

Bridging Worlds

Stories of how rural voices drive health research

Feng Chang School of Pharmacy, University of Waterloo May 2025

Road Trip April 23, 2007 to Hazard, Kentucky









Our Rural Health Research



Paul Gill

Health

Ryan Gibson

Economic

Chair of Rural

Development

Chair of Rural Digital





Leith Deacon Chair of Rural Resiliency



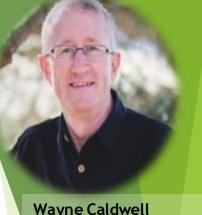
Leslie Walker Chair of Rural Artificial Intelligence



Jay McFarlan Chair of Rural **Nutrition & Exercise**



Mike Beazley Chair of Rural Substance Use



Wayne Caldwell Chair of Rural Healthy Sustainable Communities



Simon Berge **Chair of Rural Business** & Co-Operatives



Erin Donald Chair of Equity and Access in Rural Palliative Care



Ken Milne Chair of Rural Medicine



Feng Chang Chair of Rural **Pharmacy**



Scott Brown Chair of Rural Organizational Development



Mohamed Gazarin Chair of Rural Hospital **Pharmacy Research**



Casandra Bryant Chair of Rural **Human Resources**





Gateway board members Dan Stringer, Shelia Schuehlein, and Dr. Feng Chang, had the pleasure of attending the celebration of 10 years of the Waterloo University School of Pharmacy. We look forward many more years of working together! @UWPharmacy #UWPharm10



10:48 am · 30 May 2018



Waterloo Pharmacy @UWPharmacy · 30 May 2018 We're so happy you could join us and we can't wait for what our next decade will bring for our partnership!





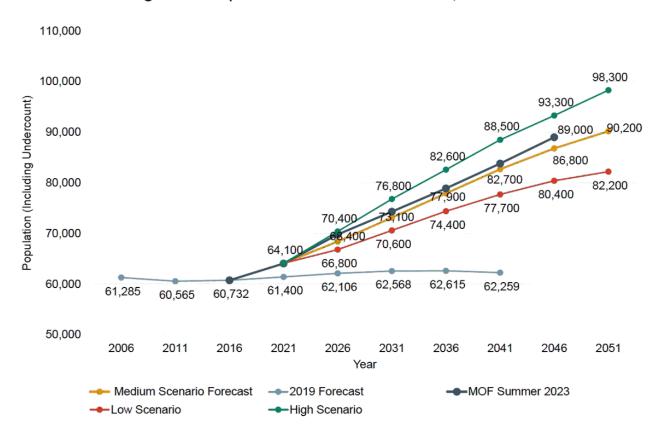






Goderich Demographic Changes:

Huron County
Long-Term Population Forecast Scenarios, 2021 to 2051



Within Huron County, the 75+ population is forecast to steadily increase from 11% to 20% in 2051.

Contrary to 2016 predictions, Huron county experienced positive net migration of approximately 660 people annually.





PREVALENCE OF POTENTIALLY INAPPROPRIATE MEDICATIONS USE

AMONG RECENTLY ADMITTED GERIATRIC PATIENTS IN RURAL HOSPITALS



<u>Potentially inappropriate medications (PIMs)</u> are prescribed most often to elderly patients and can cause serious adverse effects. Older adults tend to use multiple medications, and age-related physiological changes can make some medications inappropriate.

What is a PIM?

A medication that can create serious problems when the risks of adverse drug reactions outweigh the benefits of the medication compared with alternative treatments...

especially if an alternative treatment is available and safer for the same condition

Key aim

To assess the quality of medication use among older patients



Was the proportion of patients using one or more PIMs (using STOPP and Beers' criteria)

178 participants

Enrolled in the study

was the mean age of participants

80 years

Recommendations

- It is necessary to implement educational or computerized interventions to reduce the number of prescribed PIMs.
- A periodic medication review program should be applied in each healthcare setting to evaluate PIMs and correct use of drugs

Conclusions

The continued use of PIMs among older patients is a crucial issue that requires further research to discover the underlying reasons of continued prescription of PIMs particularly in rural regions, and to determine an ideal approach that prevents PIM-related problems.

Read more at: Haya Mukhlef Al-Shamri (2014). Prevalence of Potentially Inappropriate Medications Use Among Recently Admitted Geriatric Patients in Rural Hospitals. UWSpace. http://hdl.handle.net/10012/8983



Lonely No More

"I thought it was a really unique program ... that was really focusing on ... peer to peer support which is amazing ... it leads to that ... level of connectivity and compassion and ... a sense of belonging that ... we're looking for ..."

