

**DATE:** December 19, 2019

**CURRICULUM VITAE  
E. JANE CARTER, M.D.**

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**EDUCATION**

1978	B.A.	Chemistry	Wellesley College Wellesley, Massachusetts
1982	M.D.	Medicine	George Washington University School of Medicine Washington, District of Columbia

**POSTGRADUATE TRAINING**

**Residency:**

1982 - 1983	Intern	Internal Medicine	Roger Williams Medical Center/Brown University Providence, Rhode Island
1983 – 1985	Resident	Internal Medicine	Roger Williams Medical Center/Brown University Providence, Rhode Island
1985 – 1986	Chief Resident	Internal Medicine	Roger Williams Medical Center/Brown University Providence, Rhode Island

**Fellowship:**

1988 – 1990	Fellow	Pulmonary Medicine	Brown University School of Medicine Providence, Rhode Island
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**POSTGRADUATE HONORS AND AWARDS**

1991	Teacher of the Year Award	Roger William Medical Center	In recognition by the Internal Medicine Residency House Staff.
1999	Margaret Rawlings Lupton Service Award	Girls Preparatory School Chattanooga, Tennessee	In recognition to alumnae who exhibit exceptional citizenship and service to the community in which they live.

2001	Physician of the Year Award	Rhode Island Medical Women's Association	Award annually to a local, female physician who has demonstrated excellence and a high level of commitment to medicine, family and the community.
2001	Excellence in Teaching Award for Clinical Faculty	Brown University	In recognition of exemplary teaching and dedication to the Brown Medical School's education mission.
2001	Dean's Teaching Excellence Award	Brown University	In recognition of exemplary teaching (medical pathophysiology course – tuberculosis section, pulmonary).
2001	Dr. Sharon Zupko Award	Traveler's Aid Society of Rhode Island	In recognition of outstanding volunteer efforts on behalf of Traveler's Aid (Health Care for the Homeless).
2001	Best Physician for Women (Pulmonary)	Rhode Island Monthly	Recognizing "Best Doctors" by their peer group.
2002	Chairman's Teaching Award	Brown University	In recognition of exemplary teaching within the Department of Medicine.
2004	Leonard Tow Humanism in Medicine Award	Brown Medical School	Awarded annually by the medical school graduating class to a faculty member who demonstrates outstanding compassion in the delivery of health care, respect for patients, their families, and health care colleagues as well as demonstrating clinical excellence.
2005	Teaching and Education Faculty Award	Brown Medical School	For excellence in medical teaching, concern for student well-being and success, patient advocacy and abundant contributions to the Brown Medical School community.
2006	Hope is a Vaccine Award	Global Alliance to Immunize Against AIDS	In recognition of outstanding contributions in the fight against AIDS.

2013	World Lung Health Award	American Thoracic Society	Award to individuals with recognized contributions to world lung health in the area of basic or clinical research, delivery of healthcare, continuing education or care of patients with lung disease.
2014	6 <sup>th</sup> Annual Women's Leadership Award	Ronald McDonald House of Rhode Island	Honors women in the community who consistently make a positive impact and demonstrate exceptional leadership.
2020	North American Region The Union	Service Award	Awarded to recognize longitudinal contributions to the organization and it's mission (notified- will be presented at the March meeting)

## **PROFESSIONAL LICENSES AND BOARD CERTIFICATION**

### **Licenses:**

1983	Rhode Island
2016	Hawaii

### **Certifications:**

1986	American Board of Internal Medicine Time Unlimited
1990	American Board of Pulmonary Disease Recertified 2000; 2010
1995 – 2005	American Board of Critical Care Medicine

## **ACADEMIC APPOINTMENTS**

1985 – 1986	Assistant Clinical Instructor in Medicine	Brown University
1986 – 1988	Instructor in Medicine	Brown University
1988 – 1990	Assistant Clinical Instructor in Medicine	Brown University
1991 – 2000	Clinical Assistant Professor in Medicine	Brown University
2001 – 2009	Assistant Professor of Medicine	Brown University
2009 – Present	Associate Professor of Medicine	Brown University
2020 July	Professor of Medicine	Brown University

## **OTHER ACADEMIC APPOINTMENTS**

1998; 1999; 2000; 2004; 2014 – Present	Visiting Lecturer	Moi University School of Medicine
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## **HOSPITAL APPOINTMENTS**

1990 – 2010	Consulting Staff, Department of Medicine Pulmonary Division	Eleanor Slater Hospital / Zambarano Unit
1991 – Present	Active Staff, Department of Medicine Pulmonary Division	The Miriam Hospital and Rhode Island Hospital
1991 - 2015	Courtesy Staff, Department of Medicine Pulmonary Division	Memorial Hospital of Rhode Island

## **MAJOR ADMINISTRATIVE RESPONSIBILITIES**

1986 – 1988	Assistant Program Coordinator, Internal Medicine Residency Program	Roger Williams General Hospital
1992 – 2007	Medical Director	RISE Clinic, The Miriam Hospital
1997 – Present	Co-Founder and Program Director	Brown-Kenya Medical Exchange Program, The Miriam Hospital
2002 – Present	Acting Site Director, Pulmonary Division	The Miriam Hospital
2002 – 2008	Acting Director of Respiratory Therapy	The Miriam Hospital
2000 – 2014	Director, Pulmonary Function Laboratory	Anchor Medical
2004	External Examiner	Moi University School of Medicine
2007 – 2015	Site Director, Kenya	Fogarty International Training Program in HIV/AIDS, Warren Alpert School of Medicine

## **OTHER PROFESSIONAL APPOINTMENTS**

### **Local:**

1993 – 2007	Consultant in Tuberculosis	Rhode Island Department of Health
1997 – 2009	TB Controller	State of Rhode Island
2007 - 2013	Senior Consultant	RISE Clinic/The Miriam Hospital

**National:**

2006	Review Panel – National and International Grants I reviewed applications to the Units for HIV/AIDS Clinical Trials Network [ZAI1 KS-A (M3)] including ranking for awards.	National Institutes of Allergy and Infectious Diseases (NIH)
2006 – 2010	Board Member, Health Advisory Group, TB Review and advise the design of TB care protocols as well as outcome statistics; review publications arising out of TB core.	Millennium Village Projects
2014 – Present	TB Consultant GTBI is the CDC funded training center for the New England Region. As a consultant, I teach in the TB Intensive Course and cover the phone consultations (6 weeks per year).	Global TB Institute, Rutgers University

**International:**

2004 – 2016	Technical Consultant in TB and TB/HIV	AMPATH, US AID PEPFAR Eldoret, Kenya
2005 - 2007	International Technical Consultant in TB and TB/HIV	PEPFAR Walter Reed Project Kericho, Kenya
2011 – 2013	President	North American Region, International Union Against TB and Lung Disease
2011 – 2016	President	International Union Against TB and Lung Disease Paris, France

**Editorial Activities:**

2013	Co-Guest Editor	Rhode Island Medical Journal (Special 16 page Section)
2014 - 2016	Associate Editor	BMC Infectious Diseases

**Ad hoc Reviewer:**

2000 – Present	The International Journal of Tuberculosis and Lung Disease
2003 – Present	Journal of Acquired Immunodeficiency Syndromes
2005	AIDS Patient Care and STDs
2003	JAIDS, Clinical Science
2003	JAMA
2008; 2014; 2018-present	PLOS
2008	Indian Journal of Medical Research (IJMR)

**Independent Reviewer:**

2006; 2009; 2013	Internal Standards for Tuberculosis Care – World Health Organization (WHO)
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I was one of three independent reviewers for the international guidelines – 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> editions.

