



WORKING WITH ROCS



Center for Children's Surgery

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO **ANSCHUTZ MEDICAL CAMPUS**



Research Outcomes in
Children's Surgery (ROCS)

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AUGUST 17 , 2026

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Roadmap



**ROCS CAN HELP
WITH THESE
ASPECTS OF
YOUR RESEARCH**

Choose a
Research
Topic

Perform a
Literature
Review

Formulate a
Research
Question or
Hypothesis

Design the
Study

Write the
Protocol

Create Data
Collection
Components

Get Approval
(CHCO &
COMIRB)

Conduct the
Study

Analyze the
Data & Draw
Conclusions

Present Your
Work



Meet The ROCS Team

Jill L Kaar, PhD



ROCS Director

Kaci Pickett-Nairne, MS



Biostatistician

Sandra Talley, MPH



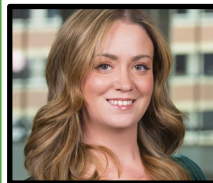
Director of Finance & Administration, CCS

Emily Meneses, MS



Biostatistician

Samantha Wilson, MS



Lead Coordinator

Suhong Tong, MS



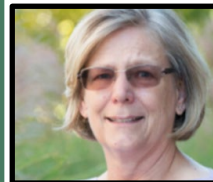
Biostatistician

Ally Calderon



Research Coordinator

Lori Silveira, PhD



Biostatistician

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Research Coordinator

Zhaoxing Pan, PhD



Biostatistician



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WHAT IS ROCS?



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CENTRAL INFRASTRUCTURE SUPPORTING OUTCOMES RESEARCH IN THE CENTER FOR CHILDREN'S SURGERY (CCS)

The ROCS team engages in collaborative efforts with various departments and services to produce high-quality research results aimed at improving outcomes for patients within the CCS.



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Why Was ROCS Established?

Surgeons are busy! They don't have a regular schedule, or a ton of time - making navigating the research landscape much more difficult.

WE BRIDGE THE GAP



ROCS understand the complexities of conducting research across CU and CHCO



- **ROCS is here to help** simplify the process, navigate institutional requirements, connect you with the right resources, and address barriers along the way.
- **Our goal** is to provide a clearer path forward so researchers can spend less time navigating the system and more time advancing high-quality surgical research.



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ROCS Services Include...

Methodology

Proposals, Aims
& Hypotheses

Grant Writing

Protocol
Development

Clinical Trial or
Study Design

Data Collection
Models

Start-Up & Regulatory

HSR/CHCO/IRB
Submissions

Research/Data
Agreements

Amendments

Consent Forms

REDCap Design

Coordinator Support

Chart Review

Recruitment,
Screening, &
Enrollment

Documentation
& Data
Management

Gift Card
Programs

Temporary PRA
Support

Biostatistics

Data Consulting

Analysis
Planning &
Protocol
Development

Sample Size &
Power
Calculations

Data Analysis

Manuscript &
Abstract
Preparation

Research Guidance

Reference
Materials &
Guides

Point of Contact
for Research
Questions

Research
Bootcamp

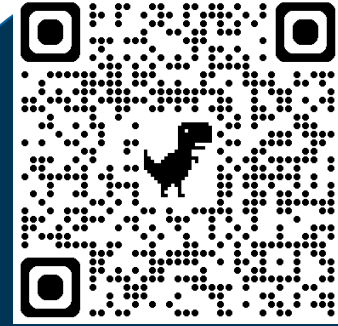
Work In
Progress (WIP)

Research
Coordinator
Forum

How Do I Request ROCS' Support?



You may also find the link on our website:
[https://medschool.cuanschutz.edu/ccs/research/research-outcomes-in-children's-surgery-\(rocs\)](https://medschool.cuanschutz.edu/ccs/research/research-outcomes-in-children's-surgery-(rocs))



**To receive ROCS support,
please submit an intake
form using this link:**

<https://app.smartsheet.com/b/form/019c6e032294733e9d795ae7652ae9e1>



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ROCS Support Intake Form

Items needed:

Key Contacts

- PI, primary point of contact, and other research team members who should be included in communications

Study Title

- A working or draft title is completely fine

COMIRB Number

- if applicable

ROCS Intake

Fields marked with an asterisk (*) are required.

