

7th Wits/Brown/Colorado/APHRC Colloquium

On Current and Emerging Population Issues

May 3rd-5th, 2009

Dear Colleagues and Friends,

On behalf of the University of Colorado, it is a pleasure to welcome you to the **7th Annual WBCA** (University of the Witwatersrand, Brown University, University of Colorado and APHRC) **Colloquium**.

In the 6 years since we first met in Johannesburg our partnerships in research and training have grown and solidified and we have truly created an international network of scholars based on the principle of mutuality – sustained and mutually beneficial collaborations. This year's program, again, focuses on sharing our research on population and health and discussing training issues, including interdisciplinary curriculum development and international training initiatives.

As in the past, the goals of the Colloquium are fourfold:

- ◆ to inform the group of ongoing research, recent findings, and plans for the future;
- ◆ to provide opportunity for discussion geared toward developing new collaborations;
- ◆ to strengthen advanced academic training in demography and population studies in sub-Saharan Africa; and
- ◆ to extend and strengthen our academic partnerships.

To serve these goals the Colloquium is designed to encourage both formal and informal discussions among participants; and we ask you to present very briefly – only 10 minutes with a few slides. We would like you to focus on the questions you are addressing; the data you are currently using or acquiring; and the questions on which you would welcome advice. If you have a paper on which your presentation is based that you would like to make available during the colloquium, please email it or give the file to Jill Williams (Jill.Williams@Colorado.edu) and she will make copies available. With your permission, we will also make presentations and/or papers available on the Colloquium website for downloading at a later date (please email these to jill.williams@colorado.edu upon your return home). The address for this website is: <http://www.colorado.edu/ibs/aps/colloquia.html>.

We have scheduled time for group meetings on Sunday and again on Tuesday afternoon. These meetings will take place in IBS, so please let Jill know if you need a meeting room.

We thank Linda Oldert, Live Muringa, Katelyn Clary, and Kelley Smith for the support they provided throughout the planning process. We also thank Liz Morningstar and Christie Sennott for help with the program.

Thank you for your participation in the Colloquium!

Yours truly,

The Organizing Committee:

Steve Graham, IBS Administrative Officer

Melissa McNabb, Program Assistant, Population Program

Jane Menken, Director, African Population Studies Research and Training Program

Jill Williams, Assistant Director, African Population Studies Research and Training Program

**7th Annual Wits/Brown/Colorado/APHRC Colloquium
On Current and Emerging Population Issues**

Saturday, May 2nd (Arrivals) Check in time is after 4:00 PM
Sunday, May 3rd (Arrivals) Check in time is after 4:00 PM

Sunday, May 3rd - RESEARCH MEETINGS

8:50	Van pick-up at Hotel Boulderado for breakfast and meetings	
9:00	Continental Breakfast	IBS #3 2nd Floor
9:30 – 11:45	Partnership for Social Science AIDS Research Menken, Clark, Tollman, Kahn, Collinson, Gómez-Olivé, Reniers, Klipstein-Grobusch, Kabudula, Williams, Sennott	IBS #3 Conference
11:45	Van pick-up at Hotel Boulderado for lunch and meetings	
12:00	Lunch	IBS #3 2nd Floor
12:30 – 2:00	Christie Sennott and advisors Sennott, Schatz, Reniers, Kahn, Menken, Williams	IBS #1 Conference
12:30 – 2:15	CU and Wits Clark, Tollman, Gómez-Olivé, Collinson...	IBS #3 Conference
2:15	Van pick-up at Hotel Boulderado for meetings	
2:30 – 4:30	Measuring Social Connections Madhavan, Townsend, Kuhn, Collinson Gómez-Olivé, Blalock...	IBS #3 Conference
3:00 – 4:50	CU and APHRC Clark, Ezeh, Zulu, Thomas	IBS #1 Conference
5:00 – 8:00	WBCA Welcome Dinner at Nepal Cuisine	
5:00	Van pick-up at IBS for dinner	
5:05	Van pick-up at Hotel Boulderado for dinner	