Currently Offering

- 4 weekly circles of support
- 1 weekly Music Group
- 1 monthly Storytelling Club
- 1 6-week Movement Program

COMMUNITY MEMBERS IMPACTED THROUGH CONNECTEDNESS COACHING

43 Enrolled in Huron County's Connectedness Coaching Offering 40 Enrolled in North Perth's Connectedness Coaching Offering 19 Enrolled in Connectedness Coach's Open Offering

COMMUNITY MEMBERS IMPACTED THROUGH LONELY NO MORE PROGRAM



12 Community Members Served as Lonely No More Volunteers
 16 Older Adult Residents Participated in Lonely No More
 4 Community Members Made a Guest Appearance
 27 Community Members Attended a Jam Session

COMMUNITY MEMBERS ENGAGED IN COMMUNITY OUTREACH INITIATVES

5 Community Representatives Spoke at Community Dialogue Event
 4 Professional Storytellers/Radio Personalities Are Scheduled
 63 Smiles Seeded Through Seed a Smile Call to Action Campaign
 11 Community Members Attended Cultural Complexity Webinar
 6 Community Members Attended Coping Strategy Exchange
 5 Community Members Have Registered for Upcoming Events

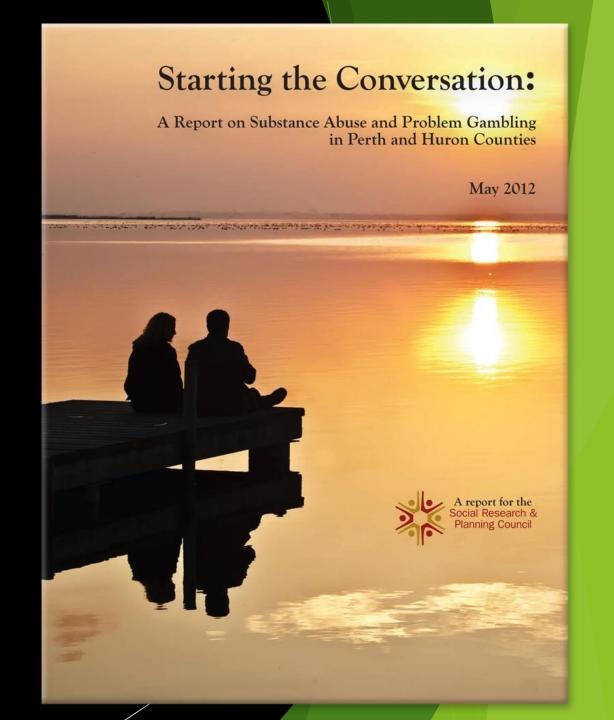
IN TOTAL, 254 COMMUNITY MEMBERS DIRECTLY IMPACTED



2021 Statistics

Increasing rates of opioid misuse in the region

 Methadone clinics among the most urgently needed new services





Methadone Access

A study exploring rural pharmacists' perceived barriers, motivations, and solutions to offering methadone maintenance treatment (MMT) in the Huron Perth region.

THE JOURNAL OF RURAL HEALTH



ORIGINAL ARTICLE

Perceived Barriers and Facilitators to Providing Methadone Maintenance Treatment Among Rural Community Pharmacists in Southwestern Ontario

Joseph Fonseca;^{1,2} Andrew Chang, PharmD;² & Feng Chang, BScPhm, PharmD^{1,2}

1 Gateway Centre of Excellence in Rural Health, Seaforth, Ontario, Canada 2 School of Pharmacy, University of Waterloo, Waterloo, Ontario, Canada

Abstract

Disclosures: The authors have no conflicts of interest to declare.

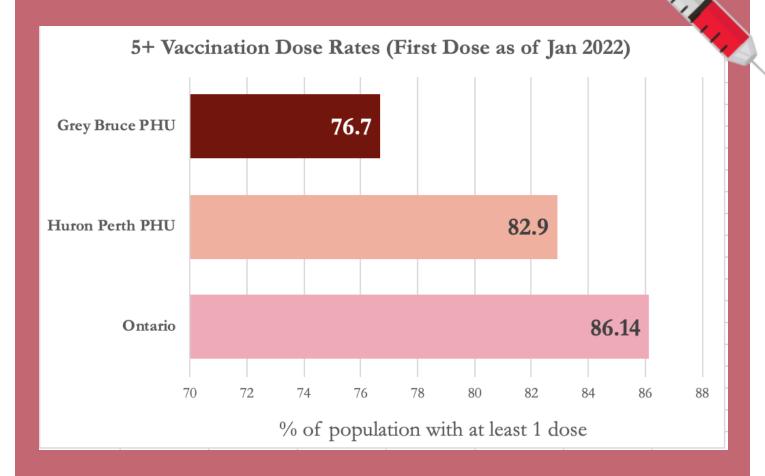
Funding: This project was supported in part by a grant from the government of Ontario (Ministry grant no. 06674) and in part by the government of Canada. The views expressed herein do not necessarily represent the views of the government of Canada.

