

Monthly Program Status Report – PROJECT

Reporting Period:	April 2015
Contracting Agency:	Food and Drug Administration (FDA)
FDA Project Manager:	Jingyee Kou, jingyee.kou@fda.hhs.gov , 301-796-9495
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Contract / Order:	HHSF223201310230C
Contractor PI:	Daniel Scharfstein, dscharf@jhu.edu , 410-955-2420
Project Team:	Aidan McDermott (Computer Programmer)
Description of Activity:	A recent FDA-sponsored National Research Council Report recommended that "examining sensitivity to the assumptions about the missing data mechanism should be a mandatory component of reporting." While the Report outlines a framework for conducting sensitivity analysis, there are two major problems with existing methods: (1) they have not been implemented in software packages and (2) they do not adequately address non-monotone missing data patterns (i.e., patients provide data irregularly). The objective of this project is to address these gaps by: 1) creating unified and coherent methods for global sensitivity analysis of clinical trials with monotone and non-monotone missing data, 2) developing free, open source and reproducible software in SAS and R to implement the methods, and 3) demonstrating the methods and software using real clinical trial data.

Project Health Check						
Health ▶	Budget	Schedule	Resources	Deliverables		
Notes ▶	Within Budget	On Schedule	Adequate	On Target		

Budget Tracking – (TOTAL CONTRACT CEILING)							
POP	Ceiling Remaining	Cumulative Funding	Year Funding (Year 1)	Spent to Date	Year Funding Remaining	Month Invoice	Funding Covers
Base	\$1,094,565	\$1,094,565	\$1,094,565	\$610,980.74 (*\$104,242.24 committed)	\$483,584.26	\$485,587.04	Salary, fringe, other expenses, and indirect costs

Activity Summary and Highlights
We completed the theoretical sections of the monotone missing data manuscript (see attached); we are currently revising the simulation section. We continue to work on methodology for constructing fast and more accurate confidence intervals. We posted a new version of the R code that is significantly faster. We have been working on converting SAMON to a PROC; we have consulted with experts from SAS and Cytel. I served on a panel on "Estimands" at the DIA-FDA Statistics Forum, presented a poster at the FDA 2015 ORSI Science Symposium and conducted a short course at the Society of Clinical Trials.

Key Accomplishments	
<i>Current Reporting Period</i>	<i>Planned for Next Period</i>
<ul style="list-style-type: none"> Completed theoretical section of manuscript Worked on methodology for confidence intervals Posted faster version of SAMON Worked on SAS version of SAMON Served on Panel at DIA-FDA Statistics Forum Presented poster FDA symposium Conducted short course at Society of Clinical Trials 	<ul style="list-style-type: none"> Initiate the Forum option on Website Expand membership on Website Develop SAS version of software Work on methodology for confidence intervals Implement intermittent missing data methods Finish and submit manuscript

Issues and Risks					
Category	Priority	Status	Opened	Issue	Description
Contract (FDA)	1	Closed	9/30/13	Intellectual Property	Revision to contract regarding intellectual property language.
Dissemination (FDA)	2	Closed	2/15/14	Website	FDA Personnel cannot connect to www.missingdatamatters.org from their office computers.
Software (JHU)	1	Closed	3/15/14	Coverage of Confidence Intervals	Simulations indicate that standard procedures for constructing confidence intervals are not providing adequate coverage with typical sample sizes.
Computing (JHU)	1	Closed	4/21/14	Periods of slow performance of computing cluster	A new computing cluster was installed at Johns Hopkins. We are experiencing periods of slow performance on the cluster.
Personnel (JHU)	1	Closed	5/21/14	Re-Distribution of Effort	Starting April 1, Aidan McDermott has reduced his percent effort by 20%. Chenguang Wang joined the project starting July 15.
Invoicing (FDA)	1	Open	6/6/14	Payment of Invoices	Invoices have not been paid.
Computing (FDA)	1	Open	6/6/14	Software on FDA Cluster	Investigate the steps needed to run software on FDA cluster
Personnel (JHU)	1	Open	1/13/15	New Effort	Yi Lu joined the project to work on confidence intervals.

Other Activities

Attachments and References
Draft of Manuscript