## **HOSPITAL COMMITTEES**

1985 – 1986	Medical Audit Committee	Roger Williams Medical Center
1985 – 1986	Pharmacy & Therapeutics Committee	Roger Williams Medical Center
1985 – 1986; 1990 – 1993	Medical Appraisal Committee	Roger Williams Medical Center
1985 – 1986; 1990 – 1994	Medical Records Committee	Roger Williams Medical Center
1992 – 1994	Chairman, Medical Records Committee	Roger Williams Medical Center
1985 – 1988; 1991 – 1994	Clinical Competency Committee	Roger Williams Medical Center
1986 – 1988	Patient Education Committee	Roger Williams Medical Center
1991 – 1993	Institutional Review Board	Roger Williams Medical Center
1991 - 1994	Credentials Committee	Roger Williams Medical Center
1994 – 1995	Executive Committee	Roger Williams Medical Center
2001 - 2011	Infection Control Committee	The Miriam Hospital

## **UNIVERSITY COMMITTEES**

1985 – 1986	Residency Committee	Brown University
2007 – 2015	Executive Committee	Fogarty International Training Program in HIV/AIDS, Warren Alpert School of Medicine
2010 – 2015	Faculty Advisory Committee	Brown Residency International Global Health (BRIGHT) Track
2017 – Present 2017 – Present	Executive Committee Co-Director, HIV-TB Scientific Working Group	Providence-Boston Center for AIDS Research
2018-Present	BioMed International Affiliation Executive Committee	Brown University

## **OTHER COMMITTEES**

### **Local:**

1994 – 2007	TB Medical Advisory Committee	Rhode Island Department of Health
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1995 - 2007	Co-Chairman	
<b>National:</b>		
2005-2018	Board of Directors	Vital Strategies (previously named World Lung Foundation and merged with The Union North America in 2015 and changed name in 2016)
2006 – 2014	Advisory Committee for the Elimination of TB (ACET)	Centers for Disease Control and Health and Human Services Secretary of the United States
2006 – 2010	Alternate representative from the North American Region of the International Union Against TB and Lung Disease	
2011 – 2014	Appointed as voting member	
2011- present	Forum of International Respiratory Societies (FIRS)	Representative from the Union
2018	President, Executive Committee	
2016	Abstract Review Committee	American College of Chest Physicians Conference
2018	Dissemination and Implementation Research in Health Review Committee	National Institutes of Health
<b>International:</b>		
2002; 2004	TB Abstract Review Committee	XIV & XV International AIDS Conference
2008 – 2011; 2013 – Present	Abstract Review Committee	Union World Congress on Lung Health
2011	Advisory Committee on Policy Statement Development for WHO	World Health Organization
2012 – 2015	Global Fund-Committee on Tuberculosis	
2012 - Present 2014 - 2018	Proposal Review Committee, TB Reach Committee Member – Rounds 3, 4, 5, 6 and 7	WHO – Rounds 3-5 UN Operations -Rounds 6-7
2016 - 2018	Committee Chair – Rounds 4 and 5	
2013 – Present	Advisory Panel	TB Modeling and Analysis Consortium, United Kingdom
2013 – Present	Steering Committee	East African Institute for Pulmonary Medicine Training

2017 - Present	Technical Review Panel	Global Fund to Fight AIDS, TB and Malaria, Geneva, Switzerland
2018	TB Focal Point (elected by peers)	
2018 – Present	Technical Review Panel	Unitaid, Geneva, Switzerland
2018- Present	Health and Education for All (HAEFA) Board of Directors	Boston, Mass, USA- Dhaka, Bangladesh

## **MEMBERSHIP IN SOCIETIES**

1986 – Present	American College of Physicians
1988	Governor, State of Rhode Island
1990 - Present	Fellow
1988 – Present	American Thoracic Society
2010 – Present	International Health Committee
2012 – 2014	Membership Committee
2018 – Present	Pulmonary Infections-TB Section Planning Committee
1988 – Present	Rhode Island Thoracic Society
1993 – 1994	Secretary/Treasurer
1995	Vice-President
1997 – 2000	President
1990 – 2000	Rhode Island Medical Society
1994 - 1995	Council Member
1990 – 2001	Providence Medical Society
1992 – 1993	Delegate to Rhode Island Medical Society Assembly
1994 – 1995	Councilor
1996 – 1997	Secretary
1997 – 2000	President
1990 – Present	Rhode Island Medical Women’s Association
1994 – Present	International Union Against Tuberculosis and Lung Disease
2011 – Present	Board of Directors
2011 – 2016	President
2016 – 2019	Immediate Past President
2016 – 2019	Chair, Nominating Committee
2000 – Present	North American Region, International Union Against TB and Lung Disease
2002 – 2005;	Board of Directors
2009 - 2015	
2000 – Present	Conference Implementation Committee
2000 – Present	Abstract Committee
2002 – 2003	Secretary-Treasurer
2003 – 2005	Vice-President/Program Chair



2006 – 2010	Alternate representative to CDC’s Advisory Committee for the Elimination of TB
2009 – 2011	President Elect
2011 – 2013	President
2013 – 2015	Immediate Past President
2013 – 2015	Executive Committee
2013 – 2015	Chair, Nominating Committee
2002 – 2008	International Tuberculosis Foundation, Inc. (this Foundation was dissolved in 2008 and became the World Lung Foundation)
2002 - 2008	Board of Directors
2002 – 2003	Vice-President
2003 – 2008	President
1995 – Present	National Tuberculosis Controllers Association
1998 – 2000	Executive Board
1995 – Present	European Respiratory Society
1997 - 2000	Rhode Island Lung Association
1997 – 2000	Board of Trustees
2015 - Present	Infectious Diseases Society of America

## **PUBLICATIONS LIST**

### **ORIGINAL PUBLICATIONS IN PEER REVIEWED JOURNALS**

1. **Carter EJ.** The Essentials of a Tuberculosis Elimination Program. Rhode Island Medicine 1992; 75(9):449-450.
2. **Carter EJ, Mates S.** Tuberculosis during Pregnancy: The Rhode Island Experience, 1987 to 1991. Chest 1994; 106(5):1466-1470.
3. **Carter EJ, Mates S.** Sudden Enlargement of a Deep Cervical Lymph Node During and After Treatment for Pulmonary Tuberculosis. Chest 1994; 106(6):1896-1898.
4. Pomputius WM, Rost J, Dennehy PH, **Carter EJ.** Standardization of Gastric Aspirate Technique Improves Yield in the Diagnosis of Tuberculosis in Children. Pediatric Infectious Disease Journal 1997; 16(2):222-226.
5. Gampper SN, George JA, **Carter EF,** Jesdale BM, Flanigan TP, Mayer KH, DeGroot AS. Co-Infection with *Mycobacterium tuberculosis* and HIV in High Risk Clinical Care Setting in Rhode Island. AIDS Care 1998; 10(2):221-229.
6. Kwara A, **Carter EJ,** Rich JD, Flanigan TP. Development of Opportunistic Infections after Diagnosis of Active Tuberculosis in HIV-Infected Patients. AIDS Patient Care and STDs 2004; 18(6):341-347.
7. McMurry J, Sbai H, Gennaro ML, **Carter EJ,** Martin W, DeGroot AS. Analyzing *Mycobacterium tuberculosis* Proteomes for Candidate Vaccine Epitopes. Tuberculosis (Edinburgh) 2005; 85(1-2):95-105. Epub 2004 December 25. PMID: 15687033.

