

BIOGRAPHICAL SKETCH

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NAME: HIGHTOW-WEIDMAN, Lisa Beth

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

POSITION TITLE: Professor

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 California, Los Angeles, LA, CA	BA	05/1994	English
University of Virginia School of Medicine, Charlottesville, VA	MD	05/1998	Medicine
Stanford Medical Center, Stanford, CA	Residency	05/2001	Internal Medicine
UNC Hospitals, UNC-Chapel Hill, Chapel Hill, NC	Fellowship	08/2004	Infectious Diseases
UNC School of Public Health- Chapel Hill, NC	MPH	05/2003	Epidemiology

A. Personal Statement

I am a Professor of Medicine and Health Behavior at UNC Chapel Hill with expertise working with HIV-infected and at-risk populations. My research focuses on technology-based interventions to prevent HIV infection among those who are at risk and to improve linkage and retention in care for populations with HIV. My work focuses particularly on sexual and gender minority youth including young men who have sex with men (YMSM) and young transgender women (YTW). In addition, I am an active clinical HIV provider in a large HIV-clinic managing at risk and HIV-infected youth and young adults prescribing pre-exposure prophylaxis and antiretroviral medications, and counseling patients on HIV prevention and care. My expertise in technology-based approaches to HIV prevention among sexual and gender minority youth makes me an ideal MPI.

Since the beginning of my career I have worked to develop and evaluate technology-based interventions for youth, particularly YMSM, to increase uptake of HIV/STI testing, deliver prevention interventions for those testing negative, and engage those testing positive in care. I have developed and evaluated a number of novel, interactive, online and app-based interventions for both positive and negative youth. I currently am the PI of a U19 grant, which developed iTech, a collaborative center that uses innovative technologies to address the HIV care continuum among adolescents and young adults in the United States. iTech also creates an infrastructure to share and disseminate best practices in technology-based HIV interventions to other Adolescent Trials Network (ATN) projects and programs serving adolescents. I have led research studies related to expanding HIV prevention interventions to technology platforms with young MSM (YMSM) with consistent grant funding from the NIH for more than a decade. I was also the PI on the grant to develop HealthMpowerment, the intervention that will be used in this proposal.

- a. **L.B. Hightow-Weidman**, S. LeGrand, K.E. Muessig, R.A. Simmons, K. Soni, S.K. Choi, H. Kirschke-Schwartz, J.R. Egger. A Randomized Trial of an Online Risk Reduction Intervention for Young Black MSM. *AIDS and Behavior*. 2018 Sept 29. [Epub ahead of print]. PMID: 30269231.
- b. **L.B. Hightow-Weidman**, K. Muessig, E. Rosenberg, T. Sanchez, S. LeGrand, L. Gravens, P.S. Sullivan. University of North Carolina/Emory Center for Innovative Technology (iTech) for Addressing the HIV Epidemic Among Adolescents and Young Adults in the United States: Protocol and Rationale for Center Development. *JMIR Res Protocols*. 2018 Aug 3; 7(8):e10365. PMID: 30076126. PMCID: PMC6098243.
- c. **L.B. Hightow-Weidman**, K. Muessig, K. Knudtson, M. Srivasta, E. Lawrence, S. LeGrand, A. Hotten, S. Hosek. A Gamified Smartphone App to Support Engagement in Care and Medication Adherence for

HIV-Positive Young Men Who Have Sex with Men (AllyQuest): Development and Pilot Study. *JMIR Public Health and Surveillance*. 2018 Apr 30; 4(2): e34. PMID: 29712626; PMCID: PMC5952121.

- d. M.I. Mulawa MI, S. LeGrand S, **L.B. Hightow-Weidman**. eHealth to Enhance Treatment Adherence Among Youth Living with HIV. *Current HIV/AIDS Reports*. 2018 Aug; 15(4):336-349. PMID: 29959649. PMCID: PMC6086132.

