



The Importance of Research in Community Hospitals

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No conflict of interest to declare





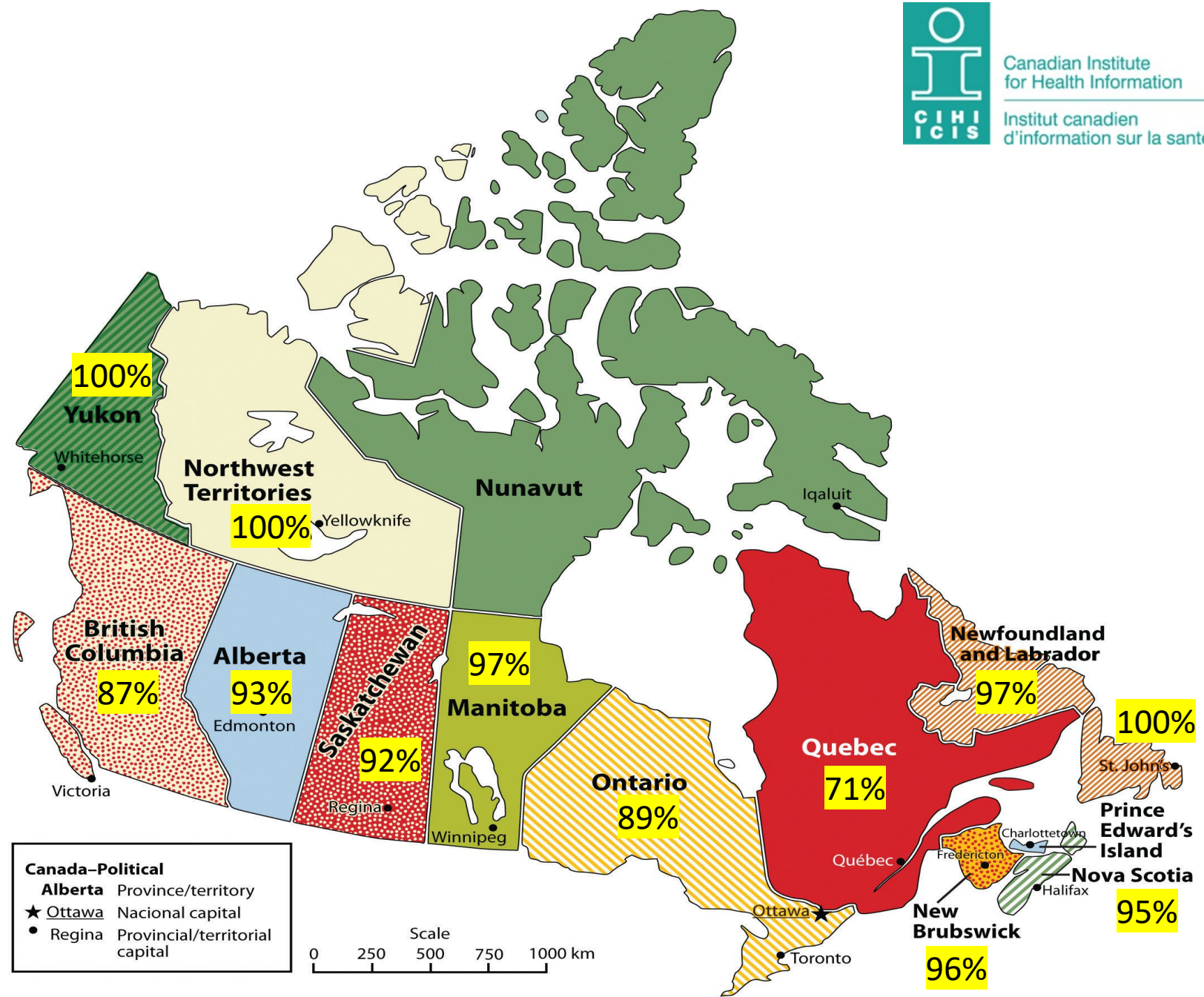
WHY?