8. Diero LO, Shaffer D, Kimaiyo S, Silka AM, Rotich JK, Smith FE, Mamlin JJ, Einterz RM, Justice AC, **Carter EJ**, Tierney WM. Characteristics of HIV Infected Patients Cared for at “Academic Model for the Prevention and Treatment of HIV/AIDS” Clinics in Western Kenya. *East African Medical Journal* 2006; 83(8):424-433.
9. Kwara A, Herold JS, Machan JT, **Carter EJ**. Factors Associated with Failure to Complete Isoniazid Treatment for Latent Tuberculosis Infection in Rhode Island. *Chest* 2008; 133(4):862-868. Epub 2007 December 10. PMID: 18071014.
10. Waxman MJ, Kimaiyo S, Ongaro N, Wools-Kaloustian KK, Flanigan TP, **Carter EJ**. Initial Outcomes of an Emergency Department Rapid HIV Testing Program in Western Kenya. *AIDS Patient Care and STDs* 2007; 21(12):981-986. PMID: 18154494.
11. Braitstein P, Nyankiko W, Vreeman R, Wools-Kaloustian K, Sang E, Musick B, Sidle J, Yiannoutsos C, Ayaya S, **Carter EJ**. The Clinical Burden of Tuberculosis among Human Immunodeficiency Virus-Infected Children in Western Kenya and the Impact of Combination Antiretroviral Treatment. *Pediatric Infectious Diseases Journal* 2009; 28(7):626-632. doi: 10.1097/INF.0b013e31819665c5.
12. Kantor R, Diero L, Delong A, Kamle L, Muyonga S, Mambo F, Walumba E, Emonyi W, Chan P, **Carter EJ**, Hogan J, Buziba N. Misclassification of First-Line Antiretroviral Treatment Failure Based on Immunological Monitoring of HIV Infection in Resource-Limited Settings. *Clinical Infectious Diseases* 2009; 49(3):454-462. doi: 10.1086/600396.
- Editorial Commentary: Sawe FK, McIntyre JA. Monitoring HIV Antiretroviral Therapy in Resource-Limited Settings: Time to Avoid Costly Outcomes. *Clinical Infectious Diseases* 2009; 49(3):463-465. doi: <https://doi.org/10.1086/600397>.
13. Vanhomwegen J, Kwara A, Marting M, Gillani FS, Fontanet A, Mutungi P, Crellin J, Obaro S, Gosciminski M, **Carter EJ**, Rastogi N. Impact of Immigration on the Molecular Epidemiology of Tuberculosis in Rhode Island. *Journal of Clinical Microbiology* 2011; 49(3):834-844. doi: 10.1128/JCM.01952-10. Epub 2010 December 15.
14. Gardner A, Cohen T, **Carter EJ**. Tuberculosis among Participants in an Academic Global Health Medical Exchange Program. *Journal of General Internal Medicine* 2011; 26(8):841-845. doi: 10.1007/s11606-011-1669-x. Epub 2011 February 26.
15. Bloomfield GS, Hogan JW, Keter A, Sang E, **Carter EJ**, Velazquez EJ, Kimaiyo S. Hypertension and Obesity as Cardiovascular Risk Factors among HIV Seropositive Patients in Western Kenya. *PLoS One* 2011; 6(7):e22288. doi: 10.1371/journal.pone.0022288. Epub 2011 July 14.
16. Kosgei RJ, Lubano KM, Shen C, Wools-Kaloustian KK, Musick BS, Siika AM, Mabeya H, **Carter EJ**, Mwangi A, Kiarie J. Impact of Integrated Family Planning and HIV Care Services on Contraceptive Use and Pregnancy Outcomes: A Retrospective Cohort Study. *Journal of Acquired Immunodeficiency Syndrome* 2011; 58(5):e121-e126. doi: 10.1097/QAI.0b013e.318237ca80.
17. Kosgei RJ, Ndavi PM, Ong’ech JO, Abuya JM, Siika AM, Wools-Kaloustian K, Mabeya H, Fojo T, Mwangi A, Reid T, Edginton ME, **Carter EJ**. Symptom Screen: Diagnostic Usefulness in Detecting Pulmonary Tuberculosis in HIV-Infected Pregnant Women in Kenya. *Public Health Action* 2011; 1(2):30-33. doi: 10.5588/pha.11.0004. Epub 2011 October 26.

18. Mabeya H, Khozaim K, Liu T, Orango O, Chumba D, Pisharodi L, **Carter J**, Cu-Uvin S. Comparison of Conventional Cervical Cytology versus Visual Inspection with Acetic Acid (VIA) among HIV-Infected Women in Western Kenya. *Journal of Lower Genital Tract Disease* 2012; 16(2):92-97. doi: 10.1097/LGT.0b013e3182320f0c. PMID: 22126834.
19. Park PH, Magut C, Garner A, O'ylengo DO, Kamie L, Langat BK, Buziba NG, **Carter EJ**. Increasing Access to the MDR-TB Surveillance Programme through a Collaborative Model in Western Kenya. *Tropical Medicine and International Health* 2012; 17(3):374-379. doi: 10.1111/j.1365-3156.2011.02933.x. Epub 2011 December 5.
20. Shaffer DN, Obiero ET, Bett JB, Kiptoo IN, Maswai JK, Sawe FK, **Carter EJ**. Successes and Challenges in an Integrated Tuberculosis/HIV Clinic in a Rural, Resource-Limited Setting: Experiences from Kericho, Kenya. *AIDS Research and Treatment* 2012; 2012:238012. doi: 10.1155/2012/238012. Epub 2012 February 16.
21. Gardner A, Naureckas C, Beckwith C, Losikoff P, Martin C, **Carter EJ**. Experiences in Implementation of Routine Human Immunodeficiency Virus Testing in a U.S. Tuberculosis Clinic. *International Journal of Tuberculosis and Lung Disease* 2012; 16(9):1241-1246. doi: 10.5588/ijtld.11.0628. Epub 2012 July 12.
22. Kirui NK, Pastakia SD, Kamano JH, Cheng S, Manuthu E, Chege P, Gardner A, Mwangi A, Enarson DA, Reid AJ, **Carter EJ**. Important Co-Morbidity in Patients with *Diabetes mellitus* in Three Clinics in Western Kenya. *Public Health Action* 2012; 2(4):148-151. doi: 10.5588/pha.12.0031. Epub 2012 November 9.
23. Siika AM, Yiannoutsos CT, Wools-Kalustian KK, Musick BS, Mwnagi AW, Diero LO, Kimaiyo SN, Tierney WM, **Cater JE**. Active Tuberculosis is Associated with Worse Clinical Outcomes in HIV-Infected African Patients on Antiretroviral Therapy. *Plos One* 2013; 8(1): e53022. doi: 10.1371/journal.pone.0053022. PMID: 23301015.
24. Szkwarko D, Ogaro F, Owiti P, **Carter EJ**. Implementing a Tuberculosis Child Contact Register to Quantify Children at Risk for Tuberculosis and HIV in Eldoret, Kenya. *Public Health Action* 2013; 3(3):209-213. doi: 10.5588/pha.13.0018.
25. Klasen E, Miranda JJ, Khatry S, Menya D, Gilman RH, Tielsch JM, Kennedy C, Dreibelbis R, Naithani N, Kimaiyo S, Chiang M, **Carter EJ**, Sherman CB, Breysse PN, Checkley W; COCINAS Trial Work Group. Feasibility Intervention Trial of Two Types of Improved Cookstoves in Three Resource-Limited Settings: Study Protocol for a Randomized Controlled Trial. *Trials* 2013; 14:327. doi: 10.1186/1745-6215-14-327.
26. Kosgei RJ, Szkwarko D, Callens S, Gichangi P, Temmerman M, Kihara AB, Sitienei JJ, Cheserem EJ, Ndavi PM, Reid AJ, **Carter EJ**. Screening for Tuberculosis in Pregnancy: Do we need more than a Symptom Screen? Experience from Western Kenya. *Public Health Action* 2013; 3(4):294-298. doi: 10.5588/pha.13.0073.
27. Creswell J, Codlin AJ, Andre E, Micek MA, Bedru A, **Carter EJ**, Yadav RP, Mosneaga A, Rai B, Banu S, Brouwer M, Blok L, Sahu S, Ditiu L. Results from Early Programmatic Implementation of Xper MTB/RIF Testing in Nine Countries. *BMC Infectious Diseases* 2014; 14:2. doi: 10.1186/1471-2334-14-2.

