

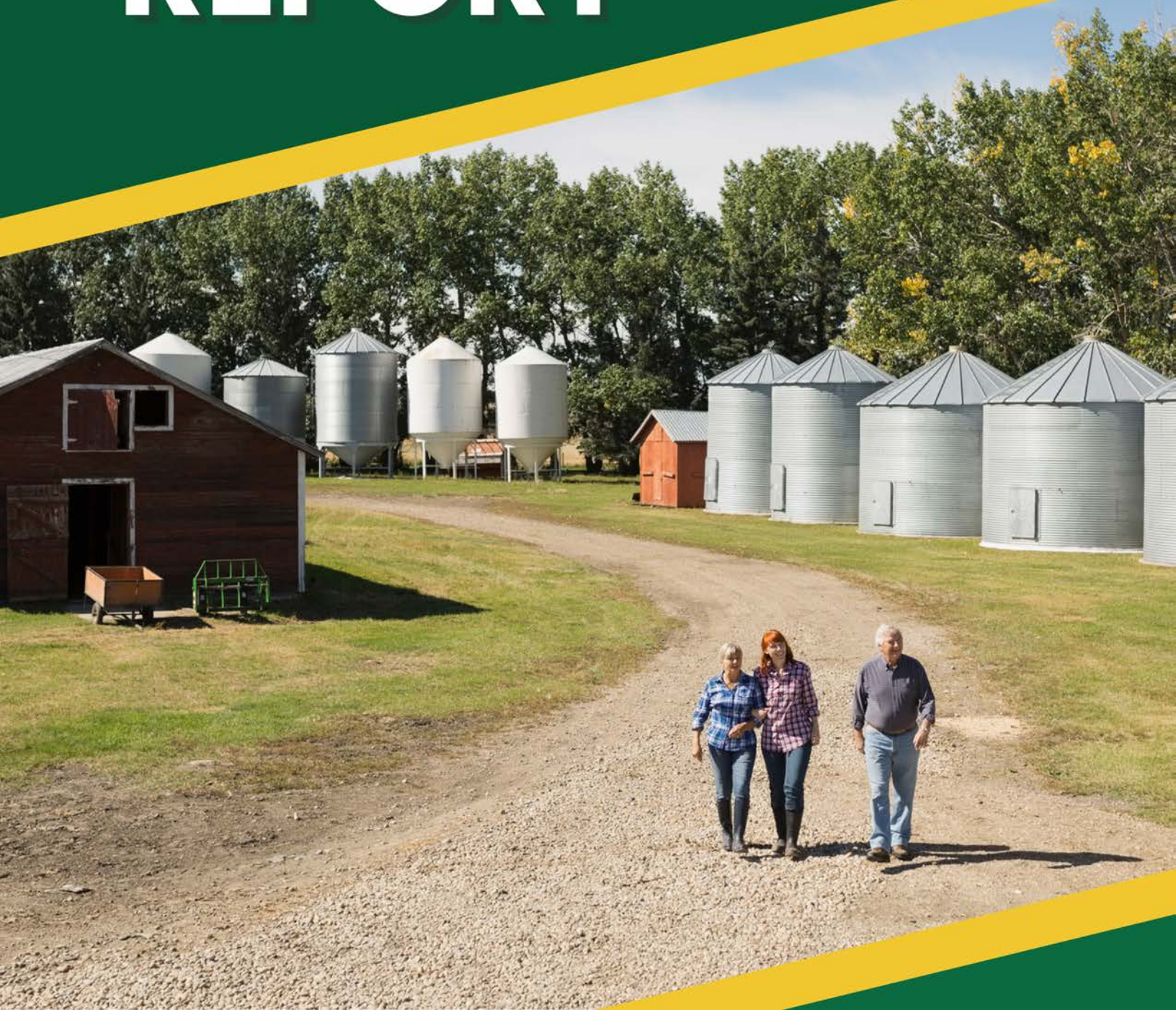


UNIVERSITY OF SASKATCHEWAN

Canadian Centre for Rural
and Agricultural Health

CCHSA-CCSSMA.USASK.CA

2024-2025 ANNUAL REPORT



The Canadian Centre for Rural and Agricultural Health (CCRAH) empowers rural and agricultural people to thrive where they live and work through innovative research, dedicated resources, outreach, and services.

CCRAH is a research centre dedicated to putting our boots on the ground alongside rural and agricultural people to address their health and safety needs. We accomplish this by working at the grassroots, in, for, and with the people and communities, undertaking research, developing resources, and delivering programs and services in Saskatchewan and across Canada. Our partnerships with communities help us define research questions and drive innovation to address health challenges for rural and agricultural people. We mobilize knowledge and take the research evidence to where it's needed through our community, industry, and academic partners.



From Our Director – WE NEED MORE CHICKENS!

USask's Canadian Centre for Rural and Agricultural Health (the Centre) will be celebrating its' 40th Anniversary next year. This is a very exciting milestone. Although the Centre has gone through a few name changes since its' inception, the vision has remained the same 'to be a global leader in the health and safety of rural and agricultural populations'. Dr. Kristjanson, the President of USask at the signing of the establishment of the Centre, understood 'place' and believed that USask was the natural global leader in this area. The rural municipalities of Saskatchewan, the Government of Saskatchewan, and industry leaders, had that same belief, and were strong supporters of the Centre's inception and development.

The Centre has continued to evolve over the years but remaining strong in its' mission to move research evidence into programming, services, and resources to support and empower people to live healthy and safe in rural and agricultural spaces. Central to the mission is the commitment to community engaged research to action. The Centre is outward facing, and community drives the research questions, and the research evidence is returned to the community through evidence driven resources, programs, and services.

There are number of tenants to my strategic plan for the Centre all of which are aimed at enhancing our Centre's vision. We have strengthened our understanding of what it means to be a USask Centre and global leader in this area. Our activities are centralized around the Centre infrastructure and capacity and scope of the infrastructure to support community engaged research. I have been working hard to extend the number and scope of resident faculty within the Centre, as well as associate members, within and outside USask. We have been working hard on 'we are here, we are here' and informing the greater community of the great work. This increased visibility has ignited collaborations along the spectrum of activities in our community engaged research to action. The train has left the station, and we are full speed ahead. The team-spirit and commitment to the Centre's vision is truly inspiring.

Within the Centre hallways, we have a tradition of celebrating successes by hanging a rubber chicken on the persons office window and writing a note of congratulations. When one squeezes the chicken, it lets out an interesting sound. If you don't know the sound, google 'rubber chicken songs'. The Centre has had so many amazing successes this past year that we need to purchase more rubber chickens! I am so proud and thankful for everyone that I am working alongside in advancing our vision and mission. We celebrate these successes in the following pages, and I look forward to purchasing more rubber chickens to celebrate all the successes yet to come....



***Dr. Shelley Kirychuk**
Director, Canadian Centre for Rural and
Agricultural Health
Professor, Department of Medicine*



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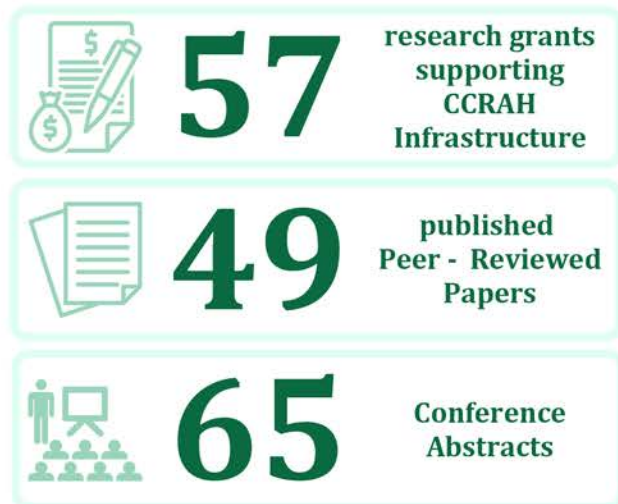


CCRAH Highlights

Collaborations & Partnerships

 29 Collaborators from 20 Canadian Universities	 91 Collaborators from 14 Colleges at the University of Saskatchewan	 21 Collaborators from 15 International Universities
 11 Government Supports	 68 Industry Partners	 23 First Nation Partners and 191 Rural Municipality Members

Research



Programs & Services

Rural and Remote Memory Clinic

- Delivered to **81 patients** and **100 family members** and care givers

Rural PHC Memory Clinics

- Delivered to **23 patients** at **15 clinics** in **10 communities** in SK

One2One Clinics:

- Delivered to **12 RMs**
- Delivered to **127 Participants**
- 6,518 KMs** travelled

Discovery Days Presentations:

- Delivered to **30 rural schools**
- Delivered to **1,557 Students**
- 9,503 KMs** travelled



Knowledge Mobilization & Communications

4 New Editions of Boots on the Ground to 229 Recipients

2 New Editions of Network News to over 22,000 farm families

17 Interviews, Podcasts, and News Articles

8 Trade Shows

114 Presentations

119 Conferences and Meetings



13 New Resources

28 Existing Resources

17 New Videos

65 Existing Videos

1,859 Total Subscribers

234 New Subscribers

36,807 Views



25,815 total views of the Centre Website with a total of 10,976 users, 4,464 being new users

1,324 posts to Centre, Network and RaDAR Twitter, Facebook, and LinkedIn accounts

3,027 Social Media users reached

27 Community Events

Including:

- **International Farm Management Association Congress 2024**
 - **Rural Dementia Online Summit**
 - **Ag in Motion 2024**
 - **SARM Midterm Convention 2024**
 - **SARM Annual Convention and Trade Show 2025**
-

CCRAH Donors and Funders

CCRAH's **Founding Chairs Management Committee** oversees donor funds coming to the Centre. The Founding Chairs advisory team is designated by the USask President, and includes fund donors and USask representatives.

The original **Founding Chairs Fund** for CCRAH was created in 1990 with financial support from leading agricultural organizations, families and individuals as listed below. These funds are endowed and provide an annual allocation.

The **Program Enhancement Fund** is an expendable donor pool. These donors help us reach our mission by making our programs, services, and resources available to support rural and agricultural people to live and work healthy and safe.

Program Enhancement Fund

- Farm Credit Canada
- CN
- Viterra
- The Co-operators
- Federated Co-operatives Ltd.
- Anonymous Donors

Founding Chairs Trust Fund

- Saskatchewan Lung Association
- Federated Co-operatives Ltd.
- Dr. Peter D. Stewart Trust
- The Senator Norman M. Paterson Foundation
- Credit Union Central of Saskatchewan
- Saskatchewan Wheat Pool
- SaskPower Corporation
- Canadian National Railways
- The Canadian Wheat Board
- Hoechst Canada Inc.
- Hutterian Brethren Communities
- SPI Marketing Group
- Crop Protection Institute
- Intercontinental Packer Ltd.
- Alberta Wheat Pool
- Mantioba Pool Elevators
- Co-operative Trust Company of Canada
- The Co-operators Group Ltd.
- The Cumis Group Ltd.
- Canadian Pacific Ltd.
- Saskatchewan Knights of Columbus Charitable Foundation
- Massey-Ferguson Industries Ltd.
- Flexi-Coil Ltd.
- Horned Cattle Trust Fund
- SaskEnergy Inc.
- Individual Donors

People Giving Back to CCRAH

The strong relationship between CCRAH and the Saskatchewan farming community is exemplified by the **Elkow family fund**, established in 2012 by the estate of Helen Elkow. From the will of Ms Helen Elkow, it stated that “after the death of both of my brothers, namely Peter and Philip, I direct my Executor to sell my farm land, for the best price available ... and donate the balance of the money in my Estate to the Centre for Agricultural Medicine for research in the name of the Elkow family – Helen, Peter and Philip.”

The **Bilokreli Family Trust**

honours Helen and Eunice Bilokreli, the only girls in a family of nine with farm roots near Theodore, Saskatchewan. Both women supported research and scholarships for rural and agricultural health with financial contributions. The trust supports the CCRAH based Rural Dementia Action Research (RaDAR) team’s work to improve delivery of rural dementia care.

**Bilokreli
Family Fund**



Helen and Eunice Bilokreli

Anonymous and personal donors play an essential role in helping CCRAH reach its mission to support rural and agricultural people in Saskatchewan and across Canada. These generous contributions directly empower our research programs, outreach initiatives, and specialized health care services, ensuring we can address the unique challenges faced by people living and working in rural and agricultural spaces. Every donation—whether named or anonymous—helps us advance safety, health, and well-being where it matters most. Thank you for putting your boots on the ground with us as we support rural and agricultural people to stay safe and healthy where they live and work.



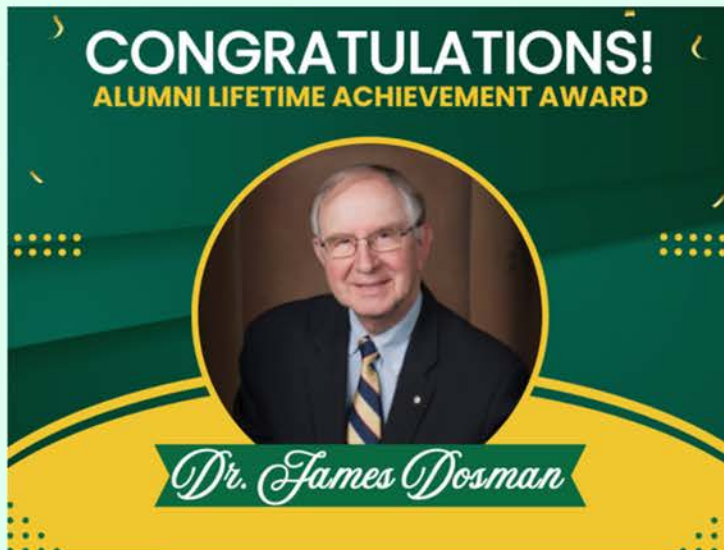
Congratulations!



Dr. Alan Rosenberg

Dr. Alan Rosenberg – 39th Annual Highlights in Medicine Conference and Reunion, 2024 Honoured Alumni Lecture Recipient: Discovering the Earliest Origins of Health and Disease: The Paradigm for Prevention.

Dr. James Dosman



Congratulations to Dr. James Dosman for receiving the University of Saskatchewan's 2024 Alumni Lifetime Achievement Award!



Dr. Joshua Lawson

Congratulations to Dr. Joshua Lawson for receiving the Department of Medicine's Administrator of the Year Award as well as being elected as Secretary of the European Academy of Allergy and Clinical Immunology (EAACI) Epidemiology Working Group.

Awards and Scholarships

Saskatchewan Association of Rural Municipalities 90th Anniversary Scholarship



In 1995, the Saskatchewan Association of Rural municipalities (SARM) auctioned off the first copy of their history book, "The Building of a Province: Commemorating the 90th Anniversary of the 90th Anniversary of the Saskatchewan Association of Rural Municipalities and with these funds initiated the Saskatchewan Association of Rural Municipalities 90th

Anniversary \$1,000 Student Scholarship in Agricultural Safety and Rural Health. Since 1996, The Canadian Centre for Rural and Agricultural Health (CCRAH), University of Saskatchewan through its Founding Chairs Program has maintained the Agricultural Safety and Rural Health Scholarship. In the 2013-2014 school year, CCRAH started offering two \$1,500 Student Scholarships.

The winners of the 2024–2025 SARM Scholarship

Regan Keisig - Balcarres, RM of Tullymet No. 216, Div. 1

Zayden Anderson - Marquis, RM of Marquis No. 191, Div. 2



Regan Keisig
Balcarres, RM of
Tullymet No. 216

"In the end, safety on the farm is not just about avoiding accidents; it's about creating an environment where everyone—family members, and workers—can thrive. If there's one thing, I wish I could tell every farmer and rancher it's that safety should never be an afterthought. Farming is a rewarding but demanding way of life, and no task is worth risking life."

Regan Keisig



Zayden Anderson
Marquis, RM of Marquis
No. 191

"Each generation has learned from the one before, adapting to new challenges and finding better ways to keep our family safe. Farming is more than a job for us, it's a way of life that brings us together. At the end of the day, the most important thing isn't how much work we get done, it's making sure everyone comes home safe."

Zayden Anderson

The Ike Thiessen: Building a Foundation Award



About Ike Thiessen

The inaugural Ike Thiessen: Building a Foundation Award was presented in March 2020 to the Saskatchewan Association of Rural Municipalities (SARM) recognizing the fundamental role they play in helping grow and enhance the activities of the Agricultural Health and Safety Network. Isaac (Ike) Thiessen was a farmer in the rural municipality of Aberdeen (RM #373) and president of the Saskatchewan Association of Rural Municipalities (SARM) from 1986 – 1988. Ike was instrumental in the recruiting of the first RMs in 1988 to join the Agricultural Health and Safety Network setting the foundation for future growth.

This Award is given annually in recognition of the support and dedication to the Agricultural Health and Safety Network for helping us further our mission and build a foundation of health and safety for Agriculture in Saskatchewan.

The Ike Thiessen: Building the Foundation Award Winner of 2024

This year's Ike Thiessen: Building a Foundation Award goes to **Ray Orb!**

Ray served on the SARM board for over 20 years and was elected as the president of SARM in 2014.

This award is in recognition of Ray's exceptional support, dedication, and contribution to promoting health and safety in Saskatchewan.



Photo: SARM



We Are the CCRAH

Ray recently highlighted the significance of the Centre's relationship with RMs, emphasizing the distinctive relationship between researchers and community.



1:35 – 2:05, 2:26 – 2:41

AHSN RM MEMBERSHIP AWARDS

SUPPORTING RURAL PEOPLE IN AGRICULTURAL HEALTH AND SAFETY

The Agricultural Health and Safety Network presents awards to RM members who have supported the Network's outreach for 5, 10, 15, 20, 25, 30, and 35 years. We recognize and celebrate their continued support of the Network.

★ Founding RMs: 1988

*R.M. of Lumsden No. 189, R.M. of St. Peter No. 369, R.M. of Aberdeen No. 343,
R.M. of Fish Creek No. 402, R.M. of Round Valley No. 410.*

5 years

RM of Orkney No. 244

15 years

RM of Glen Bain No. 105
RM of Lajord No. 128
RM of Emerald No. 277
RM of Vanscoy No. 345
RM of Grass Lake No. 381
RM of Pleasantdale No. 398
RM of Moose Range No. 486

20 years

RM of Tullymet No. 216
RM of Reford No. 379

10 years

RM of Bone Creek No. 108
RM of Saskatchewan
Landing No. 167

25 years

RM of Enniskillen No. 3
RM of Wood River No. 74
RM of Fillmore No. 96

30 years

RM of Tecumseh No. 65
RM of Sutton No. 103
RM of Chester No. 125
RM of Shamrock No. 134
RM of Elcapo No. 154
RM of Excelsior No. 166
RM of Snipe Lake No. 259
RM of Chesterfield No. 261
RM of Spalding No. 368

RM of Glenside No. 377
RM of Great Bend No. 405
RM of Cut Knife No. 439
RM of Hillsdale No. 440
RM of Britannia No. 502

35 years

RM of Brock No. 64
RM of Moosomin No. 121
RM of Gull Lake No. 139
RM of Indian Head No. 156
RM of Victory No. 226
RM of Mount Hope No. 279
RM of Kindersley No. 290
RM of Sasman No. 336
RM of Blucher No. 343

SARM Annual Convention & Trade Show 2025



The annual convention and trade show draws roughly 2,000 delegates and guests from across the province and provides SARM members the opportunity to gather as a whole to vote on and debate resolutions, discuss current issues, and participate in dialogue sessions with provincial and federal government officials. The SARM Annual Convention dates back over a hundred years. The trade show has become a signature event that draws our rural municipal leaders. During the convention and trade show, the Agricultural Health and Safety Network will be hosting its Annual General Meeting as well as announcing the *SARM Scholarship* winners and the *Ike Thiessen: Building the Foundation Award* winner!

Agricultural Health and Safety Network Annual General Meeting

**March 12th, 2025
Meeting Room #1, Hall A,
Prairieland Park**

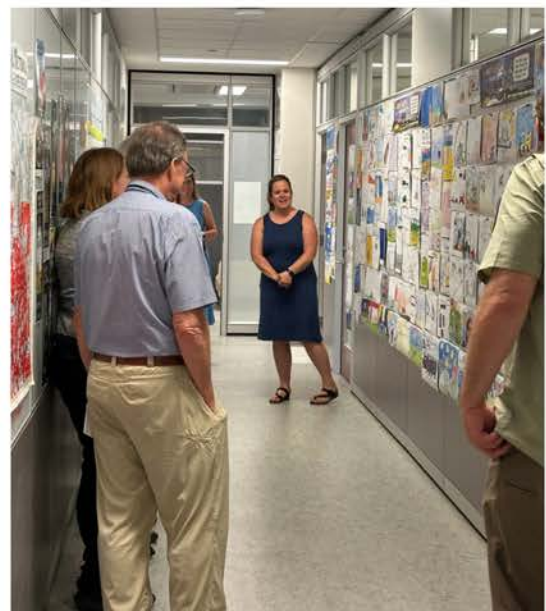
The Agricultural Health and Safety Network reviewed and discussed the Annual Report and budget, and presented awards to RM members who have been with the organization for 5, 10, 15, 20, 25, 30, and 35 years. These awards celebrate the dedication of AHSN members. The recipients of Rural Municipality Membership Awards can be found on the previous page.



Congress of the International Farm Management Association (IFMA)

The 24th Congress of the International Farm Management Association convened on July 7-12th, 2024. The theme of IFMA24 is "Resilience Through Innovation." This theme underscores the vital role of innovative practices in building resilience within the agricultural sector.

During the congress, attendees had the unique opportunity to explore our state-of-the-art infrastructure that drives groundbreaking research in rural health and safety. They also connected with CCRAH researchers behind our impactful initiatives and gained insights into ongoing programs and services from our centre.



Future of Food



Dr. Shelley Kirychuk, Director of CCRAH, attended the Future of Food Conference in Ottawa, ON on February 11 and 12th, 2025. The event, featuring key leaders in agriculture and food, highlighted how the present landscape of agriculture and food production in Canada can shape the industry's future. During the event, Dr. Kirychuk was able to network and highlight the importance of sustainability in human health for Canadian agricultural producers, farm families, and farm workers.

CCRAH Director Meets with SK Ministers



Dr. Shelley Kirychuk met with Saskatchewan Ministers and RM Council Members for meeting to share how CCRAH supports agricultural and rural people to live and work healthy and safe.

In the picture (left to right): Bob Moulding (SARM Division 1 Director), Dr. Shelley Kirychuk (CCRAH Director), Honourable Lori Carr (Minister of Mental Health and Addictions, Seniors and Rural and Remote Health), Honourable Daryl Harrison (Minister of Agriculture) and Darin Pedersen (Reeve - RM of Prairie Rose)

SARM Board of Directors Visits CCRAH



The Board of Directors of the SARM with Centre Director Shelley Kirychuk and Kendra Ulmer, Program Manager of the Agricultural Health and Safety Network

On July 17th, 2024, the Board of Directors of the Saskatchewan Association of Rural Municipalities toured the Canadian Centre for Rural and Agricultural Health. Their visit included stops at the Agricultural Health and Safety Network's office and clinic rooms. During the tour, Dr. Shelley Kirychuk, the Centre's Director, showcased the National Agricultural Industrial Hygiene labs and highlighted the Centre's research efforts that support its outreach initiatives, including those of the Agricultural Health and Safety Network.



Canada's Agriculture Day



Forks were raised on February 11th, 2025 to recognize the continuous dedication and effort of farmers from across Canada. We celebrated Canada's Agriculture Day by:

1. Dedicated social media post across all Network and Centre socials.
2. Discovery Days presentation in Lake Lenore, SK - RM of Lake Lenore No. 399, Div. 5.
3. One2One Hearing Clinic in Spruce Home, SK - RM of Buckland No. 491, Div. 5.
4. Attended the Future of Food Conference in Ottawa, ON.



Research to Action – Success at Ag in Motion 2024

The Canadian Centre for Rural and Agricultural Health had an impactful presence at Ag in Motion this year, connecting with industry, community, and academic partners!



in partnership with:



The AHSN, in partnership with SunSmart Saskatchewan, shared sun safety knowledge and resources for show attendees! SunSmart Saskatchewan was on-site with us, providing skin cancer and UV damage screenings.



The SHER Group from CCRAH attended Ag in Motion for the first time with support from Morris Equipment to recruit participants for their farm shoulder study. This study looked at the impact of upper body injuries while doing farm tasks like using a drill, shoveling, and carrying a heavy seed bag while climbing up a air seeding cart. The SHER team had a total of **17 participants!**





FARM SAFETY DRAWING CONTEST

APRIL - AUGUST 2024

AGES 5-8

AGES 9-13

The Agricultural Health and Safety Network hosted a Farm Safety Drawing Contest for kids ages 5-13 to highlight what farm safety means to them. We extend our gratitude to all the children for their creative representations of farm safety and for enthusiastically sharing their knowledge on the topic. We also appreciate the parents and teachers for fostering discussions about farm safety themes in preparation for the drawings and their submissions. Additionally, a big thank you goes to our member RMs for displaying and promoting the contest poster in their offices and schools.

