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## Education

Ph.D. in Biostatistics, May 2006. UC Berkeley, CA.

MPH in Epidemiology and Biostatistics, May 2003, UC Berkeley, CA

MSc in Mathematics, May 1995, University of Zimbabwe, Zimbabwe.

BSc in Mathematics, Dec 1988, University of Zimbabwe, Zimbabwe.

## Teaching Experience

Assistant Professor, Case-Western Reserve University, Cleveland, OH (7/2006 – present). I teach biostatistical methods and SAS programming to Clinical Research Scholars. Advise graduate students on biostatistical and epidemiological methods. I provide statistical support and consultancy in NIH-type grant proposal writings and studies to fellow faculty members

Teaching Assistant, UC Berkeley, Berkeley CA (3/2004 – 5/2006). Conducted tutorial classes and graded home works in a repeated measures course for graduate students in epidemiology and biostatistics.

Assistant Lecturer, University of Zimbabwe, Zimbabwe (8/1990 – 6/1993). Taught introductory statistics to medical students.

Short Courses, (7/2006 – present)

I have been teaching a 2-week applied biostatistical course (linear regression, logistic regression, analysis of survival data, longitudinal data analysis) to public health researchers in Zimbabwe. The course uses R for demonstration examples.

## Working Experience

Assistant Professor of Medicine, (7/ 2006 – present), Case Western Reserve University, Cleveland, OH.

Teaching Assistant, (3/ 2004 – 5/ 2006), UC Berkeley, Berkeley, CA

Data Manager, (10/ 1999 – 7/ 2001), Stanford University, Stanford, CA

Managed and maintained a large database of HIV sequence genetic data (<http://hivdb.stanford.edu>). Developed an HIV/AIDS patient treatment and monitoring database currently being used by physicians at San Mateo County Hospital, CA.

Project Statistician / Data Manager, (8/ 1993 – 9/ 1999), University of Zimbabwe, Zimbabwe  
Developed and managed a data management system for a large prospective cohort of over three thousand subjects for a research study funded by the National Institutes of Health. Wrote statistical analysis programs for the same study. Provided research leadership to a team of research nurses and research assistants.

Assistant Lecturer, (8/ 1990 – 7/ 1993), University of Zimbabwe, Zimbabwe

Biometrician, (1/1989 – 7/ 1990), Agricultural Research Services, Zimbabwe  
Analyzed agricultural research experiments data.

### **Consulting Experience**

1. Family Health International (FHI), March 2009 (30 days). Consultant to analyze 2008 Guyana BSS, run statistical analysis, compile tables and write down the results.
2. Family Health International (FHI), February 2009 (30 days). Multi-country Antiretroviral Database Project. The goal of the project was to utilize routinely collected data to improve the health of populations on ART, by assessing patterns in patient characteristics and outcomes. Tasks completed included a complete inventory of multiple datasets from ART clinics in 4 countries, data cleaning and merging, descriptive analyses, longitudinal data analyses.

### **Membership in Professional Societies**

1. American Statistical Association – Member since 2003
2. American Statistical Association – Cleveland Chapter – Member since 2006

### **Honors and Awards**

1. Fogarty International Scholar, ( 8/2001 – 6/2006)
2. Stanford University Visiting Scholar, (10/1999 – 7/2001)
3. Fogarty International Visiting Scholar, (3/1995 – 5/1995)

### **Professional Service**

1. Member of the Center For AIDS Research at Case Western Reserve University – Epidemiology and Biostatistics Unit
2. Member of the Biostatistics Core – Clinical and Translational Science Award at Case Western University

### **Computer skills**

Experienced statistical programmer in R, Stata, and SAS

Proficient in computer programming (C, Perl) and added advantage to quickly learn and grasp new programming languages

### **Biostatistical Research Interests**

1. Causal Inference methods for both randomized (clinical) trials and observational studies
2. Multilevel Models, including use of BUGS
3. Longitudinal Data Analysis Methods
4. Monitoring and Evaluation Methods