ROCS Support Intake Form

We look forward to supporting your research!

Please note the following:

- Due to an influx of requests, please allow us up to 5 business days to respond to your request.
- We request that all investigators (not just research staff) meet regularly with our team during the life of the project.

For analysis requests and biostats support:

- We require at least 4 weeks between the time we receive your data and the time we can return a complete analysis. Time will vary based on complexity of the analysis, the state of the data, and your involvement.
- We will prioritize work that results in manuscript submission.



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Additional Info Needed:

Study Details:

- Tell us what you know.
 - The more context you can provide, the better we can understand your project and identify how ROCS can help.

Timeline & Priorities

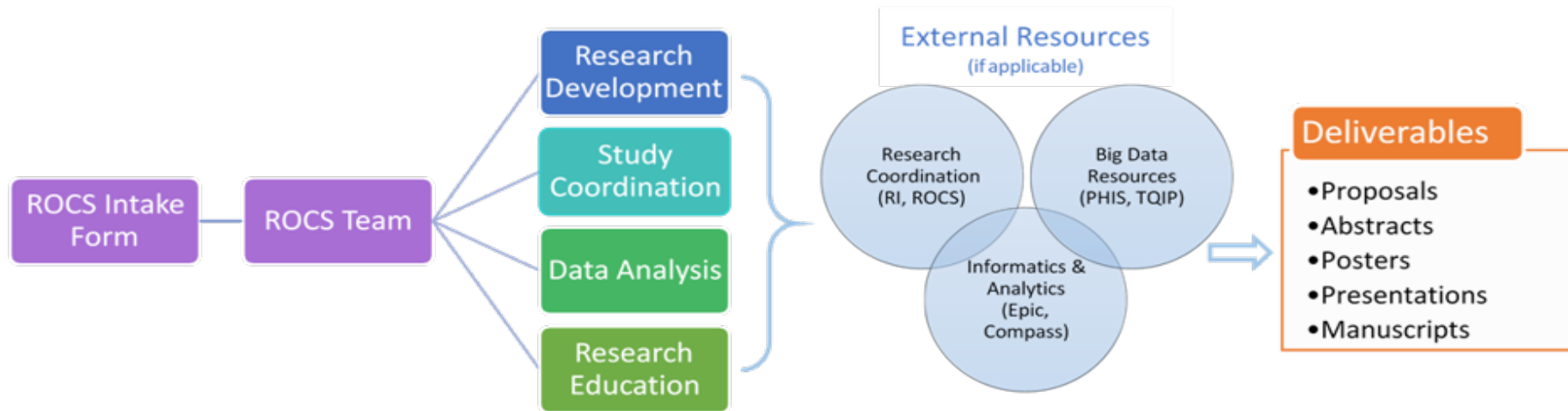
- Share your actual needs and constraints.
- Be realistic and intentional about deadlines rather than creating arbitrary dates.

What You Need From ROCS

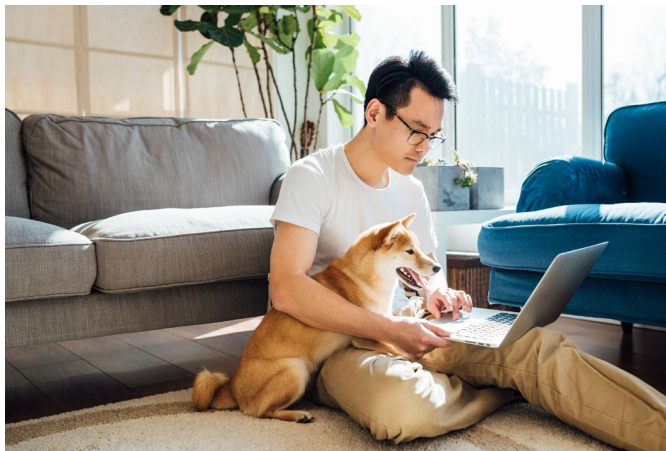
- Be specific.
 - What are you asking ROCS to help accomplish?
 - What would a successful outcome look like?