Monday, May 4th – PAPER SESSIONS AND PANELS

7:30 & 8:00	Van transport to Koenig	
7:30	Breakfast (available until 9:30)	Koenig
8:30 – 10:00	Welcome Session	Koenig
10:00 – 10:30	Break	Koenig
10:30 – 12:00	Parallel Paper Session I A. Partner Selection and Sexual Networks Michael White - chair B. Ageing, Health, and Mortality Rick Rogers - chair	Koenig IBS #3
12:00 – 1:30	Lunch	Koenig
1:30 – 3:00	Parallel Paper Session II A. Special Topics (Ezeh and Tollman) Jane Menken - chair B. Migration Fred Pampel - chair	Koenig IBS #3
3:00 – 3:30	Break	Koenig
3:30 – 5:00	Paper Session III A. HIV/AIDS Eliya Zulu - chair	Koenig
5:15 –	BBQ Dinner & Country Dance	Koenig
7:30 & 8:00	Van Transport from Koenig to Hotel	

Tuesday, May 5th – PAPER SESSIONS, PANELS, & RESEARCH MEETINGS

7:30 & 8:00	Van Transport to Koenig	
7:30	Breakfast (available until 9:30)	Koenig
8:30 – 10:00	Parallel Paper Session IV A. Households, Social Networks, and Livelihoods Stephen McGarvey - chair B. Potpourri David Sherwell - chair	Koenig IBS #3
10:30 – 12:00	Training Panel Jill Williams - chair Alex Ezeh - CARTA Dan Smith - Brown Report Kathy Kahn - Interdisciplinary core PhD requirements Jane Menken – Universities and International Collaborations All	Koenig
12:00 – 1:30	Lunch	
2:00 & 3:45	Van Transport to Hotel	
2:00 –	Collaborative meetings	IBS Buildings
2:00 – 3:30	Sage Health Tollman, Menken, Schatz...	IBS #3

PAPER SESSION I
Monday, May 4th, 10:30-12:00

A. Partner Selection and Sexual Networks

Chair: Michael White

Changes in the timing and paths to marriage with less parental involvement in Dar es Salaam, Tanzania.

Megan Klein Hattori (Brown).

I first assess how changes in age at first marriage are patterned along the lines of education, wage employment, and household structure using the 2004-2005 Tanzania Demographic and Health Survey. I use event history analysis to explore the changes in men and women's age at first marriage by birth cohort, region, education, sector of employment, relationship to the household head, religion, and age at circumcision (for those circumcised). Subsequently, in-depth interviews I conducted between December 2006 and May 2007 with youth aged 15 to 24 in Dar es Salaam are analyzed to assess urban youth's perception of what these changes in union formation actually mean to young people in relationships. Along with the region of Kilimanjaro, Dar es Salaam has the highest level of educational attainment in the country as well as the highest median age at first marriage. Changes first seen in more urban areas are likely to be precursors of changes to come in the rest of the country. The descriptions of how unions were formed in previous generations and currently in Dar es Salaam, a city that has already seen substantial changes in union formation, can provide insight as to what these changes mean to young people, including the costs, benefits, and consequences of these changes. I analyze in-depth interviews with six couples in one neighborhood in Dar es Salaam to map some of the potential paths to marriage followed by young adults.

Nuptiality Patterns in Rural South Africa.

Chodziwadziwa Whiteson Kabudula (Wits).

Mothers on the Marriage Market: Assessing the Impact of Motherhood on Partner Selection and Union Dissolution.

Christie Sennott (CU), Georges Reniers (CU, Princeton).

High rates of adolescent, non-marital fertility in many sub-Saharan African countries have sparked numerous studies on the determinants and short-term consequences of early childbearing. Fewer studies have investigated long-term marital outcomes for young mothers who eventually marry. We utilize data from the Agincourt Health and Demographic Surveillance Site (AHDSS) to investigate the impact of motherhood on women's marriage market choices and marital outcomes using a series of discrete-time logistic regression and Cox Proportional Hazards models. Specifically, we test the likelihood of young mothers marrying less educated partners, marrying much older (10+ years) partners, and entering informal unions rather than formal marriages. Additionally, we examine union stability by comparing union duration until dissolution (by divorce/separation or widowhood) for women who experienced a non-marital birth and women who postponed childbearing until after marriage. Our results suggest a complex relationship between motherhood and marital formation and dissolution in rural South Africa. Of interest is our finding that young mothers are more likely than their peers to enter informal unions and that these unions are more susceptible to dissolution, suggesting that early childbearing may negatively impact marriage partner selection and stability for young mothers.

