

Biostatistics, Epidemiology, and Research Design KFC Report

Frank Harrell¹ David DeMets²
Iris O Abrams³

¹Vanderbilt University

²University of Wisconsin

³NCRR Coordinator

CTSA PI MEETING

20 April 2010

BERD Face-to-Face Meeting

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- 8-9 April 2010 at NIH
- Piggybacked on ACRT/SCTS meeting
- 36 of 46 CTSAAs represented
- 6 NIH Institutes and Centers
- BERDs highly engaged, energetic
- Discussions of what is working well in the BERDs, plus renewal challenges
- Unveiled a new survey of BERD characteristics, operating procedures, funding models
- Helping new methodologists launch successful careers in collaborative biomedical research & CER

Training

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- Growing shortage of biostatisticians and epidemiologists
- Recruitment of PhD and MS biostatisticians a lengthy process
- Gap expected to widen as CTSA's are more successful
- Carving training slots out of existing NIH allocations may not be tenable
- Support for ↑ NIH traineeships and using some current slots for training methodologists would be appreciated

CTSpedia and other Online Resources

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- Growing use by biostatisticians, epidemiologists, ethicists, investigators
- CTSpedia.org facilitating collaboration and increasing efficiency by sharing knowledge, resources, tools, teaching modules via a wiki
- Design questions, sample size calculators, “Ask the Experts” forum, analysis and graphical tools, responsible conduct of research
- Increasing involvement from FDA clinical biostatisticians
- ↑ efficiency by sharing course designs & materials across BERDs

Evaluation and Activity Tracking

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- Mature evaluation document, submitted to Stat in Med
- Much discussion about scalability/sustainability, chargeback formulas, what services are “free”
- Need for tracking activities over entire life cycle

Optimizing Methodologist–Subject Matter Researcher Collaborations

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- Walk-in clinics for short-term consultation with biostatisticians, epidemiologists, research ethicists
- De-emphasis of consulting otherwise
- Multi-disciplinary studios (hypothesis, design, grant, manuscript)
- Methods for methodologists to ↑ subject matter knowledge
- Building scalable long-term collaborations by generating long-term support from investigators' departments
- CTSA providing more opportunities for methodologists to be involved at t_0

- Presentation from Paul Harris on REDCap
- Reproducible statistical analysis and reporting tools, analysis audit trail
 - dynamic reports linked to analysis code ~~copy and paste~~
 - discussion of areas of research having reproducibility challenges
- Web apps written by statisticians for non-statisticians

Impact of BERD

BERD KFC
Report

Logistics

Areas of
Emphasis

Impact

- Scientific: protocol review can have high impact & generate new collaborations
- ↑ diversity of research (high dimensional, new data sources, CER, ...) → need for constant ↑ methodologic expertise
- Mentoring investigators
- BERD integral to
 - using hub of connections to put subject matter experts together
 - quality of research design and analysis
 - understanding & reducing biases, finding alternative explanations, or conducting sensitivity analysis
 - sound inference/conclusions especially from non-experimental data
 - reproducible research