**262
SUBMISSIONS**

DRAWING CATEGORIES



GRAIN SAFETY



MACHINERY SAFETY

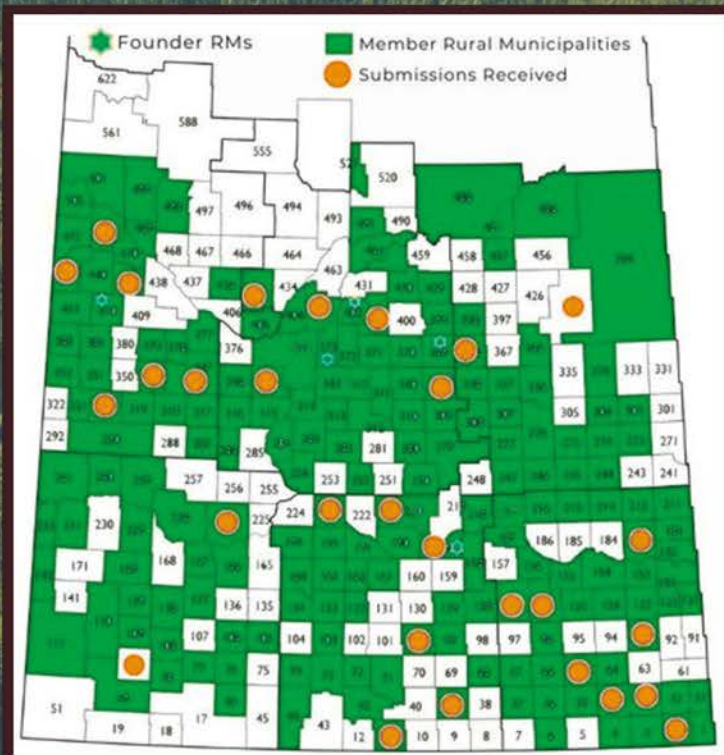


ANIMAL SAFETY

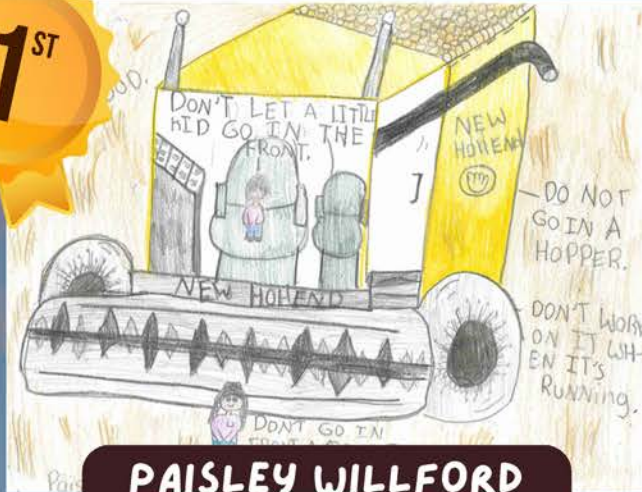


SUN SAFETY

**THANK YOU TO EVERYONE
WHO SUBMITTED A FARM
SAFETY WORK OF ART!**



AGES 5 – 8

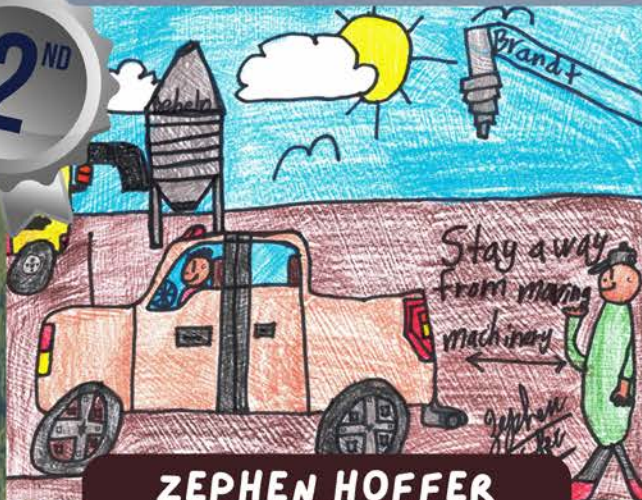


PAISLEY WILLFORD
CORONACH, SK

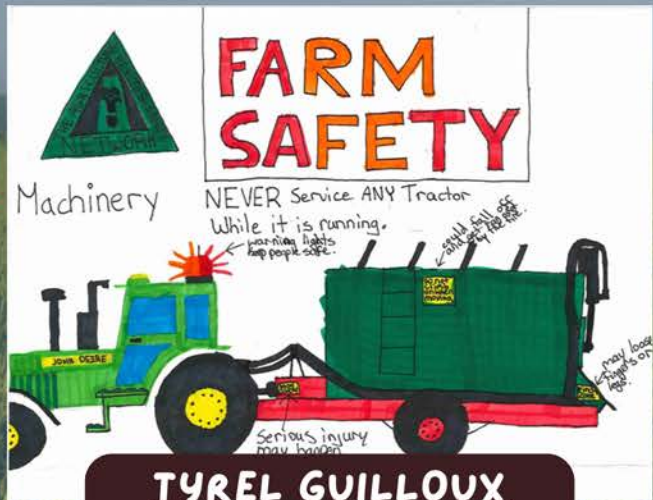
AGES 9 – 13



ELISSE KOCH
MARSDEN, SK



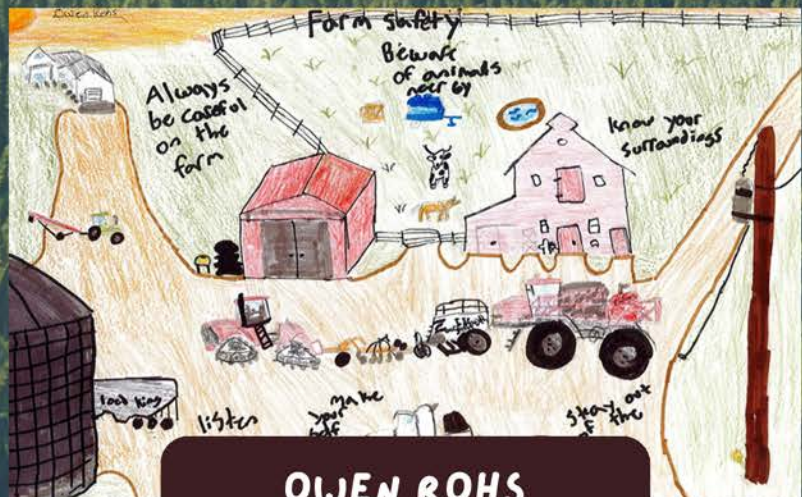
ZEPHEN HOFFER
LUMSDEN, SK



TYREL GUILLOUX
KENNEDY, SK



CLAIRE KESSEL
EDENWOLD, SK



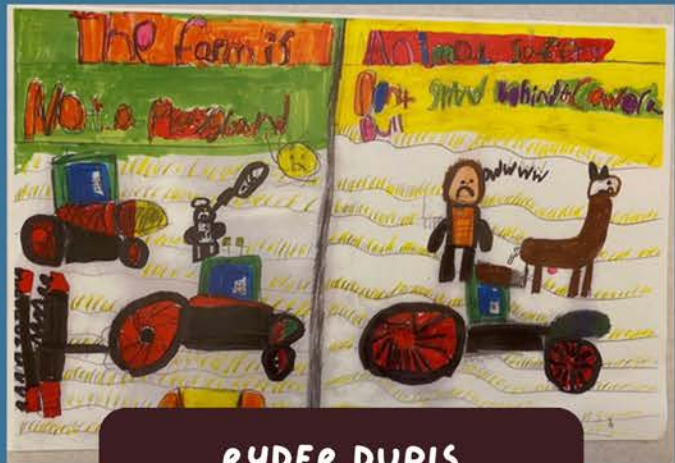
OWEN ROHS

HONOURABLE MENTIONS

AGES 5 - 8



BLAIR BOUTIN



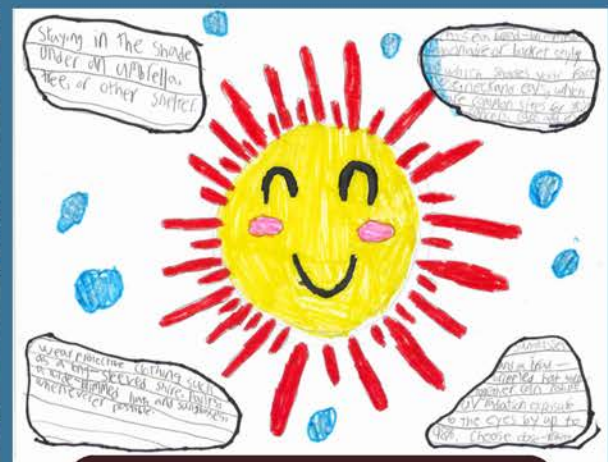
RYDER DUPIS



HILARY PERNITSKY



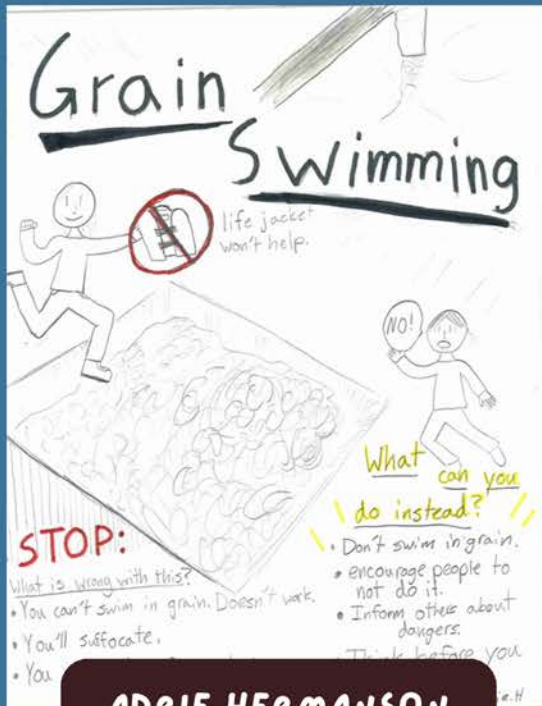
MADDY WISMER



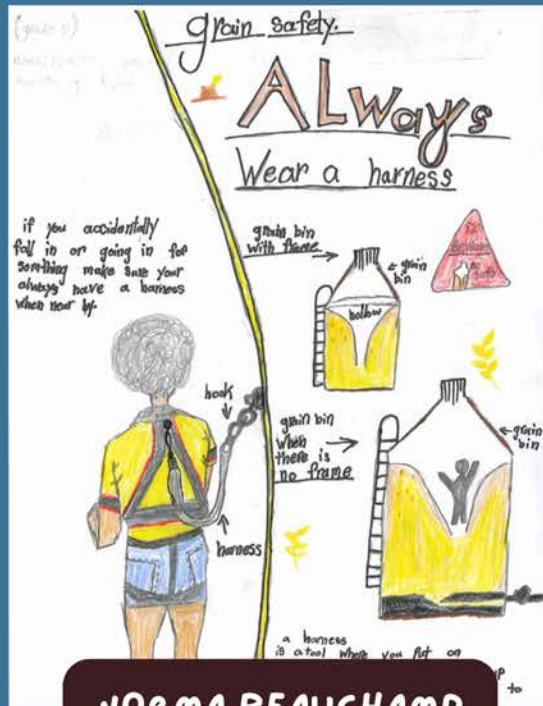
JUDE RINGROSE-HOBBS

HONOURABLE MENTIONS

AGES 9 - 13



ADRIE HERMANSON



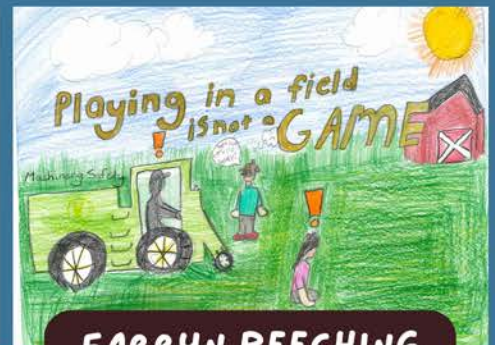
NORMA BEAUCHAMP



EMILY LIN



AUBRIE BLOWATT



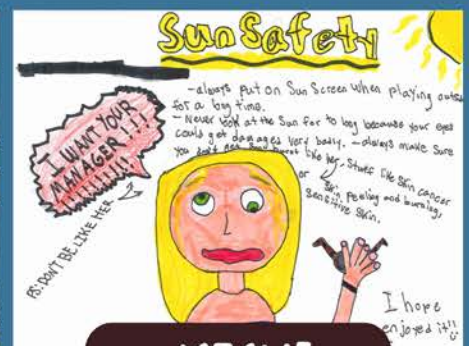
FARRYN BEECHING



OLIN HERMANSON



GAGE GEDAK

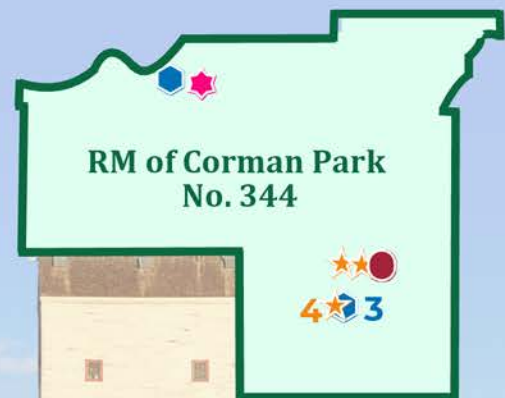
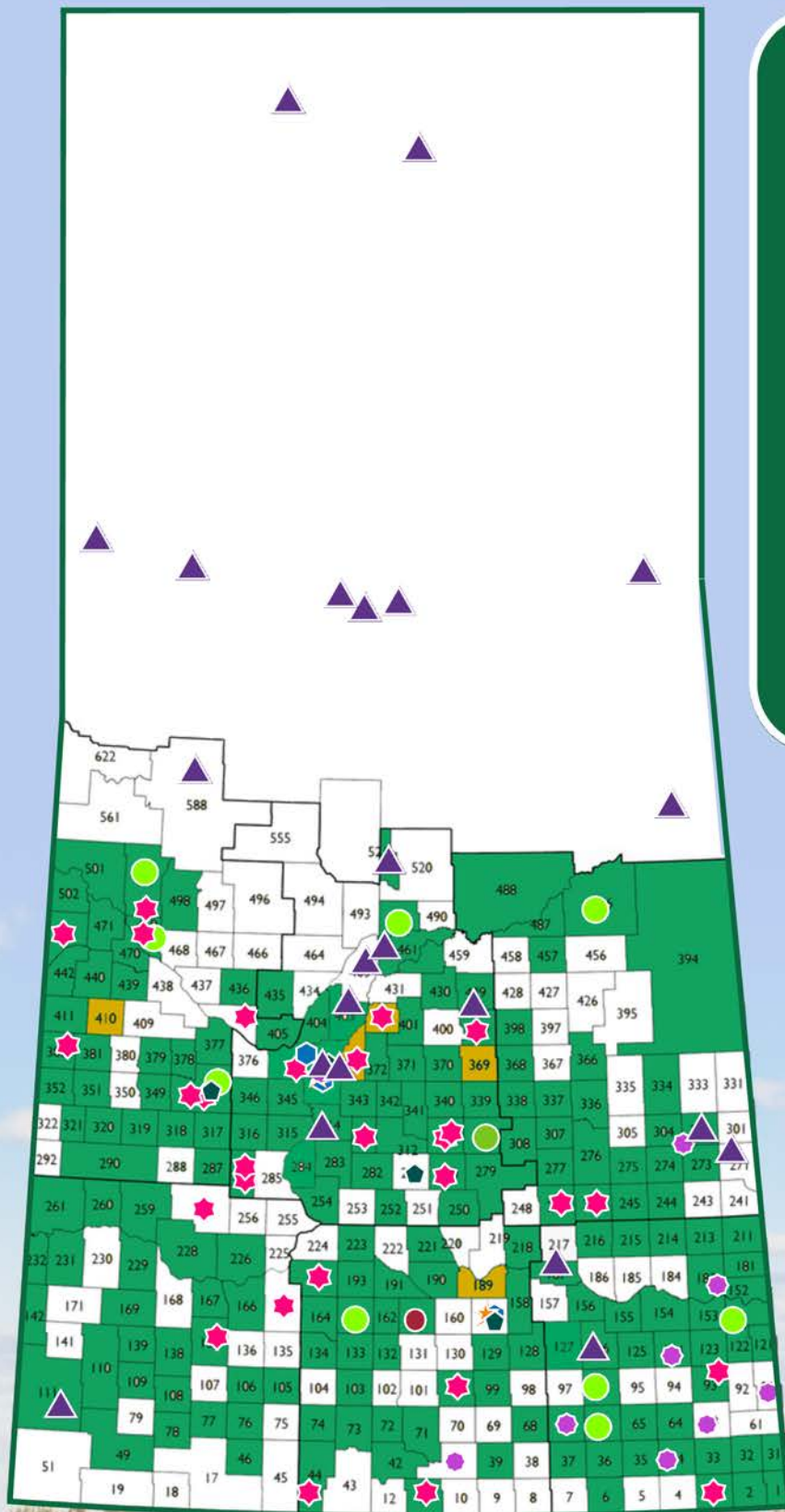


NATALIE



Programs and Services

Where we have our Boots on the Ground in Saskatchewan



SASKATCHEWAN

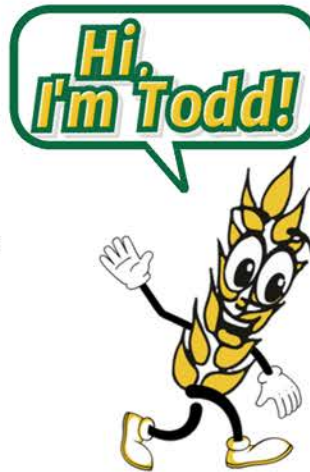
ABERDEEN

Agricultural Health and Safety Network

Discovery Days

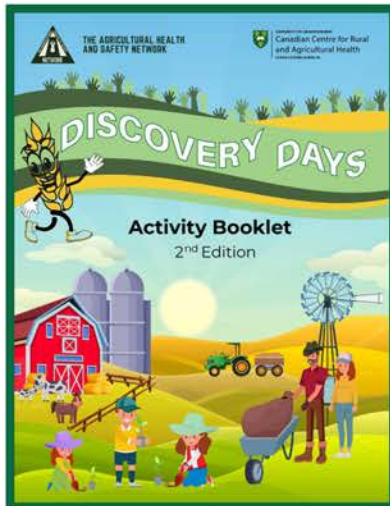
What are Discovery Days?

Offered in rural member RM member schools, the Agricultural Safety Discovery Days promote safety awareness among rural Saskatchewan children. The interactive program aims to educate children on the potential hazards associated with farm work and equip children with the knowledge to identify and circumvent risks. In-person or virtual delivery of our Discovery Days presentations are designed for rural students in grades 4-6.



Scan the QR Code to learn more about Discovery Days!

Discovery Days Booklets



Two booklets were developed to support the Discovery Days program and farm safety awareness.

1. **Discovery Days Activity Booklet - 2nd Edition**
2. **Available Discovery Days Presentations**

Both booklets are accessible via the Discovery Days page on our website.



Thank you to SaskPower for joining us for multiple Discovery Days presentations!

Thank You

SASKATCHEWAN WHEAT DEVELOPMENT COMMISSION & SASK OILSEEDS
For your support of the Discovery Days Program in 2024



List of Discovery Days

April 2024 – March 2025

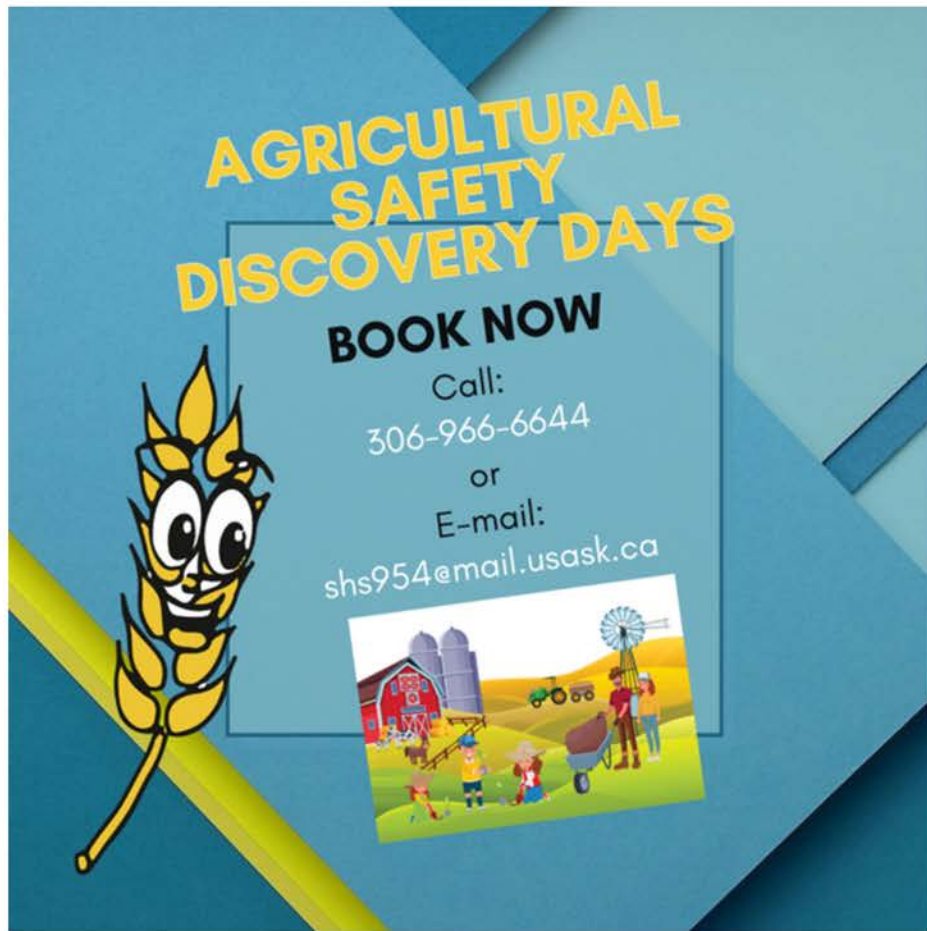


We hope you enjoyed Discovery Days as much as we did! See you soon!



109 Presentations
at 30 schools in 27 RMs
for **1,557 Students**

School	Date	RM	Di v	# Students
Aberdeen Composite School	May 1, 2024	RM of Aberdeen No. 373	5	77
Macklin School	May 2, 2024	RM of Eye Hill No. 382	6	21
Central Butte School	May 14, 2024	RM of Enfield No. 194	2	46
Wawota Parkland School	May 22, 2024	RM of Wawken No. 93	1	55
Avonlea School	May 24, 2024	RM of Elmsthorpe No. 100	2	43
Biggar Ag Safety Days	May 29, 2024	RM of Biggar No. 347	6	305
Wakaw School	June 5, 2024	RM of Fish Creek No. 402	5	72
Kelliher School	September 25, 2024	RM of Kellross No. 247	4	20
Lanigan Home School Assoc.	September 27, 2024	RM of Usborne No. 310	5	16
Elrose School	October 3, 2024	RM of Monet No. 257	3	60
Lanigan School	October 24, 2024	RM of Usborne No. 310	5	63
Langham Elementary School	October 30, 2024	RM of Corman Park No. 344	5	45
Maymont Central School	November 19, 2024	RM of Mayfield No. 406	6	40
Turtleford Community School	November 20, 2024	RM of Mervin No. 499	6	75
Cornach School	November 26, 2024	RM of Harte Butte No. 11	2	48
Glentworth School	November 27, 2024	RM of Waverley No. 44	2	30
Ituna School	November 29, 2024	RM of Ituna Bon Accord No. 246	4	70
Nokomis School	January 22, 2025	RM of Wreford No. 280	5	39
Lake Lenore School	February 11, 2025	RM of Lake Lenore No. 399	5	23
Natural Wonders Early Learning Centre	February 18, 2025	RM of Swift Current No. 137	3	33
Oxbow Prairie Horizon School	March 4, 2025	RM of Enniskillen No. 3	1	71
Wymark School	March 5, 2025	RM of Swift Current No. 137	3	44
Herbert School	March 12, 2025	RM of Morse No. 165	3	35
Foam Lake School	March 24, 2025	RM of Foam Lake No. 276	4	75
Milden Colony School	March 31, 2025	RM of Milden No. 286	5	22
Dinsmore Colony School	March 31, 2025	RM of Milden No. 286	5	23
Allan Composite School	April 3, 2025	RM of Lost River No. 313	5	35
St. Gabriel School	April 15, 2025	RM of Biggar No. 347	6	55
Marshall School	April 28, 2025	RM of Wilton No. 472	6	29
H. Hardcastle School	April 30, 2025	RM of Turtle River No. 469	6	34



One2One: Respiratory and Hearing Clinics

What is One2One?

One2One Respiratory and Hearing Clinics are for Saskatchewan farmers/ranchers, their families and agricultural workers. Participants have the unique opportunity to meet with a trained agricultural occupational health nurse in a confidential setting to address their health and safety concerns. Our program offers personalized screenings and assessments tailored to the specific hazards, risks and exposures associated with their specific agricultural work. Our agricultural health nurse provides resources and referrals to optimize the personal health and safety of each participant. The clinics are held either in a local RM or at our clinic at the USask campus.



ONE2ONE HEARING HEALTH CLINIC FOR FARMERS



UNIVERSITY OF SASKATCHEWAN
Canadian Centre for Rural
and Agricultural Health
CCRAH.CCSA.USASK.CA

STRONGER TOGETHER IN
AGRICULTURAL HEALTH AND SAFETY

CLINIC PARTICIPANTS WILL:

- Complete a hearing health questionnaire and review personal agriculture hazards.
- Participate in audiometric (hearing) testing.
- Receive copy and interpretation of test results.
- Instruction will be given on proper use and care of hearing protection for the workplace.
- Referrals made for follow-up if necessary.
- Increase awareness of Agricultural Health and Safety Resources/Programs

WHEN:

WHERE:

HOSTED BY:

FOR APPOINTMENTS CALL:



UNIVERSITY OF SASKATCHEWAN
Canadian Centre for Rural
and Agricultural Health
CCRAH.CCSA.USASK.CA



Are you interested in hosting a
hearing or respiratory clinic for
your farm families and RM

Employees?

Contact (306) 966 - 6643 or
aghealthandsafety@usask.ca

If your RM is interested in
offering a Hearing Loss
Prevention Clinic for RM
employees, please reach out!
Many RMs request to hold a
clinic for RM employees and
farmers on the same day. We
look forward to working with
.....your RM!.....

List of One2One Clinics

April 2024 – March 2025



73 Clients
screened in
12 RMs

Clinic Date	RM No.	Location	Div	Ratepayers Screened
June 12, 2024	RM of Mervin No. 499	Turtleford, SK	6	0
July 9, 2024	RM of Rocanville No. 151	Rocanville, SK	1	3
July 10, 2024	RM of Griffin No. 66	Griffin, SK	1	4
November 3, 2024 re-scheduled to April 1, 2025	RM of Wolseley No. 155	Wolseley, SK	1	11
November 27, 2024 re-scheduled	RM of Rocanville No. 151	Rocanville, SK	1	N/A
January 29, 2025	RM of Wheatlands No. 163	Mortlach, SK	2	7
February 11, 2025	RM of Buckland No. 491	Prince Albert, SK	5	7
February 13, 2025	RM of Fillmore No. 96	Fillmore, SK	1	7
March 3, 2025	RM of Prairie Rose No. 309	Janzen, SK	5	9
March 17, 2025	RM of Biggar No. 347	Biggar, SK	6	6
March 18, 2025	RM of Turtle River No. 469	Edam, SK	6	11
March 25, 2025	RM of Moose Range No. 486	Carrot River, SK	4	1
March 27, 2025	RM of Rudy No. 284	Broderick, SK	5	7



CANWORKSAFE

What is CANWORKSAFE?

CANWORKSAFE has been providing occupational health and safety screening and services to companies across Saskatchewan since 1987. The program offers a range of services, including:

- Respirator fit testing
- Audiometric testing
- Respiratory testing
- And many more specialized health and safety services

These services are available for a fee. However, rural municipalities that are members of the Agricultural Health and Safety Network are eligible for a discounted rate.

CANWORKSAFE services are offered both to industry clients and locally in RM offices for RM employees during our One2One Respiratory and Hearing Clinics.



**54 Clients
screened in 9 RMs
and 1 Industrial
company**

Clinic Date	RM No.	Location	Div	RM Employees Screened
June 12, 2024	RM of Mervin No. 499	Turtleford, SK	6	16
July 9, 2024	RM of Rocanville No. 151	Rocanville, SK	1	8
July 10, 2024	RM of Griffin No. 66	Griffin, SK	1	7
February 11, 2025	RM of Buckland No. 491	Prince Albert, SK	5	6
February 13, 2025	RM of Fillmore No. 96	Fillmore, SK	1	3
March 3, 2025	RM of Prairie Rose No. 309	Janzen, SK	5	2
March 17, 2025	RM of Biggar No. 347	Biggar, SK	6	1
March 25, 2025	RM of Moose Range No. 486	Carrot River, SK	4	7
March 27, 2025	RM of Rudy No. 284	Broderick, SK	5	4

Do you want a CANWORKSAFE Clinic at your place of employment or local RM?
Contact (306) 966-6643 or via email



Gear Up for Ag Health & Safety

What is Gear Up for Ag?

Gear Up for Ag Health & Safety trains the next generation in agricultural health & safety practices: post-secondary ag students attending trade schools, colleges and universities. Students are encouraged to share safety practices with family and friends, reaching multiple generations living and working together in agriculture. These students go on to work in many parts of agriculture including ag business, ag extension, ag education, ag trades, on farm operations, public health, veterinary medicine, and many more applications.



84 Students received PPE – eyewear, respirators, gloves, coveralls, hearing protection, Gear Up For Ag bags.

Delivered to:

Date	Location	RM	Div.	# Students
November 5, 2024	College of Nursing - University of Saskatchewan	RM of Corman Park No. 344	5	60
December 3, 2024	Saskatchewan Polytechnic - Moose Jaw Campus	RM of Moose Jaw No. 161	2	24

The Agricultural Health and Safety Network collaborated with the Ag Health & Safety Alliance to organize and implement the *Gear Up for Ag Health and Safety* Program across three academic institutions: the University of Saskatchewan’s College of Agriculture and Bioresources, the College of Nursing, and Saskatchewan Polytechnic in Moose Jaw. We showcased the "Power of Partnerships" through presentations at two conferences: ISASH in Portland (June 2025) and the CCGA Symposium in Regina (November 2025).



Trade Shows

CCRAH is committed to ensuring that research and resources are brought back to community. One of the key ways we achieve this is through our Agricultural Health and Safety Network. Every year, we attend numerous agricultural trade shows and events across Saskatchewan. These events provide valuable opportunities to share up-to-date health and safety information tailored specifically for agricultural producers and rural people. They also allow us to engage directly with farmers, ranchers, and rural residents, listening to their concerns and learning from their experiences. It also provides us the opportunity to connect with other industry professionals, fostering potential collaboration and partnerships for the health and safety of farm families. By maintaining a strong presence in these agricultural events, we ensure that our work remains relevant and responsive. This ongoing connection strengthens our ability to promote safer, healthier rural and agricultural spaces across the province.



Recent Trade Shows

Date	Event	Location
June 18 - 20, 2024	Canada's Farm Show	Regina, SK
July 5, 2024	Weyburn Fair - Ag Safety Zone	Weyburn, SK
July 16 - 18, 2024	Ag in Motion	Langham, SK
January 14 - 16, 2025	Western Canadian Crop Production Show	Saskatoon, SK
February 4 - 6, 2025	Saskatchewan Safety Seminar	Saskatoon, SK
February 6 - 7, 2025	Celebrating Rural Ranching Women	Biggar, SK
March 11 - 13, 2025	SARM Annual Convention and Trade Show 2025	Saskatoon, SK
March 18 - 20, 2025	Canada's Farm Show	Regina, SK



Thank You

to the farm families of Saskatchewan for visiting our trade show booth and to the organizers for putting on amazing farm shows!



Conventions, Conferences and Symposia

We are dedicated to connecting with agricultural health and safety professionals to share knowledge and build meaningful connections. By fostering these relationships, we aim to enhance the well-being of rural people in Canada and create a supportive environment that promotes safety, innovation, and resiliency for rural and agricultural people.

Date	Event	Location
June 17 - 20, 2024	International Society for Agricultural Safety and Health (ISASH)	Portland, Oregon, USA
July 11, 2024	International Farm Management Congress - Tour of Centre	Saskatoon, SK, Canada
September 18, 2024	WIM/WiN SK - Mine Your Potential	Saskatoon, SK, Canada
November 4 - 6, 2024	Canadian Common Ground Alliance (CCGA) Damage Prevention Symposium	Regina, SK, Canada
November 7 - 8, 2024	SK Women in Ag - Connect: The Heart of the Farm Conference	Saskatoon, SK, Canada
November 6 - 8, 2024	Midwest Rural and Agricultural Safety and Health (MRASH)	Ames, IA, USA
November 19 - 21, 2024	Agricultural Excellence Conference	Abbotsford-Chilliwack, BC, Canada
November 20 - 21, 2024	SARM Midterm Convention	Saskatoon, SK, Canada
November 28, 2024	National Symposium on Agricultural Mental Health	Online
February 4 - 6, 2025	Saskatchewan Safety Seminar	Saskatoon, SK, Canada
February 11 - 12, 2025	Future of Food	Ottawa, ON, Canada
March 11 - 13, 2025	SARM Annual Convention and Trade Show 2025	Saskatoon, SK, Canada



Presentations & Meetings

CCRAH is committed to sharing and expanding our knowledge with individuals dedicated to the health and safety of rural and agricultural communities from around the globe. By collaborating and exchanging insights, we aim to foster a safer and healthier environment for rural families in Saskatchewan and across Canada.

Date	Event	Location
May 29, 2024	Progressive Agriculture Day	Biggar, SK, Canada
July 3, 2024	RM Membership Recruitment Presentations and Drop-In's	RM of Shellbrook No. 493 RM of Blaine Lake No. 434 RM of Spiritwood No. 496 RM of Canwood No. 494 RM of Leask No. 464
November 4- 6, 2024	Canadian Common Ground Alliance (CCGA) Damage Prevention Symposium	Regina, SK, Canada
November 6 - 8, 2024	Midwest Rural and Agricultural Safety and Health (MRASH) Conference	Ames, IA, USA
November 19 - 21, 2024	Agricultural Excellence Conference	Abbotsford-Chilliwack, BC, Canada
November 20 - 21, 2024	SARM Midterm Convention	Saskatoon, SK, Canada
February 6 - 7, 2025	Celebrating Rural Ranching Women	Biggar, SK, Canada
February 10, 2025	Network Steering Committee	online
February 20, 2025	Meeting with Ministry of Ag, Rural and Remote Health, and SARM	Regina, SK, Canada
March 11 - 13, 2025	SARM Annual Convention and Trade Show	Saskatoon, SK, Canada
April 18, 2025	RM Membership Recruitment Presentations and Drop-In's	RM of Wood Creek No.281



Rural Dementia Action Research (RaDAR)

CIHR Foundation Grant (2016-2026)

The core of the Foundation program is to design, implement and sustain Rural PHC Memory Clinics that offer initial evaluation and management of individuals with suspected dementia, and scale-up the clinics to additional communities. One-day memory clinics have been established in 10 south Saskatchewan communities and are offered by local primary health care teams within the Saskatchewan Health Authority.

Members across the teams include physicians, nurse practitioners,

home care nurses/assessors, social workers, occupational therapists, physical therapists, dietitians, pharmacists, and Alzheimer Society First Link coordinators. In the past year, three new memory clinic teams in Canora, Assiniboia, and Melville have completed orientation and training.

Teams (2024)



Lead: Jean Daku, NP
KIPLING (pop. 1,140)



Lead: Dr. Jared Oberkirsh
WEYBURN (pop. 11,150)



Lead: Toni Giraudier, NP
BENGOUGH (pop. 332)



Lead: Laura Wood, NP
CARLYLE (pop. 1,500)



Lead: Nicki Ford, NP (retired)
MARYFIELD (pop. 330)



Lead: Lois Coffey, NP
LAMPMAN (pop. 735)



Lead: Dr. Mandi Nel
ESTERHAZY (pop. 2,500)



Leads: Dr. Omid Yahyazadeh,
Dan Wlock, NP
CANORA (pop. 2,090)



Lead: Raegan Rasmussen, NP
ASSINIBOIA (pop. 2,300)



Lead: Cheryl Kisters, NP
MELVILLE (pop. 4,500)

RaDAR Rural Memory Clinic Teams

Rural Primary Health Care Memory Clinics



Pictured from left to right are team members Carolee Zorn (Alzheimer Society First Link Coordinator), Andrea Wionzek (Home Care RN), Charlene Secundiak (Home Care Assessor), Kendra Kerr (Occupational Therapist), and Dan Wlock (Nurse Practitioner)

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10 communities
joined to date

3 communities
joined in 2024

129 clinics
held to date

15 clinics
held in 2025

192 patients
seen to date

23 patients
seen in 2025

Travel by the RaDAR Team
for memory clinic development

- **22,645 KM** from 2013-2019

Travel by Chelsie C.
for data collection and clinic support

- **19,429 KM** from 2019-2025
- **5,113** in 2025

Learn more about the clinics under the Rural PHC Memory Clinics tab on our team website www.ruraldementiacare.usask.ca and view a short video of the Esterhazy memory clinic.

