intelligence. It has already started working at Station Beach (Kincardine, Ontario).

Project: Socially and Physically Based Surf Warning System to Improve Beach Safety

Funder: Mitacs

Team lead: Dr. Chris Houser

Co-investigators: Drs. Dana Menard and Kendall Soucie

Sinai Health · Windsor Regional Hospital · University of Windsor · Mitacs

Looking Forward

In our first three years we established a strong common vision, united our strengths and accelerated our research activities. During a global pandemic, we continued to expand and build efficiencies within our health research ecosystem, made diversity and inclusion a priority and supported researchers at all stages of their career. We leveraged technology to enhance collaboration, grew our research network and ended our year by hosting a celebratory event that reminded our community of the impact of health research and what can be accomplished when we focus on succeeding together.

As we look forward to Year 4, we will continue to support the people that drive health research in our community and accelerate research ideas to become successfully funded projects. With the new hospital system moving forward and a joint commitment to a health innovation hub, WE-SPARK is focused on growing health innovation and critical infrastructure, creating an environment that is attractive to the brightest minds and demonstrating the importance of health research for the economic development of our region. I look forward to:

Igniting Discovery, Reaching New Heights, Living Better

Lisa A. Porter, PhD, Executive Director
Distinguished Professor, University of Windsor



Photo: **Let's keep looking forward.** / Dr. Ming Pan using artificial intelligence in the radiation planning process for cancer patients.

Priorities for 2022-2023

Organizational Effectiveness

Continue quarterly reporting and tracking that leads to the yearly impact report

Monitor and adapt budget reporting

Implement a fundraising plan Develop MOUs between WE-SPARK institutions, as needed

Review current terms, policies and reporting mechanisms to identify and respond to changing needs

Implement the next strategic planning cycle

Research Excellence

Host events that build collaboration, grow teams and support professional development that moves local research excellence forward

Continue to host the WE-SPARK Grant competitions to support local researchers to elevate grant success at the national level

Profile and track successes of Core Members to elevate the academic profile of Windsor-Essex

Provide opportunities for research mentorship

Provide a central hub for research processes and system navigation Provide support for external peer review

Initiate and continue to evolve the Equity, Diversity and Inclusion (EDI) action plan

Community Engagement

Create workshops, series and/or events that engage the community and build the profile of WE-SPARK

Showcase research facilities and projects happening in the community

Maintain social media presence and engagement, while continuing to refine messaging to target audiences

Broaden community understanding of WE-SPARK through media relations, our newsletter and speaking engagements, locally, regionally and provincially

Continue to evolve our website capabilities and reach

Implement the WE-SPARK Engage Program to invite the community to join our research efforts

Knowledge Translation

Expand the student research network and integrate with existing student programs and services at St. Clair College and the University of Windsor

Expand, promote, and streamline management of our Health Research Resource Hub

Expand and promote the Knowledge Translation Toolkit, including tools for commercialization, and increase awareness to our research community

Support student experiential learning and novel training opportunities and professional development in health research

Develop and implement a plan for increasing engagement with industry and community partners

Build Capacity

Support and expand use of data sharing platforms for our researchers

Create research ecosystem maps to facilitate clear reporting and communication pathways for WE-SPARK members, staff and committees

Facilitate joint funding plan for large infrastructure grants by creating multi-institutional, multi-disciplinary teams in preparation for grant competitions

Explore and evolve infrastructure planning and a capital plan, including a research infrastructure map of Southwestern Ontario

Implement the Nucleus plan, including collecting key core facility metrics and developing promotional content to inform our members and the community about research infrastructure (existing and future needs)



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Statistics reflect the WE-SPARK 2021/22 fiscal year ending on April 30, 2022.

All still photos unless otherwise indicated are sourced from the "Thank You For Your Support" or "Frame the Future" Video (WE-SPARK Health Institute)."

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