

Mary D. Sammel, ScD

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Education

1982-86 B.A. The University of Michigan (Statistics)
1986-88 M.A. The University of Michigan (Applied Statistics)
1991-95 Sc.D. Harvard School of Public Health (Biostatistics)

Postgraduate Training and Fellowship Appointments

1995-97
Research Fellow, Department of Biostatistics
Harvard School of Public Health

Faculty Appointments

1997-present
Assistant Professor, University of Pennsylvania
Department of Biostatistics and Epidemiology

Hospital and Administrative Appointments

1997-1998
Co-director, Epidemiology and Biostatistics
Core of Mental Retardation Research Center
Childrens Hospital of Pennsylvania 1998-present
Director, Biostatistics
Core for the Center for Research on Reproduction and Women's Health and
Department of OB/GYN training grant for junior faculty

Awards, Honors, and Memberships in Honorary Societies

1982-86

Michigan Competitive Scholarship Recipient

1987-88

Cecil Grant Memorial Scholarship Recipient American Society for Quality Control

1991-94

Training Grant Recipient, National Institute of Environmental Health Sciences

1992-94

Harvard University Teaching Fellow

1995-

Student Travel Award, Eastern North American Region of The Biometrics Society

1998

National Science Foundation Young Investigator Travel Award, International Society Meeting, Cape Town, South Africa

Memberships in Professional and Scientific Societies

American Statistical Association (ASA)

Biometrics Society, Eastern North American Region (ENAR)

American Public Health Association (APHA)

Editorial Positions

1997-present Reviewer, American Journal of Epidemiology

1997-present Reviewer, Biometrics

1998-present Reviewer, Journal of the Royal Statistical Association

1999-present Statistical Associate, Journal of the Royal Statistical Association, Series B

2001- Reviewer, Journal of the American Statistical Association

Academic Committees at the University of Pennsylvania and Affiliated Hospitals

1997 CCEB Consulting Service Planning Committee

1998-01 CCEB Computing Committee

1998 -99 CCEB Faculty Appointment Committee

1998 OB-GYN Department Review Committee
1999-03 CCEB Awards Committee
2001-03 CCEB Division of Biostatistics Admissions Committee

Major Teaching Responsibilities at the University of Pennsylvania and Affiliated Hospitals

1997-present Secondary advisor for MSCE Program
2001-2002 Chair, Masters Thesis Committee for Paula Martin
2002 Instructor BSTA654: Design of Biomedical Studies

Lectures by Invitation

3/20/96 "The Use of Latent Variable Models For the Analysis of Multiple Outcomes in Studies of Birth Defects."
International Biometrics Society (ENAR). Richmond, VA.

4/10/97 "Latent Variable Models for Multiple Outcomes."
Center for Clinical Epidemiology and Biostatistics, Department of Health, Evaluation Sciences, State University of Pennsylvania, College of Medicine, Hershey, PA.

4/14/97 "Latent Variable Models for Multiple Outcomes."
Department of Health Studies, The University of Chicago, Chicago, IL.

4/23/97 "Latent Variable Models for Multiple Outcomes"
Center for Clinical Epidemiology and Biostatistics,
University of Pennsylvania School of Medicine, Philadelphia, PA.

5/12/97 "Latent Variable Models for Multiple Outcomes."
Division of Biostatistics, Department of Preventative Medicine, University of Southern California, Los Angeles, CA.

5/22/97 "Latent Variable Models for Multiple Outcomes."
Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, GA.

9/22/97 "Latent Variable Models for Outcomes of Mixed Type".
Center for Statistical Sciences, Brown University, Providence, RI

1/6/98 "Latent Variable Modeling: A Primer". Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA.

4/2/98 "Multivariate Linear Mixed Models for Multiple Outcomes."
Division of Biostatistics, Columbia University School of Public Health, New York, NY.

11/9/98 "Summarizing Mixed Outcomes for Pain in IC: A Latent Variable Approach". Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA.

11/19/98 "Summarizing Mixed Outcomes for Pain in IC: A Latent Variable Approach". Department of Biostatistics, University of Michigan, Ann Arbor, MI.

12/14/98 "Summarizing Mixed Outcomes for Pain in IC: A Latent Variable Approach". International Biometrics Conference, Cape Town, South Africa.

3/4/99 "Summarizing Mixed Outcomes for Pain in IC: A Latent Variable Approach". Department of Biostatistics, Harvard School of Public Health, Boston, MA.

8/13/00 "Evaluation of a Global Test for Multiple Outcomes Derived from a Latent Variable Model". Joint Statistics Meeting, Indianapolis, IN.