Acknowledgments: The authors thank the community pharmacists in Huron and Perth

Purpose: Misuse of opioids has become a public health concern across North America. Rural patients have limited access to methadone maintenance treatment (MMT), an opioid addiction-treatment service that could be offered by community pharmacists. The aim of this study was to identify rural community pharmacists' perceived barriers, motivations, and solutions to offering MMT to their patients.

Methods: One-on-one, semistructured interviews were conducted with 11 community pharmacists who practice in rural southwestern Ontario. Interview transcripts were analyzed using inductive qualitative content analysis.

Findings: Increased workload, extended operating hours, and concerns about safety, theft, burglary, community resistance, and availability of methadone



Regional Background

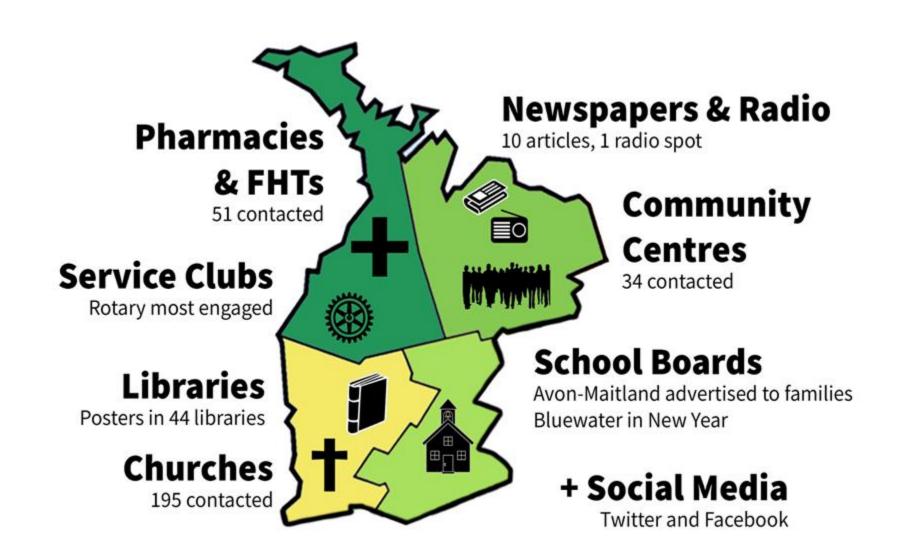
Sharpest discrepancies between the provincial average in 12-17 and 18-29 age groups



The Reaching Rural Project

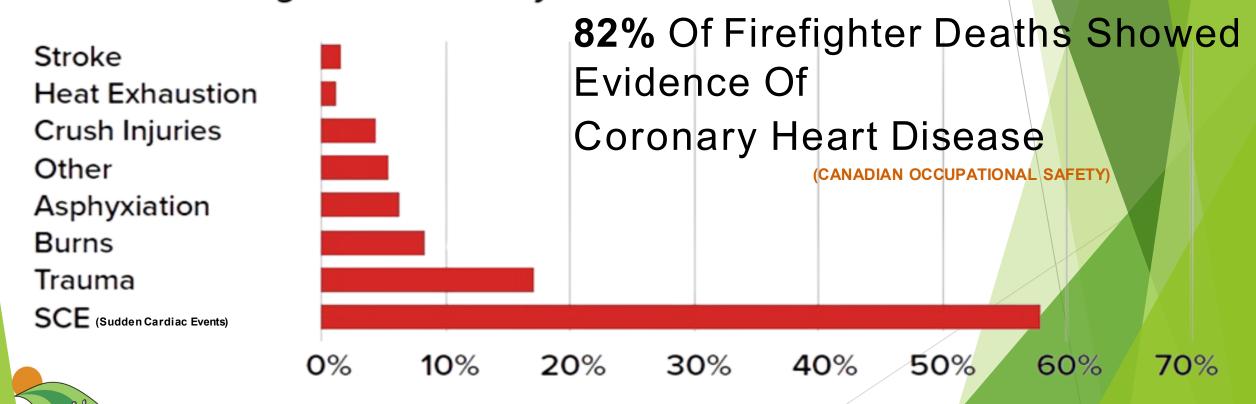
Funded by Tri-Council, administered by NSERC

