Great Plains IDeA-Clinical & Translational Research

Biomedical Informatics & Cyberinfrastructure Core

Resources for Clinical & Translational Research

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Learning Objectives

• Introduce the Great Plains Clinical And Translational Research Network

• Discuss the Biomedical Informatics (BMI) and Cyberinfrastructure Core

• Describe some BMI resources available to GP-CTR Network members

• Discuss evolving training opportunities for GP-CTR members
Great Plains IDeA-CTR Program Grant

Awarded September 1, 2016

- 5-year project (renewable)
- $4 million per year
- 4 states
- 9 institutions
- 7 key components
- 2 major programs
- 100+ personnel
What does CTR stand for?

Clinical and Translational Research

**T1**
Translation to Humans

- Pre-clinical and animal studies
- Proof of Concept (POC)
- Early stage clinical trials

**T2**
Translation to Patients

- Later phase clinical trials

**T3**
Translation to Practice

- Health services research (HSR)
- Dissemination and implementation
- Studies in real world settings

**T4**
Translation to Population Health

- Interventions and improve population health
- Social determinants of health

**BENCH** ➔ ➔ ➔ ➔ **BEDSIDE** ➔ ➔ ➔ ➔ **COMMUNITY**
Clinical & Translational Study Costs

- Cost per patient rising at 8% annually*
- 200 man hours per enrolled patient **
- $8-10K/patient***

** Emanuel et al. J Clin Oncology 2003
*** Eisenstein et al. Clinical Trials 2008; 5 75-84
TECHNOLOGY

Everyone is here to save you, but unfortunately...
...you're not in the computer.
Role of BMI in Translational Medicine

Translational Medicine Continuum

Innovation  Validation  Adoption

Bench ← T1 → Bedside ← T2 → Community ← T3 → Policy

Translational Bioinformatics  Clinical Research Informatics

Bio-informatics  Imaging Informatics  Clinical Informatics  Public Health Informatics

Molecules & Cells  Tissues & Organs  Individuals  Populations

Biomedical Informatics Continuum

The GP-CTR Biomedical Informatics & Cyberinfrastructure Core (BMI core)

Aim 1: Maintain a Collaborative Web Portal

Aim 2: Develop and Support Informatics Tools and Resources

Aim 3: Expand Regional BMI infrastructure and expertise

Aim 4: Contribute to an education and research environment for CTR

James McClay, MD, Director
Ashok Mudgapalli, PhD, Operations
Ann Fruhling, PhD, Co-Director
Babu Guda, PhD, Co-Director
GP-CTR Web Portal

Provides central access to resources and communications across the GP-CTR

Index to existing Resources in Menu/toolbox

https://gpctr.unmc.edu

Maintained by the Research IT Office
REDCap

Research Electronic Data Capture

Secure web-based system for data capture in research studies.

- Survey development for Patient Reported Outcomes
- User-friendly web-based case report forms
- Real-time data entry validation (e.g. for data types and range checks)
- Audit trails,
- Set up a calendar to schedule and track critical study events

Non-UNMC investigators may request access from the Web Portal
Central Plains Federal Statistical Research Data Center

A point of access to restricted-use versions of important datasets maintained by the US census bureau and other federal agencies.

Contact the administrator of the central plains federal statistical research data center (CPRDC) veronica roth (veronica.l.roth@census.gov) if you are considering writing a proposal.
Data Management Planning

Why should you create a data management plan?
1) Meet funding agency requirements
2) Preserve your data
3) Maintain data integrity
4) Share data with other researchers
5) Support open access

Access the Data Planning Checklist from the Web Portal

Clinical Data Research Network

UNMC is a node on The National Patient-Centered Clinical Research Network (PCORnet.org)

PCORnet supports multiple opportunities to participate in or lead comparative effectiveness research trials.

The GP-CTR partner institution KUMC leads the Greater Plains Collaborative Clinical Research Network.

Data and collaboration requests may be submitted through the GPC website at gpcnetwork.org
Other BMI supported resources

Watch for additions to the web portal

Next:

Dr. Purnima Guda, Director Electronic Health Record Data Access Core

Dr. Babu Guda, Director of Bioinformatics and Systems Biology Core
Thank You

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