ROCS Intake Workflow



What to Expect When Working With ROCS



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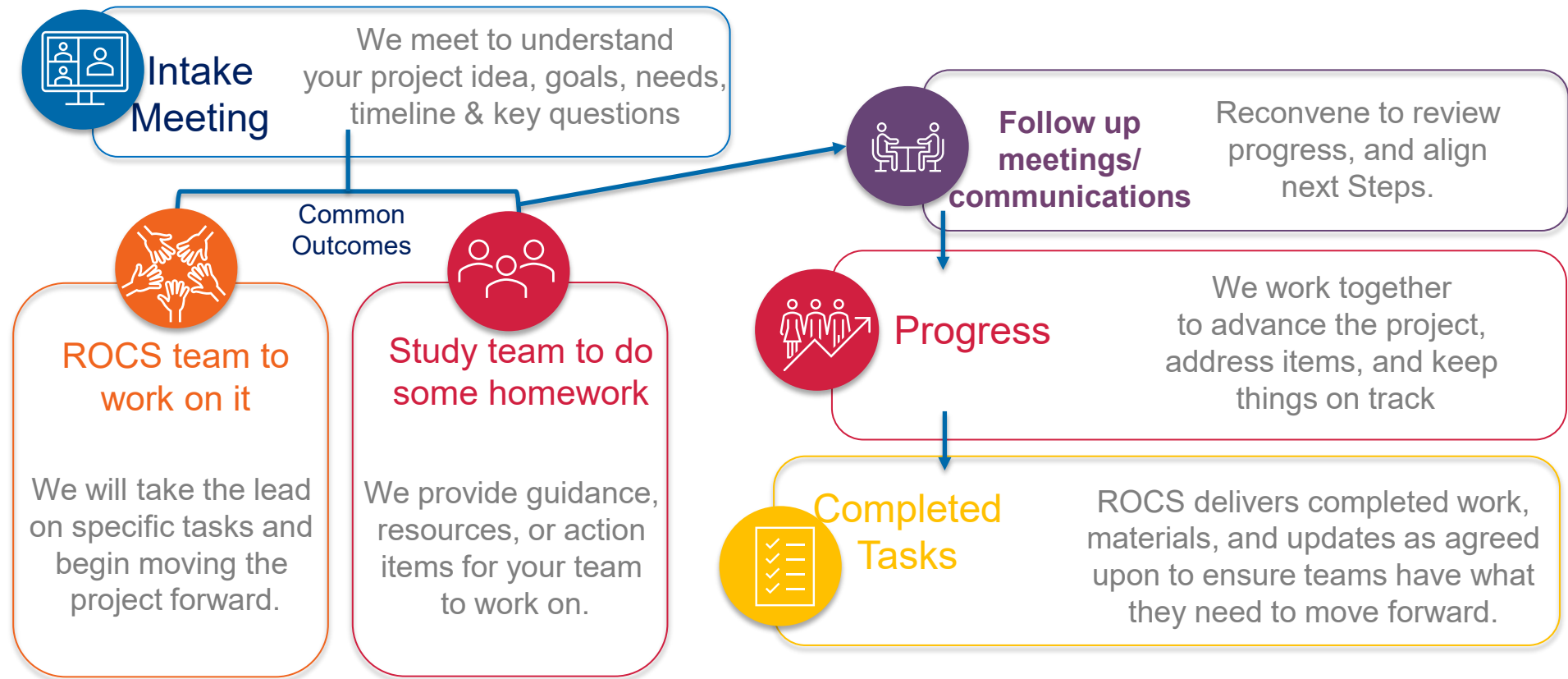
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Working with ROCS: From Intake to Completed Tasks



What **PIs, Fellows & Residents** Can Expect

Support that is practical, educational, and matched to your level of research experience

○ **A clear starting point**

We can help clarify your research question, identify next steps, and determine where ROCS can support your study..

○ **Guidance through the process**

Support from concept → IRB → data collection → analysis. ROCS can help you navigate the research process and connect the pieces along the way.

○ **Realistic feasibility assessments**

We can offer a practical look at what your study will require.

Together, we'll consider the population, available data, staffing, resources, and timelines.



What **PIs, Fellows & Residents** Can Expect (Cont.)