Getting the word out



Top Cause Of Death Among Firefighters Is Sudden Cardiac Events (SCE)

FIGURE 1. Firefighter Line of Duty Deaths









Program Reach

The population of interest will include the 18 fire halls within Huron County and on its border:

- Lucknow & District Fire Department
- Wingham fire station
- Howick Township Fire Station
- Minto Fire-Clifford Station
- Brussels Fire Station 🔭



- Blyth Fire Hall
- Goderich Fire Department
- Central Huron Fire Department Clinton
- Bayfield Fire Department 🔭



- Bluewater Fire Station 11 (Brucefield)
- Seaforth Area Fire Department
- Bluewater Fire Station 12 (Zurich)
- Bluewater Fire Station 13 (Hensall)
- Dashwood Fire Hall
- Exeter Fire Station
- Ethel Fire Station
- South Huron Fire Station 16 (Centralia)
- Ripley-Huron Fire Station





Capitalizing on **Gateway CERH's pre-established relationships in the community**, graduate and undergraduate pharmacy students were able to:

- Recruit small rural hospitals as study sites in their research
- Gain access to cross-sectoral and multidisciplinary perspectives on their projects
- Community hosted presentations and co-publications in peer-reviewed journals

School of Pharmacy » News » 2020 » February »

Pharmacy and Recreation and Leisure professors partner to improve rural health in southwestern Ontario

MONDAY, FEBRUARY 10, 2020



Profs. Feng Chang and Heather Mair with student researchers.

Bi

Pharmacy student conducts pharmacy practice research through Gateway Centre of Excellence in Rural Health

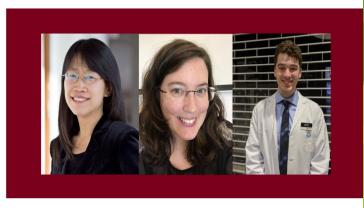
WEDNESDAY, SEPTEMBER 25, 2019



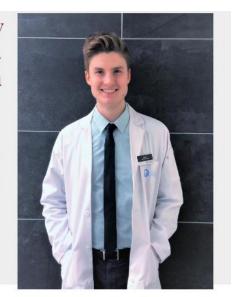
Joe with Prof. Feng Chang and a group from Gateway. Back row, left to right: Dr. Agnes Kluz, Dr. Chang, Jim Wholey, and Sheila Scheuhelin. Front Row: Gateway students Katrina Merner, Joe Fonseca, and Alana Roy. School of Pharmacy » News » 2022 » May »

Reaching Rural: engaging the community to build vaccine confidence in southwestern Ontario