B. Positions and Honors

Positions & Employment

1998-2001	Resident, Medicine, Stanford University Medical Center, Palo Alto, CA
2001-2004	Clinical Instructor and Research Fellow, Division of Infectious Diseases, Department of Medicine, University of North Carolina School of Medicine, University of North Carolina Hospitals, Chapel Hill, NC
2004-2011	Clinical Assistant Professor, Division of Infectious Diseases, Department of Medicine, University of North Carolina School of Medicine, University of North Carolina Hospitals, Chapel Hill, NC
2011-2014	Clinical Associate Professor, Division of Infectious Diseases, Department of Medicine, University of North Carolina School of Medicine, University of North Carolina Hospitals, Chapel Hill, NC
2014-2019	Associate Professor, Division of Infectious Diseases, Department of Medicine, University of North Carolina School of Medicine, University of North Carolina Hospitals, Chapel Hill, NC
2017-2019	Associate Professor, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, University of North Carolina Hospitals, Chapel Hill, NC
2019-present	Professor, Division of Infectious Diseases, Department of Medicine, University of North Carolina School of Medicine, University of North Carolina Hospitals, Chapel Hill, NC
2019-present	Professor, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, University of North Carolina Hospitals, Chapel Hill, NC

Honors

1993	Phi Beta Kappa Honor Society
1997	Alpha Omega Alpha Medical Honor Society
2003	Fellows Travel Grant, 10 th Conference on Retroviruses and Opportunistic Infections, Boston, Feb 11-14.
2004	Fellows Travel Grant, 11 th Conference on Retroviruses and Opportunistic Infections, San Francisco, Feb 8-11.
2006-2009	Elected member, University of North Carolina, Faculty Council
2008-2012	Elected Advisor, University of North Carolina, Medical Student Advisory College
2018	HIVMA Research Award

Other Experiences

06/2014	Grant Reviewer, NIH, Special Emphasis Panel, Mobile Health: Technology and Outcomes in Low- and Middle-Income Countries
2015	Ad Hoc Grant Reviewer, NIH, Behavioral and Social Science Approaches to Preventing HIV/AIDS (BSPH) study section
07/2016-10/2018	Permanent Study Section Grant Reviewer NIH, Behavioral and Social Science Approaches to Preventing HIV/AIDS (BSPH) study section
10/2016-present	Permanent Study Section Grant Reviewer NIH, Population and Public Health Approaches to HIV/AIDS (PPAH) study section
2018-2021	HIVMA Leadership Awards Committee, Member

Peer Review

2016-present	Editorial Board, <i>AIDS and Behavior</i>
2014-Dec 2018	Associate Editor, <i>Sexually Transmitted Diseases</i>
2006-present	Editorial Board, <i>Sexually Transmitted Diseases</i>

Ad Hoc Journal Reviewer

AIDS and Behavior, AIDS Care, American Journal of Public Health, BMJ Global Health, Culture, Health and Sexuality, Health Education and Behavior, Internet Interventions, JAIDS, Journal of Adolescent Health, Journal of Health Communication, Journal of Homosexuality, Journal of the International AIDS Society, Journal of Medical Internet Research, Lancet, Preventive Medicine, Sexuality Research and Social Policy.