Rural and Remote Memory Clinic

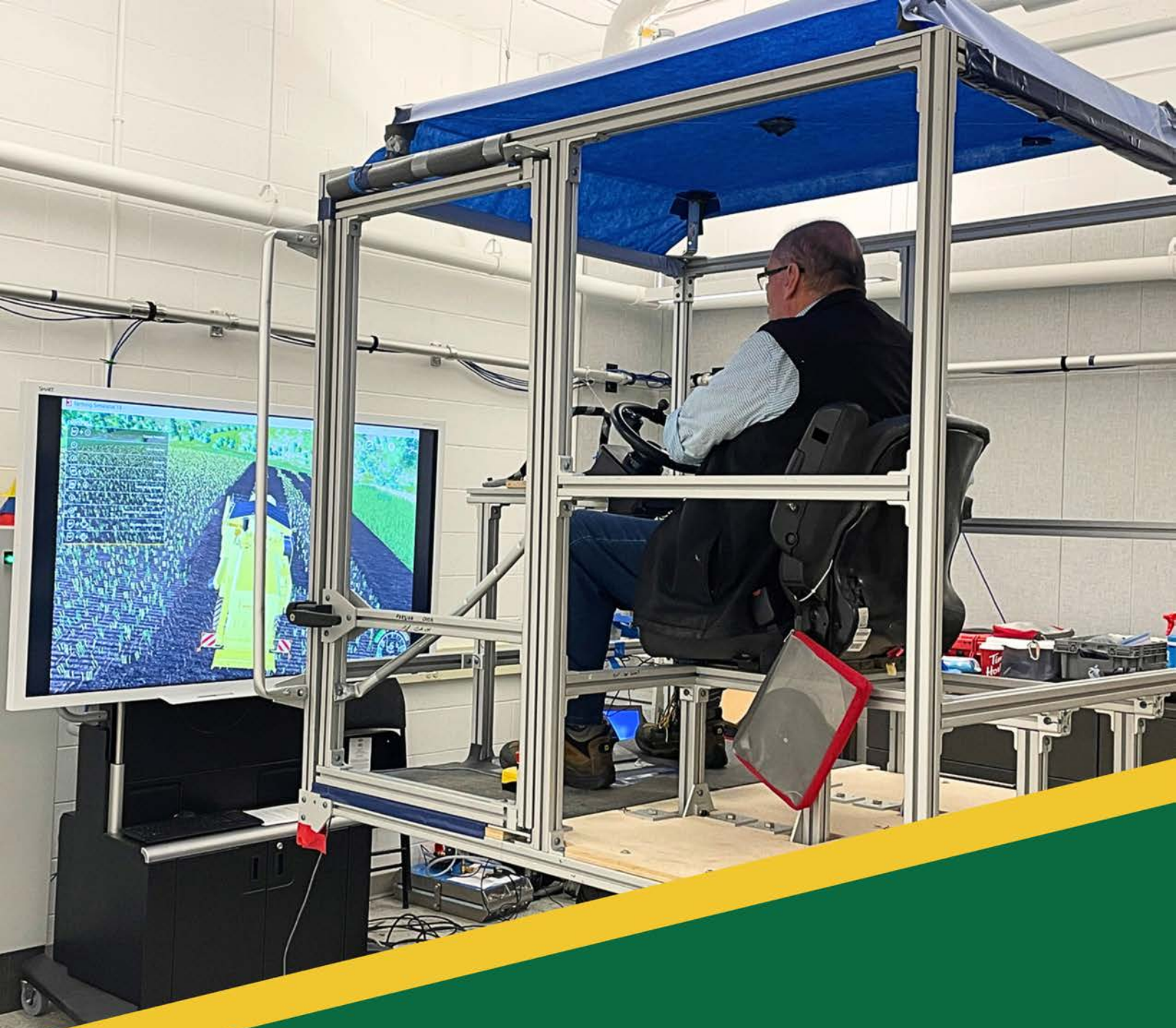


Pictured from left to right are team members Dr. A. Kirk, Dr. M. O'Connell, D. Minish, D. Morgan, J. Fairbairn, D. Walz (not pictured: S. Biller & A. Kortzman)

The RaDAR team implemented the specialist Rural and Remote Memory Clinic (RRMC) at the University of Saskatchewan in 2004, to provide diagnosis and management of atypical and complex cases of suspected dementia. The one-stop interdisciplinary clinic streamlines the assessment process by coordinating a complete team assessment on one day and uses Telehealth videoconferencing for follow-up appointments. The specialist RRMC was started as a research project and was

subsequently funded by the Saskatchewan Ministry of Health to provide clinical services to Saskatchewan residents. Since 2004 over 942 patients have been seen in the clinic.

Several team members support the RRMC including: Dr. Megan O'Connell (Neuropsychologist and Clinical Director), Dr. Andrew Kirk (Neurologist), Darla Walz (Clinic Nurse), Duane Minish (Psychometrist), Jennifer Fairbairn (Physical Therapist), Shelley Biller (Clerical Support), and August Kortzman (PhD student in Clinical Psychology).



Research and Infrastructure

Community-Driven Research to Action



The Canadian Centre for Rural and Agricultural Health embeds rural people (e.g. farmers, ranchers, communities, Indigenous communities, industries, and municipalities) in a research to action cycle. Community members are involved in the entire process, from the development of research questions, actions, and movement of evidence into resources, programs, and services. Our partnerships with communities, academics and industry help us drive innovation to address health challenges for rural and agricultural people in Saskatchewan.

Delivering evidence-based programming

We put our boots on the ground. We work at the grassroots, **in, for, and with the people and communities**, in Saskatchewan and across Canada, so rural and agricultural people can be healthy and safe.

Undertaking Research

Our research seeks to understand and support the health and safety of those that live and work in the rural space.

Developing Resources

We support research to action, mobilizing knowledge and taking information to where it's needed. We share information through our research and through industry and academic partners to support rural and agricultural health.

The success and impact of our efforts would not be possible without the continuous support and collaboration of our community, academic, and industry partners.

Rural Health and Agricultural Injury Control Laboratory



The Rural Health and Agricultural Injury Control Laboratory explores determinants of health (e.g. respiratory health, sleep health, mental health) and injury prevention. Those living in rural areas face health inequities and health access issues that differ from urban settings. Injuries in agricultural settings occur at a higher rate than that seen in most other occupations.

We have conducted large population-based studies among people living in rural and remote areas, farmers, non-farmers, and Indigenous peoples. Respiratory, sleep health,

and injury research have been focal points, including rural occupational lung health studies (grain workers and farmers); longitudinal studies of rural people's health; and longitudinal rural injury studies of farmers. The work has involved numerous partnerships, including a longstanding international collaboration with colleagues in Europe. Epidemiologic and biostatistical programmes, equipment, and technicians support the research.

Our respiratory lab allows for in-person and field testing of lung function, skin-prick testing, spirometers and home sleep testing devices. Projects include provincial rural health studies, First Nations health studies, and respiratory health studies.



Our epidemiology lab includes workstations to conduct remote data collection, store and manage data, and conduct analyses. Data sources include primary data collection and large administrative databases, clinical to population-based data as well as cross-sectional and longitudinal data. While much of our research within the epidemiology lab is based on investigations of respiratory health, we also have work focused on diabetes, cancer, mental health, and other conditions.



CCRAH Team Members

Leads



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH and a Professor in the Department of Medicine. With a background in industrial hygiene and nursing, her research focuses on the epidemiology of rural and agricultural exposures and their impact on occupational respiratory health.



Dr. James Dosman

Dr. James Dosman is the Founding Director of the CCRAH and CEO of Agrivita Canada Inc. Known as the “Father of Agricultural Medicine” in Canada, his work spans sleep medicine, respiratory and injury epidemiology, and the public health impacts of rural and agricultural environmental exposures.



Dr. Joshua Lawson

Dr. Joshua Lawson is a Professor of Medicine at the University of Saskatchewan and researcher at the CCRAH, specializing in pediatric asthma and respiratory epidemiology, with a focus on urban-rural health disparities, supported by training in epidemiology and biostatistics.



Dr. Punam Pahwa is a Biostatistics Professor in the Department of Community Health and Epidemiology and CCRAH. She specializes in statistical methodologies for analyzing complex longitudinal health data with applied investigations into chronic disease determinants, particularly those linked to rural occupational and environmental exposures.

Staff

- **Dr. Chandima Karunanayake**, Professional Research Associate
- **Dr. Meera Kachroo**, Professional Research Associate
- **Jeremy Seeseequasis**, Research Assistant
- **Brooke Thompson**, Research Manager
- **Bisma Ikram**, Research Analyst
- **Jane Dosman**
- **Dr. Merle Massie**, Professional Research Associate
- **Katie Thompson**, Communications
- **Manpreet Kaur**, Research Assistant
- **Sheila Naytowhow**, Research Assistant
- **Nadia Smith**, Program Manager
- **Jill Dosman**, Research Assistant

Students

- **Dr. Pardis (Elsa) Keshavarz**, Post-Doctoral Fellow
- **Shirmin Bintay**, MSc student
- **Sheila Naytowhow**, MSc student
- **Kathleen McMullin**, PhD student
- **Barada Mohanty**, PhD student
- **Mohsen Ghamari**, MSc student
- **Suvadra Datta Gupta**, Post-Doctoral Fellow

Other Members

Faculty and Academic

- **Dr. Sylvia Abonyi**
- **Dr. Bonnie Janzen**
- **Dr. Vivian Ramsden**
- **Dr. Mark Fenton**
- **Dr. Donna Rennie**
- **Dr. Wanda Martin**
- **Dr. Lori Bradford**
- **Dr. Kerry McPhedran**
- **Dr. Marilyn Baetz**
- **Alejandra Fonseca Cuevas**
- **Dr. Shirley Roburn**
- **Krishna Kolen**
- **Dr. Greg Marchildon**
- **Dr. Uchechi Opara**
- **Tim Vogel**
- **Dr. Sarah Oosman**
- **Dr. Cara Spence**
- **Dr. Charlene Thompson**
- **Dr. Tara Kahan**
- **Dr. Huiqing Guo**
- **Dr. Jafar Soltan**
- **Dr. Markus Brinkmann**
- **Dr. Amanda Froelich-Chow**
- **Dr. Penelope Sanz**
- **Dr. Udoka Okpalauwaekwe**
- **Dr. Malcolm King**
- **Corwyn Shomachuk**
- **Dr. Trevor VandenBoer**
- **Dr. Tom Smith-Windsor**
- **Dr. Corrine Schuster-Wallace**
- **Courtney Carlberg**
- **Mary Kiesman**
- **Lynette Epp**
- **Dr. Tracey Carr**

Community

- Eldon Henderson
- Marie Neubuhr
- Delano Mike
- Warren Seeseequasis
- Carol Naytowhow
- Heather Bighead
- Harmony Johnson-Harder
- Raymond Mendes
- Nicole Bird
- Deidre Epp
- Norma Rabbitskin
- Chief Christine Longjohn
- Suzanne Seeseequasis
- Larry Burgess
- Serina Seeseequasis
- Lory Pilon
- Gerald Ballantyne
- Erica Stockdale
- Tina Nelson
- Reynaldo Lindain
- Dawne Thomas
- Emelda Seeseequasis
- Ilona Monkman

Recognitions

1. **Indigenous Achievement Award** – Community Engagement Award for **Sheila Naytowhow** (MSc student, supervised by Dr. Shelley Kirychuk), College of Medicine, University of Saskatchewan
2. **USask SK-NEIHR Graduate Student Scholarship for Sheila Naytowhow** (MSc Student under my supervision), University of Saskatchewan, \$20,000/annum.
3. **Dr. Wanda Martin - Acting Associate Dean Research and Graduate Studies**, College of Nursing, University of Saskatchewan (January 27th, 2025-March 15th, 2025)
4. **Dr. Wanda Martin - Graduate Program Chair** College of Nursing, University of Saskatchewan (June 12th, 2024-Current)
5. **Lindsey Vold, PhD Defense** Thesis title: Situational Analysis of Local Food Production in a Northern Setting: A Holistic Nursing Perspective. Supervised by Dr. Wanda Martin. Defense Date: April 7, 2025
6. **Udoka Okpalauwaekwe, PhD Defense.** Thesis title: Enhancing Health and Wellness by, with and for Indigenous Youth at Sturgeon Lake First Nation, Saskatchewan. Supervised by: Dr. Vivian Ramsden. Defense Date: December 2024.
7. **Kathleen McMullin, PhD Defense.** Thesis Title: Kewetan: Walking in the Ancestral Footsteps of Our Woodland Cree Grandparents. Supervised by: Dr. Sylvia Abonyi. Defense date: June 2024.

Research Projects / Programs

Assess, Redress, Reassess: Addressing Disparities in House, Home, and Mental Health among First Nations People



The development of mental health interventions was the second objective of the CIHR-funded study: Assess, Redress, Reassess: Addressing Disparities in House, Home, and Mental Health among First Nations People and we have already started two interventions: yoga for better mental health, and sharing circles for young people to share their experiences, opinions, and knowledge about mental health.

Yoga for better mental health: We have started a series of yoga classes from April- June 2025 in two Communities, Beardsy's & Okemasis Cree Nation and Little Red River Reserve. We developed a video with meditation in two languages, the first of its kind in Cree ("Grounding Meditation in nēhiyawewin (Cree) and English," <https://www.youtube.com/watch?v=VLZzgwKXGvc>).

Sharing circles: Sharing circles are a ceremonial practice in First Nations communities, and may help participants express themselves, feel support, and build community. Indirectly, people have a chance to contribute their experiences, ideas, memories, and knowledge about mental health and will contribute to academic knowledge about First Nations culture and health. These circles have already helped establish and build connections between health care workers, elders, and the community members.



FIRST NATIONS MENTAL HEALTH

SHARING CIRCLE FOR WOMEN AGE 16 - 39
FIND SUPPORT AND COMMUNITY BY SHARING AND LISTENING TOGETHER

TIME AND PLACE TBA

A MEAL WILL BE SERVED
ALL PARTICIPANTS WILL RECEIVE AN HONOURARIUM

THIS STUDY IS SPONSORED BY THE UNIVERSITY OF SASKATCHEWAN AND IS PART OF AN ONGOING STUDY ABOUT HOUSE, HOME AND MENTAL HEALTH, FUNDED BY THE CANADIAN INSTITUTES OF HEALTH RESEARCH. IT HAS THE SUPPORT OF BEARDSY'S AND OKEMASIS'S CREE NATION AND MONTREAL LAKE CREE NATION, AND LITTLE RED RIVER RESERVE

QUESTIONS? WANT TO PARTICIPATE?
CONTACT:
MARIE NEULUHI (506) 334-7422
HAMMONY JOHNSON-HARDER (506) 888-8888
MEERA KACHROO (506) 393-3646

Canadian Centre for Rural and Agricultural Health
UNIVERSITY OF SASKATCHEWAN

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

Home Maintenance for Health

The project's main objective was to explore opportunities, barriers, and challenges of energy-efficient housing in First Nations communities as an option to address the critical need for healthy housing. The first stage of our project focused on hosting a symposium to listen to the people affected by the housing crisis on reserve and to discuss pathways for change. The second stage has focused on conversations with different communities on energy efficient housing and to learn more about what has worked and possible challenges in the work toward healthy housing. Our final stage will be to develop a gallery exhibit of videos of the case studies of the symposium to display the findings based on strength-based conclusions. Lastly, the gallery from this work provides the stage to start conversations to stimulate change to housing policies to promote healthy housing in First Nations and Métis communities.



Improving Immunization Services and Health Outcomes for Children and Families in the Saskatchewan Health Authority: A Community-Based Participatory Research Project



This community-based participatory study follows a Group Concept Mapping methodology, to engage families with children 0-6 years of age and frontline healthcare workers in Saskatoon and area. Briefly, in collaboration with stakeholders, we will use the question “What factors help to facilitate or challenge immunization uptake?” to generate as many responses as possible from participants. After enough responses have been identified, participants will sort responses into groups that they perceive as similar, then participants will rank them in order of importance and implementation feasibility. Results can be interpreted to identify key elements of concern and develop interventions to improve immunization health services. The study is currently in the generation of responses stage. The sorting and ranking of responses is expected to be conducted in summer 2025.

Assess, Redress, Re-assess: Addressing Disparities in Sleep Health among First Nations

We have successfully completed the CIHR-funded study, Assess, Redress, Re-assess: Addressing Disparities in Sleep Health among First Nations on March 31, 2025. We have completed baseline and follow-up sleep study surveys for adults, Level 3 overnight home sleep assessments, an actigraphy evaluations, an ethnographic study, a children's sleep study, and a yoga intervention to get a better sleep in two communities. We published 12 abstracts, 10 papers and 4 MSc theses based on this project.



**CIHR
IRSC**

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

First Nations Built Environment Climate Action



The aim of this project is to identify policy barriers and levers for change to a healthy built environment. The project has been in the stage of data collection conducting interviews in different First Nations and Métis communities. These interviews will allow us to identify successes and barriers to implement energy efficient housing in communities and will inform interventions on energy efficient housing that can reduce impacts of climate change and contribute to Indigenous livelihoods.

Housing Maintenance Pathways

This project aims to explore the housing literacy of single women with children to develop a housing maintenance pathway appropriate for this demographic. This study can help guide, develop, and implement housing maintenance programs by identifying specific learning needs, contributing to a sense of empowerment and program ownership, and identifying an optimal delivery mode.

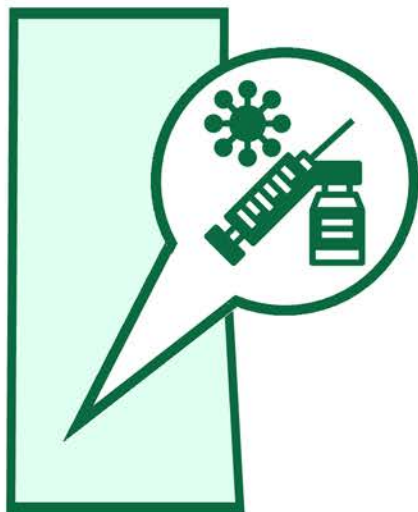


First Nations Housing Hub for Saskatchewan First Nation Communities

The First Nations & Métis Built Environment Group is developing an online First Nations Housing Hub in collaboration with Red Circle Planning Group. The hub will serve as a comprehensive resource centre covering various topics including house maintenance, policy and governance, infrastructure and more. The hub is currently in the development stage, where we are building the website and compiling the content gathered from First Nation communities and its members across Saskatchewan.



Innovative Rural-Driven Solutions to Improve Immunization Programs in South West Saskatchewan



This mixed method community-based participatory research (CBPR) study aims to engage families with children aged 0-6 years of age and frontline healthcare workers in the Saskatchewan Health Authority South West 4-6 Networks, to identify and understand factors influencing immunization and develop potential interventions to better meet the immunization needs of families.

Facilitators and Barriers for Childhood Immunization: A Scoping Review

This scoping review aims to identify the differences in childhood immunization pre and post-COVID-19 pandemic in Canada. The review follows the Arksey and O'Malley's framework to identify factors and barriers to publicly funded immunization in Canada for families with children aged 0-6 years. The search is being conducted in Medline, Web of Science, Embase, CINAHL, COCHRANE, PsycInfo and Proquest for studies published in English with no date range restrictions.

Agricultural Fatality Surveillance



The Saskatchewan Agricultural Fatality Surveillance program continues, and is part of the National Agricultural Fatality Surveillance program (CAIR – Canadian Agricultural Injury Reporting) funded by the Canadian Agricultural Safety Association (CASA). Tractor roll-overs continue to be the leading cause of fatal injury on Saskatchewan farms and are very preventable through the installation of Roll-Over Protective Structures (ROPS).



Scientific Communications

Publications

- Kader SB, Abonyi S, Dosman JA, Karunanayake CP, King M, Seesequasis W, Burgess L, Naytowhow C, Pahwa P. **Association between insomnia and four domains of health based on an Indigenous Medicine Wheel: Findings from two Saskatchewan First Nation communities.** Can J Public Health. 2024 Dec;115(6):880-891. doi: 10.17269/s41997-024-00935-0.
 - After adjusting for potential risk factors, the probability of having poor or fair health in all four domains (physical, mental, emotional, and spiritual) was higher among people with severe to moderate insomnia. Additionally, the total effect of ISI on physical, mental, emotional, and spiritual health. The impact of insomnia on four domains of health and the mediation effect of multimorbidity on this path are unique findings. Early diagnosis and treatment of these conditions might improve overall health.
- Karunanayake CP, Dosman JA, Ayas N, Fenton M, Seesequasis J, Lindain R, Seesequasis W, McMullin K, Kachroo MJ, Ramsden VR, King M, Abonyi S, Kirychuk S, Koehncke N, Skomro R, Pahwa P. **Association of Insomnia with Functional Outcomes Relevant to Daily Behaviors and Sleep-Related Quality of Life among First Nations People in Two Communities in Saskatchewan, Canada.** Clocks & Sleep. 2024; 6(4):578-588. <https://doi.org/10.3390/clockssleep6040039>
 - After adjusting for age, excessive daytime sleepiness, sex, and regular use of prescription medication, the clinical insomnia was significantly associated with functional impairments. In fact, a person with clinical insomnia was 3.5 times more likely to have functional impairments than those without clinical insomnia. This study highlights the significant association between insomnia and functional impairments related to daily behaviors and quality of life in two First Nation communities.
- Karunanayake CP, Thompson C Kachroo MJ, Rennie DC, Seesequasis W, Seesequasis J, Dosman JA, Fenton M, Ramsden VR, King M, Abonyi S, Kirychuk S, Koehncke N, Pahwa P. **Sleep Patterns, Excessive Daytime Sleepiness, and Sleep Disturbance among First Nations Children in Saskatchewan.** Clocks & Sleep 2025; 7(2): 21. <https://doi.org/10.3390/clockssleep7020021>
 - The prevalence of Excessive Daytime Sleepiness observed in this study (19.7%) is comparable to that found for other Indigenous groups. A high proportion of children exceeded the recommended screen time, an important public health issue. Parents play a crucial role in implementing screen time interventions and establishing bedtime routines for their children.
- Lawson, JA., Kim, M., Jandaghi, P., Goodridge, D., Balbuena, L., Cockcroft, D., Adamko, D. & Khanam, U. (2024). **Risk and protective factors of asthma and mental health condition multimorbidity in a national sample of Canadian children.** Pediatric Allergy and Immunology, 35: e14199 (15 pages)

- Thompson C.A., Brown A., Clark R., Rennie D., Szafron M.L., & KidsFirst North Team. (2025). **Factors that promote success in a maternal–child program serving Indigenous families: A community-based participatory research project in Northern Saskatchewan, Canada.** *Rural and Remote Health*, 25(1), 1–16.
<https://search.informit.org/doi/10.3316/informit.T2025041000007401630659454>
 - Through a community-based participatory research approach, this study was codeveloped with KidsFirst North to explore families', frontline workers', and administrators' perceptions on successes and barriers to maternal-child programs for Indigenous families; and describe the role of frontline workers within health program planning, implementation, and evaluation. Identified factors of success included importance of staff, community events and that integration of Indigenous culture. Barriers included lack of father inclusion in program activities, and lack of access to other services within the community. The results of this study may help the success of public health programs.
- Hyslop S., Kirychuk S., Karunanayake C.P., Rennie D.C., Bradford L., Ramsden V.R., Thompson B., Roberts C#, Seesequasis J., McMullin K., Fenton M., Abonyi S., Pahwa P., Dosman J.A., Martin W. (2025). **Exploring Relationships between Household Crowding and Health in Two First Nations Communities.** *Health and Place*, 92:103441
 - This study explores how household crowding affects the health of people living on-reserve in Saskatchewan. Using a cross-sectional survey, it was determined that household crowding was significantly associated with chronic bronchitis. Thus, highlighting the importance of interventions that can help mitigate this association such as ventilation and bedroom size. Moreover, interventions should be culturally reflective based on a holistic understanding of housing needs.
- Bradford L., Kirychuk S., Martin W., McPhedran K. (2024). **Engaged Scholarship in the Context of Housing Insecurity and the Built Environment.** *Engaged Scholar Journal: Community-Engaged Research, Teaching, and Learning*, 10(2), 129–135
 - This Engaged Scholar Exchanges article explores how engaged scholarship can address housing insecurity and inequities in the built environment by fostering collaboration between researchers and communities. The authors emphasize the importance of community-driven research that leads to tangible outcomes, particularly in underserved or rural areas where housing challenges are often more acute. This work contributes to rural health by highlighting how inclusive, responsive research practices can inform better housing policies and healthier living environments for vulnerable populations.
- Thompson, C., Million, T., Tchir, D., Bowen A., Szafron M. (2024). **Factors of success, barriers, and the role of frontline workers in Indigenous maternal-child health programs: a scoping review.** *Int J Equity Health* 23, 28. <https://doi.org/10.1186/s12939-024-02118-2>

- This scoping review aimed to identify enablers and barriers to successful Indigenous maternal-child community health programs for mothers and their children aged 0–6 years, and the role of frontline workers in the program process. Enablers of program success included relationship building knowledge transmission styles and cultural inclusion, etc., and barriers included impacts of colonization, power structure, barriers to program access. The findings of this study can help improve the development and delivery of Indigenous maternal-child health programs.
- Lawson J, Kim M, Jandaghi P, Goodridge D, Balbuena L, Cockcroft D, Adamko D, Khanam U. **Reply to Ching-Heng Tsai and Lien-Chung Wei.** *Pediatrics Allergy Immunol.* 2024 Sep;35(9):e14249.

Conference Abstracts

- Lawson, J., Jandaghi, P., Kim, M., Goodridge, D., Balbuena, L., Cockcroft, D., Adamko, D., Philipenko, B. & Khanam, U. (June 2024). **The impact of asthma and mental health condition multimorbidity in national samples of Canadian children.** Paper presented at 2024 Annual Congress of the European Academy of Allergy and Clinical Immunology (EAACI)
- Khanam, U., Gao, Z., Kusalik, A., Adamko, D., Rennie, D., Goodridge, D., Dosman, J., Pahwa, P., Karunanayake, C. & Lawson, JA. (June 2024). **Investigation of the predictors of asthma phenotypes (atopic and non-atopic asthma) using machine learning and traditional statistical techniques.** Paper presented at 2024 Annual Congress of the European Academy of Allergy and Clinical Immunology (EAACI)
- Grzegorz Brożek, Bartłomiej Nowak, Aleksandra Gil, Piotr Nakiela, Jan Zejda, Josh Lawson. **Trend analysis of the occurrence of asthma and respiratory symptoms in Polish children over the last 30 years.** European Respiratory Society International Congress. Sept, 2024
- Karunanayake C, Dosman J, Fenton M, Seesequasis J, Burgess L, Seesequasis W, McMullin K, Ayas N, King M, Abonyi S, V. Ramsden V, Kirychuk S, Koehncke N, Skomro R, Pahwa P. **Association of insomnia with functional outcomes relevant to daily behaviors and sleep related quality of life among First Nations People.** Respiratory Society International Conference, Sept 7 – 11, 2024, Vienna, Austria

Grants

- PI: Will Pickett. CoIs: Belton K, Cammer A, Dosman J, Lawson J, Michaelson V. CIHR Project Grant Priority Announcement: **Human Development, Child and Youth Health** (\$100,000).
- PI Lawson J. **A follow-up investigation into childhood asthma and mental or neurodevelopmental disorders multimorbidity.** Respiratory Research Centre. (\$25,000)

- Martin, W. (NPI), Kirychuk, S., Bradford, L., McPhedran, K. (July 2023 - extended until March 2026). **First Nations Built Environment Climate Action**, \$125,000(CAD). Catalyst Grant, Canadian Institutes of Health Research.
- Martin, W. (NPI), Thompson, C., Kirychuk, S. Pikisowin: **Home Maintenance for Health** (July 2024-July 2025, \$15,000 (CAD), CIHR Seed Funding Program, College of Nursing, University of Saskatchewan.
- Thompson C (NPI), Martin W, Rennie D. **Maternal-Child Program in Public Health: Community-Based Research to Improve Programs and Health Outcomes**. New Faculty Start-Up Funding, College of Nursing and College of Graduate and Postdoctoral Studies. \$40,000.
- Thompson C (NPI), Antonopoulos C, Nickel D, Rennie D, Cushon J, Stead L, Harmon-Atkinson M, Seth N, Martin W. **Improving Immunization Services and Health Outcomes for Children and Families in the Saskatchewan Health Authority: A Community-Based Participatory Research Project**. Saskatchewan Health Research Foundation (SHRF) 2024-25 Establishment Grant. \$149,999.62. 2024-06 to 2027-03.
- Thompson C (NPI), Alhassan J, Martin W, Huel C, Kirychuk S. **Innovative Rural-Driven Solutions to Improve Immunization Programs in South-West Saskatchewan**. Global Engagement Fund (New Partnership Fund), University of Saskatchewan, College of Nursing. \$10,000. 2025-01 to 2026-03
- Thompson C (NPI), Alhassan, J, Huel C, Martin W, Kirychuk S. **Innovative Rural-Driven Solutions to Improve Immunization Programs in South West Saskatchewan**. Saskatchewan Health Research Foundation: Innovation Grant. \$50,000. 2025-03 to 2026-03.

Knowledge Transfer

Invited Presentations

- Lawson J. **Allergic Disease and Mental Health Comorbidities. Presented to the PhD Student Assembly of the Medical University of Silesia, June 2024**

Outputs

- **Miyo-Nipâwin: Yoga for a Good Sleep - Official Trailer.** YouTube video. <https://youtu.be/P3tjisXS3nI?si=JY6-yawyMSKKoBpj>
- **Miyo-Nipâwin: Yoga for a Good Sleep.** YouTube video. <https://youtu.be/OX14KXWae5c?si=Y7n2dnof-SPHKkAM>
- **Grounding Meditation in nēhiyawewin (Cree) and English.** YouTube video. <https://youtu.be/VLZzgwKXGvc?si=RhYabt0GQx1HPChi>
- **Building for the Future: Housing and Health Forum - Symposium One Pager.** Infographic. https://research-groups.usask.ca/fn-built-environment/documents/2023-symposium/symposium_one-pager.pdf
- **Building for the Future: Housing and Health Forum - Graphic Report.** Infographic Booklet. https://research-groups.usask.ca/fn-built-environment/documents/2023-symposium/final_graphic_report.pdf
- **Housing Factors & Health Outcomes - First Nations People Living in On-Reserve Housing in Saskatchewan.** Infographic. https://cchsa-ccssma.usask.ca/documents/resources/fn-housing_health-outcomes.pdf

Media/Online/Technical Reports

- Olson, M. (Host). (2025, March 11). **Episode 07 - How do we create a sustainable built environment for the future?** [Audio podcast episode]. In *USask Signature Series*. University of Saskatchewan. <https://research.usask.ca/about/signature-areas/signature-series-podcast.php>
- First Nations & Metis Built Environment. **Building for the Future: Housing and Health Forum - Event Report.** <https://research-groups.usask.ca/fn-built-environment/documents/2023-symposium/final-2023-event-report.pdf>

Omics Laboratory

The Omics Laboratory uses state-of-the-art mass spectrometry analytical instrumentation and molecular laboratory techniques for innovative research in proteomics, genomics, metabolomics, and lipidomics. This research applies to clinical, environmental, agricultural, rural and occupational health. The laboratory has the capacity for high-quality mass-spectrometry and PCR-based analyses. Equipment includes ddPCR, qPCR, and high-resolution mass spectrometers. We carry out analyses for sequencing, identification, and quantification of peptides, proteins, and antibodies, targeted and untargeted proteomics, metabolomics, lipidomics, and bioinformatics analyses.

The laboratory has a strong focus in the following research areas: identifying and validating biomarkers for diseases; elucidating the molecular pathways in disease pathogenesis; identifying novel drug targets, therapeutic agents, and diagnostic tests; environmental and agricultural analysis (e.g. pesticides); impact of occupational whole-body vibration on cognitive impairment; and bioinformatics tools to analyse and annotate the proteome, metabolome, and lipidome.



Mass Spectrometry Laboratory for Omics Research Team 2025

CCRAH Team Members

Leads



Dr. George Katselis

Dr. George Katselis is an Assistant Professor in the Department of Medicine at the University of Saskatchewan and leads the CCRAH Mass Spectrometry Laboratory for Omics Research. His work focuses on functional and structural proteomics, using mass spectrometry to study clinical biomarkers, protein interactions, and applications in health, agriculture, and the environment.



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH and a Professor in the Department of Medicine. With a background in industrial hygiene and nursing, her research focuses on the epidemiology of rural and agricultural exposures and their impact on occupational respiratory health.