2/7/01 "Global Inference on Multiple Outcomes via a Latent Variable Model: Implications of Covariance Misspecification". Cancer Prevention and Control Colloquia, Office of Preventive Oncology, NCI, Rockville, MD.

7/12/01 "Chlamydia Project Reinfection Rates". Region III Chlamydia Project Advisory Committee Meeting, Annapolis, IN.

2/13/02 "Within-Subject Heterogeneity as a Risk Factor for Menopausal Symptoms". Johns Hopkins School of Public Health, Biostatistics Department Seminar, Baltimore, MD.

2/21/02 "Endocrine Chaos in the Peri-Menopause. Making Sense of Hormones Measured Over Time". University of Pennsylvania, Center for Clinical Epidemiology and Biostatistics Seminar, Philadelphia, PA.

6/02 International Biometrics Society Meeting: Frieberg, Germany.

Organizing Roles in Scientific Meetings

3/99 Invited session organizer, International Biometrics Society, ENAR Meeting, Atlanta, GA.

Bibliography

Singleton, S.P., Neale, A.V., Hess, J.W., and Dupuis, M.H., Behavioral Contracting in an Urban Health Promotion Project, Evaluations in the Health Professions 10(4):408-437, 1987.

Demers, R.Y., Neale, A.V., Demers, P., Deighton, K., Scott, R.O., Dupuis, M.H., and Herman, S., Serum Cholesterol and Colorectal Polyps, *Journal of Clinical Epidemiology* 41(1):9-13, 1988.

Russo, I.H., Gimotty, P.A., Dupuis, M.H., Russo, J.: Effects of Medroxyprogesterone Acetate on the Response of Rat Mammary Gland to Carcinogenesis, *British Journal of Cancer* 59:210-216, 1988.

Neale, A.V., Singleton, S.P., Dupuis, M.H., and Hess, J.W.: Correlates of Adherence to Behavioral Contracts for Cholesterol Reduction, *Journal of Nutrition Education* 21(6):221-225, 1989.

Neale, A.V., Singleton, S.P., Dupuis, M.H., and Hess, J.W.: The Use of Behavioral Contracting to Increase Exercise Activity, *American Journal of Health Promotion*, 4(6):441-447, 1990.

Sammel, M.D., and Ryan, L.M.: Latent Variable Models with Fixed Effects. *Biometrics*, 52:650-663, 1996.

Sammel, M.D., Ryan, L.M., and Legler, J.M.: Latent Variable Models for Mixed Discrete and Continuous Outcomes, *Journal of the Royal Statistical Society, Series B*, 59:667-678, 1997.

Xu, X., Cho, S-I., Sammel, M.D., You, L., Cui, S., Huang, Y., Wang, Z., Ma, G., Huang, W., Padungtod, C., Pothier, L., Christiani, D., Smith, T., Ryan, L., and Wang, L.: Associations of Petrochemical Exposure with Spontaneous Abortion. *Occupational and Environmental Medicine*, 55:31-36, 1998.

Kimmel, S., Keane, M., Crary, J., Jones, J., Kinman, J., Beare, J., Sammel, M., Sutton, M., and Strom, B.: A Detailed Examination of Fenfluramine-Phentermine Users with Valve Abnormalities Identified in Fargo, North Dakota. *American Journal of Cardiology*, 84:304-308, 1999.

Berlin, J., Kimmel, S., Ten Have, T., Sammel, M.: An Empirical Comparison of Several Clustered Data Approaches Under Confounding Due to Cluster Effects in the Analysis of Complications of Coronary Angioplasty. *Biometrics*, 55:470-476, 1999.

Sammel, M.D., Lin, X., and Ryan, L.M.: Multivariate Linear Mixed Models for Multiple Outcomes. *Statistics in Medicine*, 18: 2479-2492, 1999.

Barnhart, K.T., Freeman, E., Grisso, J.A., Rader, D.J., Sammel, M., Kapoor, S., and Nestler, J.E. The Effect of Deydroepiandrosterone Supplementation to Symptomatic Endocrine Profiles, Lipid Parameters, and Health-Related Quality of Life. *The Journal of Clinical Endocrinology and Metabolism*, 84:3896-3902, 1999.

Grisso, J.A., Schwarz, D.F., Hirschinger, N., Sammel M., Brensinger, C., Santanna, J., Lowe, Anderson, E., Shaw, L.M., Bethel, C.A. and Teeple, L. Violent Injuries Among Women in Urban Area. *New England Journal of Medicine*, 341:1899-1905, 1999.

Lin, X., Ryan, L., Sammel, M., Zhang, D., Podungtod, C., and Xu, X. Scaled Linear Mixed Model for Multiple Outcomes. *Biometrics*, 56:593-601, 2000.

