D2d Publication and Presentation Proposal Submission Form

Office Use
Submission Number _____ Date Submitted (MM/DD/YYYY) _____

To: D2d Publications and Presentations Subcommittee

Re: D2d Publications and Presentations Preliminary Concept Proposal

Title of Proposal *(81 character limit)*: Reclassification of patients with prediabetes upon repeated testing

Lead Author: Irwin Brodsky
Institutional Affiliation: Maine Medical Center
Street Address 1: 175 US Route 1
Street Address 2:
City: Scarborough State: ME Zip Code: 04074
Phone: 207-396-7710 Fax: 207-396-7701 Email: brodsi@mmc.org

If Lead Author is not a member of the D2d study group, please specify:
D2d Co-Investigator
Institutional Affiliation

Proposed Writing Group (name and D2d role)

List one author per line. Indicate who will do the statistical analysis.

To be determined. Request for partnering authors is under way.

Scope of Project Proposal

- (●) D2d-wide
- ( ) Site-specific
- ( ) Other, specify

Publication Tier Designation (see D2d Publications and Presentations Policy)

- ( ) Tier 1
- (●) Tier 2
- ( ) Tier 3

D2d Publication and Presentation Proposal Submission Form

Significance, proposed central hypothesis and specific aims of analysis/preliminary abstract

Pre-diabetes is currently classified if one of three glycemic criteria are met: fasting glucose 100-125 or 2-hour glucose 140-199 following ingestion of 75 grams of glucose or HbA1c 5.7-6.4%.(1) In clinical practice, physicians often repeat tests for verification before applying a classification to a patient.(2) The D2d Study Group has noted substantial variability in fasting glucose and HbA1c results with repetition. We hypothesize that a significant subset of volunteers who have glycemic testing consistent with pre-diabetes at screening are reclassified as not having pre-diabetes upon repeat testing (baseline visit). Data from D2d will be important to clinicians, because it will define the probability of reclassification with repeated glycemic testing., which has not been done before with the new ADA criteria. The limitation of the study is that volunteers reclassified as not having pre-diabetes will not be followed in D2d for development of diabetes, so inferences about overdiagnosis of pre-diabetes on initial testing or under-diagnosis with a repeat test cannot be drawn without additional study. (This could be addressed in an ancillary observational study that brings back volunteers that did not qualify for repeat testing to assess progression of glycemia).

Specific aims:
Primary--
Determine the conditional probability that repeat glycemic testing (FPG, HbA1c) will remain in the defined pre-diabetes range (i.e.. not reclassified), given that an initial test within the prior 2 weeks was in the pre-diabetes range.

Secondary--
1. Determine the conditional probability that a volunteer will be reclassified as normal on repeat glycemic testing, given prior classification as prediabetes at screennng
2. Determine the conditional probability that a volunteer will be reclassified as having diabetes on repeat glycemic testing, given prior classification as prediabetes at screening
3. Determine whether probability of reclassification is greater when repeated glycemic testing is done in two different laboratories
4. In a subset of D2d volunteers who were excluded from randomization for reclassification to normal but were rescreened at a later date, what is the probability that they were again reclassified to prediabetes or to diabetes.
5. Determine whether change in body weight between screening glycemic testing and repeat glycemic testing (baseline visit) is a significant predictor of reclassification after the baseline visit repeat testing.

1. American Diabetes A. 2. Classification and Diagnosis of Diabetes. Diabetes Care. 2016;39 Suppl 1:S13-22.
2. Welch HG, Hayes KJ, Frost C. Repeat testing among Medicare beneficiaries. Arch Intern Med. 2012;172(22):1745-51.

Identify variables to be used in the analyses

fasting plasma glucose and A1c at SCR and BAS visits.
2-hour plasma glucose at BAS (75g OGTT)
body weight

D2d Publication and Presentation Proposal Submission Form

Description of analysis plan (if desired, may include envisioned tables, figures)

Subjects: All volunteers who have completed both a SCR and BAS visit.

Analysis: Determine the conditional probability of pre-diabetes (B) at the baseline visit, given a pre-diabetes classification (A) at the screening visit. This will be denoted: P(B\A) = P (A and B)/P(A).

Pre-diabetes classification at screening (A) can be analyzed as either HbA1c in pre-diabetes range, FPG in range, or both. Pre-diabetes classification at baseline visit (B) can be analyzed as either HbA1c in range, FPG in range, 2-hour glucose in range, 2 out of 3 in range (D2d definition), or all 3 in range. The conditional probabilities of the outcomes can be displayed in tabular form.

Proposal Type

Type of proposal (check all that apply)

- [x] Manuscript – analysis
- [ ] Manuscript – methodology
- [ ] Manuscript – validation
- [ ] Manuscript – other
- [ ] Letter to the Editor
- [ ] Abstract/Extended Abstract
- [ ] Oral Presentation (e.g. Powerpoint)
- [ ] Poster Presentation

Abstract and Presentations only

Intended meeting _____

Submission due date _____

Meeting date _____

Publications only

Intended journal Diabetes Care

Describe timeline for submission

Analytical plan can be formulated ASAP; analyses can be completed and paper written as soon as recruitment is complete.

D2d Publication and Presentation Proposal Submission Form

Acknowledgement of D2d Publications and Presentations Policy

I have read and agree to abide by the policies and procedures for D2d Publications and Presentations as described in the document titled: *D2d Publication and Presentation Policy*.

Lead Author Signature Irwin Brodsky Digitally signed by Irwin Brodsky Date: 2016.07.05 09:33:27 -04'00' Date 07/05/2016
(e-signature accepted)

Note: After a proposal is submitted to the PPS and if approved, the lead author has nine months to submit a draft to the subcommittee for review. Should the lead author fail to submit a draft within nine months, the subcommittee may assign the proposal to other members of the D2d Research Group for completion.

Final steps to submission:
Save a copy of this form to your computer.
Click on the "Submit" button and follow the directions to submit electronically. Alternatively, you may attach the file manually to an email and send to: D2d@TuftsMedicalCenter.org.

Submit