Staff

- **Brooke Thompson**, NAIHL Laboratory Manager
- **Dr. Paulos Chumala**, Mass Spectrometry Technician
- **Marwa Al Hassan**, Research Assistant

Trainees

- **Daniel Chao**, MSc Student
- **James Matheson**, MSc Student
- **Greg Guenther**, MSc Student
- **Megan Tomilin**, PhD student
- **Roman Koziy**, PhD student
- **Ibrahim Hoja**, PhD student
- **Lucas Julseth**, MSc Student
- **Mitchie Kenept**, Practicum Student

Other Members

Faculty and Academic

- **Dr. John Howland**
- **Dr. Stephan Milosavljevic**
- **Dr. Dena Burnett**
- **Dr. Jay Shavadia**
- **Dr. Haissam Haddad**
- **Dr. Rama Mangipudi**
- **Dr. Gudrun Caspar-Bell**
- **Dr. Anthony King**
- **Dr. Regina Taylor-Gjevre**
- **Dr. Tina Greenfield**
- **Dr. Juan Ianowski**
- **Dr. Linda Chelico**
- **Dr. Elemir Simko**
- **Dr. Joe Bracamonte**
- **Dr. Kyle Goldstein**
- **Dr. Mars Zhao**
- **Dr. Roland Dyck**
- **Dr. Brandy Wicklow**
- **Dr. Allison Dart**
- **Melissa Del Vecchio**
- **Dr. Alan Rosenberg**
- **Dr. Sheila Ons**

Recognitions

- **Roman Koziy, PhD Defense.** Thesis Title: Biomarkers for the eradication of infection in equine septic arthritis. Co-supervised by: Dr. Elemir Simko and Dr. George Katselis. Defense Date: May 29, 2024
- **Lucas Julseth, MSc defense.** Thesis Title: Whole-Body Vibration Effects on Cognition in an Experimental Rat Model. Co-supervised by: Dr. George Katselis and Dr. Stephan Milosavljevic. Defense Date: October 31, 2024.

Research Projects / Programs

Vibration-related micro concussions

The physiological basis for the cognitive and physical effects of whole-body vibration (WBV) has not yet been defined and no biomarkers indicative of micro-concussions from WBV exposure have been identified. We believe that increasing levels of WBV causes damage via micro-concussions and leads to increased cognitive impairment. The damage corresponds with differential expressions of blood and brain proteins that can be identified by MS-based proteomics. The identified protein markers from the animal model will provide the foundation for studies in humans, as well as deeper investigations into the level, frequency, and duration of WBV exposures that contribute to injury mechanisms and accident risks in rural and agricultural people. The purpose of this project is to identify protein markers resulting from WBV exposure by comparing proteomic profiles and cognitive impairment of animals exposed to different vibration frequencies.



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Serum Proteomics to Investigate Clinical Outcomes Following ST- elevated Myocardial Infarction

ST-Elevated Myocardial Infarction (STEMI) occurs due to the complete occlusion of a coronary artery and despite improvements in treatments, it remains a major cause of mortality worldwide. Classical risk models that only rely on clinical variables are insufficient to predict the risk of adverse post-STEMI outcomes. Therefore, the prediction of cardiogenic shock and heart failure following STEMI is an unmet clinical need. Advances in proteomics can allow us to identify biomarkers to predict the occurrences of post-STEMI outcomes. We need to consider multiple methods, including multi-biomarker strategies, to stratify the risk of post-STEMI outcomes.



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- Dr. Viktor A. Pollak and Mirka B. Pollak
Cardiology Research Fund

Targeted Proteomics to Validate One Health Links in Septic Arthritis

Septic arthritis is a debilitating joint inflammation arising from presence of pathogenic microorganisms in the joint. Delays in the diagnosis and treatment can result in loss of joint function and quality of life, and even higher mortality rates. Our goal is to validate One Health (animal-human) links by using mass spectrometry (MS)-based targeted proteomics to understand the role biomarkers may play in SA. We have recently explored the discovery of putative biomarkers for the eradication of joint infection using horses as the animal model, and synovial fluid. This results from this study will facilitate the development of new diagnostic tests for the bedside detection of infection and consequent treatment of SA in septic joints. In addition, this research will identify future clinical directions investigating pharmacological agents and other novel treatment approaches to assist in the management of this serious health issue.



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Western College of
Veterinary Medicine

WCVM.USASK.CA

- Townsend Equine Health
Research fund

Scientific Communication

Publications

- Meija-Gutierrez M, Moser B, Pirlot M, Zhang H, Chumala P, Katselis GS, Palmer DRJ, Krol ES. **Caffeine and Nicotine with N-substituted Diaraine Photoaffinity Labels from Adducts at Tyrosine-39 of α -Synuclein.** *ACS Chemical Neuroscience*, 16(8): 1539-1549.
 - The study investigates how small molecules like caffeine and nicotine interact with α -synuclein, a protein implicated in Parkinson's disease (PD). Using specially designed photoaffinity labels, the researchers discovered that both caffeine and nicotine form covalent bonds at the tyrosine-39 (Tyr-39) site of α -synuclein, with caffeine also binding at glutamic acid-20 (Glu-20). These findings help pinpoint specific binding sites on α -synuclein, which is crucial for understanding how these molecules might influence or inhibit the protein's aggregation—a key factor in PD pathology. This research could have meaningful implications for rural health by contributing to the development of more accessible, preventive treatments for Parkinson's disease.
- Koziy RV, Katselis GS*, Yoshimura S, Simko E, Bracamonte JL. (2024). **Temporal kinetics of serum amyloid A (SAA) concentration and identification of SAA isoforms in blood and synovial fluid of horses with experimentally induced septic arthritis, non-septic synovitis, and systemic inflammation.** *Journal of Veterinary Diagnostic Investigation*, 37(1):42-54.
 - This study explored how serum amyloid A (SAA)—a protein that rises in response to inflammation—behaves in horses with different types of joint and systemic inflammation. Researchers induced septic arthritis, non-septic synovitis, and systemic inflammation in horses and tracked SAA levels in both blood and joint (synovial) fluid over time. It was found that SAA levels rose in both affected and unaffected joints and identified a unique SAA isoform produced locally in joints. The identification of specific SAA isoforms could lead to faster, more precise diagnostic tools for joint infections, potentially adaptable to human medicine.
- Tomilin M, Greenfield T, Chumala P, Katselis GS*. (2024). **Use of Proteomics for Dietary Reconstruction: a Case Study Using Animal Teeth from Ancient Mesopotamia.** *Journal of Proteome Research*, 23(9): 4095-4101.
 - This study used proteomics—the large-scale study of proteins—to analyze animal teeth from Early Dynastic Mesopotamia (2900–2350 BCE). By identifying dietary proteins preserved in the teeth, the researchers reconstructed ancient animal feeding practices and broader food management strategies. This innovative approach revealed how early societies adapted their livestock diets in response to environmental and social pressures, offering insights into resilience and sustainability in ancient food systems. Understanding how ancient societies managed food resources under stress can inform sustainable agricultural practices today.

- Gheisary Z, Hoja I, Liu J, Papagerakis P, Weber LP, Fenton M, Katselis GS, Lieffers JRL, Papagerakis S. (2024). **Association of Sleep Quality and General, Mental, and Oral Health with Lifestyle Traits (Dietary Intake, Smoking Status) in Arthritis: A Cross-Sectional Study from the Canadian Community Health Survey (CCHS).** *Nutrients*, 16(13):2091.
 - This study analyzed data from over 100,000 Canadians in the Canadian Community Health Survey to explore how sleep quality, general, mental, and oral health are linked to lifestyle traits like diet and smoking in people with arthritis. The researchers found that individuals with arthritis reported significantly poorer health across all these domains compared to those without arthritis. They also identified strong associations between poor sleep and unhealthy lifestyle habits, suggesting that these factors may worsen arthritis symptoms and overall well-being.
- Koziy RV, Bracamonte JL, Katselis GS*, Udenze D, Hayat S, Hammond SA, Simko E. (2024). **Putative mRNA Biomarkers for the Eradication of Infection in an Equine Experimental Model of Septic Arthritis.** *Veterinary Sciences*, 11(7): 299.
 - We investigated messenger RNA (mRNA) biomarkers in horses to determine when joint infections—specifically septic arthritis—have been successfully treated. We were able to identify eight mRNA markers that were significantly elevated during active infection but dropped after successful treatment. These findings could be easily applied to human health and could offer a clinical diagnostic tool to improve the treatment of septic arthritis for people living in rural and agricultural spaces.

Grants

- Katselis, George (PI), Shavadia, Jay (Co-PI), Caspar-Bell, Gudrun (Co-PI), *Chumala P*, Tomilin M (2024-2025). **Patho-biologic Descriptions of Sodium-Glucose Cotransporter-2 inhibitors Associated with Proteomics Differences in ST-segment elevation myocardial infarction.** \$20,000 (CAD). Department of Medicine Dr. Viktor A. Pollak and Mirka B. Pollak Cardiology Research Fund, University of Saskatchewan.
- Rosenberg, Alan (PI), Katselis G, Collins M, Maleki F (2024-2026). **Discovering the Targets for Antinuclear Antibodies in Juvenile Idiopathic Arthritis: Towards Precision Diagnosis to Improve Care.** \$100,000 (CAD) to Rosenberg, Alan. Ignite Innovation Grant, Arthritis Society Canada.

Theses

- Julseth L. **Whole-body Vibration Effects on Cognition in an Experimental Rat Model** (Thesis). University of Saskatchewan.
- Koziy R. **Biomarkers for the eradication of infection in equine septic arthritis** (Thesis). University of Saskatchewan.

Conference Abstracts

- Tomilin M, Shavadia J, Caspar-Bell G, Chumala P, Mangipudi R, Thompson B, Haddad H, Katselis GS. **Changes in Protein Expression Following a STEMI in Diabetic Patients Treated with Sodium-Glucose Transport Protein 2 Inhibitors (oral). ASMS 2024 Conference, Anaheim, CA, USA, June 3-6, 2024**
- Katselis GS, Tomilin M, Chumala P, Greenfield T. **Ancient Animal Diet Determined through Tandem Mass Spectrometry (poster). ASMS 2024 Conference, Anaheim, CA, USA, June 3-6, 2024**

Knowledge Transfer

Invited Presentations

- Katselis GS, Milosavljevic S. **Proteomics – A Journey from Basic Science to Clinical Applications. Department of Medicine Grand Rounds**, University of Saskatchewan, Saskatoon, SK, April 2, 2025.
- Tomilin M, Greenfield T, Chumala P, Katselis GS. **A Trip Through History: A brief Overview of My Journey in Interdisciplinary Mass Spectrometry. ASMS 2024 Conference Arts, Museum, Archaeology Workshop**, Anaheim, CA, USA, June 3-6, 2024.

Occupational Hygiene and Environmental Exposures Laboratory

The Occupational Hygiene and Environmental Exposure Laboratory is dedicated to advancing worker health and wellness through the anticipation, recognition, evaluation, and control of workplace and environmental hazards. The lab has the capacity to measure and evaluate exposure to a wide range of hazards, including chemical, physical (heat, noise, vibration, and radiation), biologic, and ergonomic hazards. The lab has direct reading instrumentation and indirect measurement capacities for all types of hazards. The facility also has both a human exposure laboratory and an animal exposure laboratory. Longstanding research has focused on assessment and control of agricultural worker respiratory exposures including dusts, endotoxin, bioaerosols, and antimicrobial-resistant genes. Recent work has focused on ventilation and health, including viruses and the role of ventilation and carbon dioxide in health outcomes.



CCRAH Team Members Leads



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH and a Professor in the Department of Medicine. A trained nurse and certified industrial hygienist, she leads the Occupational Health and Environmental Exposures Laboratory. Her research focuses on the epidemiology of rural and agricultural exposures and their effects on occupational respiratory health.



Dr. Niels Koehncke

Dr. Niels Koehncke is a Professor in the Department of Medicine and a specialist in Occupational Medicine. He serves as the Medical Lead for CANWORKSAFE, providing occupational health screening services for employers. Dr. Koehncke offers outpatient consultations in occupational and environmental medicine, with research interests in occupational noise and respiratory exposures, veterinary and agricultural workplace hazards, and injury prevention.

Staff

- **Brooke Thompson**, Laboratory Manager
- **Manpreet Kaur**, Research Assistant
- **Dr. Merle Massie**, Professional Research Associate

Trainees

- **Alejandra Castillo Toro**, MSc Student
- **Dr. Pardis (Elsa) Keshavarz**, Post-Doctoral Fellow
- **Tejvir Binepal**, MSc Student
- **Sheila Naytowhow**, MSc Student

Other Members Faculty and Academic

- **Dr. Caroline Duchaine**
- **Dr. Bernardo Predicala**
- **Dr. Lifeng Zhang**
- **Dr. Stephane Godbout**
- **Dr. Jafar Soltan**
- **Dr. Tara Kahan**
- **Dr. Bryce Warner**
- **Dr. Alyson Kelvin**
- **Dr. Carey Simonson**
- **Dr. Karen Schwean-Lardner**
- **Dr. Huiqing Guo**
- **Dr. Baljit Singh**
- **Dr. Gurpreet Aulakh**
- **Dr. Monique Mayer**
- **Dr. Cheryl Waldner**
- **Dr. Patrick O'Shaughnessy**
- **Dr. Marie-Lou Gaucher**
- **Dr. R S Sethi**
- **Dr. Todd Wyatt**
- **Dr. Joshua Schaeffer**
- **Dr. Risto Rautiainen**
- **Dr. Paul George**
- **Dr. Melanie Fauchoux**
- **Dr. Myra Martel**
- **Dr. Mehdi Heydari Foroughani**
- **Dr. Nathalie Turgeon**
- **Dr. Valerie Letourneau**
- **Dr. Dalila Larios Martinez**
- **Marc Veillete**
- **Joanie Lemieux**
- **Mahsa Baghdadi**
- **David Recalde**
- **Angelo Alluag**
- **Roger Bolo**
- **Vicki Clouet-Côté**

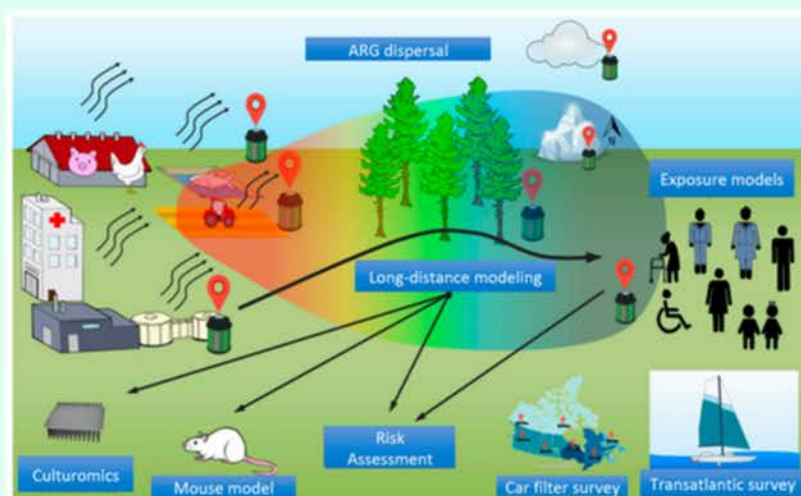
Recognitions

- 2024 ASABE Superior Paper Award for: *“Improving Air Quality in Broiler Rooms Using an Electrostatic Particle Ionization System.* Martel, Myra; Kirychuk, Shelley; Predicala, Bernardo; Bolo, Roger; Yang, Yingjie; Thompson, Brooke; Guo, Huiqing; Zhang, Lifeng. *Journal of ASABE*, 66(4):887-896.”
- Tejvir Binepal, MSc Defense. Thesis title: Assessing Bioaerosol transfer in air-to-air membrane energy exchangers. Supervised by: Dr. Carey Simonson. Defense date: September 24, 2024

Research Projects / Programs

Antibiotic resistant genes in livestock operations

The aim of this project is to address long-distance transport of ARGs through sampling in the Far North of Canada, and in the high atmosphere, overseas and through the diverse urban and rural activities. Air can lead to long distance transmission of biological agents and the potential impact of human activities on the spreading of antimicrobial resistance through the air must be better understood to fill appropriate risk and prevention models. There is an urgent need to better understand the role of air as a transport and spreading route for ARGs in outdoor environments emitted from specific high bioaerosols producing activities and settings. Bioaerosols may play an active role in the environmental spread and exposure of antimicrobial resistance.



Improving Indoor Air Quality in Canadian Residences

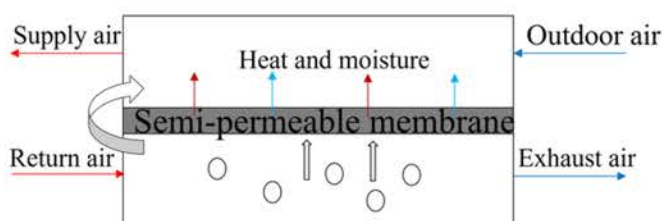
This project aims to evaluate the effects of smoke-mold interactions on air composition and determine whether exposure risk can be predicted by the separate effects of smoke and mold, and whether chemical interactions must be considered. Improving IAQ can greatly ameliorate respiratory and cardiovascular health. Cigarette smoke and mold contamination negatively impact IAQ in many Indigenous communities. This trans-disciplinary, community engaged project combines

chemical measurements, risk assessment, and science and policy communication with a goal of creating resources and tools to address and redress IAQ challenges in Indigenous communities.



Ventilation in pathogen transfer

The purpose of this project is to study the impact of ventilation on the transfer and recovery of viruses during common ventilation practices under the effect of various operating conditions (temperature and relative humidity) and membrane properties. Membrane energy exchangers use porous, semi-permeable membranes that can transfer heat and moisture well. But, because of their large pore sizes, they might also transfer infectious aerosols, like bacteria, from the building exhaust air



Membrane Energy Exchanger



to the ventilation air. Based on the results of the pathogen transfer in membranes, membrane energy exchangers will be developed to mitigate or minimize the possible pathogen transfer from the exhaust air stream (representing air from the space with an infected person) to the fresh ventilation air entering to the building space.

Surface disinfection to safeguard against pathogens

This project aims to evaluate the efficacy of hydroxylation as a surface disinfection method. By conducting experimental studies, this step aims to produce concrete data on the effectiveness of hydroxylation under different environmental conditions and on various surface materials. This directly addresses the need for non-pharmaceutical interventions, such as improved disinfection methods, to enhance infection prevention and control measures. The inclusion of diverse surface types and conditions ensures that the results are comprehensive and applicable to a wide range of real-world scenarios, thus providing valuable insights that can be quickly implemented by public health authorities. This evidence is crucial for understanding the potential of hydroxylation to mitigate the spread of highly pathogenic avian influenza A(H5N1) and enhance Canada's immediate response to the current outbreak.

Developing Strategies to Minimize Health Risks in Next Generation Livestock Buildings Integrating Modern Animal Welfare Considerations

The purpose of this project is to evaluate and improve air quality in agricultural settings using standard for animal welfare and, consequently, reduce health risks in Canadian agriculture. The increasing public concern for animals to be raised, transported and slaughtered humanely is pushing the livestock industry progressively towards animal welfare for farm animals in Canada. In pig production, the new Code of Practice mandates that all holdings brought into use after 2014 should house mated gilts and sows in groups, and existing facilities should be converted to group housing by 2024. With these changes, animals are free to roam the larger pens and, consequently, the increased animal activity can lead to higher levels of odours, gases, dust and microbes in the air. These housing changes are combined with the need to reduce the use of antibiotics in animal husbandry.



Agriculture and
Agri-Food Canada



Institut de recherche
et de développement
en agroenvironnement

Agriculture et
Agroalimentaire Canada

Reduction of odour and bioaerosol emissions in swine barns using cold plasma

This project aims to assess the effectiveness of the cold plasma technique in reducing the levels of odour and bioaerosol in swine barns under laboratory and real swine barn conditions. This project will provide a potential solution to the air quality issues in swine barns as well as in facilities of other livestock species. Improving the air emitted from livestock facilities will reduce their negative impacts on the health and well-being of the surrounding communities and the environment.



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Ionization-based air inlet protection systems for poultry houses

This project aims to test technologies that can effectively protect barns from pathogens transmitted from outside sources. The technologies tested are electrostatic precipitators and electro-nanosprays. This project will provide potential solutions for the control of airborne transmission of infectious agents between barns, thereby reducing animal mortality and improving productivity. Disease outbreaks may not only result in economic losses for the producers but also job loss for workers. Controlling transmission of infectious diseases between barns can also prevent contamination of poultry products, making them safe for human consumption.



Scientific Communication

Publications

- Martel M., Taylor M, Kirychuk S., Choi K., Guo H., Zhang L. **Electrostatic Particle Ionization for Reduction in Livestock and Potash Dust.** *Atmosphere*, 16(1):87.
 - This laboratory-scale study evaluated the efficacy of an electrostatic particle ionization system in removing livestock and potash dust. This publication will provide information about the potential application of this technology for dust control, thereby providing an environmentally friendly cost-effective solution for the mitigation of dust pollution in livestock facilities and potash mines. It is anticipated that improving the air quality in these work environments will consequently reduce the negative impacts of these production systems on the health of their workers, the quality of life of the neighboring communities, and the environment.
- Barraza-Garcia F.J., Sandoval E.M., Bolo R.E., Kirychuk S., Thompson B., Guo H., Predicala B., Zhang L. **Microbial decontamination of barn surfaces using Engineered Water Nanostructures (EWNS).** 2024. *MRS Advances*, 9:247-253
 - This laboratory scale study evaluated the effectiveness of Engineered Water Nanostructures in decontaminating pig barn surfaces. This innovation holds great promise for rural communities by improving the hygiene of livestock environments, which can reduce the spread of zoonotic diseases and enhance the health of both animals and farm workers. By offering a sustainable alternative to traditional disinfectants, EWNS technology could offer rural farmers safer, more efficient tools for maintaining biosecurity in agricultural settings.
- Kalugin D., Bahig J., Shoker A., Doan H., Kirychuk S., Abdelrasoul A. **Superhydrophobic polyether sulfone (PES) dialysis membrane with enhanced hemocompatibility and reduced human serum protein interactions: Ex vivo, in situ synchrotron imaging, experimental, and computational studies.** 2024. *Separation and Purification Technology*, 335:126071.
 - This study aimed to develop and evaluate a new dialysis membrane that provides enhanced hemocompatibility and reduced interactions with serum proteins. Membranes were employed to mimic real-world dialysis using a combination of ex vivo experiments, synchrotron imaging, and computational modeling. For rural populations, where access to specialized dialysis care may be limited, this innovation could lead to safer, longer-lasting dialysis treatments, reducing complications and improving patient outcomes in remote or underserved areas.
- Aminian S., Heydari Foroushani M., Thompson B., Schwean-Lardner K., Kirychuk S., Zhang L. **Application of Novel Engineered Water Nanostructures Techniques for Eggshell Surface Decontamination.** 2024. *LWT*, 200:116151
 - This laboratory scale study evaluated a novel, chemical-free method for

decontaminating eggshell surfaces using Engineered Water Nanostructures (EWNS). The goal was to effectively reduce harmful bacteria such as *E. coli* and *Salmonella* while preserving the eggshell's natural cuticle and nutritional quality, which are often compromised by traditional heat or chemical treatments. This approach also sought to demonstrate the feasibility of integrating EWNS into existing egg processing lines to improve food safety and reduce environmental impact.

Conference Abstracts

- Turgeon N., Lemieux J., Castillo Toro A., Rossi F., Thompson B., Nolting C., Larios Martinez D., Godbout S., Kirychuk S., Duchaine C. **AMR Profiles in the vicinity of poultry and swine barns in Canada. One Health: Antimicrobial Resistance and Emerging Zoonoses Conference**, March 11-14, 2025, Calgary, AB
- Kirychuk S, Predicala B, Zhang L, Dosman J, Thompson B, Castillo Toro A, Duchaine C. **Bioaerosols and Occupational Hygiene in Agricultural Industries. AAAR 2024 Conference**, Oct 21-25, 2024, Albuquerque, NM, USA
- Godbout S., Duchaine C., Kirychuk S., Dosman J., Brassard P., Letourneau V., Turgeon N., Larios Martinez, A.D., Predicala B., Zhang L., Girard M. **Canada at the Forefront of Agricultural Aerosol Research. AAAR 2024 Conference**, Oct 21-25, 2024, Albuquerque, NM, USA (oral)
- Clouet-Côté V, Larios D, Godbout S, Fournel S, Predicala BZ, Kirychuk S, Thompson B, Nolting C, Létourneau V. **Transition from caged to group housing for gestating sows in Canada: evaluation and improvement of air quality. ASABE Annual International Meeting**, Anaheim, CA, USA, July 28 - 31, 2024
- Heydary M., Movasaghi M., Thompson B., Schwean-Lardner K., Kirychuk S., Zhang L. **Investigating the Impact of Non-thermal Techniques on Chemical and Structural Composition of Eggshell Cuticle Following Surface Decontamination Treatment. CSBE/SCGAB AGM and Technical Meeting**. July 7-10, 2024, Winnipeg, MB, Canada.
- Bolo R.E., Martel M., Thompson B., Zhang L., Predicala B., Guo H., Kirychuk S. **Decontamination of a Swine Transport Trailer using an Electro-Nanospray System. CSBE/SCGAB AGM and Technical Meeting**. July 7-10, 2024, Winnipeg, MB, Canada.
- Bolo R., Martel M., Predicala B., Guo H., Thompson B., Kirychuk S., Zhang L. **Advanced Surface Decontamination using Engineered Water Nanostructures (EWNS) from Electro-nanospray Technology. 2024 ESA Annual Meeting**, June 9-13, 2024, Ottawa, ON, Canada.
- Castillo Toro A., Kirychuk S., Thompson B., Nolting C., Lemieux J., Veillette M., Turgeon N., Duchaine C. **Antimicrobial-Resistance genes in Bioaerosols from Livestock Operations. Environmental Dimension of Antimicrobial Resistance (EDAR7) Conference 2024**, May 26 -31, 2024, Montreal, QC.
- Nascimento A, Pandher U.S., Thompson B., Schneberger D., Singh B., Kirychuk S. **Exploring the Immunomodulatory Potential of Nature's Immuno: A Study on Mushroom**

- Formulation in Alleviating LPS-Induced Inflammation.** In Journal of Immunology (212 (Supplemental 1):1066_5569). **Immunology 2024**, May 3-7, 2024, Chicago, IL, USA.
- Binepal T.S., Fauchoux M., Kirychuk S., Zolfaghari P., Joseph A., Thompson B., Simonson C. **Test methodology to determine aerosol transfer in membrane energy exchangers.** In ASHRAE Transactions, 130:413-421. **ASHRAE Conference**, January 20 – 24, 2024, Chicago, IL, USA

Grants

- Soltan J (NPI), Co-PI: Kirychuk S, Kelvin A, Co-applicants: Simonson C, Wright S. **Innovative use of hydroxylation for surface disinfection: safeguarding against avian influenza.** CIHR Catalyst Grant: Catalyzing One Health Research on Avian Influenza. \$150,000. 09-2024 to 08-2025
- Zhang L (NPI), Predicala B, Kirychuk S, Guo H. **Reduction of odour and bioaerosol emissions in swine barns using cold plasma.** Canadian AgriSafety Applied Science Program, \$69,574. 2024-04 to 2028-03
- Kahan T (NPI) Co-PI: VendenBoer T, Co-applicants: Light E, Kirychuk S, Soltan J, Roburn S; Collaborators: Brinkmann M, Bradford L. **Assessing and communicating opportunities and barriers to improving indoor air quality in Canadian residences.** New Frontiers in Research Fund Exploration Grant, \$250,000. 04-2024 to 03-2026
- Zhang L, Predicala B, Kirychuk S, Guo H, Schwean-Lardner K. **Ionization-based air inlet protection systems for poultry houses.** CPRC Canadian Poultry Cluster, \$80,227. 2023-03 to 2026-03
- Koehncke N (PI), Mayer M (Co-PI), Sidhu N, Scansen B, Goodrich L, Easley J. (Jan 2024 – Dec 2025). **Dose to the Lens of the Eye in Veterinary Workers Performing Fluoroscopic Procedures.** College of Medicine Research Award (CoMRAD). \$17629.20 (CAD). Grant extended to Dec 2025.

Theses

- Binepal T. **Aerosol Transfer through Semi-Permeable Membranes used in Membrane Energy Exchangers** (Thesis). University of Saskatchewan.
<https://harvest.usask.ca/bitstreams/e0922524-53ed-42b7-a78e-9de80a94a8b9/download>

Knowledge Transfer

Invited Presentations

- Castillo Toro A., Kirychuk S., Thompson B., Lemuiex J., Turgeon N., Baghadi M., Veillette M., Duchaine C. **Antimicrobial Resistance Genes in Bioaerosols from Saskatchewan Livestock Operations. CCRAH Seminar Series**, January 21, 2025, University of Saskatchewan, Saskatoon, Saskatchewan
- Kirychuk S. **Canadian Centre for Rural and Agricultural Health. Cultivating Knowledge: Agriculture across the disciplines – Agriculture and Human Health Seminar Series**, College of Agriculture and Bioresources, University of Saskatchewan, September 18, 2024, Saskatoon, SK
- Castillo Toro A., Kirychuk S., Thompson B., Nolting C., Lemieux J., Veillette M., Turgeon N., Duchaine C. **Analysis of the presence and dispersion of Antibiotic-resistant genes from swine centres. Respiratory Research Centre Graduate Student Seminar**, May 14, 2024, Saskatoon, Canada
- Koehncke N. **Occupational Radiation Exposures in Veterinary Medicine. Alberta Veterinary Technician's Association Annual Meeting**. November 2024. Virtual via zoom.
- Koehncke N. **Occupational Exposures and Health Issues in Veterinary Medicine. Occupational and Environmental Medical Association Annual Conference (OEMAC)**. September 2024. Edmonton, AB.
- Koehncke N. **Harvesting Wellness: Occupational Medicine in Agriculture. Annual Conference of the Occupational Medicine Section of the Alberta Medical Association**. April 2025. Edmonton, AB.

Media/Online/Technical Reports

- **Clearing the air: ionization as a new green way to remove pathogens on barn inlets, Canadian Poultry Magazine, May 2025.** <https://www.canadianpoultrymag.com/clearing-the-air-2/>
- **Lighten up on egg washing: New research uses light source, charged water particles, to wash eggs safely. Canadian Poultry Magazine, September 2024 issue, By Lisa McLean** <http://magazine.canadianpoultrymag.com/publication/?m=1191&i=827972&p=14&ver=html5>
- **A greener, safer way of cleaning eggs, June 25, 2024, manitobacooperator.ca, By Janelle Rudolph,** <https://www.manitobacooperator.ca/livestock/a-greener-safer-way-of-cleaning-eggs/>
- **Researchers improving egg decontamination, June 10 2024, TheReview.ca, By Review Newsroom.** <https://thereview.ca/2024/06/10/researchers-improving-egg-decontamination/>

- **New Egg Decontamination Method Preserves Nutritional Quality, June 7, 2024, Farms.com**, By Victoria Schramm, <https://www.farms.com/news/new-egg-decontamination-method-preserves-nutritional-quality-211538.aspx>
- **New Chemical- and Heat-Free Egg Processing Method Kills Bacteria While Preserving Quality, June 6, 2024, food-safety.com**, By Food Safety Magazine Editorial Team, <https://www.food-safety.com/articles/9520-new-chemical-and-heat-free-egg-processing-method-kills-bacteria-while-preserving-quality>
- **Ensuring we have safe eggs to eat, Jun 6, 2024, lightsource.ca**, By Victoria Schramm, <https://www.lightsource.ca/public/news/2024-25-q1-apr-jun/ensuring-we-have-safe-eggs-to-eat.php>
- **Radio Broadcast: The Evan Bray Show - Mehdi Heydari - June 19th, 2024**, By Tamara Cherry, <https://iono.fm/e/1452653>

Biomechanics and Ergonomics Laboratory



The Biomechanics and Ergonomics Laboratory enables groundbreaking research into musculoskeletal health, ergonomics, and human movement. The lab is equipped with optical motion capture, inertial measurement units, electromyography, force plate and force cubes, in-field ergonomic tools, and an innovative rotopod for simulation of vibration exposures in-lab.