○ **Continuity**

Project knowledge and coordination can continue as trainees rotate, graduate, or transition roles

○ **Clear roles & responsibilities**

Upfront clarity about what ROCS will support, what the investigator will manage, and when additional resources may be needed.

○ **Opportunities to learn**

We aim to build research skills and understanding while providing hands-on support where needed.

**ROCS
combines
research
support +
education**



What **Research Coordinators** Can Expect From ROCS

Partnership, Resources, and shared infrastructure

- **A Collaborative Resource**

A team to bring questions, workflow challenges, or projects that could benefit from another perspective.

- **Shared Tools + Best Practices**

Templates, tracking tools, REDCap expertise, regulatory resources, and lessons learned across studies.

- **Consistent Research Practices**

Support common approaches across surgical research when standardization adds value.



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What **Research Coordinators** Can Expect From ROCS (cont.)

- **Connections across teams**

Connect CRCs doing related work and reduce unnecessary duplication of effort.

- **Knowledge sharing**

Share our institutional knowledge and help newer coordinators navigate processes and resources.

- **A place to troubleshoot**

Practical help with recruitment, regulatory, data, workflow, and operational barriers.



What Makes a Successful ROCS Partnership



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Key Points for Working with ROCS

Engage Us Early

- Reach out as early as possible — even if your project is still in the concept stage
- If you know you'll eventually need ROCS support, early conversations help us plan resources, anticipate needs, and identify potential barriers.

Set Your Project Up for Success

- Provide clean, organized data when requesting analysis or data support.
- Establish clear, realistic deadlines and communicate priorities.
- Build in time for the unexpected — research rarely goes exactly as planned. Enrollment challenges, incomplete chart data, regulatory questions, and other issues can affect timelines.



Key Points for Working with ROCS (Cont.)

Communication Matters

- Timely, two-way communication helps keep projects moving.
- Delays in receiving data, decisions, documents, or responses may affect downstream timelines for protocols, analyses, abstracts, manuscripts, and other deliverables.
- If priorities or deadlines change, let us know early so we can adjust together.

We're the Research Experts — You're the Clinical Expert

- ROCS supports research across multiple surgical divisions and specialties.
- We may ask for clarification about terminology, clinical workflows, or specialty-specific practices.
- **Your clinical expertise + our research expertise = a stronger project.**



Research Education & Community

Ongoing opportunities to learn, connect, and strengthen pediatric surgical research

1

Annual Research Bootcamp



- Held every August
- For research residents, fellows, junior faculty, and research staff
- Practical foundation for navigating research at CHCO and CU

2

Research Coordinator Forums



- Quarterly (Jan / Apr / Jul / Oct) – Last Tue of month
- Collaborative space for **coordinators and assistants**
- Navigate existing and new research processes across CHCO and CU

3

Annual Research Symposium



- Upcoming: February 19, 2027
- Showcase of CCS research
- Topics spanning pediatric surgical care and research



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Working with ROCS: Key Takeaways

1

Engage ROCS Early

Reach out even when your project is still an idea. Early involvement helps us plan resources, identify barriers, and clarify next steps.

2

Submit a ROCS Intake

Use the ROCS intake form to request services. Tell us what you know, what you need, your priorities, and your timeline.

3

Be Clear + Stay Connected

Set realistic deadlines, communicate priorities, and keep us updated when needs or timelines change. Timely, two-way communication keeps work moving.

4

Bring Your Clinical Expertise

You know your specialty and clinical workflow. ROCS brings research expertise, coordination, and guidance — together we build a stronger project.



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THANK YOU!



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MEETING With your BIOSTATISTICIAN

ROCS Biostats Team



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OVERVIEW

1 ROCS Biostatistics Services

2 Rules of Collaboration

3 Excel Data Cleaning

4 Developing a Data Dictionary

5 Preparing to Discuss Your Analysis

6 Data Sharing Guidelines



ROCS Biostatisticians

Kaci Pickett-
Nairne, MS



Biostatistician

Emily Meneses,
MS



Biostatistician

Suhong Tong, MS



Biostatistician

Lori Silveira, PhD



Biostatistician

Zhaoxing Pan,
PhD



Biostatistician



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ROCS BIOSTATISTICS SERVICES

The biostatistician can collaborate in all parts of protocol development and implementation, not just the statistics!