28. Ballif M, Nhandu V, Wood R, Dusingize JC, **Carter EJ**, Cortes CP, McGowan CC, Diero L, Graber C, Renner L, Hawerlander D, Kiertiburanakul S, Du QT, Sterling TR, Egger M, Fenner L; International Epidemiological Databases to Evaluate AIDS (IeDEA). Detection and Management of Drug-Resistant Tuberculosis in HIV-Infected Patients in Lower-Income Countries. *International Journal of Tuberculosis and Lung Disease* 2014; 18(11):1327-1336. doi: 10.5588/ijtld.14.0106.
29. Lagat DK, DeLong AK, Wellenius GA, **Carter EJ**, Bloomfield GS, Velazquez EJ, Hogan J, Kimaiyo S, Sherman CB. Factors Associated with Isolated Right Heart Failure in Women: A Pilot Study from Western Kenya. *Global Heart* 2014; 9(2):249-254. doi: 10.1016/j.gheart.2014.04.003.
30. Nyandiko W, Vreeman R, Mwangi A, Ayaya S, Kiptoon P, Musick B, Braitstein P, Koech J, **Carter EJ**, Hogan J. Survival and Loss to Follow Up among HIV and Tuberculosis Co-Infected Children Below 3 Years of Age Initiating Anti-Tuberculosis Treatment in Western Kenya. *International Journal of Advanced Research* 2014; 2(8):249-262.
31. Naureckas C, **Carter EJ**, Gardner A. HIV Testing in U.S. Tuberculosis Care Settings: A Survey of Current Practice and Perceived Barriers. *Journal of Public Health Management & Practice* 2015; 21(2):E11-E15. doi: 10.1097/PHH.0000000000000039.
32. Winston SE, Chirchir AK, Muthoni LN, Ayuku D, Koech J, Nyandiko W, **Carter EJ**, Braitstein P. Prevalence of Sexually Transmitted Infections Including HIV in Street-Connected Adolescents in Western Kenya. *Sexually Transmitted Infections* 2015; 91(5):353-359. doi: 10.1136/sextrans-2014-051797. Epub 2015 February 24.
33. Green EP, Catalani C, Diero L, **Carter EJ**, Gardner A, Ndwiga C, Keny A, Owiti P, Israelski D, Biondich P. Do Clinical Decision-Support Reminders for Medical Providers Improve Isoniazid Preventative Therapy Prescription Rates among HIV-Positive Adults? Study Protocol for a Randomized Trial. *Trials* 2015; 16:141. doi: 10.1186/s13063-015-0558-8.
34. Klasen EM, Wills B, Naithani N, Gilman RH, Tielsch JM, Chiang M, Khatry S, Breyse PN, Menya D, Apaka C, **Carter EJ**, Sherman CB, Miranda JJ, Checkley W; COCINAS Trial Working Group. Low Correlation between Household Carbon Monoxide and Particulate Matter Concentrations from Biomass-Related Pollution in Three Resource-Poor Settings. *Environmental Research* 2015; 142:424-431. doi: 10.1016/j.envres.2015.07.012. Epub 2015 July 31.
35. Owiti P, Zachariah R, Bissell K, Kumar AM, Diero L, **Carter EJ**, Gardner A. Integrating Tuberculosis and HIV Services in Rural Kenya: Uptake and Outcomes. *Public Health Action* 2015; 5(1):36-44. doi: 10.5588/pha.14.0092.
36. Kosgei RJ, Sitienei JK, Kipruto H, Kimenye K, Gathara D, Odawa FX, Gichangi P, Callens S, Temmerman M, Sitienei JC, Kihara AB, **Carter EJ**. Gender Differences in Treatment Outcomes among 15-49 Year Olds with Smear-Positive Pulmonary Tuberculosis in Kenya. *International Journal of Tuberculosis and Lung Disease* 2015; 19(10):1176-1181. doi: 10.5588/ijtld.15.0070.  
  
In Reply. *International Journal of Tuberculosis and Lung Disease* 2016; 20(3):425-426. doi: 10.5588/ijtld.15.1031-2.
37. Saito S, Mpofu P, **Carter EJ**, Diero L, Wools-Kaloustian KK, Yiannoutsos CT, Beverly MS, Tsiouris S, Somi GR, Ssali J, Nash D, Elul B. Declining Tuberculosis Incidence among People Receiving HIV

Care and Treatment Services in East Africa, 2007-2012. *Journal of Acquired Immunodeficiency Syndrome* 2016; 71(4):e96-e106. doi: 10.1097/QAI.0000000000000896.

38. Sherman CB, **Carter EJ**, Braendli O, Getaneh A, Schluger NW. The East African Training Initiative. A Model Training Program in Pulmonary and Critical Care Medicine for Low-Income Countries. *Annals of the American Thoracic Society* 2016; 13(4):451-455. doi: 10.1513/AnnalsATSS.201510-6730C.

In Reply: Schluger NW, Braendli O, **Carter EJ**, Getaneh A, Sherman CB. Reply: Cost and Sustainability of Respiratory Medicine Education in Low-Income Countries. *Annals of the American Thoracic Society* 2016 13(9):1665-1666. doi: 10.1513/AnnalsATS.201606-491LE.

39. Bloomfield GS, DeLong AK, Akwanalo CO, Hogan JW, **Carter EJ**, Aswa DF, Binanay C, Koech M, Kimaiyo S, Velazquez EJ. Markers of Atherosclerosis, Clinical Characteristics, and Treatment Patterns in Heart Failure: A Case Control Study of Middle-Aged Adult Heart Failure Patients in Rural Kenya. *Global Heart* 2016; 11(1):97-107. doi: 10.1016/j.gheart.2015.12.014.
40. Jezmir J, Cohen T, Zignol M, Nyakan E, Hedt-Gauthier BL, Gardner A, Kamle L, Injera W, **Carter EJ**. Use of Lot Quality Assurance Sampling to Ascertain Levels of Drug Resistant Tuberculosis in Western Kenya. *PLoS One* 2016; 11(5):e0154142. doi: 10.1371/journal.pone.0154142. eCollection 2016.
41. Szkwarko D, Mercer T, Kimani S, Braitstein P, Buziba N, **Carter EJ**. Implementing Intensified Tuberculosis Case-Finding among Street-Connected Youth and Young Adults in Kenya. *Public Health Action* 2016; 6(2):142-146. doi: 10.5588/pha.16.0021.
42. Stucki D, Brites D, Jeljeli L, Coscolla M, Liu Q, Trauner A, Fenner L, Rutaihwa L, Borrell S, Luo T, Gao Q, Kato-Maeda M, Ballif M, Egger M, Macedo R, Mardassi H, Moreno M, Manu G, Wampande E, Ssengooba W, Joloba M, Boom WH, Basu I, Bower J, Saraiva M, Vasconcellos S, Suffys P, Koch A, Wilkinson R, Gail-Bekker L, Malla B, Ley SD, Beck H, de Jong B, Toit K, Sanchez-Padilla E, Bonnet M, Gil-Brusola A, Frank M, Penlap Beng VN, Eisenach K, Alani I, Wangui Ndung'u P, Revathi G, Gehre F, Akter S, Ntoumi F, Stewart-Isherwood L, Ntinginya N, Rachow A, Hoelscher M, Cirillo D, Skenders G, Hoffner S, Bakonyte D, Stakenas P, Diel R, Crudu V, Moldovan O, Al-Hajj S, Otero L, Barletta F, **Carter EJ**, Diero L, Supply P, Comas I, Niemann S, Gagneux S. *Mycobacterium tuberculosis* Lineage 4 Comprises Globally Distributed and Geographically Restricted Sublineages. *Nature Genetics* 2016; 48(12):1535-1543. doi: <https://doi.org/10.1038/ng.3704>.
43. Bayisa T, Bekele A, Kassa E, Sherman C, **Carter J**, Schluger N, Schoch O. A Young Woman with an Unusual Foreign Body Aspiration. *Ethiopian Medical Journal* 2017; 55(4):317-319. Case Report.
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### **SCHOLARLY WORK PUBLISHED IN OTHER MEDIA**

1. Flanigan T, Shah P, Majhan A, Kumarasamy N, Carpenter C, Cu-Uvin S, Harwell H, **Carter EJ**, Mayer K. A Primer for Antiretroviral Therapy for HIV Infection in a Resource Poor Setting. Available in the Public Domain. **WHAT DO YOU MEAN BY PUBLIC DOMAIN; WHERE?**
2. Westphal L, Allukian M, Montoya J, **Carter EJ**. Voices of Hope. Video CD. Video history and interviews of people living with AIDS in Eldoret, Kenya. Used to teach students and health care workers at Moi University School of Medicine regarding HIV stigma.
3. **Carter EJ**, Kimaiyo S, Buziba NG. Intensified Case Finding in Eldoret, Kenya: The Cough Monitor Story. WHO Stop TB Partnership: TB/HIV Newsletter 2008 January.  
[http://www.stophth.org/wg/tb\\_hiv/asssssssssets/documents/January%202008%20TB%20HIV%20Update.pdf](http://www.stophth.org/wg/tb_hiv/asssssssssets/documents/January%202008%20TB%20HIV%20Update.pdf).