C. Contributions to Science

1. *Technology-based interventions addressing the Care Continuum for youth and young adults, particularly young men who have sex with men (YMSM).* Given the rapid expansion of the mobile web and widespread adoption of mobile technologies, technology-based interventions using mobile applications “apps”, social media, SMS-texting, etc. are highly scalable. These tools provide innovative technologies to deliver high-fidelity interventions that are cost-effective and allow for more tailoring and interactive content. I have been recognized as a leader in this field and these publications highlight my expertise in this area, both in conducting as well as evaluating these interventions.
 - a. **L.B. Hightow-Weidman**, S. LeGrand, K.E. Muessig, R.A. Simmons, K. Soni, S.K. Choi, H. Kirschke-Schwartz, J.R. Egger. A Randomized Trial of an Online Risk Reduction Intervention for Young Black MSM. *AIDS and Behavior*. 2018 Sept 29. [Epub ahead of print]. PMID: 30269231
 - b. K.E. Muessig, M. Nekkanti, J. Bauermeister, S. Bull, **L.B. Hightow-Weidman**. A Systematic Review of Recent Smartphone, Internet and Web 2.0 Interventions to Address the HIV Continuum of Care. *Current HIV/AIDS Reports*. 2015 Mar; 12(1): 173-90. PMID: 25626718. PMCID: PMC4370788.
 - c. **L.B. Hightow-Weidman**, K.E. Muessig, J.A. Bauermeister, C. Zhang, S. LeGrand. Youth, Technology, and HIV: Recent Advances and Future Directions. *Current HIV/AIDS Reports*. 2015 Dec; 12(4): 500-15. PMID: 26385582. PMCID: PMC4643403.
 - d. K.E. Muessig, N.B. Baltierra, E.C. Pike, S. LeGrand, **L.B. Hightow-Weidman**. Achieving HIV risk reduction through healthpowerment.org, a user-driven eHealth intervention for young black men who have sex with men and transgender women who have sex with men. *Digital Culture & Education*. 2014; 6 (3); 164-182. PMID: 25593616. PMCID: PMC4292870.
2. *Advancing internet and other technology-based research methods and user engagement (e.g. digital games, gamification, virtual and tangible reward systems).* Despite growing enthusiasm surrounding the use of mobile interventions, little is known about how to measure, evaluate and enhance meaningful user engagement. These strategies and lessons learned provide critical roadmaps for researchers in HIV and other public health fields to strengthen participant engagement in technology-based interventions.
 - a. **L.B. Hightow-Weidman**, K.E. Muessig, J.A. Bauermeister, S. LeGrand, L.E. Fiellin. The future of digital games for HIV prevention. *Curr Opin HIV AIDS*. 2017 Sep; 12(5):501-507. PMID: 28692490. PMID: 28692490. PMCID: PMC5651998.
 - b. S. LeGrand, K. Knutson, D. Benkeser, K.E. Muessig, A. McGee, P.S. Sullivan, **L.B. Hightow-Weidman**. Testing the Efficacy of a Social Networking Gamification App to Improve Pre-Exposure Prophylaxis Adherence (P3: Prepared, Protected, empowered): Protocol for a Randomized Controlled Trial. *JMIR Research Protocols*. 2018 Dec 18; 7(12):e10448. PMID: 30563818.
 - c. N.B. Baltierra, K.E. Muessig, E.C. Pike, S. LeGrand, S.S. Bull, **L.B. Hightow-Weidman**. More than just tracking time: Complex measures of user engagement with an internet-based health promotion intervention. *J Biomed Inform*. 2016 Feb; 59:299-307. PMID: 26732997. PMCID: PMC4792652.
 - d. **L.B. Hightow-Weidman**, K. Muessig, K. Knutson, M. Srivasta, E. Lawrence, S. LeGrand, A. Hotten, S. Hosek. A Gamified Smartphone App to Support Engagement in Care and Medication Adherence for HIV-Positive Young Men Who Have Sex with Men (AllyQuest): Development and Pilot Study. *JMIR public health and surveillance*. 2018; 4(2): e34. PMID: 29712626; PMCID: PMC5952121.
3. *Treatment as prevention for adolescents and young adults.* Provision of ARVs, either as prevention in the form of PrEP or for treatment is a critical intervention for addressing the epidemic among youth. For those youth testing positive, engagement in care and treatment with antiretroviral therapy (ART) to viral suppression is the goal to both improve individual health and prevent onward transmission. My earliest work has been recognized by the Centers for Disease Control and Prevention as one of five evidence-informed interventions for retaining YMSM in care.
 - a. **L.B. Hightow-Weidman**, J.C. Smith, E. Valera, Derrick M. Matthews, Patrick T. Lyons. Title: Keeping them in “STYLE”: Finding, Linking and Retaining Young HIV+ Black and Latino Men who have Sex with