Anonymity and Infidelity: Ethnic Identity, Strategic Cross-Ethnic Sexual Network Formation, and HIV/AIDS in Africa.

Roland Pongou (Brown)

We develop a theory of how community-level ethnic heterogeneity determines the formation of sexual networks, and how this in turn affects the spread of HIV/AIDS. Specifically, the model assumes that agents derive utility from sexual relationships, but sexual infidelity is socially prohibited and punished if detected by the cheated partner. It implies a mechanism wherein ethnic heterogeneity provides incentives for optimizing agents to multiply sexual partners across ethnic groups while at the same time lowering the probability of infidelity detection, and thus positively affecting the spread of HIV/AIDS. We use individual level data from six representative countries of sub-Saharan Africa to test the model. In doing so, we find a direct effect of ethnic heterogeneity on both the number of sexual partners and HIV infection. Robustness checks show that this effect is not driven by a lack of public goods in ethnically diverse communities. Interestingly, ethnic heterogeneity is shown to have no effect on anemia which is largely untreated like HIV/AIDS, but which unlike HIV/AIDS does not involve socially prohibited human

interactions. This finding supports our theory that diseases which involve socially prohibited human interactions spread through hidden and anonymous networks. Our study offers a new and fresh explanation for the high concentration of the AIDS epidemic in sub-Saharan Africa.

B. Aging, Health, and Mortality
Chair: Rick Rogers

Health, Quality of Life and levels of disability in older people in rural South Africa.

F. Xavier Gómez-Olivé (Wits), Margaret Thorogood (Wits), Benjamin D Clark (London School of Hygiene), Stephen Tollman (Wits)

The Socioeconomic Context of Prime-Age Adult Mortality: Evidence from the Agincourt Health and Demographic Surveillance Site.

Laura Patterson (CU), Lori Hunter (CU), Wayne Twine (Wits)

There is little empirical research examining the relationship between household socioeconomic status (SES) and prime-age adult mortality in sub-Saharan Africa. In the context of the ongoing HIV/AIDS pandemic, such work is important because SES may shape HIV/AIDS susceptibility as well as the household's ability to recover from the death of a prime-age adult. This paper presents analyses of pre-mortality SES as well as post-mortality SES change in rural South Africa, using data from the Agincourt Health and Demographic Surveillance Site (AHDSS). Results do not support the contention that disadvantaged households are more vulnerable to HIV/AIDS. In addition, HIV/AIDS-related adult deaths appear associated with a decline in SES only for households experiencing death of an adult male *other* than the household head. At least in the AHDSS area, households across socioeconomic strata seem equally vulnerable to HIV/AIDS, and HIV/AIDS may not represent a unique form of household mortality shock. Both conclusions suggest that HIV/AIDS education programs, as well as efforts to reduce poverty, should be broadly promoted.

Temporal and Spatial Variation in Genetic Influences on Health and Health Behaviors.

Jason Boardman (CU)

Applications of genetic epidemiology for demographic studies in developing countries.

Matthew McQueen (CU)

PAPER SESSION II

Monday, May 4th, 1:30-3:00

A. Special Topics

Chair: Jane Menken

Demographic Shifts and Population Health: The Potential Impact of Stalled Fertility in Africa.

Alex Ezeh (APHRC)

This presentation is a preview of a talk I will give at UC Berkeley at a conference which will focus on the implications for health of three major global trends (climate change, population/demographic shifts and economic globalization), including but not limited to impacts affecting the poor in developing countries. The conference objective is to marshal and coalesce the intellectual capacity, experiential knowledge and relationships of UC Berkeley in support of further research and action in this field. I will be discussing demography, particularly the future of Africa with some emphasis on stalled fertility decline. I appreciate feedback on this presentation.

Recession and its effects - what and how?