### **INVITED PRESENTATIONS**

#### **International:**

1. “Essentials of a Directly Observed Program.” Conference on Directly Observed Therapy and Treatment of Multi-Drug Resistant TB in the Philippines, University of Santo Tomas, Manila, The Philippines, November 19-20, 1996.
2. “DOT – The Rhode Island Experience.” Conference on Directly Observed Therapy and Treatment of Multi-Drug Resistant TB in the Philippines, University of Santo Tomas, Manila, The Philippines, November 19-20, 1996.
3. Chairman, Workshop on Directly Observed Therapy in the Treatment of Tuberculosis. Conference on Directly Observed Therapy and Treatment of Multi-Drug Resistant TB in the Philippines, University of Santo Tomas, Manila, The Philippines, November 21, 1996.
4. “Tuberculosis and Public Health: Can DOTS Work in Africa?” Grand Rounds, Moi University School of Medicine, Eldoret, Kenya, June 1998.

5. Lecture and Panel Participant. Symposium: Drug Resistance, Antituberculous Drugs. 6<sup>th</sup> Conference of the International Society of Travel Medicine, Montreal, Quebec, Canada, June 1999.
6. "Active Case Finding in Traditional and Non-Traditional Sites in Western Kenya." North American Region, International Union Against TB and Lung Disease, Vancouver, British Columbia, Canada, February 2005.
7. "TB/HIV Integrated Services at Moi University Faculty of Health Sciences." Tuberculosis Surveillance Research Unit, Paris, France, March 2005.
8. "Evaluation of WHO Guidelines for the Evaluation of Smear Negative, HIV Positive Suspects." FIND Symposium on TB Diagnostics, Paris, France, October 2006.
9. Coordinator. Symposium on Human Resource Management Issues in High-Burden Countries. 37<sup>th</sup> Union World Conference on Lung Health, Paris, France, October 2006.
10. Coordinator and Lecturer. TB/HIV Symposium, AMPATH Center, Eldoret, Kenya, February 2007. Lectures centered on TB/HIV care, pathophysiology and care algorithms.
11. "Difficulty Issues in TB Control." Grand Rounds, Department of Medicine, Kericho District Hospital, Kericho, Kenya, June 2007.
12. "MDR-TB XDR: How does it Happen? What do we Do?" Grand Rounds, Moi University Faculty of Health Sciences, AMPATH Training Institute, Eldoret, Kenya, June 2007.
13. "Two Diseases, One Patient – Designing TB/HIV Care Systems: Experience from Eldoret, Kenya." Symposium, 39<sup>th</sup> Union World Conference on Lung Health, Paris, France, October 2008.
14. Moderator, Poster Discussion Session. TB Diagnosis and Control. 39<sup>th</sup> Union World Conference on Lung Health, Paris, France, October 2008.
15. FIDELIS in Western Kenya: Creating a Model of Intensified Case Finding." 40<sup>th</sup> Union World Conference on Lung Health, Cancun, Mexico, December 2009.
16. "TB/HIV: Challenges of Management." HIV Care Symposium, Pontificia Universidad Catholica del Ecuador (PUCE), Quito, Ecuador, March 2010.
17. MDR/XDR TB. How did it Happen? What do we do now?" HIV Care Symposium, Pontificia Universidad Catholica del Ecuador (PUCE), Quito, Ecuador, March 2010.
18. Symposium Coordinator and Co-Moderator. Fluoroquinolones; Friend or Foe. 41<sup>st</sup> Union World Lung Conference on Lung Health, Berlin, Germany, November 2010.
19. Moderator, Poster Discussion Session. Epidemiology: TB in Low-Burden Countries. 41<sup>st</sup> Union World Lung Conference on Lung Health, Berlin, Germany, November 2010.
20. Moderator, Poster Discussion Session. Diagnostics and Biomarkers for Latent and Active TB. American Thoracic Society 2011 International Conference, Denver, Colorado, May 2011.

21. Workshop Facilitator. Skills Building Workshop: Implementing the Practical (Comprehensive) Approach to Lung Health: The Essentials. 2<sup>nd</sup> Kenya International Scientific Lung Health Conference, Nairobi, Kenya, October 2011.
22. “Lung Function Testing within the PAL Approach.” 2<sup>nd</sup> Kenya International Scientific Lung Health Conference, Nairobi, Kenya, October 2011.
23. Moderator, Poster Discussion Session. Epidemiology: TB in Low-Burden Countries. 42<sup>nd</sup> Union World Conference on Lung Health, Lille, France, October 2011.
24. “COPD – Diagnosis and Management 2012. Grand Rounds, Black Lion Hospital, University of ADDIS Abba School of Medicine, Addis Abba, Ethiopia, January 2012.
25. Moderator, Poster Discussion Session. Developing New Regimens from Treating MDR TB. 45<sup>th</sup> Union World Conference on Lung Health, Barcelona, Spain, November 2014.
26. Poster Presentation. Linking Patients to Care Through Non-Traditional Contact Tracing. 45<sup>th</sup> Union World Conference on Lung Health, Barcelona, Spain, November 2014.
27. “MDR XDR TB: Global Burden, Global Response.” Keynote Address. Ethiopian Thoracic Society, Addis Abba, Ethiopia, January 2015.
28. “Women and TB: The Impact of Gender.” 18<sup>th</sup> Annual Meeting, North American Region, International Union Against TB and Lung Disease, Vancouver, British Columbia, Canada, March 2015.
29. “Standardizing Respiratory Training in Africa: Linkages and Opportunities.” 1<sup>st</sup> Pan Africa Thoracic Society Conference, Nairobi, Kenya, April 2016.
30. “TBData4Action: Building Communities of Learning Around Data Use.” 50<sup>th</sup> Union World Conference on Lung Health, Hyderabad, India November 2019
31. “TBData4Action: Project Echo.” 50<sup>th</sup> Union World Conference on Lung Health, Hyderabad, India November 2019

#### **National:**

1. Moderator, Plenary Session VI-Program Evaluation. National TB Controllers’ Workshop, Centers for Disease Control and Prevention, National Center for HIV, STD and TB Prevention, Division of TB Elimination, Atlanta, Georgia, September 5-7, 1996.
2. Facilitator, Tuberculosis Poster Session I. American Thoracic Society, San Francisco, California, May 1997.
3. “Nosocomial Transmission of MDR TB without Apparent Contact.” Frontiers in Mycobacteriology-TB at the Millennium: Debating the Controversies. National Jewish Medical and Research Center, Vail, Colorado, October 1997.
4. “Occupational Exposure to TB-Perils, Pitfalls and Pearls.” Health Care for the Homeless National Conference, St. Louise, Missouri, May, 1998.