## Publications

1. M.T. Mbizvo, S Ray, M Bassett, W McFarland, R Machezano, D Katzenstein. **Condom use and the risk of HIV infection: who is being protected?** *The Central African Journal of Medicine*. Vol 40. No. 11, November 1994.
2. Sunanda Ray, Mary Bassett, Caroline Maposhere, Portia Manangazira, Jo Dean Nicolette, Roderick Machezano, Josephine Moyo. **Acceptability of the Female Condom in Zimbabwe: Positive but Male-Centred Responses.** *Reproductive Health Matters*, No.5, May 1995.
3. Bassett MT, McFarland WC, Ray S, Mbizvo MT, Machezano RN, van de Wijgert JHHM, Katzenstein DA. **Risk Factors for HIV infection at enrolment in an Urban Male Factory Cohort in Harare, Zimbabwe.** *Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*, Vol. 13, No 3 : 287 - 293. 1996.
4. Mbizvo, R. Machezano, W. McFarland, S. Ray, M. Bassett, A. Latif, D. Katzenstein. **HIV seroincidence and correlates of seroconversion in a cohort of male factory workers in Harare, Zimbabwe.** *AIDS*, Vol 10. No.8, July 1996.
5. Mbizvo MT, Latif AS, Machezano R., McFarland W, Bassett MT, Ray S, Katzenstein D, **HIV seroconversion among factory workers in Harare: Who is getting newly infected ?** *Central African Journal of Medicine*. Vol 43. No. 5, May 1997.
6. Machezano R, McFarland W, Mbizvo M, Bassett M, Katzenstein D. **Impact of HIV counseling and testing on HIV seroconversion and reported STD incidence among male factory workers in Harare, Zimbabwe.** *Central African Medical Journal*. Vol 44 , No, May 1998.
7. Gregson S, Machezano R, Donnelly CA, Mbizvo MT, Anderson RM, Katzenstein DA. **Estimating HIV incidence from Age-Specific Prevalence Data: Comparison with concurrent cohort estimates in a study of male factory workers, Harare, Zimbabwe.** *AIDS* 1998, 12:2049-2058.
8. Ray S, Latif AS, Machezano R, Katzenstein D. **Sexual behaviour and risk assessment of HIV seroconvertors among urban male factory workers in Zimbabwe.** *Social Science and Medicine*. Vol 47. No. 10. 1998
9. McFarland\_W, Gwanzura L, Bassett MT, Machezano R, Latif AS, Ley C, Parsonnet J, Burke RL, Katzenstein D. **Prevalence and Incidence of Herpes Simplex Virus Type 2 Infection among Male Zimbabwean Factory Workers.** *JID*, 1999 November; 180(5).
10. Gwanzura L, Latif A, Bassett M, Machezano R, Katzenstein D, Mason P. **Syphilis serology and HIV infection in Harare, Zimbabwe.** *Sex Transm Inf.* 1999 Dec; 75(6): 426-30.