Lu, M.C.K., Sammel, M.D., Cleveland, R.H., Ryan, L.M., and Holmes, L.B. Digit Effects Produced by Prenatal Exposure to Antiepileptic Drugs. *Teratology*, 61:277-283, 2000.

Freeman, E.W., Sammel, M.D., Grisso, J.A., Battistini, M.D., Garcia-Espagna, B. and Hollander, B.A. Hot Flashes in the Late Reproductive Years: Risk Factors for African American and Caucasian Women. *Journal of Women's Health and Gender Based Medicine*, 10:67-76, 2001.

Manson, J.M., Sammel, M.D., Freeman, E.W. and Grisso, J.A. Racial Differences in Sex Hormone Levels in Women Approaching the Transition to Menopause. *Fertility and Sterility*, 75:297-304, 2001.

Freeman, E.W., Grisso, J.A., Berlin, J., Sammel, M., Garcia-Espana, B., and Hollander, L. Symptom Reports from a Cohort of African American and Caucasian Women in the Late Reproductive Years. *Menopause*, 8:33-42, 2001.

Strom, B.L., Schinnar, R., Ziegler, E.E., Barnhart, K.T., Sammel, M.D., Macones, G.A., Stalling, V.A., Drulis, J.M., Nelson, S.E. and Hanson, S.A. Exposure to Soy-Based Formula in Infancy and Endocrinological and Reproductive Outcomes in Young Adulthood. *JAMA*, 286:807-814, 2001.

Hollander, L.E., Freeman, E.W., Sammel, M.D, Berlin, J.A., Grisso, J.A., and Battistini, M. Sleep Quality, Estradiol Levels, and Behavioral Factors in Late Reproductive Age Women. *Journal of Obstetrics and Gynecology*, 98:391-397, 2001.

Morrison, M.F., Ten Have, T., Freeman, E., Sammel, M.D., and Grisso, J.A. DHEA-S Levels and Depressive Symptoms in a Cohort of African American and Caucasian Women in the Late Reproductive Years. *Biological Psychiatry*, 50:705-711, 2001.

Dlugos, D.J., Sammel, M.D., Strom, B.L. and Farrar, J.T. Response to First Drug Trial Predicts Outcome in Childhood Temporal Lobe Epilepsy. *Neurology*, 57:2259-2264, 2001.

Battistini, M., Freeman, E.W., Grisso, J.A., Sammel, M., Hollander, L. and Garcia-Espana, B. Racial Differences and Longitudinal Changes in Inhibin B in the Late Reproductive Years. *The Journal of Clinical Endocrinology and Metabolism*, 77:193-195, 2001.

Angus, S.R., Segel, A.Y., Hsu, C.D., Locksmith, G.J., Clark, P., Sammel, M.D., Macones, G.A., Strauss, J.F. and Parry, S. Amniotic Fluid Matrix Metalloproteinase-8 Indicates Intra-Amniotic Infection. *The American Journal of Obstetrics and Gynecology*, 185:1232-1238, 2001.

Bogner, H.R., Gallo, J.J., Sammel, M.D., Ford, D.E., Armenian, H.K. and Eaton, W.W. Urinary Incontinence and Psychological Distress Among Community-Dwelling Older Adults. *Journal of the American Geriatrics Society*, 50:489-495, 2001.

Ferrand, P., Parry, S., Sammel, M., Macones, G., Kuivaniemi, H., Romero, R. and Strauss, J.F. A Polymorphism in the Matrix Metalloproteinase 9 (MMP-9) Promoter is Associated with Increased Risk of Preterm Premature Rupture of Membranes (PPROM) in African Americans. *Molecular Human Reproduction*, 8:494-501, 2002.

Sammel, M.D. and Ryan, L.M. Effects of Covariance Misspecification in a Latent Variable Model for Multiple Outcomes. Accepted to *Statistica Sinica*.

Renbaum L, Ufberg D, Sammel M, Zhou L, Jabara S, Barnhart KT. Reliability of Hysterosalpingogram (HSG): Clinicians vs Radiologists. Accepted to *Fertility and Sterility*.

Fujimoto, T., Parry, S., Urbanek, M., Sammel, M., Macones, G., Kuivaniemi, H., Romero, R. and Strauss, J.F. A Single Nucleotide Polymorphism in the Matrix Metalloproteinase-1 (MMP-1) Promoter Influences Expression of MMP-1 by Amnion Mesenchymal Cells and is Associated with Risk of Preterm Premature Rupture of the Fetal Membranes. Accepted to *Journal of Biological Chemistry*.

Sammel, M.D., Grisso, J.A., Freeman, E.W., Hollander, L., Liu, S. and Battistini, M. Weight Gain Among Women in the Late Reproductive Years. Submitted to *Journal of General Internal Medicine*.