5. Co-Moderator, Tuberculosis Effects in the Global Arena. 6<sup>th</sup> Annual Conference: TB in the Third Millennium: Mobilizing for Elimination, International Union Against TB and Lung Disease (North American Region), Chicago, Illinois, March, 2001.
6. Co-Presenter, Mini-Symposium: How to Write a Successful Scientific Abstract. 12<sup>th</sup> Annual Conference: TB – A Disease Without Borders, International Union Against TB and Lung Disease (North American Region), San Diego, California, February, 2008.
7. “Medical Update: Tuberculosis and Pregnancy.” Webinar, New Jersey Medical School Global Tuberculosis Institute, Regional Training and Medical Consultation Center, December, 2010.
8. “TB: Beyond the Basics.” New Hampshire TB Program and the New Jersey Medical School Global Tuberculosis Institute, Nashua, New Hampshire, June, 2011.
9. “TB and CoMorbidity.” World TB Day, New York City Department of Health, New York, New York, March, 2012.
10. “GENXpert in the Field: Impact on Patients and Programs.” American Thoracic Society, San Francisco, California, May, 2012.
11. “The Power of an Academic Partnership in Addressing Global Epidemics.” Rey McDonald World TB Lectureship, New Jersey Medical School Tuberculosis Institute, Newark, New Jersey, March, 2013.
12. “Intensified Case Finding in Western Kenya.” Tuberculosis Grand Rounds, New Jersey Medical School Tuberculosis Institute, Newark, New Jersey, March, 2013.
13. “Global Perspective on XDR/MDR TB with an Emphasis on Control.” Grand Rounds, Wishard Hospital, Indiana University School of Medicine, Indianapolis, Indiana, August, 2013.
14. “Research Nested within a Global Academic Partnership: Challenges and Opportunities.” Grand Rounds, Duke University School of Medicine, Durham, North Carolina, September 2013.
15. “Global to Local: Tuberculosis 2015 and Beyond.” Keynote Address, New York State TB Update, Albany, New York, September, 2015.
16. “The Global TB Epidemic – the Paradigm Shift.” World TB Day 2016: Global is Local, Columbia University and the New York City Department of Health, New York, New York, March 2016.
17. “The Paradigm Shift 2016-2020.” Global TB Institute, Rutgers New Jersey Medical School, Newark, New Jersey, March, 2016.
18. “Lessons from Streptomycin for the END TB Strategy.” CHOMA Symposium-75<sup>th</sup> Anniversary of the Discovery of Streptomycin, the First Broad Spectrum Antibiotic, American Society of Microbiology (ASM Microbe), San Francisco, California, June 2019

#### **Regional:**

1. “TB and Pregnancy.” New England TB Clinician’s Conference, Global TB Institute, Rutgers New Jersey Medical School, Worcester, Massachusetts, May, 2015.

2. "TB and Pregnancy." Grand Rounds, Lemuell Shattuck Hospital, Boston, Massachusetts, October, 2015.
3. "Electronic Cigarettes: The Path to Smoking Cessation or Tobacco Addiction." First Annual Meeting of the Massachusetts Pulmonary Section, Newton, Massachusetts, March 31, 2016.
4. "Tuberculosis – Captain of the Men of Death." Grand Rounds, Brockton/West Roxbury Veterans Affairs Hospital, West Roxbury, Massachusetts, November 6, 1996.
5. "Tuberculosis 1997 – Should We Be Concerned?" 39<sup>th</sup> New England Conference of Radiology Technologists, Sturbridge, Massachusetts, September, 1997.
6. "Tuberculosis – Lessons from the Radiographs." 39<sup>th</sup> New England Conference of Radiology Technologists, Sturbridge, Massachusetts, September, 1997.
7. "Where are we with TB in Southern New England?" Infection Control: Spanning the Continuum of Healthcare. CDC Regional TB Training Consortium (later became Global TB Institute at Rutgers) Mansfield, Massachusetts, November, 1999.
8. "Intensified Case Finding in Western Kenya." Grand Rounds, Lemuel Shattuck Hospital, Boston, Massachusetts, December, 2014.
9. "Treatment of TB Disease." New England TB Intensive Workshop, Global TB Institute at Rutgers, Worcester, Massachusetts, June 27, 2018.
10. "TB in Pregnancy." New England TB Intensive Workshop, Global TB Institute at Rutgers, Worcester, Massachusetts, June 28, 2018.
11. "Extrapulmonary TB." TB Intensive Course, Global TB Institute at Rutgers, Newark, NJ. April 2019

**Local:**

1. "Multi-Drug Resistant Tuberculosis." Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, April, 1992.
2. "Update in Tuberculosis." Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, March, 1993.
3. "Issues in Tuberculosis." Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, December, 1993.
4. "Clinical Management in Tuberculosis." Rhode Island Nursing Association, Newport, Rhode Island, May, 1994,
5. "Issues in Tuberculosis: Is the Hospital a Safe Place?" Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, June, 1994.
6. "Update in Tuberculosis: What's Happening in Rhode Island?" Grand Rounds, The Miriam Hospital, Providence, Rhode Island, December, 1994.

7. "Issues in Tuberculosis: Are Health Care Facilities Safe?" Continuing Education Rounds, Harvard Community Health Plan (Rhode Island Division), Providence, Rhode Island, June, 1995.
8. "The Third Epidemic: MDR TB." Grand Rounds, The Miriam Hospital, Providence, Rhode Island, March, 1996.
9. "Update on Tuberculosis (Tuberculin Skin Testing, Pharmacology of Antituberculous Agents, Clinical Management of TB Infection and Disease)." Rhode Island State Nurses Association, Providence, Rhode Island, April, 1996.
10. Panel Participant on Tuberculosis. Third Annual Hasbro Children's Hospital Pediatric Symposium, Hasbro Children's Hospital, Providence, Rhode Island, October 12, 1996.
11. "Directly Observed Therapy in the Management of Tuberculosis." Grand Rounds, South County Hospital, Wakefield, Rhode Island, January 24, 1997.
12. "Tuberculosis for the Primary Care Provider: Screening, Preventive Therapy and Infection Control." Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, August, 1997.
13. "International Health: Experiences in Kenya." Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, October, 1998.
14. "Pleural Tuberculosis." Case Management Conference, Rhode Island Hospital, Providence, Rhode Island, January, 1999.
15. "TB in Obstetrics: Is There a Cause for Concern?" Grand Rounds, Women and Infant's Hospital, Providence, Rhode Island, August, 1999.
16. "New Lessons from an Old Disease." Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, November, 1999.
17. "Demystifying the PPD: When to Screen? When to Treat?" Grand Rounds, Memorial Hospital of Rhode Island, Pawtucket, Rhode Island, June, 2000.
18. "Brown Kenya Program: Lessons For- and From- Both Worlds." Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, October, 2001.
19. "Demystifying TB Infection: When to Screen. When to Treat." Internal Medicine Update, American College of Physicians/American Society of Internal Medicine – Rhode Island Chapter, Newport, Rhode Island, November, 2001.
20. "Pulmonary Symptoms in the Returned Traveler." Rhode Island Chapter of Emergency Medicine Physicians Annual Meeting, Newport, Rhode Island, May, 2002.
21. "Tuberculosis 2002." Grand Rounds, Landmark Medical Center, Woonsocket, Rhode Island, March 2002.
22. "TB Guidelines in Arthritis Patients: Rheum for Improvement." Rheumatology Grand Rounds, Brown University, January, 2003.