The mission of the Biomechanics and Ergonomics Laboratory is to improve musculoskeletal health and quality of life of rural people around the world, but with a focus on Saskatchewan. Our goal is to understand how movement and biomechanics are related to injury, musculoskeletal health, and work. The overall intended contribution of the lab is to improve health through enhanced understanding of biomechanical exposures and application of ergonomic, return-to-work, and rehabilitation interventions.



*Shoulder Health and Ergonomics Research team 2025 (left to right):
Back Row: Sophia Abiara, Kenzie Friesen, Denise Balogh, Leonardo Mauad. Middle Row: Sarah Fitzgerald, Kit Stern. Front Row: Lauryn Campbell, Sara Sagen, Dr. Angelica Lang, Hannah Verity*



Ongoing projects towards these goals have wide-reaching objectives. Recent research has examined the influence of rural residence on shoulder biomechanics of people with shoulder pain, defined shoulder movement patterns during in-field assessment of work tasks in farmers, and assessed postural exposures experienced by a range of workers at a northern mine site. Current work includes exploration of post-treatment upper limb dysfunction in breast cancer survivors, prospective investigation into the role biomechanics play in the development of shoulder injuries, and collaborations with clinical researchers to understand the long-term biomechanical effects of orthopedic surgeries.

CCRAH Team Members

Lead



Dr. Angelica Lang

Dr. Angelica Lang is an Assistant Professor in the College of Medicine at the University of Saskatchewan. She is the Scientific Lead of the Shoulder Health and Ergonomics Research (SHER) team. Dr. Lang's primary areas of expertise are shoulder musculoskeletal health, biomechanics, and ergonomics. Her work aims to improve musculoskeletal health and quality of life by determining how biomechanics are related to work demands and injuries.

Trainees

- **Denise Balogh**, PhD student
- **Sarah Fitzgerald**, PhD student
- **Opeyemi Vincent Akinluyi**, MSc student
- **Lauryn Campbell**, MSc student
- **Sara Sagen**, MSc student
- **Sophia Abiara**, undergraduate student
- **Annaka Chornyeko**, MD Undergraduate Student
- **Hannah Verity**, MD Student
- **Leonardo Mauad**, Visiting Research Student and PhD student
- **Dr. Kenzie Friesen**, Postdoctoral Fellow

Other Members

Faculty and Academic

- | | |
|----------------------------------|-----------------------------------|
| • Dr. Niels Koehncke | • Dr. George Katselis |
| • Dr. Steve Milosavljevic | • Dr. Soo Kim |
| • Dr. Gary Groot | • Dr. Tracey Carr |
| • Dr. John Barden | • Dr. Scott Adams |
| • Dr. Amal Khan | • Dr. Brenna Bath |
| • Dr. Joel Lanovaz | • Dr. David Sauder |
| • Dr. Ethan Patterson | • Dr. Rachel Loewen-Walker |

Community

- | | |
|--------------------------|----------------------------|
| • Ivy McGrath | • Meaghan Ray Peter |
| • Deanna Ratzlaff | • Liz McKnight |
| • Sherry Boyle | |

Recognitions

1. **College of Medicine Graduate Student Research Award (CoMGRAD), Denise Balogh, Health Sciences, College of Medicine, University of Saskatchewan, 24000(CAD), September 2025 – August 2026**
2. **CIHR Project Grant Outstanding Reviewer, Dr. Angelica Lang, Canadian Institute of Health Research, Fall 2024 competition (recognition for 17% of reviewers)**
3. **CIHR Fellowship Award, Dr. Kenzie Friesen, Canadian Centre for Rural and Agricultural Health, University of Saskatchewan, 140000(CAD), September 2024 – August 2026**
4. **Health Sciences Graduate Scholarship, Denise Balogh, Health Sciences, College of Medicine, University of Saskatchewan, 24000(CAD), September 2024 – August 2025**
5. **NSERC Undergraduate Summer Research Award, Sophia Abiara, Kinesiology, University of Saskatchewan, 6000(CAD), May 2024-August 2024**

Research Projects / Programs

Defining Farmer Upper Limb postural Exposures during high-risk work tasks

Work-related musculoskeletal disorders (MSDs) are prevalent in agricultural producers. In Canada, and in Saskatchewan specifically where 40% of national farming production occurs, up to 85% of farmers and farm workers report pain in at least one body part. Our recent research suggests that upper limb (shoulder and neck) MSDs were among the most frequently experienced by farmers of both sexes and a wide age range, but upper limb MSD research in producers is limited. The goal of recently completed WorkSafeBC-funded project (\$50,000/1 year) was to define typical postures and kinematics for producers with and without shoulder pain during high-risk farm work tasks. Postural data from 46 farmers and farm workers, collected in in-field agricultural settings, indicate that movement compensations were present in farmers with shoulder pain, but the type of alteration depended on the task performed.



WORK SAFE BC

Additionally, our data provide a novel definition of arm rotation required during these tasks, which is new information about work-related postural demands. This study supports the theory that kinematics contribute to shoulder injury risk factors in many aspects of farm work. Knowledge translation documents are in development to share with farmers to reduce the burden of upper limb MSDs, including education and injury prevention strategies.

Collaborators: Dr Niels Koehncke

Students: Denise Balogh (PhD student), Opeyemi Vincent Akinuyi (MSc student)

Manuscripts submitted: Journal of Agromedicine, International Journal of Industrial Ergonomics

Shoulder dysfunction and breast cancer treatment: biomechanical analysis of the impact of reconstruction and mastectomy



Collaborators: Drs. Soo Kim (School of Rehabilitation Sciences), Gary Groot (Surgery/Community Health and Epidemiology), Tracey Carr (Community Health and Epidemiology), John Barden (University of Regina)
Community Partners: Ivy McGrath, Deanna Ratzlaff, Sherry Boyle

Many breast cancer survivors experience upper limb problems after routine treatment, and these problems may be worsened by breast reconstruction. Kinematics, or body motion, can also be negatively affected by breast cancer treatment, influencing functional abilities and secondary injury risk. Improved definition of this relationship is sorely needed. Therefore, the primary aim of this project is to define upper limb kinematics in breast cancer survivors with and without shoulder pain. Our results will provide critical information needed to enhance awareness of post-treatment dysfunction to guide shared decision-making with patients and inform novel post-surgical rehabilitation interventions for breast cancer survivors. This work is funded by a Canadian Institute of Health Research Project Grant (\$350,000/4 years) and the Canadian Cancer Society (\$490,000/5 years). Recruitment of 150 breast cancer survivors is ongoing.

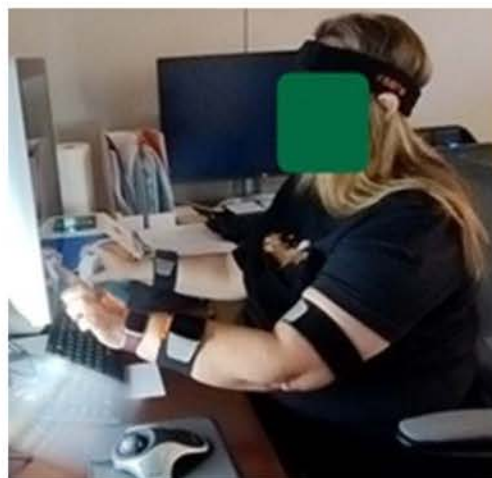


**Canadian
Cancer
Society**



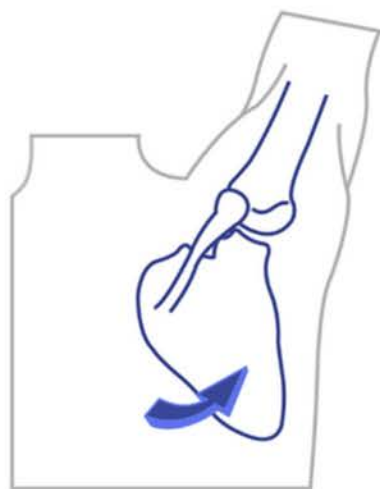
Ergonomic evaluation of robotic telesonography

Ultrasound sonographers have high levels of upper limb musculoskeletal disorders, due to known exposure to risk factors such as awkward postures and repetitive movements. A new type of sonography, robotic telesonography, in which an expert (sonographer) remotely performs sonography in real time, has recently emerged as an opportunity to perform sonography regardless of a patient's location. The new robotic arm ultrasound may mitigate some of these risk factors or possibly result in different types or levels of exposures. This collaborative project with the University of Saskatchewan's Virtual Health Hub is conducting an ongoing ergonomic evaluation of robotic telesonography. Robotic telesonography has the potential to greatly enhance access to imaging in rural communities, but worker health needs to be considered before this care can be introduced at a larger scale. Data collection is ongoing.



Collaborators: Dr. Scott Adams (Department of Medical Imaging, Virtual Health Hub), Dr. Amal Khan (Community Health and Epidemiology, Virtual Health Hub), Leonardo Mauad (Visiting PhD student, University of Sao Paulo)

Do time and rural residence affect upper limb biomechanical alterations in rotator cuff disease?



Shoulder pain is common. The most frequent cause of pain and disability of the upper limb is injury to rotator cuff muscles, the small muscles surrounding the shoulder. Our team's previous research suggests there are movement strategy alterations that are related to rotator cuff disease development, but more research is needed to define this relationship. The first objective of this Saskatchewan Health Research Foundation-funded project (\$120,000/3 years) found that, in a cross-sectional sample, as time since injury increases, the more harmful movement becomes, suggesting that negative compensations are occurring over time that are preventing full recovery from rotator cuff disorders. This relationship is more pronounced in rural individuals. The second objective examined longitudinal data over one year. The longitudinal data also showed regression to more harmful movement

patterns over time but indicated that sex and age influence the changes. This study indicates there is a previously unconsidered temporal component to the relationship between injury and kinematics, which can be leveraged to improve prevention and treatment.

Collaborators: Drs. Brenna Bath (School of Rehabilitation Sciences), Joel Lanovaz (College of Kinesiology)

Students: Lauryn Campell (MSc student), Sophia Abiara (undergraduate)

Manuscripts under review: Journal of Electromyography and Kinesiology Special Edition

Whole body vibration and shoulder musculoskeletal disorders



Operating large equipment on farms is associated with musculoskeletal disorders. The low back, neck, and shoulder are most frequently reported to be affected. Evidence suggests both driving for long periods and exposure to whole body vibration influence the pain and injuries, however it is not clear to what extent both factors cause, or exacerbate, symptoms. The overarching goal of this ongoing research is to explore how driving, arm posture, and whole body vibration affect shoulder pain and discomfort during simulated vehicle operations. Recruitment is in progress.

Students: Sara Sagen (MSc student)

Factors Contributing to Distal Biceps Tearing in the Supinated Arm of Deadlifters: A Biomechanical Study

This collaborative study with clinician-researchers in orthopedic surgery is exploring the mechanisms of distal biceps tears in deadlifting. These muscle tears can occur in weightlifters, both recreational and competitive, but the tears almost exclusively happen to the supinated arm (palm forward) in a mixed grip deadlift. However, the typically accepted reasons for biceps tears do not apply to these deadlifts, so further research is needed to understand injury mechanisms.

Collaborators: Dr. David Sauder (Orthopedic Surgery), Dr. Ethan Patterson (Family Medicine)



Exploring the musculoskeletal health needs after gender affirming top surgery

Transgender and gender diverse (TGD) people are important members of our diverse society with distinct health care experiences and needs. Gender-affirming surgery, like top surgery, is often medically necessary to alleviate gender dysphoria. These procedures may have physical side effects for patients that are not well understood. The purpose of this study was to define the scope and scale of potential postsurgical upper limb musculoskeletal symptoms in TGD individuals in Canada. The first portion of the study, an online survey, indicates the majority of respondents experienced at least one musculoskeletal symptom after surgery. Responses to open-ended questions also indicate a need for improved access to trans safe care. The second phase will consist of a discussion-style focus group with people who have had top surgery to further explore post-surgical challenges, as well as best practices for knowledge exchange of our study findings.

Students: Sarah Fitzgerald (PhD student)

Co-Investigators: Brenna Bath (School of Rehabilitation Sciences), Tracey Carr (Community Health and Epidemiology), Soo Kim (School of Rehabilitation Sciences), Rachel Loewen-Walker (College of Arts and Sciences), Meaghan Ray Peters (Community Partner), & Liz McKnight (Community Partner)



Scapular kinematics and functional movement: exploring best practice methods from calibration to application.

Ongoing research in the SHER Lab, funded by a Discovery Grant (\$165,000/5 years) from the Natural Sciences and Engineering Research Council of Canada (NSERC) is exploring the best practice methods for measuring and calculating the motion of scapula – commonly known as the shoulder blade – to eventually improve the understanding of what causes shoulder injuries and how to remedy them. Current progress is assessing how different body compositions affect common measurement and calculation procedures as an additional step to validate methods for the whole population, and future work will explore predictions with regression models and machine learning.

Students: Sophia Abiara (NSERC Undergraduate Research Student Award), Denise Balogh (PhD student)



Scientific Communication

Publications

- Balogh, D.*, Cui, X., Mayer, M., Koehncke, N., Dueck, R., & Lang, A.E. (2025). **Reliability and agreement during the Rapid Entire Body Assessment: comparing rater expertise and artificial intelligence.** *PLOS One*, In Press.
 - About: This paper assessed the reliability of an AI-based app to assess ergonomic exposures. Findings suggest the app has acceptable agreement and may be useful for large-scale ergonomics studies, especially for researchers with low ergonomic assessment experience. This approach can be applied to future work and has been used to assess large animal veterinarians during imaging of horses on farms.
- Pointer, J., Lang, A.E., Balogh, D.*, Osgood, N. & Kim, S. (2025). **Accuracy of Shoulder Range of Motion Measures Collected by a Breast Cancer Smartphone Application: Assessment in Healthy Adults.** *Digital Health*, 11.
 - About: This study validated use of a smartphone app to collect range of motion outcomes in breast cancer survivors. The availability of a rehabilitation app will improve access to care for survivors, particularly those living in rural areas.
- Balogh, D.* & Lang, A.E. (2025). **Quantifying the trunk and humeral ergonomic demands of uranium mine site workers using wearable sensors.** *Journal of Occupational and Environmental Medicine*, In Press.
 - About: Workers in mines in Northern Saskatchewan are an important contingent of the rural workforce, and there are a wide range of occupations on a mine site, including miners, tradespeople, and support workers. This study highlighted high work demands in many occupations, providing further awareness of risk factors for injuries in previously unexplored jobs and tasks in the rural workforce.
- Lang, A.E. (2024). **Repeatability of two methods for estimating scapular kinematics during dynamic functional tasks.** *Journal of Biomechanics*, 176: 112334.
 - About: This methodological study will inform future biomechanical studies of a wide range of clinical and occupational groups.
- Lang, A.E., Chorneyko, A.W.*, Heinrichs, V.M.* (2024). **Comparing and characterizing scapular muscle activations in males and females during execution of common functional movement.** *PeerJ*, 12, e17728.
 - About: This research highlighted muscle activation differences between sexes during commonly performed functional movements, indicating research should continue to include sex as factor when assessing muscle activity and biomechanics.
- Yung, M., Milosavljevic, S., Lang, A.E., Tennant, L.M., & Trask, C.M. (2024). **Exploring the link between occupationally relevant whole body vibration and headache and neck pain: Is elevated muscle tension an intermediary factor?** *Annals of Work Exposure and Health*, 68(8): 779-790.

- About: Whole body vibration is a common exposure in rural and agricultural populations, and is linked to neck and back discomfort and headaches. This research indicates that further exploration between vibration and muscle tension is needed.

Conference Abstracts

- Balogh, D.* & Lang, A.E. (August 2024). **Quantifying trunk and humeral ergonomic risk factors in mine site workers.** Canadian Society of Biomechanics Conference, Edmonton, AB.
- Campbell, L.,* Abiara, S.,* & Lang, A.E. (August 2024). **Time since pain onset and age influence scapular kinematics during an overhead reaching task.** Canadian Society of Biomechanics Conference, Edmonton, AB.
- Heinrichs, V.* & Lang, A.E. (June 2024). **The acute effects of lower trapezius activation exercise on shoulder biomechanics during functional tasks: a pilot study of asymptomatic adults.** Highlights in Medicine 39th Annual Conference, University of Saskatchewan, Saskatoon, SK.
- Waslen, A.*, Sims, L., Sauder, D., & Lang, A.E. (June 2024). **How do full wrist fusions affect upper limb kinematics during functional task performance?** Canadian Orthopedic Association Conference, Halifax, NS.
- Balogh, D.* & Lang, A.E. (June 2024). **Exploration of upper limb postural risk factors for injury on a Northern Saskatchewan mine site.** International Shoulder Group Conference, York University, Toronto, ON.
- Campbell, L.,* Abiara, S.,* & Lang, A.E. (June 2024). **Influence of time since pain onset on kinematics in work-related functional tasks.** International Shoulder Group Conference, York University, Toronto, ON.
- Lang, A.E., Campbell, L.*, & Abiara, S.* (May 2024). **Time since pain onset influences shoulder motion in people with rotator cuff disorders: a study of rural and urban Saskatchewan.** Department of Medicine Research Day, University of Saskatchewan, Saskatoon, SK.
- Waslen, A.*, Sims, L., Sauder, D., & Lang, A.E. (May 2024). **Wrist fusion surgery alters shoulder kinematics during functional tasks compared to non-fusion side.** Department of Surgery Research Day, University of Saskatchewan, Saskatoon, SK.
- Verity, H.*, Campbell, L.*, & Lang, A.E. (October 2024). **Shoulder kinematics change over time in the presence of rotator cuff disorders: a preliminary analysis of longitudinal data.** College of Medicine Undergraduate Research Symposium, University of Saskatchewan, Saskatoon, SK.
- Chorneyko, A.*, Nair, B. & Lang, A.E. (October 2024). **Assessment of upper limb kinematics and function in patients with rheumatoid arthritis.** College of Medicine Undergraduate Research Symposium, University of Saskatchewan, Saskatoon, SK.
- Akinluyi, O.V.,* Balogh, D.,* & Lang, A.E. (August 2024). **Evaluating the effects of age on upper limb kinematics during high risk farm tasks among Saskatchewan farmers.**

Canadian Society of Biomechanics Conference, Edmonton, AB.

- Chorneyko, A.,* Heinrichs, V.,* & Lang, A.E. (June 2024). **Sex differences in scapular muscle activation ratios and kinematics during functional tasks. International Shoulder Group Conference**, York University, Toronto, ON.
- Watterworth, M.W.B, Auray, W.M., Lang, A.E., & La Dela, N.J. (May 2024). **Validating Theia3D markerless motion capture: a comparison with Vicon for shoulder elevation. Ontario Biomechanics Conference**. York University, Toronto, ON.
- Balogh, D.* & Lang, A.E. (May 2024). **Investigating trunk and humeral postural demands across a uranium mine site. Life and Health Sciences Research Expo**, College of Medicine, University of Saskatchewan, Saskatoon, SK.
- Campbell, L.,* Abiara, S.,* & Lang, A.E. (May 2024). **Influence of time since pain onset and age on scapular kinematics during an overhead reaching task. Life and Health Sciences Research Expo**, College of Medicine, University of Saskatchewan, Saskatoon, SK.
- Akinluyu, O.V.,* Balogh, D.,* & Lang, A.E. (May 2024). **Evaluating the effects of age and sex on upper limb kinematics among Saskatchewan farmers. Life and Health Sciences Research Expo**, College of Medicine, University of Saskatchewan, Saskatoon, SK.

Grants

- Khan, A., Mendez, I., Adams, S., & Lang, A.E. (January 2025-December 2025). **Development and evaluation of a novel robotic arm ultrasound system to improve access to pediatric and prenatal ultrasound services in rural and remote communities of Saskatchewan**. 30000 (CAD). College of Medicine Research Award, College of Medicine, University of Saskatchewan.
- Cardoso, M., Albert, W., & Lang, A.E. (January 2025- December 2025). **An investigation of the physical task demands of caregivers working a long-term care facility**. 33000 (CAD). Partnership with WorkSafe Saskatchewan.
- Lang, A.E. (NPI), Groot, G., Kim, S.Y., Carr, T., & Barden, J. (April 2024 - April 2028). **Shoulder dysfunction and breast cancer treatment: biomechanical analysis of the impact of reconstruction and mastectomy**. 348076 (CAD). Project Grant, Canadian Institute of Health Research.
- Lang, A.E. (PI), Carr, T., Groot, G., Kim, S.Y., Ratzlaff, D., Boyle, S., & McGrath, I. (December 2023 – December 2028). **Exploring functional abilities after breast reconstruction to maintain breast cancer survivor quality of life: a combined biomechanical and qualitative analysis**, 492450 (CAD). Emerging Scholar Research Grant, Canadian Cancer Society.
- Lang, A.E. (PI) (April 2023 - March 2028). **Scapular kinematics and functional movement: exploring best practice methods from calibration to application**, 177500.0 (CAD). Discovery Grant - Individual, Natural Sciences and Engineering Research Council of Canada.

Knowledge Transfer

Invited Presentations

- Lang, A.E. (April 2025). **How does the way we move at work influence injury risk?** **Saskatchewan Society of Nutrition Management Annual Conference**, Saskatoon, SK.
- Lang, A.E. (April 2025). **Shoulder dysfunction after breast cancer treatment: what do we know and what's next.** **InPower Regina**, Regina, SK [virtual].
- Lang, A.E. (February 2025). **Shoulder dysfunction after breast cancer treatment: biomechanical analysis of mastectomy and reconstruction.** **3rd Annual Chandra Dattani Breast Cancer Symposium**, Saskatoon, SK.
- Lang, A.E. (October 2024). **Measurement of shoulder motion: what, why, how, and what's next?** **University of Sao Paulo**, Sao Paulo, Brazil [virtual].
- Lang, A.E. (September 2024). **Shoulder Health and Ergonomics Research at the University of Saskatchewan**, **Saskatchewan Mining Association International Health Facility Guidelines Q3 Meeting**, Orano, Saskatoon, SK.
- Lang, A.E. (June 2024). **Insights into shoulder musculoskeletal disorders: methodology and applications of biomechanics**, **Ontario Tech University**.
- **Department of Medicine Grand Rounds, "Shoulder Health and Ergonomics research,"** University of Saskatchewan. Saskatoon, SK. September 18th, 2024.

Media/Online/Technical Reports

- Balogh, D., Tomilin, M., & Lang, A.E. (2024). **Evaluation of whole body vibration exposure at the MacArthur River mine site.** Report for Industry Partner.

Outputs/Media

- Author of knowledge translation resource for breast cancer survivors: **Upper Limb Musculoskeletal Health and Breast Cancer**, <https://research-groups.usask.ca/ergolab//our-research/breast-cancer-and-msk-health.php>
- **Globe and Mail newspaper article, Globe and Mail, May 2024.** <https://www.theglobeandmail.com/business/adv/article-research-insights-informing-policy-and-care/>

Rural Dementia Laboratory



The goal of the Rural Dementia Laboratory and the Rural Dementia Action Research (RaDAR) team is to improve health care delivery for persons living with dementia in rural/remote settings. The RaDAR team is an interdisciplinary group of knowledge users and researchers. We see a pressing need for improved healthcare delivery to rural populations, which have a higher proportion of older adults than cities, but fewer primary health care, specialist, and support services available locally. Two streams to the RaDAR program are the specialist Rural and Remote Memory Clinic on USask campus, and Rural Primary Health Care Memory Clinics located in several communities.

RaDAR investigators share a team research approach that involves affiliated studies focusing on the diagnosis, management, and care of individuals with dementia and their caregivers.

At CCRAH the specialist Rural and Remote Memory Clinic is anchored in the Rural Dementia Laboratory, which was custom designed to support families and patients, as well as clinical team members, during the day-long team assessment appointment. CCRAH offers use of this clinical space – for an infrastructure charge – to our collaborators, such as the Chronic Pain Clinic and a Huntington's Disease Clinic.

CCRAH Team Members

Leads



Dr. Debra Morgan

Dr. Debra Morgan, CCRAH Professor and College of Medicine Chair in Rural Health Delivery, led the interdisciplinary RaDAR team from 2003 to 2024. Dr. Morgan was a founding member of the specialist RaDAR Rural and Remote Memory Clinic (RRMC) established in 2004 as a 5-year research demonstration project and subsequently funded by the Ministry of Health. For the last decade she has been focused on collaborating with rural primary healthcare teams to develop, implement, sustain, and spread rural memory clinics. Dr. Morgan retired at the end of 2024 and will continue to support RaDAR activities in an Emeritus role.



Dr. Julie Kosteniuk

Dr. Julie Kosteniuk is a co-lead of the Rural Dementia Action Research (RaDAR) team and specializes in dementia epidemiology. Her research focuses on the intersection of mental health and aging, with a particular emphasis on depressive disorders among individuals living with dementia. Dr. Kosteniuk is deeply committed to improving rural health services and enhancing the capacity of rural and remote health care professionals to deliver high-quality, person-centered dementia care. Her work also explores innovative models of primary health care that support individuals with dementia and their caregivers in underserved communities.



Dr. Megan O'Connell

Dr. Megan O'Connell is a professor in the Department of Psychology and Health Studies and Co-Lead of the Rural Dementia Action Research (RaDAR) team. A clinical neuropsychologist by training, her research focuses on neuropsychological assessment and interventions for individuals and families affected by dementia. Dr. O'Connell's work emphasizes the development and evaluation of innovative approaches to care, including telehealth-based caregiver support, exercise programs, and cognitive rehabilitation. Her current research also explores the refinement of neuropsychological measurement tools relevant to dementia diagnosis and care.



Dr. Allison Cammer

Dr. Allison Cammer is an Associate Professor and Director of Dietetics in the College of Pharmacy and Nutrition at the University of Saskatchewan, and Co-Lead of the Rural Dementia Action Research (RaDAR) team. A Registered Dietitian, Dr. Cammer's research centers on the role of nutrition in supporting individuals living with dementia. Her work contributes to advancing evidence-based dietary strategies and care practices that enhance quality of life for people with dementia and their caregivers, particularly in rural and remote communities.

Staff

- **Heather Alford**, Research Assistant
- **Shelley Biller**, Clerical Support
- **Chelsie Cameron**, Research Assistant
- **Jean Daku**, Nurse Practitioner
- **Valerie Elliot**, Research Officer
- **Jennifer Fairbairn**, Physiotherapist
- **Tora Levinton**, Research Assistant
- **Duane Minish**, Research Officer
- **Darla Walz**, Clinic Nurse

Trainees

- **Ashlee Buekert**, MSc student
- **Amanda Dupperon**, PhD student
- **Patrick Fahim**, PhD student
- **Erin Fedusiak**, Undergraduate student
- **Meghan Flath**, PhD student
- **Ben Gould**, PhD student
- **Emily Gulka**, PhD student
- **Erin Leeder**, PhD student
- **Abby Lehmann**, MSc student
- **Seshni Naidoo**, MSc student
- **Jordan Wellsch**, PhD student
- **Brianna Wickett**, Undergraduate student

Other Members Faculty and Academic

- **Dr. Andrew Kirk**
- **Dr. Norma Stewart (Emeritus)**
- **Dr. Megan O'Connell**
- **Dr. Allison Cammer**
- **Dr. Amanda Froehlich Chow**
- **Dr. Bonnie Jeffery**
- **Dr. Jayna Holroyd-Leduc**
- **Dr. Rachel Herron**
- **Dr. Jennifer Walker**
- **Dr. Arlene Astell**
- **Dr. Gary Naglie**
- **Dr. Mark Skinner**
- **Dr. Natalie Bier**
- **Dr. Jane Farmer**
- **Dr. Paulette Hunter**
- **Dr. Lachlan McWilliams**
- **Dr. Shelley Peacock**
- **Dr. Elizabeth Rhynold**
- **Dr. Margaret Crossley (Emeritus)**
- **Dr. Thomas Hadjistavropoulos**
- **Dr. Kristen Haase**
- **Dr. Vanina Dal Bello Haas**
- **Dr. Katherine McGilton**
- **Dr. Dallas Seitz**
- **Dr. Mark Rapoport**
- **Dr. Isabelle Vedel**
- **Dr. Irene Blackberry**
- **Dr. Anthea Innes**

Recognitions

- **Heather Alford**, MSc Nutrition, supervised by Dr. Allison Cammer. On December 13, 2024 Heather successfully defended her thesis, 'Nutrition as Family's Bridge to Dementia Care in Long-Term Care: A Grounded Theory Study.'
- **Karl Grewal**, PhD student, Clinical Psychology with Dr. O'Connell, on the successful defense of his PhD dissertation in the Department of Psychology and Health Studies! PhD dissertation: "Integrating Cognitive Rehabilitation and Technology for Individuals with Memory Concerns."
- **August Kortzman**, PhD student, Clinical Psychology with Dr. O'Connell, on the successful defense of his PhD dissertations in the Department of Psychology and Health Studies! PhD dissertation: "Informal Social Support in Caregivers of Persons with Dementia: A Systematic Review of Effectiveness of Informal Social Support Interventions and a Trial Intervention."
- **Jake Ursenbach**, PhD student, Clinical Psychology with Dr. O'Connell, on the successful defense of his PhD dissertation in the Department of Psychology and Health Studies! PhD dissertation: "Improving Cognitive Assessment in the Context of Rural Dementia Diagnosis."

Bilokreli Family Trust Fund

The RaDAR team is the recipient of funding to support Summit and the team's activities, generously provided by the Bilokreli family. The family has an interest in supporting rural dementia research in the province, and we are pleased to offer student poster prizes in their name to student trainees working in the field. The Bilokreli Student poster prizes at the 17th Annual Summit were awarded to:



Erin Fedusiak



Heather Alford



Brianna Wickett

Research Projects / Programs



Dr. Megan O'Connell is a co-investigator on a recently funded New Frontiers in Research Fund (NFRF) Transformation Grant for \$24,000,000 CAD, led by Dr. Jennifer Walker of McMaster University. This is a six-year Indigenous-led project to transform brain health and develop a bundle of dementia assessment tools tailored specifically to Indigenous communities.



Dr. Julie Kosteniuk leads the study "Exploring opportunities to increase rural primary care readiness for dementia care" funded by a Saskatchewan Health Research Foundation Establishment Grant (2024-2027). The study involves a provincial survey examining collaborations and resources for dementia care in primary care, an investigation of rural-urban differences in dementia diagnosis rates, and evaluation of a rural hybrid memory clinic model. This research will inform recommendations for practices, policies, and services to support quality care for people living with dementia in rural communities.



Dr. Allison Cammer leads The Cognitive Kitchen, an evidence-based culinary and nutrition program to enhance food literacy skills and support rural people to maintain health at home. Sessions are offered virtually to rural older adults and care partners of people living with dementia. The program involves food preparation elements as well as discussion of strategies to support dementia risk reduction and living well with dementia.

The Cognitive Kitchen



The Cognitive Kitchen – Recruitment Poster



This evidence-based program was codesigned by RaDAR team members and patient-family partners. It is being offered both virtually for adults 55+ and care partners of people living with dementia. Each session in the six-part series includes a hands-on preparation component and discussion on strategies to support dementia risk reduction and living well with dementia. Programs are being scheduled based on participant interest and availability, so register now to be the first to know when one is available to suit your preferences!

To register, please complete the intake survey to confirm your eligibility and scheduling preferences:

<https://www.surveymonkey.ca/r/cognitivekitchenintake>.

To learn more, visit:

<https://cchsaccssma.usask.ca/ruraldementiacare/research-and-projects/resource-art/2023-cog-kit-program.php>

or contact the program coordinator at julie.beitel@usask.ca or (306) 966-5303.