- Men in Care *AIDS Patient Care and STDs*. 2011 January; 25(1): 37-45. PMID: PMC3030910
- b. A. Pettifor, N.L. Nguyen, C. Celum, F.M. Cowan, V. Go, **L.B. Hightow-Weidman**. Tailored combination prevention packages and PrEP for young key populations. *J Int AIDS Soc*. 2015 February 26; 18(2 Suppl 1): 19434. PMID: 25724507. PMID: PMC4344537.
 - c. S.Y. Kahana, M.I. Fernandez, P.A. Wilson, J.A. Bauermeister, S. Lee, C.M. Wilson, **L.B. Hightow-Weidman**. Rates and Correlates of Antiretroviral Therapy Use and Virologic Suppression among Perinatally and Behaviorally Infected HIV+ Youth Linked to Care in the United States. *JAIDS*. 2015 February 1; 69(2): 169-77. PMID: 25590270. PMID: PMC4312477.
 - d. **L.B. Hightow-Weidman**, K. Jones, A.R. Wohl, D. Futterman, A.Y. Outlaw, G. Phillips II, J. Hidalgo, T.P. Giordano for The YMSM of Color SPNS Initiative Study Group. Early Linkage and Retention in Care: Findings from the Outreach, Linkage and Retention in Care Initiative among Young Men of Color who have Sex with Men. *AIDS Patient Care and STDs*. 2011 August; 25 Suppl 1:S31-38. PMID: 21711141.
4. *Psychosocial and Structural Factors that Impact Engagement in Prevention and Care among Young Racial/Ethnic Minority MSM*. YMSM of color continue to bear a disproportionate burden of the HIV epidemic. I have spent the entirety of my career devoted to understanding individual, community-level and structural factors that impacts HIV incidence within this population. These studies emphasize many of the psychosocial and contextual factors contributing to risk and engagement in prevention and care for both HIV-infected and –uninfected YMSM of color.
- a. J.A. Bauermeister, K. Muessig, S. LeGrand, D.D. Flores, S.K. Choi, W. Dong, G. Sallabank, **L.B. Hightow-Weidman**. HIV and Sexuality Stigma Reduction Through Engagement in Online Forums: Results from the HealthMpowerment Intervention. *AIDS and Behavior*. 2018 Aug 18. [Epub ahead of print]. PMID: 30121727.
 - b. T.W. Menza, S.K. Choi, S. LeGrand, K. Muessig, **L.B. Hightow-Weidman**. Correlates of self-reported viral suppression among HIV-positive, young, Black men who have sex with men participating in a randomized controlled trial of an Internet-based HIV prevention intervention. *Sexually Transmitted Diseases*. 2018 Feb; 45(2):118-126. PMID: 28876283.
 - c. **L.B. Hightow-Weidman**, S. LeGrand, S. K. Choi, J. Egger, C.B. Hurt, K.E. Muessig. Exploring the HIV continuum of care among young black MSM. *PLoS ONE*. 2017 June 29; 12(6): e0179688. PMID: 28662170. PMID: PMC5491033.
 - d. K.E. Muessig, K.A. Knudtson, K. Soni, M.A. Larsen, D. Traum, W. Dong, D.F. Conserve, A. Leuski, R. Artstein, **L.B. Hightow-Weidman**. "I didn't tell you sooner because I didn't know how to handle it myself." Developing a virtual reality program to support HIV-status disclosure decisions. *Digital Culture and Education*. 2018 July 13; 10:22-48. PMID: 30123342. PMID: PMC6097708.
5. *Increasing uptake of HIV testing and prevention services among YMSM*. Accurate knowledge of HIV serostatus is critical for the success of our two most promising biomedical prevention strategies: treatment as prevention and pre-exposure prophylaxis (PrEP). My earliest research was in acute/recent HIV infection and focused on the important role that YMSM have in the epidemic – especially YMSM of color. My current focus is on increasing uptake of HIV testing strategies PrEP among YMSM using technology.
- a. **L.B. Hightow-Weidman**, M. Magnus, G. Beauchamp, C.B. Hurt, S. Shoptaw, L. Emel, E. Piwowar-Manning, K.H. Mayer, L.E. Nelson, P. Watkins, D. Whitfield, S.D. Fields, D. Wheeler. Incidence and Correlates of STIs among Black Men who have Sex with Men Participating in the HPTN 073 PrEP Study. *Clinical Infectious Diseases*. 2019 Jan 7. [Epub ahead of print]. PMID 30615169.
 - b. S. LeGrand, K.E. Muessig, K.J. Horvath, A.L. Rosengren, **L.B. Hightow-Weidman**. Using technology to support HIV self-testing among MSM. *Curr Opin HIV AIDS*. 2017 Sep; 12(5): 425-431. PMID: 28617712. PMID: PMC: PMC5889120.
 - c. C.B. Hurt, K. Soni, W.C. Miller, **L.B. Hightow-Weidman**. Human Immunodeficiency Virus Testing Practices and Interest in Self-Testing Options Among Young, Black Men Who Have Sex with Men in North Carolina. *Sexually Transmitted Diseases*. 2016 September; 43(9): 587-593. PMID: 27513387. PMID: PMC4991826.
 - d. C.B. Boyer, **L.B. Hightow-Weidman**, J. Bethel, S.X. Li, L. Henry-Reid, D. Futterman, D. Maturo, D.M. Straub, K. Howell, S. Reid, J. Lowe, B. G. Kapogiannis, J.M. Ellen. An Assessment of the Feasibility and Acceptability of a Friendship-Based Social Network Recruitment Strategy to Screen At-Risk

