

# Biostatistics Collaboration Center

23 Faculty & Staff



*Mission:* to support investigators in the conduct of high-quality, innovative health-related research by providing expertise in biostatistics, statistical programming, and data management.

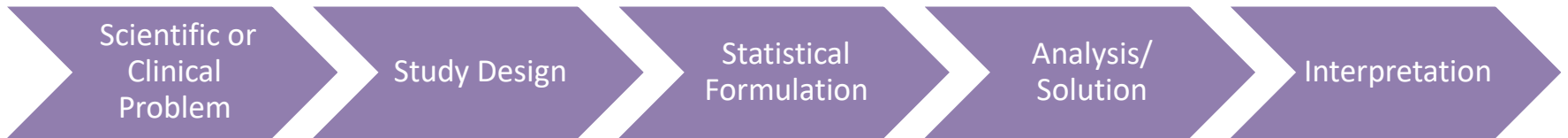
# Who we work with



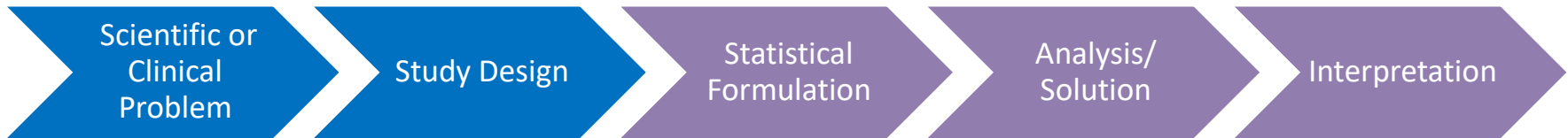
Clinicians  
Basic Scientists  
Social Scientists  
Allied Health  
Startups

Faculty  
Postdocs  
Residents  
Students  
Staff

# What do we do?



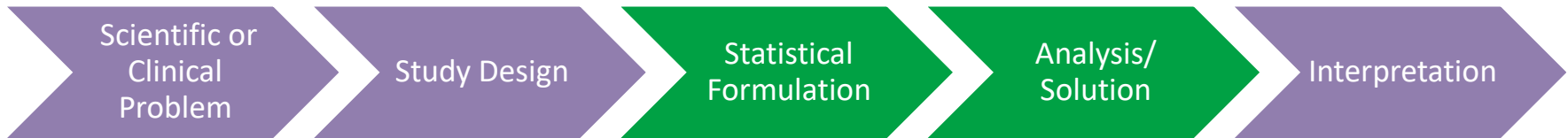
# What do we do?



Translate clinical and scientific questions into a statistical framework and answerable hypotheses

Design and power studies that will answer those questions

# What do we do?



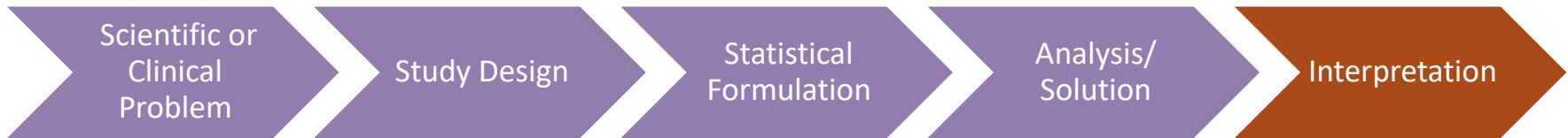
Oversee data collection and management

Interim reports, data quality checks

Develop statistical analysis plans

Analyze data

# What do we do?



Interpret findings

Prepare results, tables, figures for publication

Write statistical analysis portion of *Methods* section

Write/revise *Results* section

# What can we do?

Many areas of expertise, including:

- Bayesian Methods
- Big Data
- Bioinformatics
- Causal inference
- Clinical trials
- Cluster analysis
- Database design
- Genomics
- Longitudinal data
- Machine learning
- Missing data
- Reproducibility
- Statistical genetics
- Survival analysis
- Wearable data

Many types of software, including:







Original Investigation | Emergency Medicine

# Emergency Department Vestibular Rehabilitation Therapy for Dizziness and Vertigo

## A Nonrandomized Clinical Trial

Howard S. Kim, MD, MS; Jacob M. Schauer, PhD; Ann K. Kan, MS; Joshua B. Alinger, MD, PhD; Kyle J. Strickland, PT, DPT; Alexander Garreau, PT, DPT; Danielle M. McCarthy, MD, MS; Zachary B. Taylor, MPH; Ivy L. Fishman, BA; Kayla M. Muschong, BS; Heidi R. Roth, PT, DHS

### Abstract

**IMPORTANCE** Dizziness symptoms account for nearly 2 million annual emergency department (ED) visits and present a diagnostic challenge for clinicians. Most dizziness research has focused on improving guideline-concordant care among clinicians, with little focus on developing patient-centered interventions to improve dizziness-related disability.

**OBJECTIVE** To examine the feasibility of ED vestibular rehabilitation therapy (ED-VeRT) using a protocolized diagnostic classification algorithm and collection of longitudinal patient-reported outcomes.

### Key Points

**Question** What is the feasibility of offering vestibular therapy for patients presenting to the emergency department (ED) with dizziness and collecting longitudinal patient-reported outcomes?