Dr. Megan O'Connell



Dr. Megan O'Connell

Dr. Megan O'Connell currently has a number of graduate students working on dissertations. Benjamin Gould is completing work on exploring user needs for technology to support aging well in First Nations communities in PEI. Meghan Flath has completed data collection for her study on barriers and facilitators to pet ownership for older adults and will begin data analysis. She is surveying veterinarians and family members of older adults on their experiences with older adults and pet ownership in order to examine ways to address the identified barriers and promote the facilitators to older adult pet ownership.

Karl Grewal, Jake Ursenbach, and August Kortzman have all successfully defended their dissertations in the last 12 months. Dr. Grewal's dissertation developed a more detailed understanding of how technology could support individuals living with memory concerns and their families. He published two first-authored articles from this work in late 2024 in JMIR Formative Research and Archives of Clinical Neuropsychology, respectively.

Dr. Ursenbach's thesis, "Improving Cognitive Assessment in the Context of Rural Dementia Diagnosis," comprises three studies addressing the gap in the validity of assessment with rural-dwelling populations by investigating measurement equivalence of cognitive assessment instruments and the validity of computerized cognitive tests in rural and urban populations. Both Drs. Grewal and Ursenbach are now in clinical neuropsychology practices.

Dr. Kortzman has just defended his thesis, "Informal Social Support in Caregivers of Persons with Dementia: A Systematic Review of Effectiveness of Informal Social Support Interventions and a Trial Intervention," this past April. He is continuing his work in the RRMC.

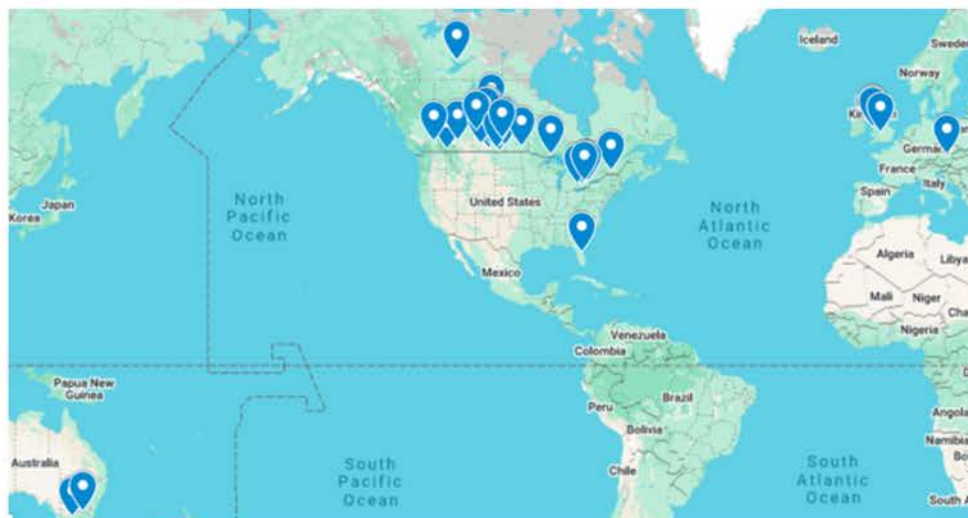
Dr. Megan O'Connell is collaborating with numerous partners across Canada. She is the co-principal investigator, with Dr. Jennifer Walker of McMaster University on a CIHR-funded project to increase support for Indigenous care partners of persons living with dementia. The project has been given an Anishinaabe name by our community partners: Bemekmegick Onendahmawin, which means "support for those who are looking after ones with memory loss."

She has recently received funding from SHRF for a pilot project examining barriers and facilitators of virtual support groups for Indigenous care partners in Saskatchewan, with the Alzheimer Society of Saskatchewan (ASOS). Also, with ASOS, Dr. O'Connell is bringing components of Interpersonal Therapy to care partner support groups, and a website and podcast series are currently in development.



Summit of the Knowledge Network in Rural and Remote Dementia Care

The RaDAR research program is guided by the Knowledge Network in Rural and Remote Dementia Care. The Network consists of people living with dementia and family members, front-line health care providers and managers, and other stakeholders including health region representatives, international researchers, and individuals from governmental and community-based organizations. The Network meets annually at the Rural Dementia Care Summit, the RaDAR team's key knowledge exchange event, where members provide input into new and ongoing research projects and learn about new dementia care research taking place in Saskatchewan and internationally. Duane Minish directs Summit organization and coordination each year.



Summit 2024 Attendees joined from around the world



*2024 Summit Keynote
Presenter Dr. Debra
Morgan*

The RaDAR team held its 17th annual Summit meeting virtually on November 26th & 27th, 2024. Summit 2024 was the team's fifth to be held as an online only virtual event. More than one hundred fifty attendees joined the two-day online event that included an evening poster session and both live and pre-recorded presentations on a variety of topics with a diverse group of presenters. Attendees joined from across Canada and internationally from Australia, Austria, Ireland, Netherlands, United States, and United Kingdom.

More information about the Summit can be found on the RaDAR team's website under the Previous Summits tab:

www.ruraldementiacare.usask.ca

Scientific Communication

Publications

- Cetin-Sahin, D., Godard-Sebillotte, C., Bronskill, S. E., Seitz, D., Morgan, D. G., MacLagan, L. C., Sourial, N., Quail, J., Gruneir, A., Wilchesky, M., Rochette, L., Kubuta Massamba, V., Youngson, E. E., Diong, C., Smith, E. E., Arsenault-Lapierre, G., Le Berre, M., Maxwell, C. J. , Kosteniuk, J., Bosson-Rieutort, D., Wang, T. , Miskucza, K. , Vedel, I., & The COVID-ROSA Research Team. (2025). **The COVID-19 pandemic and dementia: A multijurisdictional meta-analysis of the impact of the first two pandemic waves on acute healthcare utilization and mortality in Canada.** Canadian Geriatrics Journal. March;28(1):16-30.
<https://doi.org/10.5770/cgj.28.776>
 - About: Using administrative data from 4 provinces, this study estimated the impact of the first two COVID-19 pandemic waves on health service use in persons with dementia. The study found all-cause ED visits and hospitalizations decreased among community and nursing home populations in the first wave, mortality was higher in nursing homes in the first wave, and mortality was higher in the community in the second wave. The study highlights the importance of ensuring people living with dementia receive necessary services in future health crises.
- Chertkow, H., Phillips, N., Rockwood, K., Anderson, N., Andrew, M. K., Bartha, R., Beaudoin, C., Bélanger, N., Bellec, P., Belleville, S., Bergman, H., Best, S., Bethell, J., Bherer, L., Black, S., Borrie, M., Camicioli, R., Carrier, J., Morgan, D., O'Connell, M. E., Wittich, W. (2024). **Impact of a national dementia research consortium: The Canadian Consortium on Neurodegeneration in Aging (CCNA).** Journal of Alzheimer's disease : JAD, 102(3), 535–561. <https://doi.org/10.1177/13872877241290990>
 - About: The Canadian Consortium on Neurodegeneration in Aging (CCNA) was created by the Canadian federal government through its health research funding agency, the Canadian Institutes for Health Research (CIHR), in 2014, as a response to the G7 initiative to fight dementia. Responding to the needs of researchers within the CCNA teams, a unique sample of 1173 deeply phenotyped patients with various forms of dementia was accrued and studied over eight years (COMPASS-ND). CCNA's Team 15 led by Drs. Debra Morgan and Megan O'Connell (University of Saskatchewan) focused on the issue of providing adequate care for patients with dementia living in rural settings.
- Dolatshahi, Y., Mayhew, A., O'Connell, M. E., Liu-Ambrose, T., Taler, V. Smith, E. E., Hogan, D. B., Kirkland, S., Costa, A. P., Wolfson, C., Raina, P., Griffith, L. & Jones, A. (2024). **Prevalence and population attributable fractions of potentially modifiable risk factors for dementia in Canada: A cross-sectional analysis of the Canadian Longitudinal Study on Aging.** Canadian Journal of Public Health, 115, 953-963. <https://doi.org/10.17269/s41997-024-00920-7>
- Elliot V., Kosteniuk J., O'Connell ME., Cameron C., Morgan D. (2024). **Services for older adults in rural primary care memory clinic communities and surrounding areas: a**

qualitative descriptive study. BMC Health Services Research. Jun 13;24(1):725.

<https://doi.org/10.1186/s12913-024-11167-w>

- About: This study described existing programs, service gaps, and service experiences of family caregivers of people living with dementia in communities in southeast Saskatchewan. A need for locally available and accessible services was identified, in addition to individualized approaches, in-home care and care continuity, and formal and informal supports. The findings point to numerous opportunities to advance service delivery for rural people living with dementia and their families.
- Fedusiak, E., Cammer, A., Wickett, B., Morgan, D., Cameron, C., Szakács, Kosteniuk J. (2025). **Implementation and acceptability of a rural active living initiative. Activities, Adaptation & Aging.** Published online ahead of print April 14, 2025.
<https://doi.org/10.1080/01924788.2025.2492995>
 - About: In this article, an active living program developed specifically for older adults living independently outside of long-term care was examined in relation to implementation and acceptability. Study participants included older adults attending the program, staff, and program developers. The findings suggest the initiative improved physical activity, mental well-being, and socialization, underscoring the importance of community health promotion for older adults.
- Golshan, F., Lysenko, R., Nabi Zade, M., Alibolandi, P., Block, H., Masiowski, P., O'Connell, M. E., Sun, G., & Mickleborough, M. (2024). **Study protocol for a randomized controlled trial of neurofeedback mindfulness in chronic migraines.** Contemporary Clinical Trials Communications, 41. <https://doi.org/10.1016/j.conctc.2024.101362>
- Grewal, K. S., Grewal, E. S., Cammer, A., McWilliams, L. A., Spiteri, R. J., O'Connell, M. E. (2024). **Case reports in the integration of technology with cognitive rehabilitation for individuals with memory concerns and their care partners.** Archives of Clinical Neuropsychology, 1–29. <https://doi.org/10.1093/arclin/acae115>
 - About: Technology can be combined with psychological interventions to support older adults with memory concerns. In rural settings, technology has helped provide access to health and support services, as well as education and information about dementia. Cognitive rehabilitation and technology present a promising avenue for supporting people living with cognitive impairment.
- Grewal, K. S., Gowda-Sookochoff, R., Peacock, S., Cammer, A., McWilliams, L. A., Spiteri, R., Haase, K. R., Harrison, M., Holtslander, L., MacRae, R., Michael, J., Green, S., O'Connell, M. E. (2024). **Perspectives on technology use in the context of caregiving for persons with dementia: Qualitative interview study.** JMIR Formative Research, 8, e63041.
<https://doi.org/10.2196/63041>
 - This study aims to further understand care partner technology use, attitudes, and the potential role of off-the-shelf technologies (eg, smartphones and smart homes) in supporting caregiving from the perspective of care partners for persons with dementia. Care partners noted that their technology use either increased or was unchanged as they moved through the COVID-19 pandemic. Care partners' reports of

increased technology use throughout the COVID-19 pandemic may also suggest that the pandemic impacted their perceptions of the usefulness of technology, being influenced by the requirements of their reality.

- Jones, A., Ali, M. U., Mayhew, A., Aryal, K., Correia, R. H., Dash, D., Manis, D. R., Rehman, A., O'Connell, M. E., Taler, V., Costa, A. P., Hogan, D. B., Wolfson, C., Raina, P., & Griffith, L. (2025). **Environmental risk factors for all-cause dementia, Alzheimer's disease dementia, vascular dementia, and mild cognitive impairment: An umbrella review and meta-analysis.** *Environmental Research*, 270, 1-7.
<https://doi.org/10.1016/j.envres.2025.121007>
- Middleton, L., Vucea-Tirabassi, V., Liu, G., Bethell, J., Cooke, H., Keller, H., Liu-Ambrose, T., O'Connell, M. E., Stapleton, J., Waldron, I., Wu, S., Yous, M. L., Aiken, C., Heibei, W., Norman, M., & McAiney, C. (2024). **Understanding the impact related to lifestyle interventions for people with dementia: A systematic review protocol.** *PLOS ONE*, 19(9), e0310690.
<https://doi.org/10.1371/journal.pone.0310690>
- Morgan D., Kosteniuk J., Bayly M. (2024). **Perceptions and outcomes of an embedded Alzheimer Society First Link Coordinator in rural primary health care memory clinics.** *BMC Health Services Research*. May 9;24(1):607. <https://doi.org/10.1186/s12913-024-11066-0>
 - About: An Alzheimer Society First Link Coordinator is a member of RaDAR rural primary health care memory clinic teams in Saskatchewan. However, little is known about how they collaborate with memory clinic teams to support dementia care. This study found the First Link Coordinator role has multiple benefits for patients and families, and for other memory clinic team members, including emotional and psychological support, connection to services, and symptom management.
- Pike, K. E., Li, L., Naismith, S., Bahar-Fuchs, A., Lee, A., Mehrani, I., Bentvelzen, A., Lautenschlager, N., O'Connell, M. E., Blackberry, I., & Mowszowski, L. (2024). **Implementation of cognitive (neuropsychological) interventions for older adults in clinical or community settings: A scoping review.** *Neuropsychology Review*.
<https://doi.org/10.1007/s11065-024-09650-6>
- Rojas-Rozo L., Arsenault-Lapierre G., Dumaresq D., Trepanier T., Lea P., Barnett K., O'Connor D., Loughlin R., Miskucza K., Wighton M., Godard-Sebillotte C., Gruneir A., Beuscart JB., Bronskill S., Sourial N., Smith E., Bethell J., Vedel I., and The COVID-ROSA Research Team (includes Debra Morgan, Megan O'Connell, and Julie Kosteniuk). (2024). **Unlocking engagement: Enhancing participation in research with vulnerable populations.** *International Journal of Public Health*. Oct 31;69, 1606705.
<https://doi.org/10.3389/ijph.2024.1606705>
 - About: This article described a 6-step tailored approach to engaging people with lived experience with dementia in a project that examined the impact of the COVID-19 pandemic on health service use in persons with dementia. The approach resulted in a research process that was more inclusive of the voices of people with dementia, with

the research structured within a human rights framework and the analysis informed by equity considerations. The findings may serve to guide other researchers in the future who would like to engage people living with particular health conditions in participatory health research.

- Sun, G., Kirk, A., Karunanayake, C., O'Connell, M. E., & Morgan, D. G. (2025). **Quality of life in patients with subjective cognitive impairment referred to a rural and remote memory clinic.** *Canadian Journal of Neurological Sciences / Journal Canadien Des Sciences Neurologiques*, 1–18. <https://doi.org/10.1017/cjn.2024.368>
 - About: We sought to compare whether quality of life (QOL) in patients with subjective cognitive impairment (SCI) who performed normally on a neuropsychological battery significantly differed from those diagnosed with mild cognitive impairment (MCI), Alzheimer's disease (AD) or non-Alzheimer's dementia (non-AD) at initial assessment in a Rural and Remote Memory Clinic (RRMC). Although they lacked clinically significant cognitive deficits, patients with SCI self-reported significantly lower QOL than patients with MCI and AD. Conversely, caregiver-reported patient QOL was higher for patients with SCI than for patients with AD and non-AD. This shows that SCI seriously impacts QOL.

Conference Abstracts

- Deobald, V., Peacock, S., Morgan, D., Campbell, D., Cammer, A. **Nurses' Experience Using Non-Pharmacological Interventions for Persons Living with Dementia in Rural Long-Term Care Facilities in Saskatchewan.** *Canadian Association on Gerontology (CAG) 53rd Annual Scientific and Educational Meeting*, Edmonton, Alberta, October 24-26, 2024.
- Griffith, L. E., Muniz-Terrera, G., van den Heuvel, E., Khattar, J., Hogan, D. B., O'Connell, M. E., Levasseur, M., & Raina, P. (2024). **The Associations between Physical, Psychological, Cognitive, Social Frailty and Health Care Utilization in Community-Dwelling Adults Aged 45-85 participating in the Canadian Longitudinal Study on Aging (CLSA).** *53rd Annual Scientific and Educational Meeting of the Canadian Association on Gerontology*, Edmonton, Alberta, October 24-26, 2024.
- Haase, K. R., Cosco, T., Peacock, S., & O'Connell, M. E. (2024). **A Multi-Method Exploration of Older Adults' Technology Use During the Pandemic in Two Canadian Provinces** [Abstract]. *Studies in Health Technology and Informatics*, 315, 704–705. <https://doi.org/10.3233/SHTI240288>
- Haase, K. R., Kardeh, B., Kilgour, H., Detwyler, D., Verma, R., Cosco, T., Peacock, S., & O'Connell, M. E. (2024). **Technology Use for Social Interaction Amongst Older Adults During the COVID-19 Pandemic: A Qualitative Study** [Paper]. *Studies in Health Technology and Informatics*, 315, 273–277. <https://doi.org/10.3233/SHTI240151>
- Kosteniuk J., Acan Osman, B., Morgan, D., Karunanayake, C., O'Connell, M.E., Cammer, A., Kirk, A., Osman, M., Campbell, A., Levinton, T., Quail, J. **Examining sex differences in health**

service use before and after diagnosis in a rural and remote memory clinic. A poster presentation at the Canadian Conference on Dementia Hot Topics 2024, October 18, 2024 (virtual presentation).

- Kosteniuk J., Morgan D., O'Connell M.E., Cameron C., Elliot V., Karunanayake C. **Family care partner self-efficacy and service needs before and after a rural memory clinic assessment. A poster presentation at the Canadian Association on Gerontology 53rd Annual Scientific and Educational Meeting**, Edmonton, Alberta, October 24-26, 2024.
- Morgan D., Bayly M., Kosteniuk J. **The care navigator role in rural primary care memory clinics. A poster presentation at the GSA 2024 Annual Scientific Meeting**. Seattle, Washington, Nov 13-16, 2024.
- O'Rourke, H. M., Hoben, M., Peacock, S., Swindle, J., Bethell, J., Boscart, V., Chamberlain, S., Cranley, L., Dal Pizzol, F. L. F., Ghosh, S., Hopper, T., McGilton, K., & O'Connell, M. E. **Connecting Today: How a facilitated remote visiting program may address loneliness of people living with dementia in care homes** [Oral presentation, accepted]. **Canadian Gerontological Nursing Association (CGNA): 23rd Biennial CGNA Conference**. Winnipeg, Manitoba, May 29-31, 2025.
- Vedel, I., Cetin-Sahin, D., Arsenault-Lapierre, G., Bronskill, S. E., Couturier, Y., Diong, C., Godard-Sebillotte, C., Gruneir, A., Lemay-Compagnat, A., MacLagan, L. C., Massamba, V., Neiterman, E., O'Connell, M. E., Roach, P., Rochette, L., Rojas-Rozo, L., Youngson, E., & Wilchesky, M. (2024). **The impact of the COVID-19 pandemic on healthcare use, mortality, and human rights of persons living with dementia in Canada** [Abstract]. *The Annals of Family Medicine*. 22(Supplement 1), 5967. <https://doi.org/10.1370/afm.22.s1.5967>

Grants

- Kosteniuk, J., O'Connell ME, Cammer A, Seitz D, Kirk A, Zorn C, Klapak D, Wiley M, Acan Osman B. **Exploring opportunities to increase rural primary care readiness for dementia care**. Saskatchewan Health Research Foundation Establishment Grant. \$149,909. July 2024-June 2027.
- O'Rourke, H. M. (NPI), Hoben, M., (co-PI), Peacock, S. (co-PI), Bethell, J., Boscart, V., Chamberlain, S., Cranley, L., Ghosh, S., Hopper, T., McGilton, K., O'Connell, M. E. (co-Is), Chaskavich, K., Checkland, C., Cornell, J., Drimer, N., Duncan, D., Eager, C., Friesen, S., Gregory, D., Haugen, L., Huhn, A., Iartseva, R., Jeannotte, A., Maisey, S., Michael, J., Peck, S., Sinden, D., Stainbrook, V., Wong, A. (Collaborators). (Oct 1 2024-Sept 30 2026). **Connecting Today to combat social isolation and loneliness: An evaluation of a remote visiting program for care home residents living with dementia**. \$300,000 CAD. Project Grant Pandemics and Health Emergencies Research – Multi-Year, Canadian Institutes of Health Research (CIHR).
- Raina, P. (NPI), Beauchamp, M., (co-PI), Carvalhal, A., Ewa, V., Feldman, S., Godard-Sebillotte, C., Iroanyah, N., Ismail, Z., Karunanathan, S., Levinson A., Main, S., O'Connell, M. E., Rajah, N., Roach, P., Sivanathan, S., Walker, J. (co-Is), Armstrong, J., Bailey, P., Barrick, C., Chambers,

- L., Checkland, C., Chow, C., Dhillon, N., Gauthier, S., Guest, T., Kadungure, C., McKenna, B., Mehta, A., Phelps, F., Saeed, H., Semeniuk, R., Shultz, J., Webster, C. (Collaborators). (2024-2030). **Mobilizing brain health and dementia guidelines for practical information and a well trained workforce with cultural competencies - the BRAID Hub - Brain health Resources And Integrated Diversity Hub.** \$2,125,000 CAD. CIHR Team Grant: Canadian Brain Health and Cognitive Impairment in Aging Research Knowledge Mobilization (KM) Hub.
- Walker, J. (NPI), Mercieca, E. (co-PI), Bartel, R., Bethell, J., Dame, J., Davis Hill, L., Edgar-Webkamigad, E., McGilton, K., Mushquash, C., Naponse, N., O'Connell, M. E., Pilon, R., Powless, J., Richmond, C., Roach, P., Webkamigad, S. (co-Is), Balaz, P., Dudley, M., Dunn, K., Garrett, N., Lewis, J., Raina, P., Smith, K. (Collaborators). (2025-2031). **Weaving Indigenous Community-led and Interdisciplinary Research to Develop Culturally Safer Wholistic Brain Health Assessment.** \$24,000,000 CAD. New Frontiers in Research Fund, Transformation Grant.

Knowledge Transfer

Invited Presentations

- Fedusiak, E., Cammer, A., Wickett, B., Morgan, D., Cameron, C., Szakacs, S., Kosteniuk, J. **Implementation and acceptability: An evaluation of an active living initiative.** An oral presentation at the Canadian Centre for Rural and Agricultural Health Research Seminar, University of Saskatchewan, Saskatoon, April 29, 2025.
- Fedusiak, E., Cammer, A., Wickett, B., Morgan, D., Cameron, C., Szakacs, S., Kosteniuk, J. **Implementation and acceptability of an active living program for rural older adults.** A poster presentation at the Knowledge Network in Rural and Remote Dementia Care: 17th Annual RaDAR Rural Dementia Summit. Saskatoon, SK (virtual poster presentation), November 26-27, 2024. *1st place Bilokreli Student Poster Prize Winner
- Kosteniuk, J., Morgan, D., O'Connell, M.E., Cameron, C., Elliot, V., Karunanayake C. **Care partners attending rural primary care memory clinics: Service needs and self-efficacy.** A poster presentation at the Knowledge Network in Rural and Remote Dementia Care: 17th Annual RaDAR Rural Dementia Summit. Saskatoon, SK (virtual poster presentation), November 26-27, 2024.
- Leeder, E., Salma, J., Froehlich Chow, A., Kosteniuk, J. **The socio-ecological model as a framework for understanding aging in place in rural Canada.** A poster presentation at the School of Public Health Poster Day. University of Saskatchewan, Saskatoon, SK, October 15, 2024.
- Morgan, D. **The Rural Dementia Action Research (RaDAR) Program: 25 years of rural dementia research.** Invited presentation in the President's Lecture Series, University of Saskatchewan. Nov 6, 2024
- Morgan, D., Kosteniuk, J., O'Connell, M.E., Kirk, A., Seitz, D., Elliot, V., Cameron, C. **RaDAR Memory Clinics.** A poster presentation at the Dementia Supports in Rural Saskatchewan Windup Summit. Yorkton, SK, June 20, 2024.
- O'Connell, M. E. (2024). **Aging and Dementia in Rural Saskatchewan.** The President's Lecture Series, College of Arts & Science, University of Saskatchewan, September 18, 2024.
- Wickett, B., Kosteniuk, J., Fedusiak, E., Morgan, D., Klapac, D., Cammer, A. **What about nutrition? An exploration of registered dietitians in community dementia care.** An oral presentation at the Canadian Centre for Rural and Agricultural Health Research Seminar, University of Saskatchewan, Saskatoon, April 29, 2025.
- Wickett, B., Kosteniuk, J., Fedusiak, E., Morgan, D., Klapac, D., Cammer, A. **Exploring the role of registered dietitians in nutrition care for persons living with dementia in the community from the perspective of health care professionals.** A poster presentation at the Knowledge Network in Rural and Remote Dementia Care: 17th Annual RaDAR Rural Dementia Summit. Saskatoon, SK (virtual poster presentation), November 26-27, 2024.*3rd place Bilokreli Student Poster Prize Winner

Media/Online/Technical Reports

- Kosteniuk J, Morgan D, Elliot V. **Rural Memory Clinics: 2024 Update.** (2024). [report]. Printed at the University of Saskatchewan, Saskatoon, SK, Canada. (14 pages). Available at: <https://tinyurl.com/42s5yrdj>
- Levinton, T, Morgan, D., and Kosteniuk, J. (January 2025). **RaDAR Newsletter: January 2025.** Available at: <https://cchsa-ccssma.usask.ca/ruraldementiacare/publications/newsletters/2025-winter-radar-newsletter.pdf>
- Levinton, T, Elliot, V, Morgan, D., and Kosteniuk, J. (June 2024). **RaDAR Newsletter,** available online <https://cchsa-ccssma.usask.ca/ruraldementiacare/publications/newsletters/2024-summer-radar-news.pdf>

New Resources

- Innes, A., O'Connell, M. E., Geoghegan, C., & Fehr, P. (2024). **How to Live Well with Dementia: Expert Help for People Living with Dementia and their Family, Friends, and Care Partners.** Routledge.

Rural and Remote Access to Care Laboratory



Access is a multidimensional concept that can be defined as the opportunity to have healthcare needs fulfilled. Diverse populations experience health challenges and access to care differently for a variety of reasons, such as culture, location, and other social and economic factors. Research is focused on understanding root causes, barriers, and challenges of health conditions in rural and remote communities and finding unique and innovative solutions to improve access to healthcare services. Remote presence health provision

research and training is rapidly expanding as an important resource to support people. A new mobile unit expands our mobile health screening services for rural Saskatchewan. One area of focus is musculoskeletal health and access to non-pharmacological management and services. Musculoskeletal conditions, including chronic back pain, impair quality of life, and place economic burden on individuals, communities, and the healthcare system. Virtual care services and programming help provide virtual physiotherapy and rehabilitation to Indigenous communities, connecting patients and families hundreds of kilometres away from health providers with care. The Musculoskeletal Health and Access to Care (MHAC) lab encompasses diverse projects with multidisciplinary researchers that focus on addressing population health burdens of musculoskeletal disorders and understanding population needs to improve access to care.

CCRAH Team Members

Leads



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH and a Professor in the Department of Medicine. With a background in industrial hygiene and nursing, her research focuses on the epidemiology of rural and agricultural exposures and their impact on occupational respiratory health. In this role, Shelley oversees multiple outreach initiatives and supports researchers in developing relationships with rural and remote communities.

Team Members

- **Dr. Brenna Bath**, Director - School of Rehabilitation Sciences
- **Dr. Katie Crockett**, Assistant Professor - School of Rehabilitation Sciences
- **Dr. Stacey Lovo**, Assistant Professor - School of Rehabilitation Sciences, Director of Virtual Physiotherapy - Saskatchewan Virtual Health Hub

Trainees

- **Hailey Dunn**, PhD Candidate
- **Rosalie Dostie**, PhD Student
- **Kendra Usunier**, PhD Student
- **Briana Bowes**, MSc Student
- **Rebecca Sawatsky**, MSc Student
- **Brayden Lockinger**, Student Research Assistant

Recognitions

- **Dr. Katie Crockett**: Tenure-track Faculty, Assistant Professor, School of Rehabilitation Science, University of Saskatchewan, July 1, 2024.
- **Dr. Brenna Bath**: Lavigne-Smee Visiting Scholar Award, School of Physical and Occupational Therapy, McGill University, August 2024.

Research Projects / Programs

Bridging Access to Physiotherapy Care Gaps for Saskatchewan Mothers: Experiences of Postpartum Women and Health Care Providers



This study involves a multi-phase approach to understand the current gaps and opportunities for maternal health services, specifically physiotherapy care, among women with postpartum low back and pelvic girdle pain in Saskatchewan. Data collection involves an online survey as well as qualitative semi-structured interviews to postpartum experiences in accessing care from both patient and healthcare provider perspectives. Data collection is ongoing in both the survey and interview format, with a planned World Café event to discuss findings and generate dialogue for potential solutions.

Enhancing Access to Team Based Musculoskeletal Care to Indigenous Communities Using Virtual Technology

This study includes a hybrid model of care for pain management through a combination of the use of remote presence robot technology and in-person physiotherapy and pharmacy services for people experiencing chronic bone, muscle, and joint pain. Two needs assessments and clinical interventions have been conducted utilizing this hybrid model. The analysis is ongoing with the communities involved in this intervention to evaluate the outcomes and better understand the musculoskeletal assessment, management, and education process in a culturally responsive and community-directed manner.



One2One Mobile Unit Update

In the fall of 2023, CCRAH and AHSN received an anonymous donation of \$1.5 million to develop two mobile units for rural health and wellness. The donor requested that these mobile units be named after the rural Saskatchewan town of Waseca. Following the purchase of the first vehicle (Waseca 1- a 2024 Ford Expedition) in the summer of 2024, we have been collaborating with designers to



create a vehicle wrap for both vehicles (Waseca 1 and 2). The wrap design will prominently feature the name "Waseca," which will be on both an elevator within the design and on the back of the vehicles. The inclusion of the name on the elevator is particularly symbolic for Waseca, as the town still has standing elevators, a feature that is becoming increasingly rare across the province. Additionally, the design incorporates agricultural imagery that will resonate with the Waseca community, rural residents, and the services provided by the mobile units.

While the wrap design is being finalized, we have been taking Waseca 1 on the road at rural schools for Discovery Days presentations and to RM offices for clinics. Locations and pictures of these activities are being widely shared in community on our social media.

Waseca 1

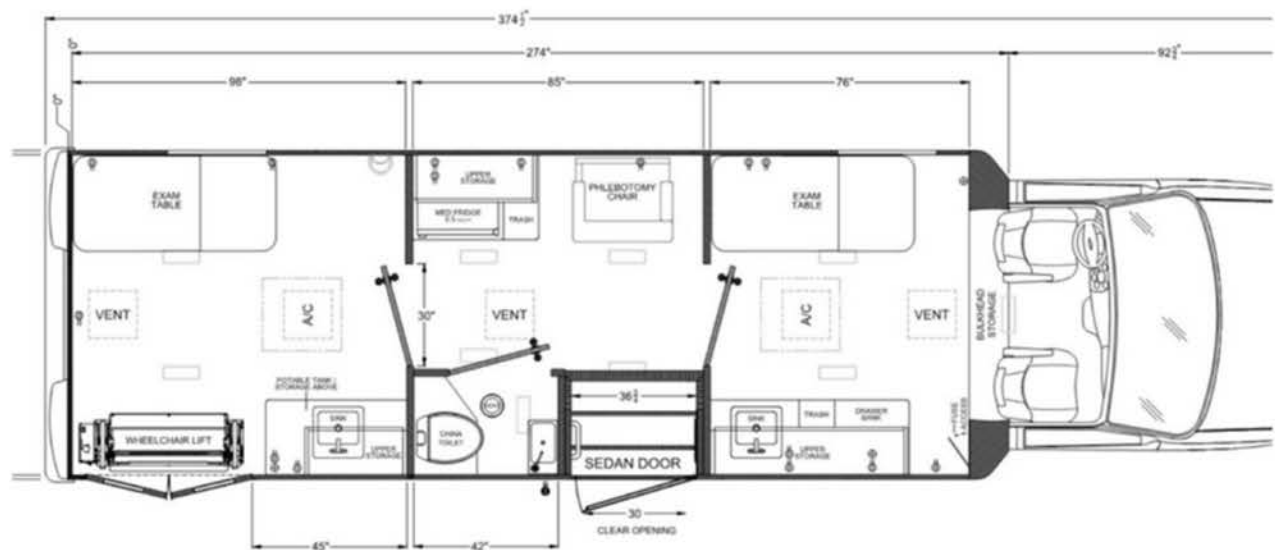
On the road since the summer of 2024, Waseca 1 has transported staff, resources, supplies and equipment across rural Saskatchewan to provide agricultural health and safety prevention, education and clinic services. As an example, at the Western Canadian Crop Production Show (held in Saskatoon from January 14-16,



2025), we had nearly 400 people visit our booth to access education resources and to speak with staff! This unit has allowed us to travel to 11 rural municipalities, provide 29 rural school presentations, and attend 5 trade shows, conferences, and events—reaching almost 1,700 rural people! **This unit is making a difference to rural people.**

Waseca 2 – Coming Soon!

