Introduction: This submission provides SAS code for fitting a longitudinal logistic regression model in which a random intercept is included to induce a compound symmetry covariance structure for repeated measures on individual subjects.

Keyword Categories:

Clinical:	Longitudinal Study
Genetics:	Not Applicable (NA)
Statistical:	Generalized Linear Mixed Models; NLMIXED procedure; Longitudinal Data Analysis
Software:	SAS 9.1
Related:	

References:

Van Ness, PH, J. O'Leary, et al. (2004). "Fitting longitudinal mixed effect logistic regression models with the NLMIXED procedure." *Proceedings of the 29th Annual SAS® Users Group International Conference (SUGI 29)* **29**: 1-6 (www2.sas.com/proceedings/sugi29/190-29.pdf).

Fried T, Byers, AL, Gallo, WT, Van Ness, PH, Towle, VR, O'Leary, JR, Dubin, JA. Prospective study of health status preferences and changes in preferences over time in older adults. *Archives of Internal Medicine.* 2006;166:890-895.

Component Files:

a. PDF file explaining the entire sample: NLMIXEDSummaryVanNess.pdf
b. SAS program: NLMIXEDProgramVanNess.txt
c. SAS data file:NLMIXEDDataVanNess.txt
d. SAS output file: NLMIXEDOutputVanNess.txt

Optimal Use:

To run the macro one should first copy the NLMIXEDProgramVanNess.txt file and paste it into SAS software enhanced editor window. Next, save this newly created SAS program using the filename 'mixed_long_logit.inc'. Then, run the macro using the syntax provided in the annotations for the macro program.

Prerequistes:

One only needs the ability to run SAS programs, any recent version will be sufficient.

Potential Applications:

This macro program is intended for use with regression models of sufficiently large dimension, e.g., in which the number of covariates is expected to be a half dozen or more, such that failure to obtain successful convergence of estimating algorithms is a real problem. The program seeks to address this problem by providing good approximations for estimated parameters from a related GEE model fit with PROC GENMOD.

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