23. "Tuberculosis Update: What's New in 2003?" Grand Rounds, Memorial Hospital of Rhode Island, Pawtucket, Rhode Island, December, 2003.
24. Panel Participant. The Global Consequences of AIDS: Reconnaissance on the Worldwide Impact – The Pandemic and Treatment. Pandemic/AIDS Symposium, Brown University, Providence, Rhode Island, April 24, 2004.
25. "Tuberculosis: Detection, Treatment and Prevention." Clinical Laboratory Science Society of Central New England, Providence, Rhode Island, May, 2005.
26. "Tuberculosis for the Geriatrician." Division of Geriatrics Fundamentals Lecture Series, Brown Medical School, Providence, Rhode Island, August, 2005.
27. "Mycobacterium Tuberculosis." Advanced Microbiology Course MTC 541, University of Rhode Island, Providence, Rhode Island, May, 2007.
28. "Mycobacterium Tuberculosis Update." American Society for Clinical laboratory Science – Central New England, Providence, Rhode Island, May, 2010.
29. "Treatment of Latent TB Infection." Family Medicine Grand Rounds, Memorial Hospital of Rhode Island, Pawtucket, Rhode Island, December, 2011.
30. "The Role of Primary Care in TB Elimination in the United States." Grand Rounds, VA Medical Center, Providence, Rhode Island, December, 2012.
31. "Tuberculosis and latent Tuberculosis Infection (LTBI) in Rhode Island: Epidemiology, Screening and Treatment. Public Health Grand Rounds, Rhode Island Department of Health, Providence, Rhode Island, February, 2013.
32. "The Challenge of Global TB Control." American Society for Clinical Laboratory Science – Central New England, Providence, Rhode Island, May, 2013.
33. "The Role of Primary Care in TB Elimination in the United States." Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, May, 2013.
34. "E-Cigarettes: The Path to or from Tobacco Addiction?" Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, March, 2014.
35. "The Role of the Primary Care Physician in TB Elimination in the United States." Global Health Grand Rounds, Memorial Hospital of Rhode Island, Pawtucket, Rhode Island, August, 2014.
36. "A Guide to TB Screening for Rheumatologists." Rheumatology Grand Rounds, Roger Williams Medical Center, Providence, Rhode Island, March, 2015.
37. "TB Screening 2016: Is a Blood Test Better?" Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, March, 2016.
38. "TB 2018." Clinical Microbiology Course, University of Rhode Island, Providence, Rhode Island, March 2018.

39. “The Power of an Academic Partnership in Addressing Global Epidemics: The Story of AMPATH. Dermatology Grand Rounds, Rhode Island Hospital, Providence, Rhode Island, April 12, 2018.
40. “TB Pearls: A Fellow’s Need to Know Guide for Diagnosis and Management.” Introductory Lecture Series for Pulmonary Fellowship, Warren Alpert School of Medicine, Providence, Rhode Island, July 30, 2018.
41. “TB Pearls: A Resident’s Need to Know Guide for Diagnosis and Management.” Internal Medicine Residents House Staff Conference, Rhode Island Hospital, Providence, Rhode Island, July 31, 2018.
42. “Physician Involvement in Global Health.” Second Year Primary Care-Population Medicine Course, Warren Alpert School of Medicine, Providence, Rhode Island, August 2, 2018.
43. “TB Pearls: A Fellow’s Need to Know Guide for Diagnosis and Management.” Introductory Lecture Series for Pulmonary Fellowship, Warren Alpert School of Medicine, Providence, Rhode Island, July 31, 2019.

### **INVITED PARTICIPATION AND INTERNATIONAL CONSULTANCY**

2002 – 2003	International TB Consultancy Training Course A one year distanced based learning initiative that met every two weeks. Only 23 individuals invited globally to participate and only five (including myself) completed the entire module.	University of Alberta Edmonton, Canada Funded by USAID
2003	International TB Consultancy Course A week long course to develop global expertise in international TB consulting skills. There were 25 invited participants.	NAR IUATLD/ATS/Gorgas TB Initiative Cambridge, Massachusetts Funded by The International Union Against TB and Lung Disease
2016	International Principles of TB Care and Prevention- 7 day course TB Consultant and Senior Trainer	The Union  National TB Control Program Mandalay, Myanmar
2017; 2018	International Principles of TB Care and Prevention- 10 day course TB Consultant and Senior Trainer	The Union  Bulawayo, Zimbabwe
2017-2019	International Principles of TB Care and Prevention 7 day courses TB Consultant and Senior Trainer	USAID funded National TB Program Kenya Laikipia, Nanyuki, Sagana (2), Mombassa (2), Nakuru, Kenya (total 7 courses)

2018	STOP TB EXPERT REVIEW: Guide on TB Case Finding Expert on the pediatric case finding as well as the private engagement and contact investigations.	KIT, Royal Tropical Institute, Amsterdam, The Netherlands
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## **GRANTS**

1. Directly Observed Therapy (DOT) for TB/HIV in Western Kenya  
1 RO3 TW006234-01  
Funded by: Fogarty International Center of the National Institutes of Health  
Role: Principal Researcher (Principal Investigator – Timothy Flanagan)  
2003 - 2006 (no cost extension granted to 2008)  
Amount: \$30,000 per year
2. Aids Associated Assessment of TB Transmission (AHATT) Study  
Funded by: Center for AIDS Research Development Grant  
Role: Investigator  
2004 - 2005 (extended to 2008 due to delays by the Kenya based IRB)  
Amount: \$30,000 per year
3. Tuberculosis Active Case Finding in Traditional and Non-Traditional Sites in Western Kenya  
Funded by: FIDELIS Round 3 – The International Union against TB and Lung Disease  
Role: Technical Advisor\*  
2004 2005; 3 month no cost extension granted  
Amount: \$199,000

\*The International Union against TB and Lung Disease will not award a grant outside of the developing country in which the project is set. Although the award is formally to the Director of the hospital and the Dean of the medical school, I wrote and carried out the project. There were only 52 Fidelis grants awarded internationally and I was the technical advisor (i.e., PI) of two of these.

4. DOTS Expansion: Lab to Community Mobilization in North Rift Valley, Western Kenya  
Funded by: FIDELIS Round 5 – The International Union Against TB and Lung Disease  
Role: Technical Advisor\*\*  
2006 - 2007; 3 month no cost extension granted  
Amount: \$250,000

\*\*The International Union against TB and Lung Disease will not award a grant outside of the developing country in which the project is set. Although the award is formally to the Director of the hospital and the Dean of the medical school, I wrote and carried out the project.

5. FIND Demonstration Project: Use of Rapid TB Culture Technology Impact on the Diagnosis of Smear Negative Tuberculosis in the Developing World  
Funded by: FIND Diagnostics  
Role: Technical Advisor\*\*\*  
2006 - 2008  
Amount: \$250,000

\*\*\* FIND will not award a grant outside of the developing country in which the project is set. Although the award is formally to the Director of the hospital and the Dean of the medical school, I wrote and carried out the project.

6. Fogarty International Research Scholars (FIRCS) Program and Fogarty International Research Fellows (FIRCF) Program

Funded by: Fogarty International Center of the National Institutes of Health

Role: Principal Investigator

2009 - 2010

Funding: Funds given to fellows or scholars.

The Fogarty International Clinical Scholars (FIRCS) training grant funds both a U.S. and a Kenyan student as well as both a U.S. and Kenyan resident/fellow to work on research projects and receive international research/project experience for one year at the Moi University Faculty of Health Sciences.

The Fogarty International Clinical Fellows grant funds but U.S. and Kenyan junior faculty members for one year to perform their research projects on site at Moi University School of Medicine.

7. ASANTE Cardiovascular Pulmonary Disease Center of Excellence

Funded by: National Heart Lung Blood Institute Cardiopulmonary Center of Excellence

Grant No.: NO1-HV98221

Role: Pulmonary Principal Investigator (5% effort)

2009 – 2014

The aim of this grant is to develop clinical researchers and human research capacity in Cardiopulmonary Medicine in Western Kenya.

Supplemental Grants to Parent Award:

a. Indoor Air Pollution and its Resultant Health Effects in Kenya and Bangladesh

Grant No.: HHSN 268200900031C

Role: Pulmonary Principal Investigator (5% effort)

b. Feasibility Intervention Trial of Two Types of Improved Cookstoves in Three Developing Countries

Grant No.: HHSN 268200900033C

Role: Pulmonary Principal Investigator (5% effort)

8. Operational Research in Tuberculosis (Memorandum of Understanding)

Funded by: International Union Against TB and Lung Disease and MSF jointly under SORT IT Program.

Role: Principal Investigator

2010 – 2011

Amount: \$50,000

This MOU fund two junior Kenyan faculty to perform operational research in Tuberculosis. The deliverable products for the grant will be two submitted manuscripts per trainee.