Final design of the fully equipped Waseca 2 mobile unit is currently under way. This new unit will expand our mobile health screening services for rural Saskatchewan to enhance health and safety of farm families and agricultural workers.



Scientific Communication

Publications

- Yanko EJ, Thomson C, Gasmo C, Bourassa R, Crockett K. (2025). **A collaborative interdisciplinary approach for trigger finger management.** J Hand Ther. 2025 Jan 15:S0894-1130(24)00169-8. doi: 10.1016/j.jht.2024.12.003
- Crockett K, Lovo S, Irvine A, Trask C, Oosman S, McKinney V, McDonald T, Sari N, Martinez Rueda R, Aiyer H, Carnegie B, Custer M, McIntosh S, Bath B, (2024). **Healthcare provider perspectives on accessing healthcare for chronic low back pain across urban, rural, and remote settings.** Health Services Insights doi:10.1177/11786329241265861
- Deason, J. P., Adams, S. J., Khan, A., Lovo, S., & Mendez, I. (2024). **A comprehensive evaluation tool to assess community capacity and readiness for virtual care implementation.** Journal of telemedicine and telecare, 1357633X241293854. Advance online publication. <https://doi.org/10.1177/1357633X241293854>
- Dostie R, Dunn H, Marks W, Camden C, Lovo S. (2024). **Use of telehealth for pediatric rehabilitation needs of Indigenous children- A Scoping review.** International Journal of Circumpolar Health. 83(1):2308944 <https://pubmed.ncbi.nlm.nih.gov/38320112>
- Hudon, A., Miciak, M., Slade, T., Lovo, S., Whittaker, J. L., Côté, D., Feldman, D. E., Kairy, D., Laberge, M., McKeen, B., Cooper, L., & Gross, D. P. (2024). **What are the Perceptions and Lived Experiences of Canadian Injured Workers about the Provision of Physiotherapy Services using Telerehabilitation?.** Journal of occupational rehabilitation, 10.1007/s10926-024-10261-4. Advance online publication. <https://doi.org/10.1007/s10926-024-10261-4>
- Lafrance S, Santaguida C, Perreault K, Bath B, Hébert L, Feldman D, Thavorn K, Fernandes J, Desmeules F **One might be enough? Is one enough? The effectiveness of a single session of education and exercise compared to multiple sessions of a multimodal physiotherapy intervention for adults with spinal disorders in an advanced practice physiotherapy model of care: a randomised controlled trial.** J of Orthopaedic and Sports Physical Therapy (JOSPT) (e-pub Sept 2024) <https://www.jospt.org/doi/10.2519/jospt.2024.12618>
- Lovo S, Imeah B, Sari N, O'Connell ME, Milosavljevic S, Angarita Fonseca A, Bath B. (2024). **Effectiveness of an interprofessional assessment and management approach for people with chronic low back disorders delivered via virtual care: A randomized controlled trial pilot study.** Digital Health. <https://pubmed.ncbi.nlm.nih.gov/38846367/>
- Lovo S, Leidl D, Usunier K, Paslawski T, Wesolowski M, Puri A, Caron V, Kim S. (2024). **Development and Pilot Implementation of a Virtual Reality Teaching Tool in a Master of Physical Therapy Orthopedic Course.** Imagining SOTL. 4(1): 39-61.
- Smith L, Abonyi S, Bath B, Durocher L, Roy TJ, Oosman S. **Older Métis Adults' Experiences of Physical Activity and Implications to Health Providers.** International Journal of Indigenous Health. (Oct 2024) <https://doi.org/10.32799/ijih.v20i1.42220>

- Veras M, Sigouin J, Auger, C, Auger L, Ahmed S, Boychuck Z, Cavallo S, Lévesque M, Lovo S, Miller W, Nelson, M, Norouzi-Gheidari N, O'Neil J, Perreault K, Urbanowski R, Sheehy L, Singh H, Vicent C, Wang R, Zidarov D, Hudon A, Kairy D. (2024). **A Rapid Review Protocol of Physiotherapy and Occupational Therapy Telerehabilitation to Inform Ethical and Equity Concerns**. Digital Health. doi:10.1177/20552076241260367
- Zhang, T., Bath, B., McKinney, V., Swidrovich, J., Johnson, R., Foulds, H., Makar, N., Montgrand, M., & Lovo, S. (2024). **Understanding Needs for Chronic Musculoskeletal Pain Management in a Northern Dene and Métis Community: A Community Based Needs Assessment**. Canadian journal of pain = Revue canadienne de la douleur; 8(2), 2412560. <https://doi.org/10.1080/24740527.2024.2412560>

Conference Abstracts

- Crockett K, Lovo S, Irvine A, Trask C, Oosman S, McKinney V, McDonald T, Sari N, Martinez-Rueda R, Aiyer H, Carnegie B, Custer M, McIntosh S, Bath B. (May 2025). **Navigating Access to Chronic Low Back Pain Care Across Urban, Rural, and Remote Landscapes: Patient and Provider Insights**. World Physiotherapy Congress; Tokyo, Japan. (Abstract accepted). May 2025.
- Dostie R; Crockett K; Gross S; Camden C; Corriveau H; Lovo S. (May 2025). **Culturally Responsive Rehabilitation: Insights from First Nations Communities in Canada**. World Physiotherapy Congress, Tokyo, Japan. (Abstract accepted). May 2025
- Dostie R, M'Sadoques-Plourde J, Vollant J, Corriveau H, Camden C, Lovo S. (2025). **Retombées communautaires d'une démarche de recherche participative visant à décrire les services contribuant au bien-être des enfants W8banakiak**. Colloque Quali, Montréal.
- Martínez-Rueda R, Boden C, Crockett K, Bath B. **Physical Therapy and Health Promotion in Chronic Conditions: A Scoping Review**. 2024 Life & Health Sciences Research Expo, Saskatoon, SK. May 2024.
- Alras A, Patel M, Wang M, Lovo S, Bath B, Hammond C, Mendez I, Babyn P, Adams S. (2024). **Recommendations Regarding the Appropriateness of Virtual Care**. International Congress on Circumpolar Health, Halifax.
- Ahmed K, Amjad K, Sawatsky R, Bowes B, McKinney V, Sewap S, Dorion R, Lovo S, Bath B. (2024). **A Team and Technology Approach to Chronic Back Pain Care: Experiences of Northern Saskatchewan Cree Community members**. School of Rehabilitation Science Research Event. Saskatoon.
- Ahmed K, Amjad K, Sawatsky R, Bowes B, McKinney V, Sewap S, Dorion R, Lovo S, Bath B. (2024). **A Team and Technology Approach to Chronic Back Pain Care: Experiences of Northern Saskatchewan Cree Community members**. Canadian Physiotherapy Association Congress. Vancouver.
- Amjad K, Ahmad K, Lovo S, Sawatsky R, Bowes B, McKinney V, Sewap S, Dorion R, Bath B, (2024). **The Narratives of a Northern Saskatchewan First Nation Cree Community on Management of Chronic Back Pain Using Virtual Care**, Canadian Agency for Drugs and

Technologies in Health Symposium. Ottawa.

- Anderson V, Turner N, Lovo S, Tunison S, Isbister D, Kustra E, Bodnar C, Sysing M, Perrault A, Kasperski J, Lew J, Semenec P, Strade A, Thompson L, Raffoul J, Kechego J, Dufour G, Beltrano N, Squires V. (2024). **Using Relational Systems Thinking to Advance Indigenization of Teaching and Learning at Three Canadian Higher Education Institutions.** Canadian Society for the Study of Higher Education. Montreal.
- Bowes B, Wolfe-Keller S, Fineday E, Bird M, Lovo S. (2024). **Needs and Experiences of Saskatchewan First Nations Communities with Virtual Care: A Community-Directed Assessment.** 2024 Saskatchewan NEIHR Research Engagement Day, Regina.
- Delormier T, Oashu L, Bisset S, Martin D, Amirault M, Rand J, Stelia K, Erb T, Henry R, Macquee Smith F, Lovo S. (2024). **Telling a Story of Collective Impact through Individual and Collaborative Evaluations in Canada's Network Environments for Indigenous Health Research (NEIHRs).** International Congress on Circumpolar Health. Halifax.
- Dostie R, Dunn H, Marks W, Camden C, Lovo S. (2024). **Exploring Telerehabilitation for Indigenous children: A Call for Culturally Responsive Research.** Turtle Island Indigenous Sciences Conference.
- Khan A, Adams S, Lovo S, Burbridge B, Mendez I. (2024). **Enhancing Access to Ultrasound Services Using a Telerobotic Ultrasound System in Rural Southern Saskatchewan: Accessibility as a Social Determinant of Health.** International Congress on Circumpolar Health. Halifax.
- Gross S, Sawatsky R, Bath B, Lovo S (2024). **Enhancing Access to Team Based Musculoskeletal Care to Indigenous Communities using Virtual Technology.** 2024 School of Rehabilitation Science Research Event. Saskatoon.
- Gross S, Sawatsky R, Veronica McKinney Bath B, Lovo S. (2024). **Improving Musculoskeletal Care Service Delivery in Remote First Nations Communities through Evaluation of Community Needs and Preferences.** 5th Annual Canadian Arthritis Research Conference. Online.
- Gross S, Sawatsky R, Bath B, Lovo S (2024). **Exploring Remote First Nation Community and Healthcare Provider Needs and Preferences for Musculoskeletal Care.** Canadian Physiotherapy Association Congress. Vancouver British Columbia.
- Lovo S, Dani H, Lockinger B, Zhang T, Nickel D, Larocque M, McKinney V, Swidrovich J, Linassi G (2024). **Access to Care for First Nation and Métis Peoples with Neuropathic Pain: Screaming my Lungs out in a Dark Place,** International Congress on Circumpolar Health, Halifax.
- Lovo S, Sawatsky R, Ahmad K, Amjad K, Imea B, Bowes B, McKinney V, Sewap S, Dorion R, Bath B. (2024). **Enhancing access to community-based back pain care in a Northern Cree Community: evaluation of a virtual back pain clinic.** International Congress on Circumpolar Health, Halifax.
- Lovo S, Nickel D, Dani H, Roy TJ, McKinney V, Swidrovich J, Janvier D, Campanucci V, Linassi G (2024). **Influence of Culture and Language on Experience of Neuropathic Pain in First Nation and Métis Peoples.** International Congress on Circumpolar Health, Halifax.

- Veras M, Lovo S, Kairy D, Hudon A. **A Rapid Review of Telerehabilitation in Physiotherapy: Addressing Ethical and Equity Aspects.** Canadian Physiotherapy Association Congress. Vancouver (poster)

Grants

- Henry R, Tait C, Gabel C, Hansen-Gardiner T, Ferguson L, Foulds H, Graham H, Keepness S, Marks W, McGinnis A, McKinney V, Opikekew Wajunta C, Swidrovich J, Lambert S, Lovo S, Oosman S, Lavaille C. (2024). **Network Environments for Indigenous Health Research (NEIHR).** CIHR Operating Grant: nātawihowin and mamawiikikayaahk Research, Training and Mentorship Networks (SK-NEIHR). 2024-2029. \$5,000,000.
- Lovo S (NPI), Caron V, Bowes B. (2024). **Enhancing Access to Pediatric Rehabilitation in Remote Northern Saskatchewan – Equipment for Pediatric Clinics.** Jim Pattison Children's Hospital Foundation Equipment Grant. \$83,000.
- Mendez I, Lovo S (co-PI) Adams S, Demarzo F, Hansen G, Holt T, Bustamante L, McKinney V, Bear D, Roayl K, Sparling L (2024). **Development of a Culturally Rooted Pediatric Virtual Care Program to Facilitate Access Closer to Home.** Saskatchewan Health Research Foundation IMPACT Grant. \$150,000 (SHRF Excellence Award for top grant).
- Mendez I, Deeson J, Lovo S, Kanyuka Zakhar. (2024). **Bridging Healthcare Gaps: Implementing Wearable Virtual Care for Wound Management in Remote Northern Saskatchewan.** Mitacs Accelerate. \$15,000.
- Lovo S (NPI). (2024). **DARE Undergrad Training and Mentorship Award. Understanding Access to Neuropathic Pain Management in Rural and Remote First Nations Peoples.** University of Saskatchewan. \$6000.
- Lovo S (NPI), Linassi G. (2024). **Virtual Care Management of Neuropathic Pain in Rural and Remote First Nation and Métis Peoples.** College of Medicine Dean's Research Project. \$6000.
- Sarty G, McKinney V, Lovo S, Leader J, Adams S, Pollard M, Wiebe M, Rayan S. (2024). **Finding a Needs Based Niche for Specialized Compact MRIs in Northern Saskatchewan First Nation and Métis Communities.** Saskatchewan Network Environment in Indigenous Health Research Community Partnership Grant. \$10000.
- Kim S, Lovo S (co-I), Morhart R (2024). **Enacting Subjective History Taking Skills in Physical Therapy Students through Generative AI,** The Jane and Ron Graham Center for Scholarship in Teaching and Learning ElevatED Grant. \$3000.

Knowledge Transfer

Invited Presentations

- Lovo S and Deeson J. (2025). **Site Selection Tool for Virtual Health Hub. Senior Technical Advisory Group Federation of Sovereign Indigenous Nations.**
- Lovo S and Dunn H. (2025). **Enhancing Access to Pediatric Rehabilitation in Partnership with First Nation Communities. Northern Ontario Telerehabilitation Team.**
- Deeson J, Bowes B, Ong Smith M, Dani H, Olson B, Bustamante L, Lovo S. (2024). **Technology and Remote Presence, Mobile Pod Planning. For the Peter Ballantyne Cree Nation Health Services Board. Saskatoon.**
- Deeson J, Bowes B, Ong Smith M, Dani H, Olson B, Bustamante L, Lovo S. (2024). **Technology and Remote Presence. For the Federation of Sovereign Indigenous Nations' E-health and Jordan's Principal Departments. Saskatoon.**
- Mendez I and Lovo S. (2024). **Virtual Health Hub. Senior Technical Advisory Group, Federation of Sovereign Indigenous Nations. Saskatoon.**
- O'Neill J, Lovo S, Russell T, Ahmed S, Veras M. (2024). **Panel on Telerehabilitation and Digital Health in Canada. Canadian Physiotherapy Association Congress. Vancouver.**
- Lovo S, Oosman S, Woodsworth J, McKinney V, (2024). **Engaging with Indigenous Communities – a Focus on Communities in the North. Canadian Institute of Infection and Immunity. Saskatoon.**
- Lovo S and Crockett K. (2024). **Working in Partnership with First Nation and Métis Communities to Enhance Access to Rehabilitation Care. Saskatchewan Council on Patient Oriented Research Oversight Committee. Saskatoon.**
- Lovo S, and Bear D. SCOPR (2024) **Collaboration with First Nations to Ensure Patient Centered Healthcare and Health Promotion. Saskatchewan Council on Patient Oriented Research. Regina (online)**
- Lovo, S and Deeson, J. **Portable Diagnostic Imagine Pod. Improving Access to Medical Diagnostic Imaging Services. Peter Ballantyne Cree Nation Health Services (2024).**
- Lovo S, Deeson J, Bowes Briana (2024). **Enhancing Access to Rehabilitation Using Virtual Technology. Central Alberta Pediatric Telerehabilitation Team.**
- Bath B, Turner T, Broks (Oct 2024) **Coming Soon! Update on USask OT and SLP programs. SHA Provincial Therapies Conference.**
- Crockett K. (September 2024). FAST (Falls Arrest Strategy Training): **Moving Research into Community Practice. 6th Annual Community Older Adult Falls Prevention Symposium. NewYork-Presbyterian / Weill Cornell Trauma Center & The Carter-Burden Network.**
- Lovo S and Crockett K. (May 2024). **Working in Partnership with First Nation and Métis Communities to Enhance Access to Rehabilitation Care. Saskatchewan Council on Patient Oriented Research Oversight Committee. Saskatoon, SK, Canada**

- Bath B (Aug 2024). **Bridging Access to Rehabilitation Care through research, leadership, and advocacy.** Keynote presentation for Annual Research Day. School of Physical and Occupational Therapy. McGill University.

Media/Online/Technical Reports

- Lovo S. (2024). **Remote Rehabilitation: Dr. Stacey Lovo's Quest for Equitable Care. Researchers Under the Scope.** University of Saskatchewan. <https://ovdr-com.libsyn.com/remote-rehabilitation-dr-stacey-lovos-quest-for-equitable-care>
- Lovo S. (2024). **Dr. Stacey Lovo's Community Directed Approach to Establish Remote Rehabilitation Care for Indigenous Children in Saskatchewan.** Saskatchewan Health Research Foundation. <https://www.shrf.ca/post/dr-stacey-lovo-remote-rehabilitation-care-for-indigenous>
- Lovo S and Linassi G. (2024). **Revolutionizing Neuropathic Pain Assessment: A Journey of Collaboration to Improve Rural and Remote Indigenous Healthcare.** Saskatchewan Health Research Foundation: <https://www.shrf.ca/post/revolutionizing-neuropathic-pain-assessment-indigenous-healthcare>

New Resources

- Cowell W, Frantz J, Guenter L, Korte M, Vandersteen T, Sewap S, Roy TJ, Fleury N, BigEagle M, Eagle E, Janvier L, Montgrand M, Keenatch L, Sawatsky R, Swidrovich J, Morin R, Lovo S. **Kawisthomasko (Taking Care of Your Back) (2024). – Brochures in Cree TH, Cree Y, Dene, Northern Michif, Heritage Michif and Dakota Languages.** www.rehabscience.ca/cers
- Lovo S, Usunier K, Sewap S, Alberg D, Keenatch L, Fleury N, Roy TJ, Eagle E, BigEagle M, Sawatsky R, Richards J, Swidrovich J, Morin R, Delainey R, Wright C, Abbott K, **Kawisthomasko (Taking Care of Your Back) (2024). – Self-Management Videos in Cree TH, Cree Y, Dene, Northern Michif, Heritage Michif and Dakota Languages.** www.rehabscience.ca/cers

Health and Safety Outreach Laboratory

Focused on moving the research evidence into resources, programs, and services to support rural people, the Health and Safety Outreach Laboratory has the capacity for population assessments and training for common exposures (noise, respiratory, chemical, etc.). Equipment and tools in the lab include portable and volumetric spirometers, quantitative mask fit testing equipment, portable audiometer, audiometric booth, health screening equipment, hearing protection fit testing equipment, display settings for resource distribution, and confidential medical file storage capacity. Programming is offered to over 21,000 rural Saskatchewan residents through our Agricultural Health and Safety Network, and across Canada and worldwide through our partnerships.



CCRAH Team Members

Leads



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director CCRAH and a Professor in the Department of Medicine. As the Director, she provides direction, guidance, and feedback to the overall direction of the AHSN and its outreach programs and services.



Kendra Ulmer

Kendra Ulmer is the Program Manager of the Agricultural Health and Safety Network. With a background as a registered nurse, Kendra delivers all of the AHSN health care screening programs and leads the development of the AHSN 's programs, outreach initiatives, and specialized screening services.

Staff

- **Shelly Sander**, Discovery Days Coordinator
- **Karen Marcinkiw**, Registered Nurse
- **Sueli de Freitas**, Communications
- **Merle Massie**, Professional Research Associate
- **Tess Kelly**, KT Specialist
- **Katie Thompson**, Communications

Discovery Days Presenters

- **Sheri Pedersen**
- **Bailey Kemery**
- **Brooke Burletoff**
- **Leanne Schell**
- **Robyn Gerbrandt**

AHSN Steering Committee

The AHSN Steering Committee members provide valuable grassroots feedback to the AHSN. The Steering Committee represents RM membership, farmers, and ranchers in each division of Saskatchewan and from the government. We encourage you to reach out and introduce your RM to your respective Division Steering Committee member.

Current Members

Division 1

Michelle Williams

RM of Wolsley, No. 155

Division 2

TBA

Division 3

Mark Hughes

Reeve for the RM of Miry Creek, No. 229

Division 4

TBA

Division 5

Darin Pedersen

Reeve for the RM of Prairie Rose, No. 309

Division 6

Ronald Gory

RM of Frenchman Butte No. 501

Saskatchewan Ministry of Agriculture

Tasha Lupanko

Communications Public Trust

SERVING OVER
21,000
 Saskatchewan farm
 families

191
 Rural Municipality
 members
GOAL: 210 RMS IN 2025

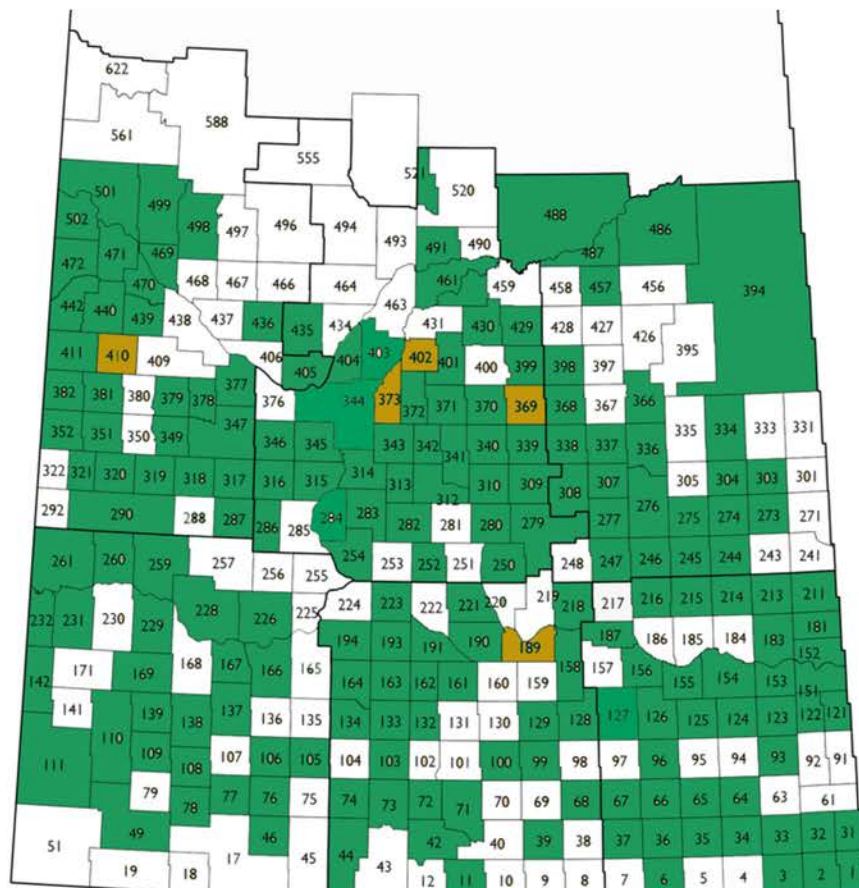
AHSN Membership: 2024-2025

☀ Founding RMS – 1988:

*R.M. of Lumsden No. 189, R.M. of St. Peter No. 369, R.M. of Aberdeen No. 373,
 R.M. of Fish Creek No. 402, R.M. of Round Valley No. 410.*

AHSN Funding

- Each member RM pays \$4.60 per active farm family plus a base fee of \$400.00, capped at \$1500.00.
- Grants from the Saskatchewan Ministry of Agriculture.
- Grants, sponsorships, and donor support.
- In-kind and matching from the Canadian Centre for Rural and Agricultural Health.



Network Membership 2024 – 2025

Supporting Rural People in Agricultural Health and Safety

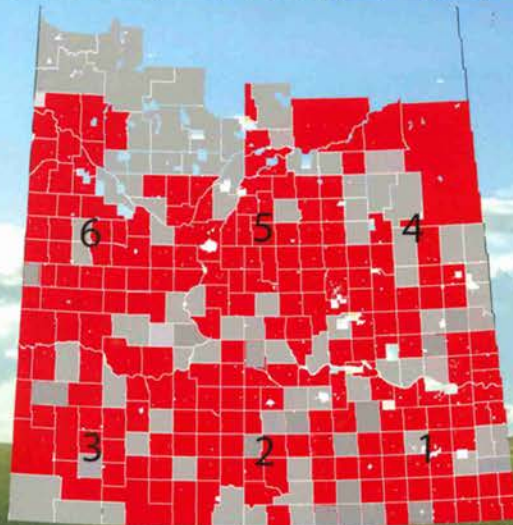
R.M. of Argyle No. 1	R.M. of Shamrock No. 134	R.M. of Sliding Hills No. 273	R.M. of Aberdeen No. 373
R.M. of Mount Pleasant No. 2	R.M. of Swift Current No. 137	R.M. of Good Lake No. 274	R.M. of Glenside No. 377
R.M. of Enniskillen No. 3	R.M. of Webb No. 138	R.M. of Insinger No. 275	R.M. of Rosemount No. 378
R.M. of Cambria No. 6	R.M. of Gull Lake No. 139	R.M. of Foam Lake No. 276	R.M. of Reford No. 379
R.M. of Hart Butte No. 11	R.M. of Enterprise No. 142	R.M. of Emerald No. 277	R.M. of Grass Lake No. 381
R.M. of Storthoaks No. 31	R.M. of Rocanville No. 151	R.M. of Mount Hope No. 279	R.M. of Eye Hill No. 382
R.M. of Reciprocity No. 32	R.M. of Spy Hill No. 152	R.M. of Wreford No. 280	R.M. of Hudson Bay No. 394
R.M. of Moose Creek No. 33	R.M. of Willowdale No. 153	R.M. of McCraney No. 282	R.M. of Pleasantdale No. 398
R.M. of Browning No. 34	R.M. of Elcapo No. 154	R.M. of Rosedale No. 283	R.M. of Lake Lenore No. 399
R.M. of Benson No. 35	R.M. of Wolseley No. 155	R.M. of Rudy No. 284	R.M. of Hoodoo No. 401
R.M. of Cymri No. 36	R.M. of Indian Head No. 156	R.M. of Milden No. 286	R.M. of Fish Creek No. 402
R.M. of Lomond No. 37	R.M. of Edenwood No. 158	R.M. of St. Andrews No. 287	R.M. of Rosthern No. 403
R.M. of The Gap No. 39	R.M. of Moose Jaw No. 161	R.M. of Kindersley No. 290	R.M. of Laird No. 404
R.M. of Willow Bunch No. 42	R.M. of Caron No. 162	R.M. of Keys No. 303	R.M. of Great Bend No. 405
R.M. of Waverley No. 44	R.M. of Wheatlands No. 163	R.M. of Buchanan No. 304	R.M. of Round Valley No. 410
R.M. of Glen McPherson No. 46	R.M. of Chaplin No. 164	R.M. of Elfros No. 307	R.M. of Senlac No. 411
R.M. of White Valley No. 49	R.M. of Excelsior No. 166	R.M. of Big Quill No. 308	R.M. of Flett's Springs No. 429
R.M. of Brock No. 64	R.M. of Saskatchewan Landing No. 167	R.M. of Prairie Rose No. 309	R.M. of Invergordon No. 430
R.M. of Tecumseh No. 65	R.M. of Pittville No. 169	R.M. of Osborne No. 310	R.M. of Redberry No. 435
R.M. of Griffin No. 66	R.M. of Langenburg No. 181	R.M. of Morris No. 312	R.M. of Douglas No. 436
R.M. of Weyburn No. 67	R.M. of Fertile Belt No. 183	R.M. of Lost River No. 313	R.M. of Cut Knife No. 439
R.M. of Brokenshell No. 68	R.M. of North Qu'Appelle No. 187	R.M. of Dundurn No. 314	R.M. of Hillsdale No. 440
R.M. of Excel No. 71	R.M. of Lumsden No. 189	R.M. of Montrose No. 315	R.M. of Manitou Lake No. 442
R.M. of Lake Of The Rivers No. 72	R.M. of Dufferin No. 190	R.M. of Harris No. 316	R.M. of Connaught No. 457
R.M. of Stonehenge No. 73	R.M. of Marquis No. 191	R.M. of Marriott No. 317	R.M. of Birch Hills No. 460
R.M. of Wood River No. 74	R.M. of Eyebrow No. 193	R.M. of Mountain View No. 318	R.M. of Prince Albert No. 461
R.M. of Auvergne No. 76	R.M. of Enfield No. 194	R.M. of Winslow No. 319	R.M. of Turtle River No. 469
R.M. of Wise Creek No. 77	R.M. of Churchbridge No. 211	R.M. of Oakdale No. 320	R.M. of Eldon No. 471
R.M. of Grassy Creek No. 78	R.M. of Saltcoats No. 213	R.M. of Prairiedale No. 321	R.M. of Wilton No. 472
R.M. of Wawken No. 93	R.M. of Cana No. 214	R.M. of Preeceville No. 334	R.M. of Moose Range No. 486
R.M. of Fillmore No. 96	R.M. of Stanley No. 215	R.M. of Sasman No. 336	R.M. of Nipawin No. 487
R.M. of Caledonia No. 99	R.M. of Tullymet No. 216	R.M. of Lakeview No. 337	R.M. of Torch River No. 488
R.M. of Elmsthorpe No. 100	R.M. of Lipton No. 217	R.M. of Lakeside No. 338	R.M. of Buckland No. 491
R.M. of Sutton No. 103	R.M. of Cupar No. 218	R.M. of Leroy No. 339	R.M. of Parkdale No. 498
R.M. of Glen Bain No. 105	R.M. of McKillop No. 220	R.M. of Wolverine No. 340	R.M. of Mervin No. 499
R.M. of Whiska Creek No. 106	R.M. of Sarnia No. 221	R.M. of Viscount No. 341	R.M. of Frenchman Butte No. 501
R.M. of Bone Creek No. 108	R.M. of Huron No. 223	R.M. of Colonsay No. 342	R.M. of Britannia No. 502
R.M. of Carmichael No. 109	R.M. of Victory No. 226	R.M. of Blucher No. 343	R.M. of District of Lakeland No. 521
R.M. of Piapot No. 110	R.M. of Lacadena No. 228	R.M. of Corman Park No. 344	
R.M. of Maple Creek No. 111	R.M. of Miry Creek No. 229	R.M. of Vanscoy No. 345	
R.M. of Moosomin No. 121	R.M. of Happyland No. 231	R.M. of Perdue No. 346	
R.M. of Martin No. 122	R.M. of Deer Forks No. 232	R.M. of Biggar No. 347	
R.M. of Silverwood No. 123	R.M. of Orkney No. 244	R.M. of Grandview No. 349	
R.M. of Kingsley No. 124	R.M. of Garry No. 245	R.M. of Progress No. 351	
R.M. of Chester No. 125	R.M. of Ituna Bon Accord No. 246	R.M. of Heart's Hill No. 352	
R.M. of Montmartre No. 126	R.M. of Kellross No. 247	R.M. of Kelvington No. 366	
R.M. of Francis No. 127	R.M. of Last Mountain Valley No. 250	R.M. of Spalding No. 368	
R.M. of Lajord No. 128	R.M. of Arm River No. 252	R.M. of St. Peter No. 369	
R.M. of Bratt's Lake No. 129	R.M. of Loreburn No. 254	R.M. of Humboldt No. 370	
R.M. of Hillsborough No. 132	R.M. of Snipe Lake No. 259	R.M. of Bayne No. 371	
R.M. of Rodgers No. 133	R.M. of Chesterfield No. 261	R.M. of Grant No. 372	

Increasing Awareness!
Posted in
Network RM
Offices.