HOW?



Most hospitals in Canada are community hospitals



Ontario Hospitals

- 14 Acute Academic Hospitals
- 46 Community Hospitals
- 13 Complex Continuing Care and Rehabilitation Hospitals
- 62 Small Hospitals
- 5 Mental Health and Addiction Hospitals

Geographic Differences

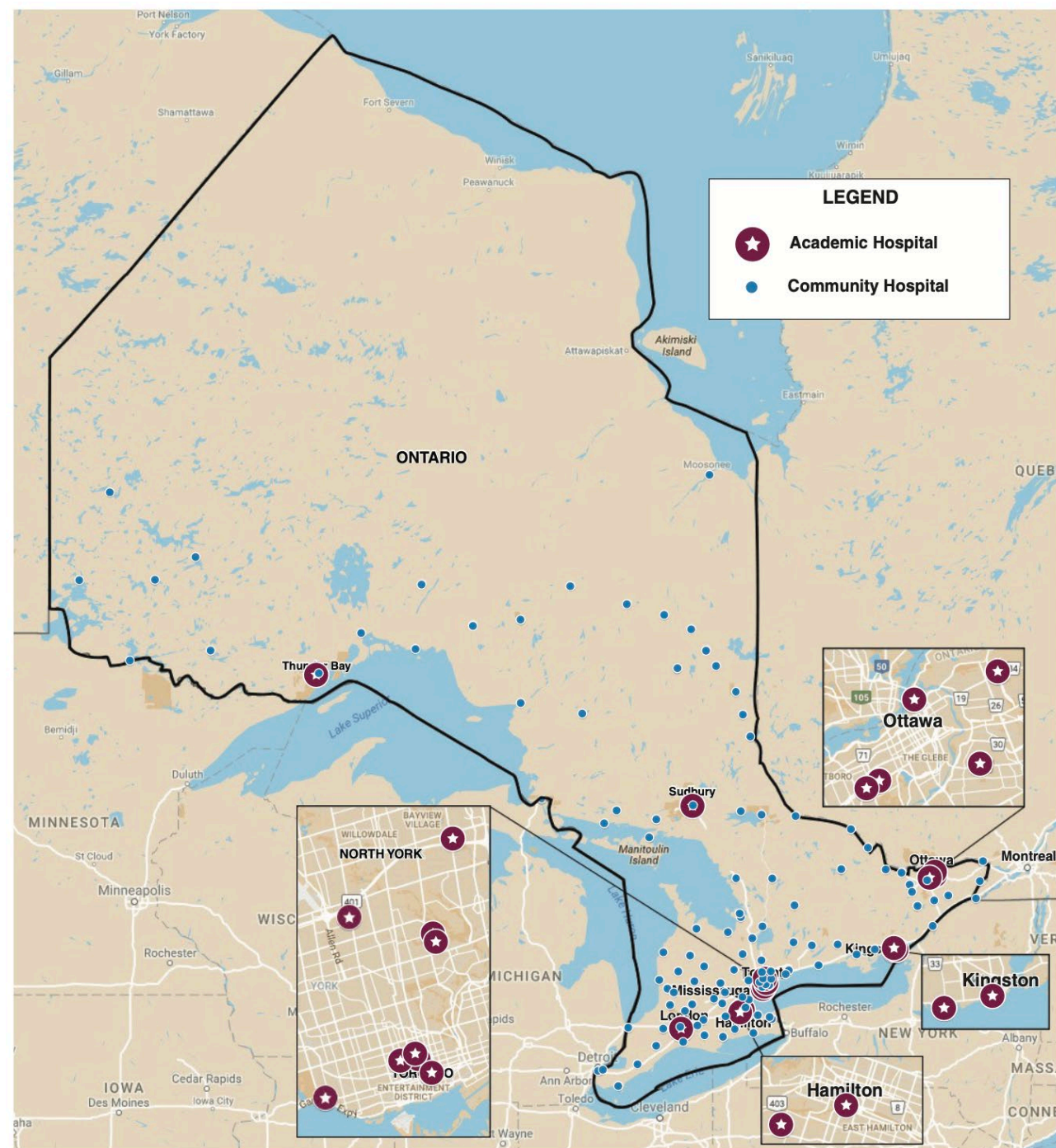


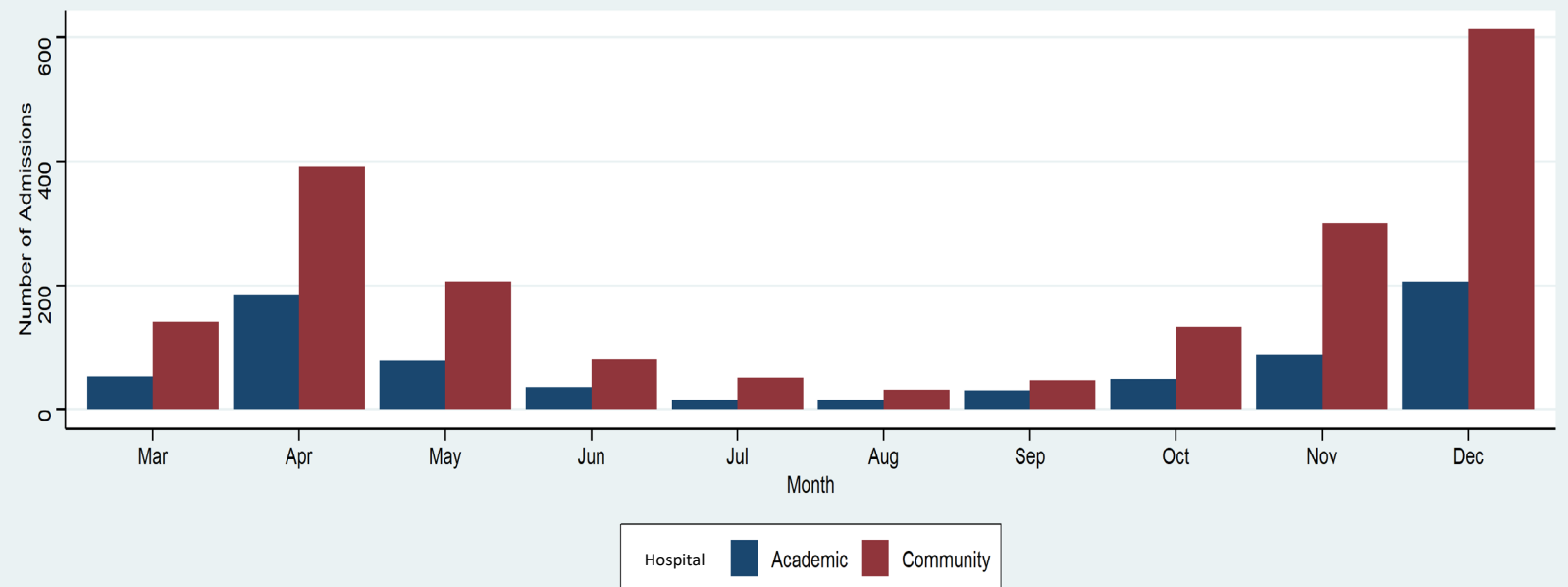
Figure 1: Locations of academic and community hospitals in Ontario (created by one of the authors [S.C.] using Google Maps).