Stephen Tollman (Wits)

The global recession will impact directly on poor communities through loss of jobs, lack of employment opportunities, reduced purchasing power for food etc. Health and socio-demographic surveillance systems are uniquely placed to evaluate the livelihood and health effects of a global recession on local communities in African

and other settings. In South Africa, the mitigating effects of an expanded public works program, major infrastructure development, and increased social transfers (pensions and child care grants) - all already accounted for in the national budget - make for a unique case study. I will introduce a discussion on this issue - it will be a feature of Agincourt research over coming years and would be very useful to have WBCA contribute to evolving thinking.

B. Migration

Chair: Fred Pampel

The Distribution of Births Across the Calendar Year in Rural SA, 1950-2007: Evidence for Changing Patterns of Migration.

Mark Lurie (Brown)

The Dynamics of Migration, Health and Livelihoods: INDEPTH Network Perspectives.

The INDEPTH Migration and Urbanisation Working Group.

Represented by Dr. Mark A. Collinson (Wits)

In this paper we present a multi-country study by the INDEPTH Network Migration and Urbanisation Working Group from seven health and demographic surveillance systems (HDSS) sites in Africa and Asia. The study, which will be published by Ashgate later in the year, is organised into three parts. The first examines the field of migration studies with emphasis on the issues that can be addressed using HDSS data. We examine methods used for migration surveillance in HDSS sites, compare the contexts in which migration studies are conducted, and compare age-sex migration profiles from different sites. The second section examines the impact of migration on socio-economic status in two sites in Asia and one in Africa. The third section looks at the impact of migration on health in three African sites and one Asian site. The findings are organised into four cross-cutting themes, the first of which is migration selection. A specific section of the population is much more likely to migrate, which can change the population structure. Another key theme is how migration changes exposure of both migrants and their origin households. This results in exposure to new diseases as well as access to health care and health resources. It also brings exposure to new ideas that make the migrant household and networks different from the ones that don't have that exposure. Another important theme is the disruption and separation of individuals and functional social units, especially mother-child relations and sexual partners. Finally, we discuss the contribution that migration makes to communities and household of origin, in particular, new behaviours and attitudes as well as income from remittances. Generally, migration is a strong force for change in impoverished communities, but there can be negative health consequences that need to be offset by appropriate policies and targeted development strategies.

Rapid social and ecological change in northern Tanzania: how global flows of ideas and capital impact migration and the management of natural resources.

Terry McCabe (CU)

A case study from northern Tanzania demonstrates the complexity and unpredictability of change in the livelihoods of the formally pastoral Maasai. In this paper I examine the forces influencing the rapid transformation of the Simanjiro plains, located to the east of Tarangire National Park. This intensification has been fueled by money made by men acting as middle-men in the Tanzanite gem business and by the insecurity of land tenure regimes. Local, regional, and international actors - from NGO's favoring conservation to those supporting indigenous rights - vie for power and influence in their attempt to sway local land use decisions. This mix of global ideas concerning conservation, global flows of capital, and the attempt by local people to secure their land and livelihoods force us to fundamentally restructure how we conceptualize the local and the complexity of forces that influence "local" decisions.

Migration Event History Analysis using Demographic Surveillance System Data.

Philippe Bocquier (Wits), Donatien Beguy (APHRC)

The objective of this methodological paper is to test the applicability of the event history analysis (EHA) technique to estimate both out- and in-migration rates, using longitudinal data collected in two DSS sites: the Nairobi Urban Health and Demographic Surveillance System (NUHDSS, Kenya) and the Agincourt Health and Demographic Surveillance System (AHDSS, South Africa). To our best knowledge, this is the first attempt to use the EHA framework to analyze in-migration DSS data. The estimation of both out- and in-migration rates, and the resulting net-migration rates, will help better monitor the population under observation in the two sites since all of the movements in and out of the surveillance area can be captured while analyzing DSS data. Noticing that in-migration is just the opposite process of out-migration, our method consists in running the time of analysis in reverse order to

produce tables that will formally have the same structure and properties as decrement tables but which will be interpreted as increment tables. Beyond descriptive analysis, our method allows multivariate analysis on the determinants of in-migration in much the same way as out-migration is analysed.