Hirschinger, N.B., Grisso, J.A., Wallace, D.B., McCollum, K.F., Schwarz, D.F., Sammel, M.D., Brensinger, C. and Anderson, E. A Study of Intentional Injuries by Women in an Urban Area. Submitted to *American Journal of Public Health*.

Freeman, E.W., Sammel, M.D. and Martin, P. Reliability and Validity of the Penn Menopause Symptom List. Submitted to *Menopause*.

Ferrand, P.E., Fujimoto, T., Chennathukuzhi, V., Parry, S., Macones, G.A., Sammel, M., Kuivaniemi, H., Romero, R and Strauss, J.F. The CARD15 2936insC Mutation and TLR4 896 A>G Polymorphism in African Americans and Risk of Preterm Premature Rupture of Membranes (PPROM). Submitted to Molecular Human Reproduction.

Elkousy, M., Sammel, M., Stevens, E., Peipert, J. and Macones, G. The Effect of Fetal Macrosomia on VBAC Success Rates. Submitted to American Journal of Obstetrics and Gynecology.

Sammel, M.D., Wang, Y., Ratcliffe, S.J., Freeman, E.W., Manson, J.M. and Propert, K.J. Models for Within Subject Heterogeneity as Predictors for Disease. Submitted to Statistics in Medicine.

Research Publications

Sammel, M.D. and Landis, J.R. Summarizing Mixed Outcomes for Pain in Interstitial Cystitis: A Latent Variable Approach. Proceedings of the International Biometric Conference, Cape Town, South Africa, December 1998.

Sammel, M.D., Wang, Y., Ratcliffe, S.J., Freeman, E. and Propert, K.J. Models for Within Subject Heterogeneity as Predictors for Disease. Proceedings of The American Statistical Association, Biometrics section.

Abstracts

Strom, B.L., Schinnar, R., Ziegler, E.E., Barnhart, K., Sammel, M.D., Macones, G., Stallings, V., Hanson, S.A. and Nelson, S.E. Follow-up Study of a Cohorted Soy-Based Formula During Infancy. (Presented Experimental Biology, 2000, San Diego, CA).

Manson, Hormone Levels in Women Approaching Menopause. (Presented to APHA meeting, November 2000, Boston, MA).

Bogner, H.R., Gallo, J.J., Sammel, M.D., Ford, D.E., Armenian, H.K. and Eaton, W.W. Urinary Incontinence and Psychological Distress Among Community-Dwelling Older Adults. (Presented at the American Geriatric Society Meeting, May 9-13, 2001, Chicago, IL)

Manson, J., Sammel, M., Freeman, E. and Grisso, J. Racial Differences in Sex Hormone Levels in Women Approaching the Transition to Menopause. (Presented at 4th International Symposium on Women's Health and Menopause, May 21, 2001, Washington, DC).

Hollander, L. E., Freeman, E.W., Berlin, J.A., Grisso, J.A., Battistini, M. and Sammel, M.D. Sleep Quality in Late Reproductive Age Women. (Presented at 4th International Symposium on Women's Health and Menopause, May 22, 2001, Washington, DC).

Sammel, M.D., Propert, K.J. and Wang, Y. Within Subject Heterogeneity as a Risk Factor for Menopausal Symptoms. (Presented at American Statistical Association, Joint Meeting, August 6, 2001, Atlanta, GA.)

Dlugos, D.J., Sammel, M.D. and Farrar, J.T. Response to First Drug Trial Predicts 2-Year Outcome in Childhood Temporal Lobe Epilepsy. (Presented at American Epilepsy Society Meeting, December 2001).

Nathanson, P.G., Sammel, M. and Berlin, M. Repeat Chlamydia Infections in Region III Family Planning Clinics – Implications for Screening Programs. (Presenting at National STD Prevention Conference, San Diego, CA, March 2002).

Editorials, Reviews, Chapters, including participation in committee reports

Satriano, W. A., Ragheb, N.E., Dupuis, M.H., Comorbidity in Older Women with Breast Cancer: An Epidemiologic Approach in R.Yancik and J. Yates (Eds). Approaches to Early Detection and Treatment of Cancer in the Elderly, Springer Company, New York, 1989.

Barnhart, K. and Sammel, M. The Truth is Out There: A Guide to the Pitfalls of Interpreting Evidence Based Medicine in Studies of Human Reproduction. Accepted to Fertility and Sterility.

Elliott, M.R. and Sammel, M.D. Comment on "Latent Class Analysis of Complex Sample Survey Data: Application to Dietary Data". Accepted to Journal of American Statistical Association.