
BIOGRAPHICAL SKETCH

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NAME: Clouse, Kate

eRA COMMONS USER NAME (credential, e.g., agency login): kateclouse

POSITION TITLE: Assistant Professor of Medicine, Vanderbilt Institute for Global Health
Vanderbilt University School of Medicine

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

| INSTITUTION AND LOCATION | DEGREE (if applicable) | Completion Date MM/YYYY | FIELD OF STUDY |
|---|---------------------------|----------------------------|------------------------------|
| University of North Carolina at Chapel Hill | BA | 1998 | English |
| University of California, Berkeley | MPH | 2005 | Health Policy and Management |
| University of North Carolina at Chapel Hill | PhD | 2012 | Epidemiology |
| University of North Carolina at Chapel Hill | Postdoctoral | 2013 | Epidemiology |

A. Personal Statement

I am an epidemiologist with over a decade of experience conducting HIV research in southern Africa. My research specialty is HIV/AIDS implementation science in South Africa, notably the HIV continuum of care and TB/HIV integration. My particular strength in epidemiology lies at the intersection of practical field experience and methods-based analytic training. I lived in Johannesburg, South Africa, for three years, where I worked with the Wits Reproductive Health and HIV Institute (WRHI) and the Health Economics and Epidemiology Research Office (HE²RO), of the University of the Witwatersrand. During this time, I conducted research exploring the HIV continuum of care among adults newly-diagnosed with HIV and collected primary data. This work demonstrated that women who are diagnosed with HIV during antenatal care fall out of care at alarmingly high rates, and that the risk of loss is greatest after delivery. I also examined patient retention among adults initiating antiretroviral therapy (ART) for the first time and showed that women who initiate ART during pregnancy are at greatest risk of loss to follow-up, compared to non-pregnant women and men. To date, I have published six manuscripts exploring outcomes among pregnant/postpartum HIV-positive women in South Africa. This prior work piqued my interest in the role of frequent population mobility as a factor contributing to poor retention in HIV care, particularly among postpartum women, which now is the focus of my work supported by a K01 award from NIMH (2015-2019).

1. **Clouse K**, Vermund SH, Maskew M, Lurie M, MacLeod W, Malet G, Carmona S, Sherman G, Fox MP. Mobility and clinic switching among postpartum women considered lost to HIV care in South Africa. *JAIDS* 2017, in press.
2. **Clouse K**, Schwartz S, Van Rie A, Bassett J, Yende N, Pettifor A. "What they wanted was to give birth; nothing else": Barriers to retention in Option B+ HIV care among postpartum women in South Africa. *JAIDS* 2014; 67(1):e12-8. PMID: 24977376.
3. **Clouse K**, Pettifor A, Maskew M, Bassett J, Van Rie A, Gay C, Behets F, Sanne I, Fox MP. Initiating ART when presenting with higher CD4 counts results in reduced loss to follow-up under South Africa's 2010 revised antiretroviral therapy guidelines. *AIDS* 2013; 27(4):645-650. PMCID: PMC3646627.
4. **Clouse K**, Pettifor A, Shearer K, Maskew M, Bassett J, Larson B, Van Rie A, Sanne I, Fox MP. Loss to follow-up before and after delivery among women testing HIV-positive during pregnancy in Johannesburg, South Africa. *Trop Med Int Health* 2013;18(4):451-460. PMCID: PMC3600093.

B. Positions and Honors

Positions and Employment

| | |
|-----------|--|
| 2004-2008 | Research Analyst, University of California, San Francisco, CA |
| 2008 | Data Review Manager, WRHI, University of the Witwatersrand, Johannesburg, South Africa |
| 2008-2009 | FHI 360 – UNC Pre-doctoral Fellow, FHI 360, Research Triangle Park, NC |
| 2009-2010 | Graduate Research Assistant, Department of Epidemiology, University of North Carolina, Chapel Hill, NC |
| 2010-2012 | Epidemiologist/Researcher, HE ² RO, University of the Witwatersrand, Johannesburg, South Africa |
| 2012-2013 | Post-doctoral Researcher, Department of Epidemiology, University of North Carolina, Chapel Hill, NC |
| 2014-2015 | Research Assistant Professor of Medicine, Vanderbilt Institute for Global Health; Vanderbilt University School of Medicine, Department of Infectious Diseases, Nashville, TN |
| 2015- | Assistant Professor of Medicine, Vanderbilt Institute for Global Health; Vanderbilt University School of Medicine, Department of Infectious Diseases, Nashville, TN |