11. Machezano R, McFarland W, Hudes E, Bassett M, Mbizvo M, Katzenstein D. **Correlates of HIV Test Results Seeking and Utilization of Partner Counseling Services in a Cohort of Male Factory Workers in Zimbabwe.** *AIDS and Behavior, Vol 4, No. 1, 2000.*
12. Machezano RN, Bassett MT, Zhou PS, Mbizvo MT, Latif AS, Katzenstein DA. **Report of Sexually Transmitted Infections by HIV infected men during follow-up: Time to target the HIV infected?.** *Sex Transm Inf 2000; 76(3) 188-192.*
13. Kantor R, Machezano R, Gonzales MJ, Dupnik K, Schapiro JM, Shafer RW. **Human Immunodeficiency Virus Reverse Transcriptase and Protease Sequence Database: an expanded data model integrating natural language text and sequence analysis programs.** *Nucleic Acids Res. 2001 Jan 1; 29(1): 296-299.*
14. Shulman NS, Machezano RN, Shafer RW, Winters MA, Zolopa AR, Liou SH, Hughes M, Katzenstein DA. The AIDS Clinical Trials Group 302 Study Team. **Genotypic correlates of a virologic response to stavudine after zidovudine monotherapy.** *J Acquir Immune Defic Syndr 2001 Aug 1; 7(4):377-80.*
15. Mathew J. Gonzales, Rhoderick N. Machezano, Robert W. Shafer. **Human Immunodeficiency Virus Type 1 Reverse-Transcriptase and Protease Subtypes: Classification, Amino Acid Mutation Patterns, and Prevalence in Northern California Clinic-Based Population.** *The Journal of Infectious Diseases. 2001; 184: 998-1006.*
16. Machezano R, Bassett M, McFarland W, Katzenstein D. **Clinical Signs and Symptoms in the Assessment of Immunodeficiency in Men with Subtype C HIV infection in Harare, Zimbabwe.** *HIV Clinical Trials. 2002 ; 3(2): 148-54*
17. Dorsey G, Gasasira AF, Machezano R, Kanya MR, Staedke SG, Hubbard A. **The impact of age, temperature, and parasite density on treatment outcomes from antimalarial clinical trials in Kampala, Uganda.** *Am J Trop Med Hyg. 2004 Nov;71(5):531-6.*
18. de Jong BC, Prentiss D, McFarland W, Machezano R, Israelski DM. **.Marijuana use and its association with adherence to antiretroviral therapy among HIV-infected persons with moderate to severe nausea.** *J Acquir Immune Defic Syndr. 2005 Jan 1;38(1):43-6.*
19. Damon Francis, Samuel L. Nsoya, Ambrose Talisuna, Adoke Yeka, Moses R. Kanya, Rhoderick Machezano, Christian Dokomajilar, Philip J. Rosenthal, Grant Dorsey. **Geographic Differences in Antimalarial Drug Efficacy in Uganda are Explained by Differences in Endemicity not Known Molecular Markers of Drug Resistance.** *J Infect Dis. 2006 Apr 1;193 (7):978-86.*
20. Kassaye SG, Ndayishimiye F, Binswanger H, Sall AY, Machezano R, Israelski DM. **Association-driven care and treatment: a model for community-based delivery of HIV/AIDS healthcare in resource-limited settings.** *AIDS. 2006 Jul 13;20 (11):1561-2.*

21. Machekano R, Hubbard A. **Efficacy Studies of Malaria Treatments in Africa: Efficient Estimation with Missing Indicators of Failure.** *Statistical Methods in Medical Research*, 2008; 17: 191-206.
22. Machekano R, Hubbard A. **Empirical Bayes Approach to Controlling Familywise Error: Application to HIV Resistance data.** (*Under revision with comments from. Biostatistics*, 2008)
23. McHenry CR, Huh ES, Machekano RN, **Is nodule size an independent predictor of thyroid malignancy?** *Surgery*. 2008 December; 144(6): 1062-9.
24. Sullivan C, Sayre SS, Leon JB, Machekano R, Love TE, Porter D, Marbury M, Sehgal AS. **Impact of food additives on hyperphosphatemia among end stage renal disease patients: a randomized controlled trial.** , February 11, 2009. Vol. 301, No.6.
25. Campbell TB, Borok M, Ndemera B, Fiorillo S, White IE, Zhang XQ, Machekano RN, Katzenstein D, Gwanzura L. **Lack of evidence for frequent heterosexual transmission of human herpesvirus 8 in Zimbabwe.** *Clinical Infectious Disease*, June 1, 2009. Vol 48(11).

#### **Presentations at National, Regional, and International Meetings:**

1. "Data Transformations for the Analysis of Pest Control Data". Nairobi, Kenya, 1990
2. "Risk factors for HIV infection among Urban Male Factory Workers in Harare, Zimbabwe". Marakkech, Morocco - Dec 1993
3. "Modeling Behavior Change: Are people really changing their behavior". SANASO Aids Conference, Mbabane, Swaziland, October 1997
4. "Peer Education reduces HIV infection among Factory Workers in Harare, Zimbabwe". Xth International conference on AIDS and STD in Africa, 7 – 11<sup>th</sup> December, 1997, Abidjan, Cote d'Ivoire.
5. "Empirical Bayes Approach to Controlling Familywise Error: Application to HIV Resistance data". Center for Health Research and Policy Seminar, MetroHealth, Cleveland. Jan 6, 2006.
6. "Efficacy Studies of Malaria Treatments in Africa: Efficient Estimation with Missing Indicators of Failure" . American Statistical Association – Cleveland Chapter Meeting. November 1, 2006.

**Referees:**

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