THURSDAY, MAY 26, 2022

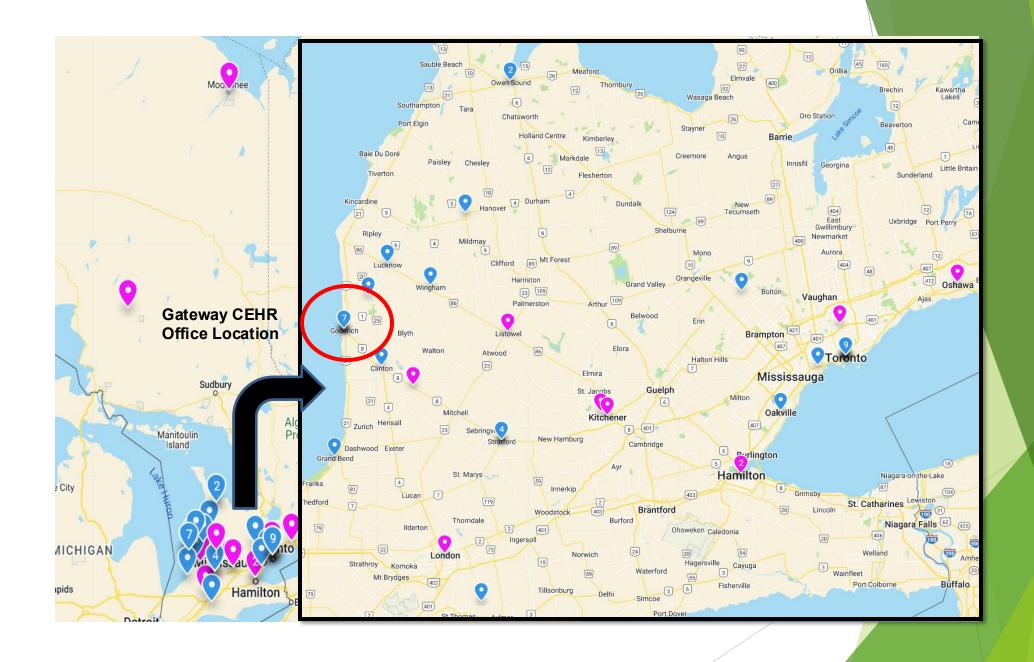


Led by Prof. Feng Chang, Reaching Rural is a project supported by the Gateway Centre for Excellence in Rural Health. Left to right: Feng Chang, Sarah Versteeg, Dan Stuckless. "I have to credit Prof. Chang and Gateway for their flexible approach to mentorship. Working with them, you get out what you put in – if you want to take an idea and run with it, they support you wholeheartedly. As a student, I've gained tangible skills and connections and been able to see the product of my work published and making a difference."





"My experiences with Gateway have taught me so much about myself and my interests. It taught me to focus on what skills I have – to leverage those to have an impact and to build new skills so that I bring something to the table when partnering with researchers."



- Gateway CERH (Goderich, ON)
- •Alexandra Marine and General Hospital (Goderich, ON)
- •Goderich Place (Goderich, ON)
- Healthy Hearts (Goderich, ON)
- Municipality of ACW (Goderich, ON)
- Senior Centre without Walls (Goderich, ON)
- •Huron Community Family Health Team (Seaforth, ON)
- Municipality of North Perth (Listowel, ON)
- •Alzheimer's Society of Huron and Perth (Stratford and Listowel, ON)
- Huron Perth Public Health (Listowel, ON)
- Brown's Guardian Pharmacy (Walkerton, ON)
- Council on Aging Grey Bruce (Owen Sound, ON)
- Senior Centers without Walls (Grey Bruce, Owen Sound, ON)
- Dungannon Seniors' Club / Dungannon Community Alliance (Dungannon, ON)
- •Home & Community Support Services of Grey-Bruce (Markdale, ON)
- Huron Perth Healthcare Alliance (Stratford, ON)
- •Huron Perth OHT Heart Failure Action Group (Stratford, ON)
- VON (Stratford, ON)
- •Older Adults Centres' Association of Ontario (Caledon East, ON)
- •One Care Home and Community Support Services (Clinton, ON)
- •Ontario Association for Family Mediation (head office Almonte, ON)
- Royal Oaks Pharmacy (Wingham, ON)
- Seniors' Centre for Excellence (Mapleton, ON)
- Sepoy Manor (Lucknow, ON)
- Western University Schulich School of Medicine and Dentistry (London, ON)
- School of Rehabilitation Science at McMaster (Hamilton, ON)
- •Chronic Pain Centre of Excellence for Canadian Veterans (Hamilton, ON)
- Community Justice Initiative (Kitchener, ON)
- University of Toronto (Toronto, ON)
- ■ISMP Canada (Toronto, ON)
- Alzheimer Society of Canada (Toronto, ON)
- Alzheimer Society of Ontario (Toronto, ON)
- Rehabilitative Care Alliance (Toronto, ON)
- BrainXchange (Toronto, ON)
- Provincial Geriatrics Leadership Ontario (Toronto, ON)
- Ontario Retirement Communities Association (Oakville, ON)
- Ontario Tech University (Oshawa, ON)

- ■NorthWest Telepharmacy Solutions (Deep River, ON)
- ■Canadian Association of Schools of Nursing (Ottawa, ON)
- Association of Faculties of Pharmacy of Canada (Ottawa, ON)
- Canadian Association of Schools of Social Work (Kanata, ON)
- Canadian Pharmacists Association (Ottawa, ON)
- ■Royal Canadian Legion (head office, Ottawa, ON)
- Winchester District Memorial Hospital (Winchester, ON)
- Older Adult and Care Partner Advisory Councils (OACPACs)
- ■Ontario Caregiver Organization
- ■Weeneebayko Area Health Authority (Moose Factory, ON)
- Chapleau and District Family Health Team (Chapleau, ON)
- ■Indivior Canada (Quebec)
- Citizens's Crime Prevention Association of Newfoundland and Labrador (St. John's, NFL)
- Alzheimer Society New Brunswick (Fredericton, NB)
- ■Caregivers Nova Scotia (Cape Breton, NS)
- ■Dementia Advocacy Canada
- ■Holland College (Charlottetown PEI)
- ■ProTem (Moncton, NB)
- •University of New Brunswick (St John, NB)
- ■Cape Breton University (Cape Breton)
- ■Family Mediation Canada (head office Kelowna BC)
- ■Age-u-cate (Bedford, TX)