**Findings** In this nonrandomized clinical trial of 125 patients with dizziness, ED

### BCC Contributions:

Study design, statistical analysis plan, data cleaning, statistical analysis, missing data, manuscript writing

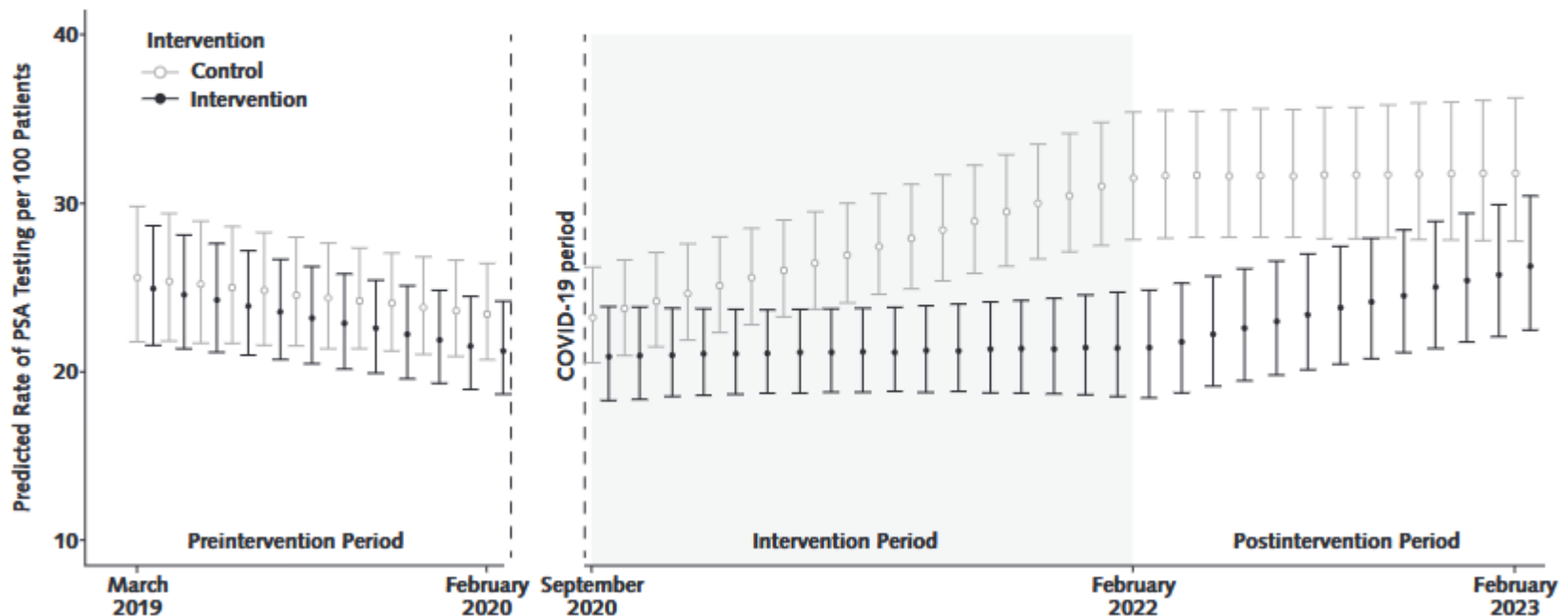


Letters | 11 February 2025

## Persistence of Effects of Behavioral Interventions on Reducing Overuse of Care in Older Patients After Discontinuation

Author: Lucia C. Petito, PhD   Tiffany Brown, MPH, Jason N. Doctor, PhD , Craig R. Fox, PhD , Ji Young Lee, MS , and Stephen D. Persell, MD, MPH  [AUTHOR, ARTICLE, & DISCLOSURE INFORMATION](#)

**Figure.** Model-based monthly rates of PSA overtesting, urinalysis or urine culture done without indication, and diabetes overtreatment before, during, and after the BEAGLE trial intervention.



# Biostatistics Centers and Cores

## Overview



### Biostatistics Collaboration Center (BCC)

- Supports **non-cancer** research at NU
- Subsidized by FSM
- Director: Leah Welty

### Quantitative Data Sciences Core (QDSC)

- Supports **cancer-related** research at NU
- Free to Lurie Cancer Center (LCC) members
- Director: Masha Kocherginsky

### Northwestern University Data Analysis and Coordinating Center (NUDACC)

- Supports prospective, **multicenter research**
- Regulatory, sample tracking, data coordination, data analysis

# Biostatistics Collaboration Center

REQUEST AN APPOINTMENT

Come talk to us for an hour – we can learn about your work and how we might be able to help. It's covered by the FSM Office for Research, and the wait is not long!

## Writing a grant?

- ✓ Power/sample size
- ✓ Statistical analysis plan
- ✓ Co-Investigator

## Help with analysis? Constructing a database?

- ✓ Develop statistical analysis plan (no cost)
- ✓ Hourly charge for analysis (\$150 - \$360/hour)

# Biostatistics Collaboration Center

REQUEST AN APPOINTMENT



*Thank you!*

<https://www.feinberg.northwestern.edu/sites/bcc/index.html>