PAPER SESSION III

Monday, May 4th, 3:30-5:00

A. HIV/AIDS

Chair: Eliya Zulu

Forecasting HIV prevalence in east Africa.

Jason Thomas (Washington), Samuel Clark (Washington), Le Bao (Washington), and Adrian Raftery, (Washington)

In this paper, we forecast (national) HIV prevalence for several East African countries using estimated HIV incidence profiles obtained from a cohort-component projection model. Data on HIV prevalence (from ANCs and surveys) collected during the late 1980s and early 1990s are used to produce estimates of age-specific incidence, which are used to forecast prevalence reported in the Demographic and Health Surveys carried out after 2000. The contribution of this work is to assess the cohort-component model as a method for making population projections in the context of HIV. If the model shows good predictive performance, then it may be useful for informing policy/planning about future trends, and possibly exploring potential interventions.

Adult AIDS mortality trends in Addis Ababa.

Daniel Sahleyesus (CU, Addis Ababa University)

Exploring the Wealth and HIV Status Paradox among African Youth.

Sanyu A. Mojola (CU)

Recent studies have suggested that HIV in Africa is not a disease of poverty but rather a disease of affluence. That is, the wealthiest and most educated populations in Africa have the highest rates of HIV. Preliminary analysis of the Kenya Demographic and Health Survey (2004) merged with the HIV subsample, suggests that this larger trend is evident among young (15-29 year old) Kenyan men and women – that is, the richer/richest young men and women have the highest rates of HIV. This project aims to explore this paradox using mixed methods analysis combining quantitative analysis of the KDHS (2004) with qualitative interviews with middle class and/or wealthy HIV positive and negative Kenyan men and women. This project could also possibly be made comparative by conducting a similar study in South Africa.

Factors Associated with Infant Mortality in a Rural Setting in South Africa.

Akeem T. Ketlogetswe (Wits), Kathleen Kahn (Wits), and Kerstin Klipstein-Grobusch (Wits)

Infant mortality rate is one of the leading indicators of the level of child health and overall development in countries as well as a Millennium Development Goals (MDG) indicator. Studies on risk factors and causes of infant mortality (IM) present the opportunity to identify intervention programs appropriate in different populations in our attempt to reduce mortality. The aim of the study was to determine factors associated with IM in a rural setting for 10,492 children in the Agincourt Health and Demographic Surveillance Site (AHDSS) born between 01 January 1998 and 31 December 2002. Secondary data extracted from the longitudinal AHDSS database were used to study determinants of IM using survival analysis. There was evidence of an increasing trend in IM. The leading causes of death were HIV/AIDS and other infectious diseases (HIV-related protozoal and bacterial infections) with 17.02% and 14.47% respectively. Results suggest that IM was associated with biological factors, for instance birth weight and gestation period, and the health seeking behaviour of parents such as birth registration and use of the road to health card to monitor growth of the infants on a regular basis. There were also proxies for socio-economic status such as education and refugee status of the mother that were associated with IM; however, the effects of these factors differed. To reduce the number of infants who die from HIV/AIDS and its related infections, programs like Prevention of Mother to Child Transmission (PMTCT) should be made available to all sero-positive mothers.

PAPER SESSION IV
Tuesday, May 5th, 8:30-10:00

A. Households, Social Networks, and Livelihoods

Chair: Stephen McGarvey

Measuring Social Connection Using Multiple Data Sources: Qualitative Analysis.

Nicholas Townsend (Brown), **Sangeetha Madhavan** (Maryland), Randall Kuhn (University of Denver), Anita I. Garey (Connecticut), Mark Collinson (Wits)

Measuring Social Connection Using Multiple Data Sources: DSS Analysis.

Nicholas Townsend (Brown), Sangeetha Madhavan (Maryland), **Randall Kuhn** (University of Denver), Anita I. Garey (Connecticut), Mark Collinson (Wits)

A Demographic Result Concerning Household Change at Agincourt, from Orbit Theory.

