Research & Connect Care
The Connect Care Research Team

Research Triad
CC.Research@ahs.ca
Clinical Operations:
Carrie Farnell, CORE Lead
Amanda Cunningham, Senior Trainer
IT:
Brian Preeper, Application Lead
Virginia Marshall, Project Manager
CMIO:
Serena Bains, Clinical Informatics Lead

AHS Research & Innovation
Becky Wong, Director, Research Admin
Trina Johnson, Provincial Lead, Research Ops
Pedro Reis, Project Manager
Leanne Blahut, Project Manager

Connect Care Research Triad Leadership
Clinical Operations: Shelley Bannister
IT: Marcus Norman
CMIO: Leahann McElveen

Epic
Eric Jansen, Research Application Manager

AHS Research & Innovation Leadership
Marc Leduc, Sr Provincial Director
Research & Connect Care

How is the Inquiry and Research Community working with Connect Care?
What is Inquiry and Research to Connect Care?

We participate in inquiry when we ask questions about what we do and we perform research, we use systematic approaches to answer those questions.

Connect Care is, at its core, about inquiry and research.

**Vision:** To better healthcare with better information. The means is curiosity, inquiry and research.
How will Connect Care Support Clinical Research?

To enhance patient safety, the medical records of patients participating in studies include a flag, note and link to information about any study participation. Clinicians can learn:

• The name and description of the registered study
• Emergency contact details for the research team
• Research-related orders and encounters that may inform clinical care
Research & Connect Care

How will Inquiry and Research Relate to Operations?

Connect Care will promote processes and workflows to perform, track, and report on inquiry and research performed in AHS facilities. Ultimately Connect Care will:

- **Enable inquiry** by training AHS staff and researchers to use tools and workflows that explore the impacts of how they do their work
- **Enhance recruitment** using tools and functionalities to increase opportunities for Albertans to know about and participate in research
- **Provide reporting services** easing access to research teams, managers and monitors who oversee research studies
- **Support billing** for research-related services (i.e. Lab, Diagnostic Imaging, Pharmacy, Health Information Management)
- **Streamline study administration** with research record tracking, reporting and analytics.
Research and discovery

- evidence generation & analytics
- study execution
- feasibility & cohort exploration
- innovation
- collaboration
Research and discovery

feasibility & cohort exploration
Cohort exploration

Feasibility
SlicerDicer PHI Warning

Enter your IRB approval number

IRB Number:

Continue  Cancel Export

Accountability

Research and discovery

- study execution
- feasibility & cohort exploration
Targeted point of care
- BPAs
- Schedule “surfing”

Targeted outreach
- Direct to patient
- Letters
- Clinician Outreach

Self referral
- Flyers/Ads
- ResearchKit apps
- Research Match
- Sync for Science
Patient meets the initial screening criteria for a study of asthma patients currently being treated with leukotriene modulators or sympathomimetics but are not being treated with inhaled steroids (Study 500_NIH122303). Study coordinator will be automatically notified if patient is interested.

Respond to Study
Do Not Respond

Asthma Control and Treatment Efficacy

- Interested
- Declined

Brief Information for Clinicians
Brief Information for Patient
Full Protocol Detail
Does my referral matter?

Accept (1)
Recruitment

Targeted outreach
- Direct to patient
- Letters/cold calls

Self referral
- Flyers/Ads
- ResearchKit apps
- Research Match
- Sync for Science
Recruitment: general considerations

Governance:
- Under what conditions will which strategies be considered?
- How will you educate your research community about these options?
- Who, along with IRB, needs to review and approve a study for a given recruitment strategy?

Process:
- How will investigators request Epic-facilitated support for recruitment?
- How will approval for Epic-facilitated recruitment strategy for a given study be documented?
- What will be the process for monitoring use and effectiveness of the tools?

Resources:
- Who will work with requesting investigator to review and translate request?
- Who will build, test, maintain, retire the Epic-based recruitment for a study?