African American and Hispanic/Latina Young Women for HIV Infection. *JAMA Pediatrics*. 2013 March 1; 167(3): 289-96. PMID: 23338776. PMCID: PMC3596427

Complete PubMed Bibliography of Lisa Hightow-Weidman's Published Work (112 articles):

<https://www.ncbi.nlm.nih.gov/sites/myncbi/lisa.hightow-weidman.1/bibliography/40552633/public/?sort=date&direction=descending>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

1U19HD089881-03 Hightow-Weidman/Sullivan (mPI) 09/30/16 - 05/31/21 4.20 calendar

Title: The UNC/Emory Center for Innovative Technology (iTech) Across the Prevention and Care Continuum

This study seeks to develop a technology center to address the domestic epidemic of HIV among at risk and HIV-infected youth in the United States.

Role: mPI

2R44MH104102-03 Larsen/Hightow-Weidman (mPI) 06/14/17 - 05/31/20 1.68 calendar

Title: Tough Talks: A Disclosure Intervention for HIV & YMSM

In this grant, we will further refine and enhance Tough Talks™, a disclosure intervention for HIV-positive YMSM, and develop a full-feature version to test via a multi-site, randomized controlled trial (RCT)

Role: mPI

5U01MD011274-01 Bauermeister (PI) 08/01/16 - 06/30/21 0.9 calendar

Title: Reducing HIV vulnerability through a multilevel life skills intervention for adolescent men

We propose to deliver and test a life skills intervention targeting the key domains that fuel HIV disparities among adolescent MSM in the United States.

Role: Co-I

R01MD013623 Muessig/Bauermeister (mPI) 08/16/18 – 03/31/23 0.60 calendar

Title: Increasing engagement and improving HIV care outcomes via stigma reduction in an online social networking intervention among racially diverse young men who have sex with men and transgender women

This intervention tests the impact of a stigma reduction and social network intervention delivered via the mobile web optimized platform – healthMpowerment.org – on increasing regular HIV testing (among HIV-negative) and improving viral suppression (among HIV-positive) for men and transgender women.

Role : Co-I.

R34MH118058 Muessig (PI) 07/20/18 - 05/31/21 0.60 calendar

Title: Piloting a Sequential Multiple-Assignment Randomization Trial to evaluate AllyQuest: an mHealth intervention for HIV-positive young MSM to optimize HIV medication adherence and care outcomes

Ally Quest (AQ) is a theory-informed HIV antiretroviral adherence and social support application (app) we created and will test through a pilot Sequential Multiple-Assignment Randomization Trial (SMART) that evaluates an escalation versus de-escalation approach to intervention intensity

Role: Co-I

U01PS005181 Sullivan (PI) 09/01/17- 08/31/21 0.24 calendar

Title: Engaging African American and Latino MSM for HIV Testing and Prevention Services through Technology

The goal of this study is to provide moderation of healthMpowerment content and to actively participate in study design and planning.

Role: Co-I