- Analysis plan and protocol development
- Sample size and power calculation
- Retrospective and prospective data collection
- Clinical trial and general study design
- Randomization schedules
- Database structure and review (REDCap)
- Abstract and poster development
- Manuscript and grant preparation



RULES OF COLLABORATION WITH ROCS BIOSTATISTICIANS

1. Involve your biostatistician early and communicate often!
2. Data should be stored in REDCap
 - If your data is already in Excel, the data should be cleaned and include a data dictionary
3. Your biostatistician should be considered a co-investigator
 - Considered co-authors on all manuscripts, usually 2nd author
4. Notify us of any co-authored submissions and acceptance, even for abstracts
5. Be considerate of the time we need to complete your analysis!
 - For simple analyses, we need at least 4 weeks from receiving clean data



RULES OF COLLABORATION WITH ROCS BIOSTATISTICIANS

Request	Minimum Time Required
Power/Sample size calculation	10-20 hours
Protocol and analysis plan development	20-40 hours
Data analysis (depending on complexity)	40-120 hours +
Abstract assistance	10-40 hours

Hours of work $\neq$ weeks of work!



EXCEL DATA CLEANING

- ❖ Data cleaning can take a lot of time!
- ❖ It is usually an iterative process between you and your biostatistician.
- ❖ Ask your biostatistician for a meeting to discuss data cleaning expectations before you start!



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EXCEL DATA CREATION & CLEANING

Tips for Creating Clean Data in Excel:

1. Create concise variable names.
2. Leave cells blank to indicate missing values!
3. For categorical variables, use consistent, shorthand notation to label categories.
4. Ensure dates use identical formatting, such as MM-DD-YYYY or MM/DD/YYYY.
5. For select all that apply questions, each option should be a separate yes/no variable.
6. Free text should only be used for notes that won't be used in analysis!
7. Don't highlight, color-code, or hide rows/columns of your data.
8. Always keep an original copy of your data, even if it's messy!



DEVELOPING A DATA DICTIONARY

Your data dictionary is usually a separate Excel document or sheet!

It should be up-to-date and include the same information as a REDCap codebook!

Variable Name	Variable Label	Variable Attributes
record_id	Unique record identifier	
mrn	Medical record number	
dob	Date of birth	MM-DD-YYYY
sex	Patient sex	1=Female, 2=Male
ethnicity	Ethnicity	H=Hispanic or Latino, N=Not Hispanic or Latino, U=Unknown
height	Height (cm)	
iss	Injury severity score	0-75



PREPARING TO DISCUSS YOUR ANALYSIS

Main types of data analysis we see in ROCS:

1. Descriptive statistics
2. Hypothesis testing
3. Correlations
4. Regression analyses
5. Survival analyses

If you don't know what type of analysis you'd like, we're here to help!



PREPARING TO DISCUSS YOUR ANALYSIS

Things to think about before meeting with your biostatistician:

1. What are your study aims?
2. What is your study design?
3. Are there known confounders?
4. What are your inclusion and exclusion criteria?
5. What is your anticipated sample size?
6. What is the end goal of this project?



PREPARING TO DISCUSS YOUR ANALYSIS

Things to discuss with your biostatistician:

1. Will some patients have repeat events, admissions, or measurements?
2. Should the analysis be stratified (analysis performed separately within groups)?
3. Do you want to perform a sub-analysis (repeat the analysis in a smaller group)?
4. Is there similar published literature?
 - Consider looking at adult studies!
5. What tables & figures would you like created?



PREPARING TO DISCUSS YOUR ANALYSIS

Regardless of what you find in similar literature, understand that a specific analysis may not be feasible for your study!

Your biostatistician has the expertise to know when and how to appropriately implement analyses! We will consider:

- Sample size
- Study type
- Statistical assumptions



DATA SHARING GUIDELINES

Data containing PHI should not be shared with ROCS biostatisticians via email!

Some alternative methods:

- OneDrive
- Microsoft Teams
- REDCap Send-It

Reach out to ARC for specific information on data sharing best practices!



THANK YOU!



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