Most
Patients
Receive
Health Care
In
Community
Hospitals

COVID-19 ICU Admissions in 2020 in Ontario

Academic ICUs (N=799, 28%)

Community ICUs (N=2,040, 72%)



Patient Populations are Different

	Academic ICUs (n=576)	Community ICUs (n=1790)	P-value
Age (SD)	64.5 (16.5)	64.8 (13.9)	0.47
MOD score on admission (SD)	4.28 (2.95)	4.60 (2.62)	0.004
P/F ratio on admission (SD)	278 (210)	195 (174)	<0.001
% days invasive ventilation (SD)	41.8 (40.6)	51.0 (41.5)	<0.001
% days non-invasive ventilation (SD)	14.2 (26.9)	17.1 (27.1)	<0.001
% days without ventilation (SD)	12.6 (26.7)	8.9 (21.0)	0.019
% days on dialysis (SD)	7.0 (20.8)	6.1 (18.3)	<0.001
% days on ECMO (SD)	0.86 (7.0)	0.087 (1.1)	<0.001
ICU length of stay in days (SD)	14.0 (16.3)	15.4 (16.3)	<0.001
Discharge destination			0.005
Discharged (%)	363 (63.0%)	1013 (56.6%)	
Transferred (%)	47 (8.2%)	229 (12.8%)	
Deceased/palliative (%)	166 (28.8%)	544 (30.4%)	

Patient Populations are Different

	Community n=352	Academic n=2203	Total n=2555	P-value adjusted for centre
Age in years, mean (SD)	62.7 (14.9)	59.5 (16.4)	59.9 (16.2)	0.044
Type of Patient, number (%)				
Medical	325 (92.3)	1631 (74.0)	1956 (76.6)	0.007
Surgical	26 (7.4)	242 (11.0)	268 (10.5)	0.223
Trauma	1 (0.3)	330 (15.0)	331 (13.0)	0.017
Duration of mechanical ventilation in days				
Median (Q1-Q3)	8 (4-16)	7 (3-12)	7 (4-13)	0.037†
Duration of ICU stay in days				
Median (Q1-Q3)	13 (8-23)	11 (7-18)	12 (7-19)	0.012†
Death in ICU, N (%)	107 (30.4)	452 (20.5)	559 (21.9)	0.002
Death in hospital, N (%)	143 (40.6)	574 (26.1)	717 (28.1)	<0.001

Community Hospitals Can Conduct Clinical Trials

	Community n=352	Academic n=2203	Total n=2555	P-value adjusted for centre
Consent Rate (%)	85.9	76.3	77.5	0.149
Monthly Enrollment per 15-bed ICU, Mean (SD)	2.1 (1.4)	1.1 (0.7)	1.3 (0.9)	0.119
Protocol Adherence				
Either a) received study product or b) had a legitimate reason not to receive study product on $\geq 90\%$ of ICU days, N (%)	319 (90.6)	2019 (91.6)	2338 (91.5)	0.207
Received at least 1 dose of study product, N (%)	348 (98.9)	2187 (99.3)	2535 (99.2)	0.422
No protocol violation, N (%)	318 (90.3)	2052 (93.1)	2370 (92.8)	0.232

Benefits to Health System

Learning Health Systems



Systematically gather and
create evidence.

Apply the most promising evidence
to improve care.