AGRICULTURAL HEALTH AND SAFETY NETWORK

WE ARE A MEMBER



PROMOTING & SUPPORTING AGRICULTURAL HEALTH AND SAFETY



- CLINICS
- DISCOVERY DAYS
- OUTREACH
- PRESENTATIONS
- RESOURCES
- TRAINING
- WORKSHOPS



306-966-6644 • aghealth.usask.ca
E-mail: aghealthandsafety@usask.ca

UNIVERSITY OF SASKATCHEWAN
Canadian Centre for Rural
and Agricultural Health

SARM
Saskatchewan Association
of Rural Municipalities

Government
of
Saskatchewan

Research to Action

The Agricultural Health and Safety Network actively invites Saskatchewan rural residents and agricultural producers to participate in exciting research projects and activities happening at CCRAH and partner organizations. The valuable insights gained from this research are then transformed into useful resources, which the AHSN and partners share back with the agricultural community in Saskatchewan.

RESEARCH TO ACTION



SUPPORTING RESEARCH

Exploring the current hazards in agricultural settings. Which agricultural practices pose risks to producers? What health concerns do producers face? How can we provide the support they need?

DEVELOPING RESOURCES

From videos to booklets, fact sheets to brochures, we transform research into practical takeaways for agricultural producers, available both digitally and physically.

SHARING KNOWLEDGE

We attend trade shows, conventions, conferences, as well as give presentations in rural communities to share our findings with rural and agricultural communities, government, and our partners!

Farm Safety Plan Project

Updates to Guide & Templates

- Farm Safety Plan (FSP) Guide & templates/documents - updated to reflect feedback from 2022 Pilot Project.
- Additional resources added for: mental health, fatigue and contractor requirements.
- Workplace violence and harassment content meets new OHS regulations.
- Modules organized to reflect a staged approach of **Start With**, **Next When Ready** and **Finally** to promote integration of the FSP over time and at each farm's pace.
- Practical coaching tips added throughout the modules to make content more user friendly to promote user success.



The poster features the 'The Agricultural Health & Safety Network' logo at the top left, which is a triangle containing a stylized figure. To the right is the University of Saskatchewan logo and text: 'UNIVERSITY OF SASKATCHEWAN Canadian Centre for Rural and Agricultural Health CCRAH-CCSMA.USASK.CA'. The main headline reads 'DOES YOUR FARM HAVE A FARM SAFETY PLAN?' in large, bold, green letters. Below this, a circular inset shows four people (three men and one woman) gathered around a table, looking at a laptop. To the right of the circle, it says 'We can support you in the process!'. A green banner below the circle states 'Attend upcoming training sessions on How To Build Your Farm Safety Plan!'. A list of benefits is provided: 'Save Time by using pre-developed tools, templates & policies.', 'Learn the importance of documentation and communication.', 'Help family and farm employees better understand their roles and responsibilities in staying safe and healthy.', and 'Improve your overall occupational health and safety culture and compliance.' A QR code is located on the right side. At the bottom, it says 'For more information, please contact: aghealthandsafety@usask.ca'. Logos for 'Sustainable Canadian Agricultural Partnership' and 'Saskatchewan Canada' are at the bottom right.

DOES YOUR FARM HAVE A FARM SAFETY PLAN?

We can support you in the process!

Attend upcoming training sessions on How To Build Your Farm Safety Plan!

- **Save Time** by using pre-developed tools, templates & policies.
- **Learn** the importance of documentation and communication.
- **Help** family and farm employees better understand their roles and responsibilities in staying safe and healthy.
- **Improve** your overall occupational health and safety culture and compliance.

For more information, please contact:
aghealthandsafety@usask.ca

Sustainable Canadian Agricultural Partnership Saskatchewan Canada

Project Next Steps

- Goal: to deliver coaching workshops in 2025 in blocks of (2 online and 1 in-person) per group of participants, to support farmers in the journey of FSP development.
- Promote FSP project and workshops at tradeshow and One2One Clinics- gathering interested farms to participate in upcoming workshops.
- Formal promotional campaign in development.

Thank you for Vital Insight for your consultation services on this project to date!

Thank you to our partners for your continuous support!



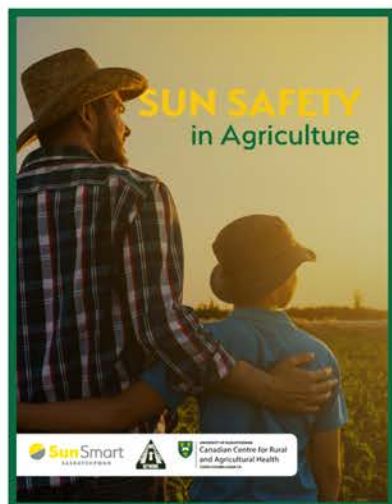
Government
— of —
Saskatchewan



Sustainable Canadian Agricultural Partnership
Competitive. Innovative. Resilient.

New and Upcoming Resources

Our current and upcoming resources will be available for download on the Network's website and in print at our upcoming trade shows!



Sun Safety in Agriculture

Available to Saskatchewan producers in July 2025!

Working outdoors means facing significant risks from sun exposure, especially for Canadian agricultural workers who spend extensive time outside. This exposure heightens the risk of skin cancer and heat stress, but these conditions can be prevented!

This resource will cover:

- Skin Cancer and UV Exposure
- Prevention and UV Protection
- Outcomes of Exposure such as Heat Exhaustion, Heat Stress, Sunburn, etc.



Tick Resource

The Network is developing a new resource on ticks, covering risks, prevention, and what to do if bitten. Farm workers are at risk of tick bites and diseases like Lyme disease. To prevent bites, wear long sleeves, long pants, closed-toe shoes, tuck pants into socks, and use insect repellent. Avoid tick-prone areas like woods, tall grass, and brush. After being outdoors, do a full-body tick check and wash off loose ticks. If bitten, use fine-tipped tweezers to remove the tick carefully, then use soap and water to wash the area.

Electrical Safety on Saskatchewan Farms

2nd Edition in progress in partnership with SaskPower!

The Electrical Safety on Saskatchewan Farms resource was designed to fill an existing gap in knowledge in the Saskatchewan agricultural community and provide a comprehensive overview of farm electrical safety. The Agricultural Health and Safety Network collaborated with SaskPower for their expertise on the subject and development of this resource.



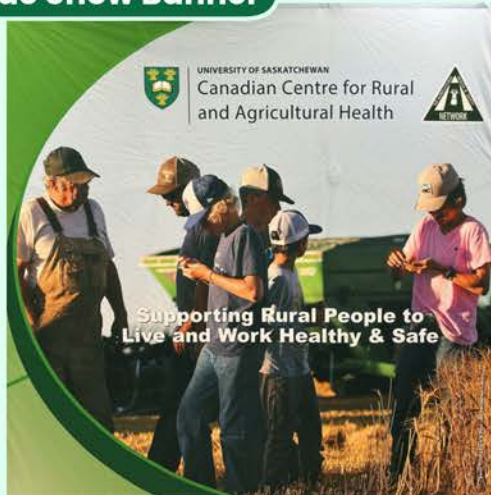
New Trade Show Items

Building Our Identity to Reflect the Communities We Support - "Supporting Rural People in Agricultural Health and Safety"

Over the past year, the AHSN has been refining its messaging and visual identity to represent the agricultural community in Saskatchewan.

Recently, we have implemented this new vision in a backdrop banner for our trade show booth and a new 2025 calendar and Mental Wellness magnet to distribute at trade shows.

Trade Show Banner



2025 Calendar Magnet



Mental Wellness Magnet

If your safety is at immediate risk, call 911	
SaskAgMatters - free counselling services	call 1-306-371-7644
211 Saskatchewan	call or text 2-1-1
Family Service Saskatoon	call 1-306-244-0127
Counselling Connect Saskatchewan	https://www.counsellingconnectsask.ca/
Farm Stress Line	call 1-800-667-4442
National Farmer Crisis Line - 24/7 support	call 1-866-327-6701
AgTalk - non-crisis peer to peer support platform	visit domore.ag/agtalk
Kids Help Phone	text 686868 or call 1-800-668-6868
HealthLine	call 8-1-1
Suicide Crisis Helpline	call or text 9-8-8
Mobile Crisis Services	call 1-306-757-0127
Problem Gambling Helpline	call 1-800-306-6789
Adult Sexual Assault Helpline	call 1-800-214-7083
First Nations & Inuit Hope for Wellness Help Line	call 1-855-242-3310
Dementia Helpline	call 1-877-949-4141

Mental Wellness for Saskatchewan Farmers & Ranchers

Immediate Support

If you or someone you know is struggling with mental well-being, remember...
You are not alone—there is hope and there is help!



UNIVERSITY OF SASKATCHEWAN
Canadian Centre for Rural and Agricultural Health
CCRAH-CCRAH-CCRAH



Supporting Rural People in Agricultural Health and Safety

Network News

Delivered to:
191 Member RMs

Reach of:
21,000 Farm Families



Network News Spring 2024 Edition #54

Springtime in Saskatchewan isn't always a sure thing with the weather changing from sunny blue skies to grey snow clouds in a day! As you are gearing up to head out into the fields, take some time to think about health and safety on your farm to make the 2024 growing season your safest season yet. Health and safety around the farm encompasses a wide range of hazards from sun exposure in the hot summer months to respiratory hazards from dusts and chemicals. This edition of the Network News provides plenty of quick reads to help you stay on top of safety this season. The most important part of your farm is the people – you,

your family and your farm workers are what make your farm a success! Both communication and farm safety are essential for a successful farm.

Network News Fall 2024 Edition #55

As the harvest season kicks into high gear, it is important to focus not just on getting the crop off but also on your own well-being. Managing fatigue and stress is key during these busy times. Long hours and heavy workloads can take a toll, so remember to take regular breaks, stay hydrated, and support one another. With the increased demands of harvest, incidents are more likely to occur. This edition of the Network News provides a basic first aid equipment checklist and information. The feature article in this edition of the Network News, "The Recovering Farmer: A Journey through the Labyrinth of Anxiety & Depression" sheds light on the emotional challenges farmers can face and offers guidance on seeking support and maintaining mental health.



Coming Soon! Network News Spring/Summer Edition #56 will be delivered in May/June 2025!

Check out all editions of the Network News on our website!

Commercialization and Innovation Laboratory

The **Commercialization and Innovation Laboratory** provides opportunities for private sector personnel to work in collaboration to effect seamless transition between knowledge development and commercial activity, including developing and testing potential products and services for the health and safety of rural people.

CCRAH Team Members

Leads



Dr. Niels Koehncke

Dr. Niels Koehncke is a Professor in the Department of Medicine and a specialist in Occupational Medicine. He serves as the Medical Lead for CANWORKSAFE, providing occupational health screening services for employers. Dr. Koehncke offers outpatient consultations in occupational and environmental medicine, with research interests in occupational noise and respiratory exposures, veterinary and agricultural workplace hazards, and injury prevention.



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH and a Professor in the Department of Medicine. As a trained nurse and certified industrial hygienist, she leads the Occupational Health and Environmental Exposures Laboratory. Her research focuses on the epidemiology of rural and agricultural exposures and their effects on occupational respiratory health.

Staff

- Kendra Ulmer
- Joan Ulmer
- Brooke Thompson

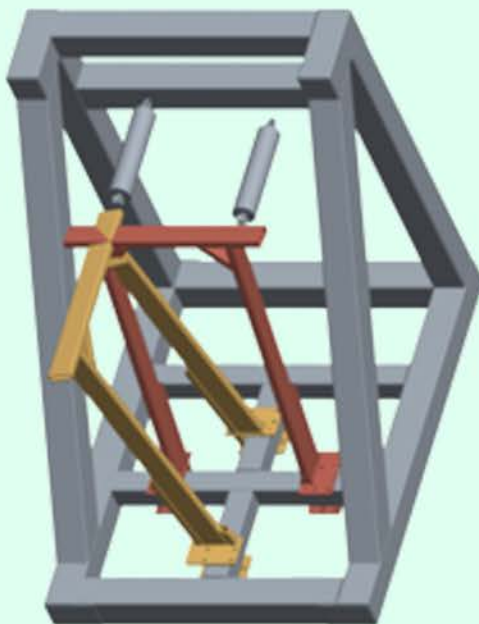
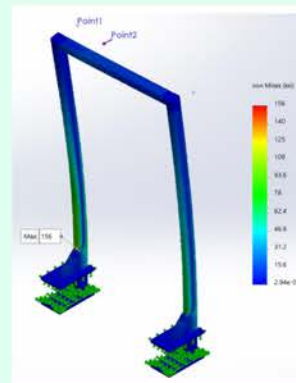
Collaborators

- Jim Wassermann, agricultural engineer

Research Programs / Projects

Low-Cost Roll-Over Protective Structures (ROPS)

The Low Cost ROPS Project was established because tractor rollovers continue to be a leading cause of death on the Canadian farm. Most modern tractors have a roll over protection system (ROPS) that will protect the operator in the event of a roll over event. Unfortunately, many tractors are older and do not have ROPS. Previous research had indicated that the price of commercial ROPS was the major contributor to the large amount of older tractors without ROPS. So this project was designed to develop a simple and affordable ROPS for farmers. It was thought that if farmers could build their own, the costs would be significantly reduced. Three designs have been developed for different tractor weights. These designs are specially focused on something that farmers can easily and confidently build properly and install on their older tractors.



ROPS Test Fixture

Now we have to “hit the field”. The project is currently at the stage where we are having farmers from Newfoundland Labrador and Saskatchewan building ROPS to verify that the designs, instructional process and farmer’s fabrication capabilities are sound. The goal is to have 10 ROPS built in each of these two provinces and then tested to the CSA ROPS standard. Testing ROPS can be very expensive so an activity this past year was to use 4th year engineering students to help with the design of a specialized test fixture which will allow testing to be conducted quickly and economically. That test fixture was completed and one day may even make it’s way into a CCRAH lab.

Stay posted this summer as the farmer-built ROPS start appearing for testing and we get closer to answering a primary question being asked by many – “Can famers easily and economically build structurally sound ROPS for their older tractors?” We are hoping the answer is YES so we can see a leading cause of death on the farm disappear!

Services

CANWORKSAFE

CANWORKSAFE provides occupational health and safety screening and services to companies in Saskatchewan since 1987. The CANWORKSAFE program provides services such as: (a) Respirator fit testing, (b) Audiometric testing, (c) Respiratory testing and many more. These services are offered for a fee. If a rural municipality is a member of the Agricultural Health and Safety Network, the RM receives a discount.

Want a CANWORKSAFE Clinic at your place of employment or local RM?
Contact (306) 966-6643 or via email



Kendra Ulmer, Brooke Thompson, Dr. Niels Koehncke, Dr. Shelley Kirychuk, Joan Ulmer

Occupational Medicine Clinic

Faculty Lead: Dr. Niels Koehncke
Offered through the Saskatchewan Health Authority and Department of Medicine via referral by health care provider.



Sleep Medicine Clinic

Faculty Lead: Dr. James Dosman
Offered through the Saskatchewan Health Authority and Department of Medicine by referral via health care provider.



Scientific Communication

Grants

- Koehncke N (PI), Wasserman J (Co-) (Nov 2023 – March 2026). **Roll-Over Protection Structures (ROPS) Design and Certification.** WorkSafe Saskatchewan Sponsorship Grant. \$50,000 (CAD).
- Wasserman J (PI), Koehncke N (Co-I) (Jan 2024 – Dec 2025). **Implementing a Low Cost ROPS Program to Reduce Saskatchewan Farm Fatalities.** Saskatchewan Ministry of Agriculture, Sustainable Canadian Agricultural Partnership. \$50,800 (CAD).

Knowledge Transfer

Invited Presentations

- Koehncke, N. **The Low-Cost ROPS Program.** Canadian Agricultural Safety Association **Annual Conference.** Abbotsford, British Columbia. November 2024

Rural Wellness Communications Laboratory

The Rural Wellness Communications Laboratory is an interdisciplinary initiative dedicated to promoting and disseminating the work of the Canadian Centre for Rural and Agricultural Health (CCRAH) with community, industry, and academic partners. Its mission is to support research teams by developing and distributing resources and information that best shares research in an easy-to-access format. By using a communication integrated approach, digital and telecommunications lab, it ensures that rural wellness research remains accessible, relevant, and widely distributed enabling seamless collaboration with partners around the world.



CCRAH Communications Team 2025 (left to right) back row: Katie Thompson, Dr. Shelley Kirychuk, Dr. Matthieu Girard. Front row: Duane Minish, Sueli de Freitas, Brooke Thompson

CCRAH Team Members

Lead



Dr. Shelley Kirychuk

Dr. Shelley Kirychuk is the Director of CCRAH. In this role, she shapes the Centre's strategic direction and vision, and works closely with the Communications team to ensure CCRAH's messaging aligns with its goals and values.

Staff

- **Dr. Matthieu Girard**, KT & Communications Manager
- **Katie Thompson**, Graphic Designer
- **Brooke Thompson**, Lab Manager
- **Sueli de Freitas**, Communications
- **Duane Minish**, RaDAR
- **Dr. Merle Massie**, Professional Research Associate

CCRAH Communications – Team Update

Over the past year, the CCRAH Communications team has been actively enhancing its communications and engagement efforts to better reflect our vision and impact. A key focus has been the development of compelling Cases for Support to strengthen funding and partnership opportunities. The Communications team has also been building a robust social media and communications strategy that showcases our strengths, highlights ongoing impactful research projects, and celebrates the achievements of partnering organizations.



A cornerstone initiative we have developed is the Boots on the Ground newsletter, which is distributed bi-monthly to nearly 300 recipients, providing updates and insights into the work done at CCRAH and partnering organizations.

Additionally, the team has prioritized resource development and the dissemination of research findings to ensure that valuable knowledge reaches the right audiences in accessible and engaging formats.

Looking ahead, the CCRAH Communications team is gearing up for an exciting year of growth and innovation. A major priority will be updating the CCRAH website to improve user experience, accessibility, and alignment with the CCRAH's goals and vision. In tandem, the team is developing a refreshed visual branding identity that captures the breadth of our research, outreach, and impact—while also clearly positioning CCRAH as part of a larger organizational ecosystem. Efforts will continue to strengthen and refine the overall communications strategy and social media plan, ensuring consistent, engaging, and strategic messaging.



Specific to 2026, the team will play a key role in supporting the planning and promotion of the Safety and Health in Agricultural and Rural Populations (SHARP) 2026 Symposium, helping to elevate its visibility and impact across academic, industry, and rural communities.

Midwest Rural Agricultural Safety and Health (MRASH) Conference

In November 2024, CCRAH Communications team members Matthieu Girard and Katie Thompson attended the Midwest Rural and Agricultural Safety and Health (MRASH) Conference in Ames, Iowa. Hosted by Iowa's Center for Agricultural Safety

and Health (I-CASH), in collaboration with the Great Plains Center for Agricultural Health and other partners, MRASH is an annual gathering of researchers, health professionals, farmers, and rural advocates committed to advancing agricultural safety and health. The 2024 conference theme, "Messaging Matters," emphasized the importance of effective communication strategies in reaching rural and agricultural communities, highlighting innovative tools, media engagement, and the value of strong community connections.



Midwest Rural Agricultural Safety and Health Conference

Messaging Matters

November 6-8, 2024

ISU Alumni Center, Ames, Iowa



At the conference, we had a display table featuring our research and outreach efforts, offering attendees insight into the impactful work being done across Saskatchewan and Canada. We also had the opportunity to present on "Knowledge Mobilization for Rural and Agricultural People in Canada," where we shared CCRAH's approach to translating research into meaningful action through strong partnerships, resource development, and targeted outreach initiatives.



Knowledge Transfer

Media/Online/Technical Reports

- Massie M (May 2024) **Farmer and rancher mental health focus of Governor General Discussion.** <https://cchsa-ccssma.usask.ca/news-articles/2024-news/farmer-and-rancher-mental-health-focus-of-governor-general-discussion.php>
- CCRAH Communications (July 2024) **USask farm shoulder study shows research in action at Ag in Motion.** University of Saskatchewan News. <https://news.usask.ca/articles/research/2024/usask-farm-shoulder-study-shows-research-in-action-at-ag-in-motion.php>
- CCRAH Communications (July 2024) **Sun safety in agriculture: USask partnership at Ag in Motion.** University of Saskatchewan News. <https://cchsa-ccssma.usask.ca/news-articles/2024-news/sun-safety-in-agriculture-usask-partnership-at-ag-in-motion.php>
- Massie M. (July 2024) **First Nations Housing Symposium combines research and knowledge with action and art.** First Nations and Metis Built Environment. <https://research-groups.usask.ca/fn-built-environment/news-and-events/first-nations-housing-symposium-combines-research-and-knowledge-with-action-and-art1.php>

Conference Abstracts

- Girard M, Thompson K, de Freitas S, Thompson B, Massie M, Ulmer K, Kirychuk S, Koehncke N, Sander S, Minish D. **Knowledge Mobilization for Rural and Agricultural People in Canada.** Midwest Rural and Agricultural Safety and Health (MRASH) Conference. Ames, IA, USA.
- Thompson K, Ulmer K, de Freitas S, Thompson B, Sander S, Kirychuk S, Koehncke N, Girard M. **Grassroots Connections with Farmers - Ensuring the Success of Research and Outreach Programs for Health and Safety in Canada.** International Society for Agricultural Safety and Health (ISASH) Conference. Portland, ME, USA.

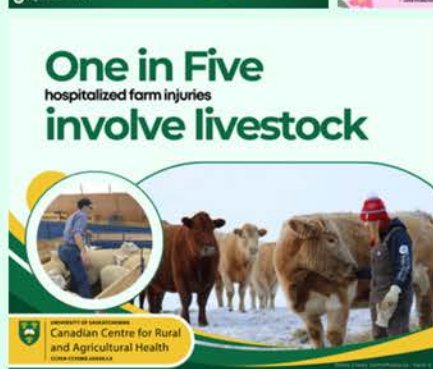
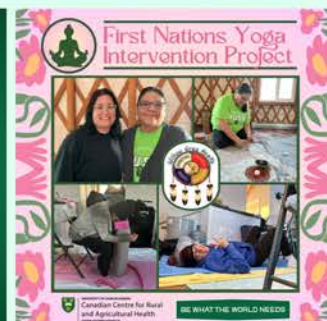
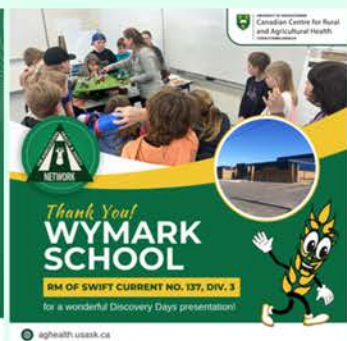
Social Media

At CCRAH, our Communications team has been working to grow and energize our social media presence. We're not just posting—we're telling our story. From showcasing the incredible achievements of our researchers and partners, to highlighting our travels and accomplishments, we're opening a window into the heart of our work.

We're also committed to sharing timely, relevant, and impactful information that supports our mission and engages our community. Whether it's highlighting new research, promoting upcoming initiatives, or celebrating milestones, our goal is to connect and inform our followers of all CCRAH latest happenings..



4,961 Followers
on all CCRAH and
CCRAH-related social
media platforms



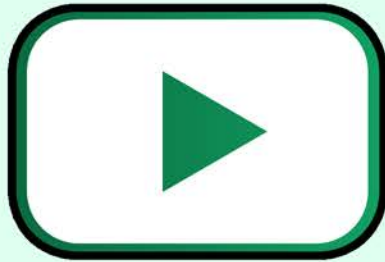
Age Makes a Difference

0-14 years	15-39 years	40-59 years	60+ years
Machinery rollover	Machinery rollover	Entangled in moving machinery	Disoriented machinery operator runover by machine
Passenger fell from machine then runover	Machinery vs. traffic collision	Machinery vs. traffic collision	Machinery rollover
Machinery runover of bystander	Pinned or stuck by machine component	Machinery rollover	Operator fell from machine then runover
Drowning	Contact with toxic substance	Disoriented machinery operator runover by machine	Animal related

Leading cause of fatal injury by age group, 1990-2019 in Saskatchewan



YouTube



Views

- Total - 289,143
- 24/25 - 36,807

Videos

- Total - 65
- 24/25 - 17

LinkedIn



- Reactions - 1,237
- Impressions - 32,473
- Page Visits - 434

Facebook



- Posts - 537
- Page Visits - 3,500
- Interactions - 2,800

Followers

	May 1, 2024	Dec 1, 2024	Jun 1, 2025
Facebook - CCRAH Started Jan 22nd 2024	36	80	144
Facebook - AHSN	491	523	555
LinkedIn - CCRAH Started Jan 2024	106	231	348
X - CCRAH	539	617	647
X - AHSN	913	909	899
X - RaDAR	522	527	508

BOOTS on the Ground

Newsletter of CCRAH

The Canadian Centre for Rural and Agricultural Health (CCRAH) publishes a bi-monthly newsletter titled “Boots on the Ground.” This publication is dedicated to highlighting the various activities and outreach efforts of CCRAH. It serves as an essential platform for disseminating crucial information, research findings, and notable achievements to our valued collaborators, community members, and industry partners.

Through “Boots on the Ground,” CCRAH aims to foster stronger connections within the rural and agricultural communities. The newsletter is designed to promote better health outcomes and enhance safety practices, not only in Saskatchewan but also across Canada and globally. Each edition features a range of topics, including updates on ongoing projects, insights from recent studies, and profiles of community initiatives.

By sharing these stories and findings, CCRAH hopes to inspire and inform its audience, encouraging the adoption of best practices and innovative solutions in rural health and agriculture. The newsletter also provides a forum for recognizing the contributions of individuals and organizations that are making a difference in these fields.

Ultimately, “Boots on the Ground” is more than just a newsletter; it is a tool for building a supportive and informed community dedicated to improving the well-being and safety of those living and working in rural and agricultural settings.



Sign up to join our
Boots on the Ground
mailing list!



ENHANCE RURAL AND AGRICULTURAL HEALTH OUTCOMES IN OUR WORLD



The Canadian Centre for Rural and Agricultural Health works with the University of Saskatchewan as part of the Be What The World Needs campaign.

Together, we have developed a Case for Support. It guides you to imagine ways to work with us to keep rural and agricultural people healthy and safe.

Thank you for putting your boots on the ground with us!

Partners / Collaborators / Members



UNIVERSITY OF SASKATCHEWAN
College of Medicine
MEDICINE.USASK.CA

Departments

- Surgery
- Pediatrics
- Anatomy, Physiology and Pharmacology
- Biochemistry, Microbiology and Immunology
- Academic Family Medicine
- Community Health and Epidemiology
- Pathology and Laboratory Medicine

Divisions

- Endocrinology and Metabolism
- Cardiology
- Rheumatology
- Orthopedic Surgery



UNIVERSITY OF SASKATCHEWAN
Western College of Veterinary Medicine
WCV.M.USASK.CA

Departments

- Small Animal Clinical Sciences
- Veterinary Biomedical Sciences



UNIVERSITY OF SASKATCHEWAN
College of Engineering
ENGINEERING.USASK.CA

Departments

- Mechanical Engineering
- Chemical and Biological Engineering
- Civil, Geological and Environmental Engineering



UNIVERSITY OF SASKATCHEWAN
College of Arts and Science
ARTSANDSCIENCE.USASK.CA

Departments

- Psychology
- Chemistry



UNIVERSITY OF SASKATCHEWAN
Toxicology Centre
USASK.CA/TOXICOLOGY



UNIVERSITY OF SASKATCHEWAN

- Bilokreli Trust Fund



UNIVERSITY OF SASKATCHEWAN
Respiratory Research Centre
COLLEGE OF MEDICINE
MEDICINE.USASK.CA/RESPIRATORYRESEARCH



UNIVERSITY OF SASKATCHEWAN
Global Institute for Water Security
USASK.CA/WATER



UNIVERSITY OF SASKATCHEWAN
College of Kinesiology
KINESIOLOGY.USASK.CA



UNIVERSITY OF SASKATCHEWAN
School of Environment and Sustainability
SENS.USASK.CA



UNIVERSITY OF SASKATCHEWAN
School of Rehabilitation Science
COLLEGE OF MEDICINE
REHABSCIENCE.USASK.CA



UNIVERSITY OF SASKATCHEWAN
Centre for the Study of Co-operatives
USASKSTUDIES.COOP



UNIVERSITY OF SASKATCHEWAN
College of Agriculture and Bioresources
DEPARTMENT OF ANIMAL AND POULTRY SCIENCE
AGBIO.USASK.CA



UNIVERSITY OF SASKATCHEWAN
College of Pharmacy and Nutrition
PHARMACY-NUTRITION.USASK.CA



UNIVERSITY OF SASKATCHEWAN
School of Public Health
SPH.USASK.CA



UNIVERSITY OF SASKATCHEWAN
College of Nursing
NURSING.USASK.CA





- Economic Development
- Homebuilders and Construction Company



Indigenous Services
Canada

Services aux
Autochtones Canada



BEARDY'S & OKEMASIS' CREE NATION





FOND DU LAC
DENESULINE FIRST NATION



**WHITECAP DAKOTA
FIRST NATION**
WAPAHA SKA #94



**The Key
First Nation**
306-594-2020 | NORQUAY, SK



CASA | ACSA
CANADIAN AGRICULTURAL SAFETY ASSOCIATION
ASSOCIATION CANADIENNE DE SÉCURITÉ AGRICOLE



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada



**University of Nebraska
Medical Center**



Nutrien™

**Ag
Health & Safety
Alliance**

SARM
Saskatchewan Association
of Rural Municipalities

**University
of Regina**

**McGill
UNIVERSITY**

**TRENT
UNIVERSITY**

Baycrest

**Sunnybrook
RESEARCH INSTITUTE**

**McMaster
University**

**UNIVERSITY OF
TORONTO**

**BRANDON
UNIVERSITY**

**UBC
THE UNIVERSITY
OF BRITISH COLUMBIA**

**UNIVERSITY OF
CALGARY**

UHI University of the
Highlands and Islands
Oilthigh na Gàidhealtachd
agus nan Eilean

**SWIN
BUR
NE** SWINBURNE
UNIVERSITY OF
TECHNOLOGY

**LA TROBE
UNIVERSITY**

**SASKATCHEWAN
HEALTH
QUALITY
COUNCIL**

Alzheimer Society
SASKATCHEWAN

FHQ
Tribal Council

HN

**All Nations'
Healing Hospital**

Saskatchewan

- Ministry of Health
- Ministry of Agriculture

**Dementia Supports
in Rural Saskatchewan**

Cameco

CCNA
Canadian Consortium
on Neurodegeneration
in Aging



CCNV
Consortium canadien en
neurodégénérescence
associée au vieillissement

**Universidade
de São Paulo**

iPM
Occupational Therapy

UDS Université de
Sherbrooke



Canadian
Cancer
Society



**nātawihowin and
mamawiikikayaahk**
Research, Training, and Mentorship Networks
Saskatchewan NEIHR skneihr.ca



SCPOR
Saskatchewan Centre for
Patient-Oriented Research



Sask Wheat
DEVELOPMENT COMMISSION

WorkSafeTM
SASKATCHEWAN
Work to live.



**The Do More
Agriculture
Foundation**



3M Science.
Applied to Life.TM



UNIVERSITY OF SASKATCHEWAN

Canadian Centre for Rural and Agricultural Health

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