Charles Mberi Kimpolo (Wits) and **David Sherwell** (Wits)

We consider three demographic variables of household change in Agincourt data, namely *adult death*, *absence of biological mother of a child at school going age* and *household head a minor*. These questions are preparation for future data of child educational attendance and progression at school. We analyse the preliminary data by use of "Orbit Theory". There are 48 possible states of each household, defined by the order of questions and the fitness of each question (e.g. adult death is unfit). For a sample of 1,000 households we record the change of state since 1992. From a "transition matrix" we find the change of state of Agincourt households to be uniformly distributed over possible changes and that there are as many transitions from unfit to fit household compositions (under our variables) as in the opposite direction. Averaged over 16 years, household change in Agincourt is then of stable fitness with respect to our variables. Change of the status of biological mother is balanced between in- and out-migration. The data suggest the obvious action to bias Agincourt towards fit households, namely to induce biological mothers to stay at home (and simultaneously ensure an adult household head).

Laying a Socio-Ecological Foundation for Longitudinal Livelihoods Analyses at Agincourt: Success with SUCSES.

Lori Hunter (CU), Wayne Twine (Wits)

B. Potpourri

Chair: David Sherwell

Peopling Development: Who is "Local" in International Development Programs?

Rebecca Warne Peters (Brown)

While the "ex-pats" working for local and international non-governmental organizations (NGOs) are widely presumed to be Western or Northern and the national staff of these same organizations generally seen as "local," a detailed look at individuals' professional histories inside these organizations suggests a much more complicated picture. Ex-pats in Angola, for instance, are just as likely to be Guatemalan, Bangladeshi, or Zambian as they are to be Portuguese, British or American. Nationals are just as likely to have been educated abroad as they are to speak an indigenous language. This paper recounts the personal and professional histories of development workers participating in a good governance program in Angola from 2006-2009, demonstrating that to be "international" or to be "local" is in fact a characteristic that shifts contextually and strategically. This paper considers the implications of a fluid continuum of locality and internationality in the design and conduct of development programs, and argues for the expansion of "development studies" to include examinations of the developers as well as the developing.

Interdisciplinary Studies of the Nutrition Transition in South Africa.

Stephen McGarvey (Brown)

Nesting qualitative methods in demographic surveillance sites: More than the sum of the parts.

Enid Schatz (University of Missouri)

For quantitative researchers collecting longitudinal data in demographic surveillance sites and through other means, there are real advantages to nesting qualitative studies within those projects, advantages that add up to more than the sum of the parts. Due to sampling options and data available on the larger population, there is the possibility of conducting relatively large qualitative studies through team ethnography, of greater generalizability of small N qualitative studies, as well as the likelihood of uncovering new information that can enrich the understanding of the topic and provide insight for better quantitative measures to use in future data collection. This paper provides examples from two longitudinal mixed-method studies to show that the incorporation of qualitative team research not only provides richer, more realistic picture of the lives of the people that longitudinal studies are interested in documenting, but it also does so in a way that addresses a number of quantitative researchers' concerns about qualitative methodologies.

Patterns of Stall in Fertility Decline and their Determinants in Eastern Africa.

Alex C. Ezeh (APHRC), **Blessing U. Mberu (APHRC)**, Jacques O. Emina (APRHC)

We use data from the Demographic and Health Surveys to examine the patterns of stall in fertility decline in four Eastern African countries. Contrary to patterns of fertility transition in Africa that cut across various socio-economic and geographic groups within countries, we find strong selectivity of fertility stall across different groups and regions in all four countries. In both Kenya and Tanzania where fertility decline has stalled at the national level, it continued to decline among most educated women and those in some regions. While fertility has remained at pre-transition levels in Uganda over the past 20 years, there are signs of decline with specific groups of women (especially the most educated, urban and those in the Eastern region) taking the lead. For Zimbabwe, although fertility has continued to decline at the national level, stall is observed among women with less than secondary education and those in some of the regions. We link these intra-country variations to differential changes in socio-economic variables, family planning program environment and reproductive behavior models. The results suggest that declines in contraceptive use, increases in unmet need for family planning, increasing preferences for larger families, and increases in adolescent fertility were consistently associated with stalls in sub-group fertility across all four countries. These results are consistent with models that emphasize the role of declines in national and international commitments to family planning programs in the premature stall in African fertility transition.