The Quintuple Aim For health care improvement

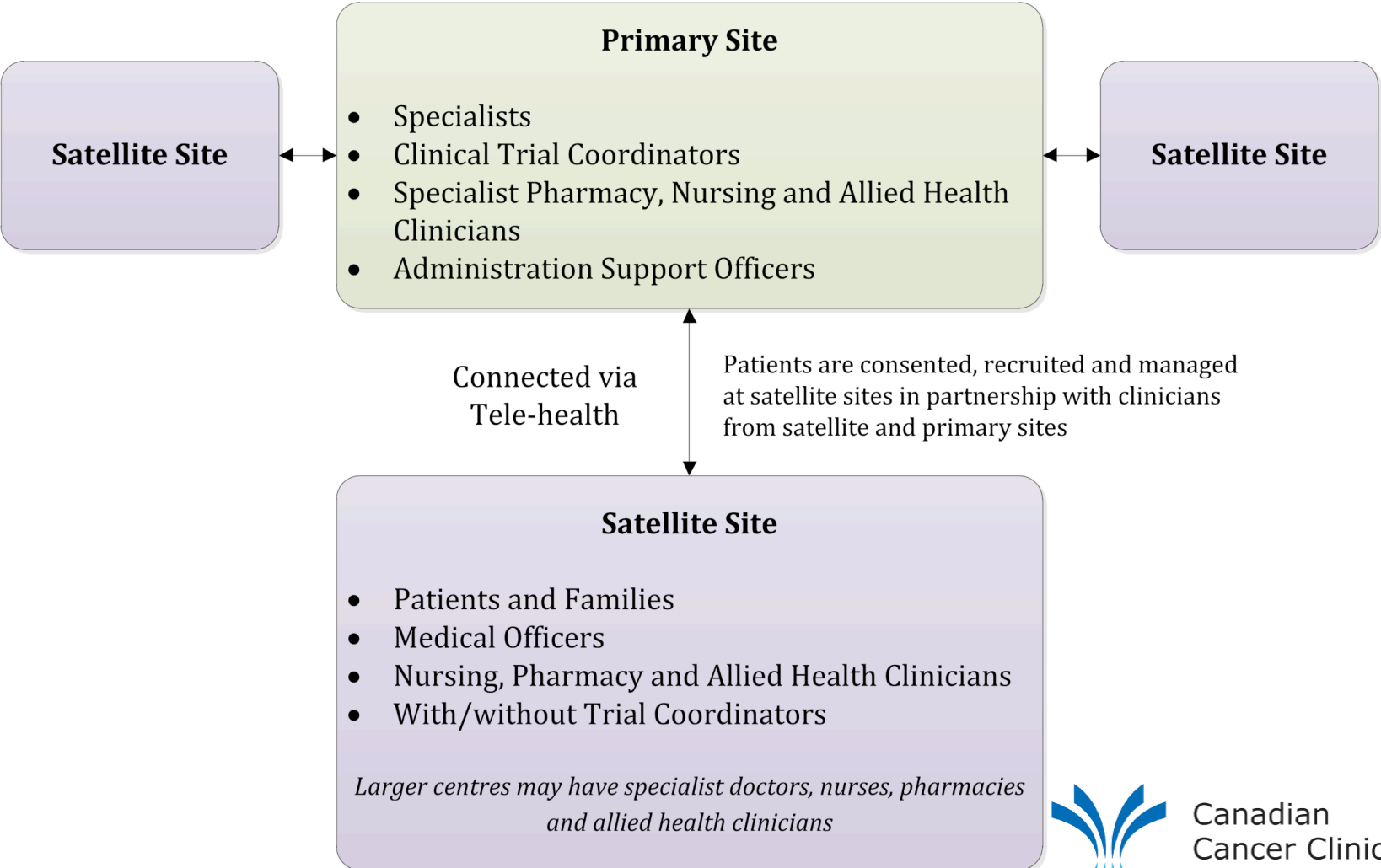


Benefits to Health System



3CTN's CRAFT Framework

Hub and Spoke



Research Funding



PSI
FOUNDATION



CIHR IRSC



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

Training

Lifting

Health Research
Training Platform

Mentorship /Networks



CCIRNet

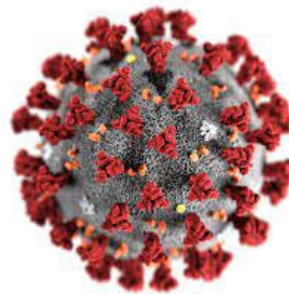
Canadian Community
ICU Research Network



CCCRCG

Research Coordinators Group (CCCRCG)

Resources



**COVID-19 Network of
Clinical Trials Networks**



SUMMARY

Summary

- Involving community hospitals in research will improve health service delivery and health outcomes of patients
- Community hospitals can do research with the right support