Other Experience and Professional Memberships

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| 2009- | Member, International AIDS Society (IAS) |
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Honors

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|------|---|
| 2004 | UCB School of Public Health Alumni Association Patricia Buffler Scholarship |
| 2008 | FHI 360 – UNC Pre-doctoral Fellowship |
| 2011 | UNC Department of Epidemiology Rebecca James Baker Scholarship |
| 2013 | UNC Gillings School of Global Public Health Greenberg Award for Excellence in Doctoral Research |

C. Contribution to Science

1. My work has helped to characterize the HIV continuum of care among pregnant women in South Africa and has highlighted the difficulty of retaining postpartum women in HIV care. In sub-Saharan Africa, pregnant women often are retained during antenatal care but then are at particularly high risk of dropping out of HIV care around the time of delivery. The total rates of drop-out are higher than men and non-pregnant women. Failure to return to routine HIV care endangers the life of the mother and the infant. In addition to quantitative analyses describing the timing and magnitude of drop-out, I also have used mixed-methods approaches to understand barriers to postpartum care among HIV-positive women.
 - a. **Clouse K**, Vermund SH, Maskew M, Lurie M, MacLeod W, Malet G, Carmona S, Sherman G, Fox MP. Mobility and clinic switching among postpartum women considered lost to HIV care in South Africa. *JAIDS* 2017, in press.
 - b. **Clouse K**, Schwartz S, Van Rie A, Bassett J, Yende N, Pettifor A. "What they wanted was to give birth; nothing else": Barriers to retention in Option B+ HIV care among postpartum women in South Africa. *JAIDS* 2014; 67(1):e12-8. PMID: 24977376.
 - c. **Clouse K**, Pettifor A, Shearer K, Maskew M, Bassett J, Larson B, Van Rie A, Sanne I, Fox MP. Loss to follow-up before and after delivery among women testing HIV-positive during pregnancy in Johannesburg, South Africa. *Trop Med Int Health* 2013;18(4):451-460. PMCID: PMC3600093.
 - d. **Clouse K**, Pettifor A, Maskew M, Bassett J, Van Rie A, Gay C, Behets F, Sanne I, Fox MP. Initiating ART when presenting with higher CD4 counts results in reduced loss to follow-up under South Africa's 2010 revised antiretroviral therapy guidelines. *AIDS* 2013; 27(4):645-650. PMCID: PMC3646627.
2. My work has demonstrated the high rates of patient drop-out soon after HIV testing. Early studies of retention in HIV care focused on patient drop-out after the initiation of antiretroviral therapy (ART). My work in South Africa was among the first studies to explore the full continuum of care from HIV diagnosis through one year on ART within the public sector in South Africa. My findings help to illuminate the importance of pre-ART retention in care, as patients are at high risk of drop-out prior to the initiation of ART, and studies that examine retention starting at ART initiation likely are missing earlier periods of high drop-out.