THINK BIG, BUT START SMALL
Research-aware patient care
Study approved

Epic needs to know about the STUDY (Study Administrative Record)

RECRUIT patients

Which PATIENTS are associated with the study

Study MONITOR review

Which ENCOUNTERS are associated with the study

Which ORDERS are associated with the study

PRL creation and insertion (Beacon and/or billing)

Visit charges generated from clinical activity and/or manual charge entry

Which BEACON PROTOCOL is assigned to the patient

Research charge routing engine evaluates and predirects charges to appropriate account

Research billing review

Charges billed appropriately
Epic needs to know about the **STUDY** (Study Administrative Record)

Which **PATIENTS** are associated with the study

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PRL creation and insertion (Beacon and/or billing)
### Enrolled

**Asthma Control and Treatment Efficacy**

<table>
<thead>
<tr>
<th>Study Description</th>
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<tbody>
<tr>
<td>Epic Medical Center is participating in a study of the efficacy of asthma treatment and control in patients currently being treated with a leukotriene modulator and/or sympathomimetic agents but are not using inhaled steroids. Patients in this study may be receiving a study medication or a placebo. If you have any patient care concerns potentially related to study, please contact Dr. Clemmer (PI).</td>
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<table>
<thead>
<tr>
<th>Study Code:</th>
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<tr>
<td>Principal Investigator:</td>
<td>Terry Clemmer, M.D.</td>
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<td>NOT #:</td>
<td>NCT990128323</td>
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<td>IRB #:</td>
<td>452A0450110-2010</td>
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<td>Study Type:</td>
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**Additional Info**

- **Coordinators:** Robin Bird
**notify study team of potential adverse events**

### Patient Information
- **Patient Name:** Smith, John
- **Sex:** Male
- **Date of Birth:** 09/02/1964
- **Age:** 51 y.o.
- **Social Security Number:** xxx-xx-8889

### Encounter Information
- **Location:** Epic Medical Hospital
- **Center:** EMH

### Admission Information
- **Admitting Provider:** Emergency Medicine
- **Patient Service:** Emergency
- **Patient Class:** Emergency
- **Admission Date:** 10/27/2015
- **Length of Stay:**

### ED Arrival Information
- **Expected Arrival:**
- **Actual Arrival:** 10/27/2015 08:12 AM
- **Acuity:** Emergency Medicine
- **Means of Arrival:** Car
- **Escorted By:** Friend
- **Service:** Emergency Medicine
Study approved
(Epic needs to know about the STUDY (Study Administrative Record))

RECRUIT patients

Which PATIENTS are associated with the study

Study MONITOR review

Which ENCOUNTERS are associated with the study

Which ORDERS are associated with the study

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Visit charges generated from clinical activity and/or manual charge entry

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Charges billed appropriately
Study approved

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Charges billed appropriately
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Research visit task tracking
Adverse events
Study approved

Epic needs to know about the STUDY (Study Administrative Record)

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Research billing review

Charges billed appropriately

PRL creation and insertion (Beacon and/or billing)
Research orders

- X-ray Chest 2 Views

- Pulmonary function test
  - Summary: Routine, Clinic Performed

- CBC and differential meow

- Basic metabolic panel

- Outpatient
  - Pulmonary function test
  - X-ray Routine, Clinic Performed
  - CBC and differential meow
  - Basic metabolic panel

Select a pharmacy

Results routing for research

ROUTE RESULTS

ALSO TO STUDY TEAM
Contraindicated medications
Drug-Study: mirtazapine

IRB: 100

This medication will disqualify the patient from being able to continue on their clinical trial. Please contact the PI at 606-232-6267 to discuss potential options for this patient.

Details

Override Reason...
Study approved

Epic needs to know about the **STUDY** (Study Administrative Record)

Which **PATIENTS** are associated with the study

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**RECRUIT** patients

Visit charges generated from clinical activity and/or manual charge entry

Research charge routing engine evaluates and redirects charges to appropriate account

Research billing review

Charges billed appropriately
Research charge separation

![Research Billing Review for Johnson, Arnold [30342]](image_url)

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<th>Description</th>
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External study monitors

- oncology study
- insomnia study
Coordinator release

Monitor review
Research and discovery

- Evidence generation & analytics
- Study execution
- Feasibility & cohort exploration
Data...data...data
The data ecosystem

- **Chronicles**
  *Real-time operational database*

- **Clarity**
  *Operational data store (staging data)*

- **Caboodle**
  *Data warehouse*

- Interactive operational workflows
- Epic data normalized in RDBMS
- Star schema-modeled data
Research and discovery

- evidence generation & analytics
- study execution
- innovation
- feasibility & cohort exploration
- collaboration
Questions?

Connect Care Research Team
CC.Research@albertahealthservices.ca