MIDWESTERN NEWS

Another emergency denartment closure

2024 worst year for Ontario ER closures, CBC analysis finds

BY SCOTT KITCHING

JANUARY 30, 2024 - 2:18PM







A

1 out of every 5 hospitals with an ER or urgent care centre had unplanned shutdowns

Julie Ireton, Valerie Ouellet · CBC News · Posted: Dec 02, 2024 4:00 AM EST | Last Updated: 9 hours ago

Another hospital in the region is having to temporarily close its emergency department.



ec 20, 2021 · Last updated Dec 21, 2021 · 4 minute read

requently closed rural Ontario mergency department faces uncertain uture

Patient volumes have dropped off at the Chesley emergency department because of reduced hours

3	
***	EMERGENCY DEPARTMENT
	OPEN <mark>B</mark> AM TO 6PM
	AFTER HOURS CAIL 911 OR
	GO TO SEAFORTH OR GODERICH

Reason for closure	Total hours closed	% of closure hours	No. of hospitals
Nurse shortage	37,100	85.27%	12
General staff shortage	4,963	11.41%	21
COVID-related staff shortage	922	2.12%	6
Physician shortage	341	0.78%	9
Other	161	0.37%	4
No reason given	22	0.05%	3

LONDON News

1,199 emergency room closures in Ontario this year: Report

Farmer Mental Health in Canada Worsened During Pandemic, U of G Research Finds

Agriculture and suicide

CENTRE FOR SUICIDE PREVENTION AND MENTAL HEALTH COMMISSION OF CANADA

DOWNLOAD SHARE

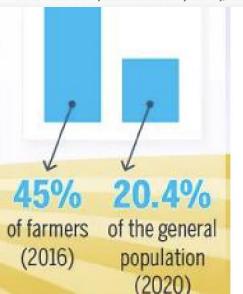
Cliquez ici pour la version française

Click here to view all our fact sheets on suicide.

These fact sheets are a collaboration between the Centre for Suicide Prevention and the Mental Health Commission of Canada.

Introduction

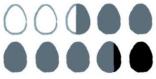
Farming and ranching are considered two of the most stressful occupations, both physically and mentally. Unique factors associated with agricultural work may contribute to poor mental health outcomes and even suicide. In Canada, producers (farmers and ranchers) are especially prone to mental health challenges such as depression and anxiety, and they may have less resiliency because of the stressors they experience (Jones-Bitton et al., 2020). While much of the research on resiliency focuses on farmers specifically, some of the factors farmers face are similar to what other







FARMERS HAD SIGNIFICANTLY HIGHER SCORES ON ALL 3 SUBSCALES OF THE MASLACH BURNOUT INVENTORY COMPARED TO POPULATION NORMS.



76% OF FARMERS WERE CLASSIFIED AS EXPERIENCING MODERATE OR HIGH PERCEIVED STRESS

ROCHELLE THOMPSON, BRIANA HAGEN, ANDRIA JONES-BITTON, 2022

There is 1 psychologist for every 28,500 people in rural areas

53.4% of households in rural areas have access to high-speed broadband Internet

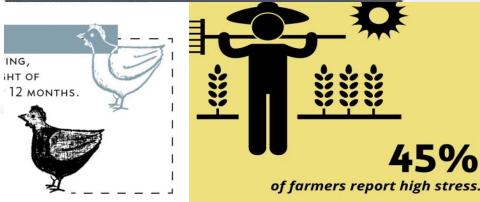


45%

Compared to 1 psychologist for every 3,848 people in urban areas (2015)

Compared to 89.5% of households in Canada as a whole (2022)





& CYNICISM ARE 2 OF THE



of farmers meet the classification for depression.





of farmers are more susceptible than the general population to chronic stress, which can lead to physical and mental illnesses.

WHERE MIGHT THE NEXT 10 YEARS TAKE US?