- a. **Clouse K**, Pettifor A, Maskew M, Bassett J, Van Rie A, Gay C, Behets F, Sanne I, Fox MP. Patient retention from HIV diagnosis through one year on antiretroviral therapy at a primary healthcare clinic in Johannesburg, South Africa. *JAIDS* 2013;62(2): e39-e46. PMID: PMC3548953.
 - b. **Clouse K**, Hanrahan CF, Bassett J, Fox M, Sanne I, Van Rie A. Impact of systematic HIV testing on case finding and retention in care at a primary care clinic in South Africa. *Trop Med Int Health*. 2014; 19(12):1411-9. PMID: 25244155.
 - c. Fox MP, Shearer K, Maskew M, Meyer-Rath G, **Clouse K**, Sanne I. Attrition through multiple stages of HIV care in South Africa: a challenge for test-and-treat. *PLoS One* 2014; 9(10):e110252. PMID: PMC4203772.
3. My work has helped to characterize mobile phone ownership and use patterns among HIV-positive, pregnant women attending routine antenatal care in South Africa and explored a mobile phone based pilot study to improve postpartum retention in HIV care. In a study conducted in 2013, we found mobile phones were ubiquitous among this population, while phone sharing and number switching was uncommon, leading us to conclude that mobile phone interventions are feasible among this population. Additionally, we found that providing maternal support through a mobile phone-based case manager intervention was highly acceptable and feasible, and resulted in a higher proportion of infants receiving HIV diagnosis.
 - a. **Clouse K**, Schwartz S, Van Rie A, Bassett J, Vermund S, Pettifor A. High mobile phone ownership, but low internet and email usage among pregnant, HIV-infected women attending antenatal care in Johannesburg. *J Telemed Telecare* 2015; 21(2):104-7. PMID: PMC4860457.
 - b. Schwartz S, **Clouse K**, Yende N, Van Rie A, Bassett J, Pettifor A. Acceptability and feasibility of an *mHealth* intervention to retain mothers and infants enrolled in an Option B+ program in postpartum HIV care. *Matern Child Health J*. 2015 Sep;19(9):2029-37. PMID: PMC4871127.
 4. My work has demonstrated the feasibility and utility of Xpert MTB/RIF placement at the point of care for rapid TB diagnosis in a primary care clinic. Most studies of Xpert MTB/RIF are constrained within a laboratory. Working with colleagues at UNC and in South Africa, we demonstrated that Xpert MTB/RIF can be used in a busy primary care facility by low-level staff with minimal training. Time-to-treatment was much improved with point-of-care Xpert MTB/RIF placement.
 - a. **Clouse K**, Page-Shipp L, Dansey H, Moatlhodi B, Scott L, Bassett J, Stevens W, Sanne I, Van Rie A. Implementation of Xpert MTB/RIF for routine point-of-care diagnosis of tuberculosis at the primary care level. *S Afr Med J* 2012;102(10):805-7. PMID: 23034211.
 - b. Van Rie A, Page-Shipp L, Harrahan C, Bistline K, Dansey H, Bassett J, **Clouse K**, Scott L, Stevens W, Sanne I. Point-of-care Xpert MTB/RIF for assessment of smear-negative TB suspects at a primary care clinic in South Africa. *Int J Tuberc Lung Dis* 2013;17(3):L368-372. PMID: PMC4445423.
 - c. Hanrahan CF, Selibas K, Deery C, Dansey H., **Clouse K**, Bassett J, Scott L, Sanne I, Van Rie A. Outcomes of TB suspects screened using a single point-of-care Xpert MTB/RIF assay as the routine initial diagnostic at a primary care clinic in urban South Africa. *PLoS One* 2013;8(6):e65421. PMID: PMC3675091.

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1Fk8w9u36yd/bibliography/43313291/public/?sort=date&direction=ascending>

D. Research Support

Active Research support

1K01MH107256-01 (Kate Clouse, PI)

04/01/2015-03/31/2019

NIH/NIMH

Population mobility and retention in HIV care among postpartum women in South Africa

This mentored K01 award will support training and research to explore the impact of population mobility on retention in postpartum HIV care and gather critical information for the development of future interventions to improve retention in HIV care.

Role: Principal investigator

Completed support

5R01AI099026-02 (Annelies Van Rie, PI)

04/01/2012-03/31/2016

NIH/NIAID

Optimizing the impact of Xpert MTB/RIF on treatment outcomes of drug resistant TB.

This study will compare important patient outcomes of rifampicin resistant tuberculosis in patients diagnosed with drug resistant TB by culture-based method and the rapid Xpert assay.

Role: Post-doctoral researcher

4R01HD069175-05 (Helen McIlleron, PI)

08/22/2011-07/31/2013

NIH/NICHD

Optimal dosing of 1st line anti-tuberculosis and antiretroviral drugs in children – a pharmacokinetic study

This study will evaluate the 2010 WHO dosing recommendations for first line anti-tuberculosis drugs in HIV infected and uninfected children in South Africa and Malawi.

Role: Post-doctoral researcher

5R01MH087118-02 (Audrey Pettifor, PI)

07/01/2012-02/28/2015

NIH/NIMH

Effects of Cash Transfer and Community Mobilization in Young South African Women

The objective is to determine the effect of an innovative, multi-level HIV prevention intervention that will jointly address both structural and social factors that contribute to young women's increased vulnerability to HIV.

Families of young women will be provided with cash transfers conditional on the young women attending school, with the goal of reducing the young women's HIV risk by keeping her in school by improving her family's economic resources (structural factors).

Role: Post-doctoral researcher