



UNIVERSITY OF  
CALGARY



CLINICAL RESEARCH UNIT:  
SUPPORTING RESEARCHERS  
WITH END-TO-END RESEARCH  
DATA SERVICES

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*Tracy Wang, Director of Strategy and Operations*

**Better  
Data  
Better  
Research**



# OUR MISSION

To simplify and demystify end-to-end research data processes from collection to analysis to translation by maximizing the potential of electronic data capture tools, co-developing innovative custom platforms, and offering sophisticated and specialized data services.

CRU supports the U of C strategic pillar to *Become Leaders in Research*.

CRU launched in **2007** and was designated a faculty-wide core resource for the Cumming School of Medicine in **2013**.

# CRU SERVICE OFFERING

## ELECTRONIC DATA CAPTURE AND MANAGEMENT

Access and capacity building tools for **data capture, databases, and data management**



Self-service

CRU-Supported

Clinical Trials

## CUSTOM SOFTWARE PLATFORMS

Create innovative solutions for research workflows that are **tailor-made for the project's unique needs**



CRU-built products

Project-specific custom platforms

## METHODS AND ANALYTICS

**Statistical support and methodology** for clinical trials and observational studies

Data linkage

Data cleaning & analysis



Specialized technical project management expertise for **end-to-end project support**, including meeting **Tri-Council Research Data Management Requirements**

The CRU provides services on a **cost recovery** basis and charges service fees.



# THE CRU OFFERS A VALIDATED REDCAP 13 INSTANCE

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- Meets Health Canada/ICH GCP requirements to run regulatory clinical trials
- REDCap's interface is simple to use and familiar to many researchers
- Development on REDCap is more cost-effective than other EDC tools

We also offer:

- Validated **external modules** (e.g., auto-scheduling, auto-populate fields)
- **MyCap patient portal**
- An **eConsent** framework
- CRU-built supplementary tools (**DataXplor**) to improve data quality

# Service Showcase: Methods and Analytics

## Novel Stroke Treatment

## Project Provider Continuity

## Travel Distance and Patient Outcomes

Research Area

Alternative treatment and drug modalities for stroke treatment

Investigate role of primary care providers in care continuity for chronic diseases

Impact of travel distance on outcomes for patients needing sub-specialty care

CRU Support

- **Data Linkage: Registries, clinical study portal, CIHI administrative data**
- **Data cleaning**
- **DSMC interim analysis and statistical analysis**

- **Cohort extraction from administrative dataset, implementing disease case definitions, generating novel metrics**
- **Statistical analysis: Multivariable zero-inflated negative binomial regressions**

- **Statistical analysis: Multivariable survival analysis**

Outcomes

Publication in high impact journal (ranked 2<sup>nd</sup> among 830 general medicine journals)

Successful publication, others in progress

Findings: Patients supported by primary care in the community have significantly reduced rates of ED visits and hospitalizations.

Successful publication, viewed 600+ times

Findings: Longer travel distance to subspecialty clinics had higher risk of death, raising equity considerations

# GET IN TOUCH!



START A PROJECT  
WITH US!

SUBMIT AN [INTAKE SURVEY](#)



VISIT OUR  
[WEBSITE](#)

[CRU.UCALGARY.CA](http://CRU.UCALGARY.CA)



EMAIL US

[CRU@UCALGARY.CA](mailto:CRU@UCALGARY.CA)



# THANKS!

We look forward to collaborating!

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# CRU IN THE RESEARCH ECOSYSTEM



## CENTRE FOR HEALTH INFORMATICS

Data access and **analysis of secondary data**  
*Example: AHS administrative data*



- Support **primary data collection** via EDC tools and health registry platforms, including validated systems for regulatory studies
- Software development capabilities to build **custom platforms**
- Provide **statistical and methods** support



## Calgary Centre for Clinical Research

- Support services for **administrative, financial, and operational** research processes, including industry-led studies
- OnCore CTMS supports clinical trial **processes**, but *does not provide EDC capabilities*



Research and beta test site for **research design**  
*Examples: simulate clinical environments, human factors like usability and user experience*



## Research Computing Services

**High performance computing** capabilities for advanced computational problems