9. Lot Quality Assurance Survey for Drug Resistant TB in Western Kenya.

Funded by: World Health Organization

Role: Principal Investigator

2011 – 2012

Amount: \$60,000

10. TB Reach Wave 2: Intensified Case Finding in Western Kenya

Funded by: World Health Organization – Wave 2

Role: Principal Investigator

2011 - 2012

Amount: \$999,257

The purpose of this grant is to perform active case findings for TB in western Kenya. There are four goals:

1. Community-based active case finding for smear positive TB.
2. Culture-based case finding in smear negative TB.
3. GenXpert-based case finding in smear negative TB.
4. Pediatric TB.

11. TB Reach Wave 2 – Year 2: Intensified Case Finding in Western Kenya

Funded by: World Health Organization

Role: Principal Investigator

2013 - 2014

Amount: \$800,000

The purpose of this grant is to perform active case findings for TB in western Kenya. There are four goals:

1. Community-based active case finding for smear positive TB.
2. GenXpert-based case finding in smear negative TB.
3. Pediatric TB.
4. TB Case Finding at District and Subdistrict Hospitals.

12. TB Reach Wave 5 – Finding the Children: Pediatric TB in Kenya

Funded by: STOP TB Partnership at UNOPS, Geneva (moved from WHO above)

Role: Principal Investigator

2017 - 2019

Amount: \$990,000

This grant will bring an innovative package of care for the ten busiest health centers in ten counties of Kenya (covering approximately 1/3 of the population of Kenya). The package will include:

1. A unified child management register.
2. Facilitated transport for exposed children under the age of 5.
3. Outpatient nasopharyngeal aspirates for specimen collection in those under 5 years.
4. Linkage of sick child clinics and TB clinics in all health facilities.
5. PROJECT ECHO support of all health care workers to develop human capacity in pediatric TB.

## **UNIVERSITY TEACHING, ADVISING AND MENTORING ROLES**

### **Teaching Roles:**

**E. Jane Carter, M.D.**



1984 – 1988; 1990 – 1994; 1997	BioMed 350	Warren Alpert School of Medicine	Preceptor
1985 – 1988; 1991 – 1994	Clinical Clerkship in Medicine	Warren Alpert School of Medicine	Preceptor
1992 – 2013	Tuberculosis Clinic*	RISE Clinic	Preceptor
1996; 1999; 2000 – 2004; 2008 – Present	Pathophysiology Course	Warren Alpert School of Medicine	Lecturer
1996 – 2000	Pharmacology Course	Warren Alpert School of Medicine	Lecturer
2002 – Present	Tropical Medicine in Kenya BMS Course #320	Warren Alpert School of Medicine	Preceptor
2007 – 2015	Fogarty International Training Program in HIV/AIDS**	Warren Alpert School of Medicine	Represented Kenya Program
2015 – 2017	PHP 1070 – The Burden of Disease in Developing Countries	Warren Alpert School of Medicine	Lecturer

\*Pulmonary fellows, infectious disease fellows and pediatric infectious disease fellows each spend one-half day per week in the TB Clinic. We developed a site for longitudinal clinic for one Internal Medicine resident and one Pulmonary fellow. Miscellaneous rotators through the TB Clinic include Internal Medicine residents (one month Public Health elective – average 6-8 per year), nurse midwives (from the University of Rhode Island) as well as physicians and nurse practitioners from the entire state of Rhode Island.

\*\*As the Executive Committee Member representing the Kenya Program, my responsibilities included securing an NIH grant (RO3) and writing a supplement grant to add Kenya (submitted 2004; re-submitted 2006 – received best score in the U.S. on the resubmission) in order to add Kenya to the Lifespan Tufts AITRP. When Kenya was added to AITRP, the duties included:

1. Identify potential Kenyan trainees, including on site interviews and assistance in the application process.
2. Oversight of all Kenyan trainees at Brown.
3. Monthly meetings of the Fogarty Executive Committee as well as email review of candidates application from all participating countries.
4. Advise and assist with re-entry grants for Kenyan trainees, including IRB submission, fiscal accountability and reporting for grant awards related to AITRP, and logistical training on site in Kenya.

#### **Kenya trainees trained to date:**

2006                      Dr. Hillary Mabaye  
Three month rotation      Chief, Reproductive Health, Moi Teaching and Referral Hospital

Topic: HIV in Women

2006  
Three month rotation

Dr. Esther Nabakwe  
Staff Pediatrician, Moi University School of Medicine  
Topic: TB/HIV in Children

2007 – 2010

Ann Mwangi  
Biostatistician, AMPATH (Academic Model for the Prevention and Treatment of HIV/AIDS, Eldoret, Kenya)  
Ph.D. Biostatistics, Brown University

2009  
Six month rotation

Dr. Winstone Nyankiko  
Head of Research, AMPATH (Academic Model for the Prevention and Treatment of HIV/AIDS, Eldoret, Kenya)  
Topic: Clinical Trial Design  
M.P.H., Harvard School of Public Health (awarded 2012)

2010

Dr. Rose Kosgei  
Medical Officer, Reproductive Health, AMPATH (Academic Model for the Prevention and Treatment of HIV/AIDS, Eldoret, Kenya)  
Topic: Reproductive Health/TB  
Master's Degree in Clinical Trial Management, London School of Tropical Hygiene (awarded 2013). Presently completing her Ph.D. thesis on TB and Pregnancy.

2010 – 2015

Kirwa Kiprotu  
Faculty in Public Health, Moi University School of Public Health  
Ph.D. in Epidemiology, Brown University

2010 – 2013

Lydia Kamle  
Program Manager, TB Projects Officer, Moi University  
Masters in Research Administration/Business, Moi University School of Medicine. Presently a Ph.D. candidate in Global Health at the University of Melbourne, Australia.

2011 – 2013

Christine Chuani  
Co-Director, Research Sponsored Projects Office, AMPATH/Moi University School of Medicine  
Master's Degree in Research Administration, Emmanuel College

2011 – 2013

Robert Rono  
Co-Director, Research Sponsored Projects Office, AMPATH/Moi University School of Medicine  
Master's Degree in Research Administration, Emmanuel College

2012 – 2016

Dr. Nicholas Kirui  
Masters in Medicine, Moi University School of Medicine (awarded 2016)

2013 2016

Edwin Sang  
Data Manager, AMPATH

Master's Degree in Biostatistics, Brown University

2014 Sylvia Shangani  
Research Staff AMPATH  
Completed Master's Degree in Behavioral Medicine and accepted to Ph.D.  
Program, Brown University

2014 - 2016 Evon Okidi  
Master's Degree in Biostatistics, Brown University

**Mentoring – T32 HIV Clinical Research Training Fellows:**

2002 - 2003 Jonathon Cohen, M.D.  
Year 1 Project: Initiation of an antiretroviral therapy program for HIV/AIDS at a rural health center.  
Year 2: Rhode Island Foundation grant to design the AMPATH training program for HIV care and administrate the first training session (has grown to become the largest HIV training program in Kenya).

2005 – 2006 Michael Waxman, M.D.  
Project: Initiation of rapid on-site HIV testing as part of routine care in the casualty (emergency) room of the Moi Teaching and Referral Hospital, Eldoret, Kenya.

2009 – 2011 Adrian Gardener, M.D.  
Project: Fluoroquinolone Resistance in Tuberculosis in the Developing World.

2010 – 2011 Susannah Winston, M.D.  
Project and Published: Sexual Health Risks and HIV Prevalence in Street Involved Youth in Western Kenya.

2016 – 2019 Tara Bouton, M.D.  
Project: Drug Resistant TB in Ghana- manuscript submitted

**Mentoring – Brown University Students:**

2004 Sophy Wong  
Project: Development of an evaluation tool of medical student knowledge regarding HIV/AIDS in western Kenya.

2004 – Present Nickhill Bhakta (12 month rotation on site in Kenya)  
Projects: Intensified Case Finding for TB in Western Kenya and Stigma Roles in TB and HIV in Western Kenya resulting in manuscript publications.

2005 Alexander Westphal, Jennifer Montoya, Myron Allukian  
Project: Voices of Hope Documentary. A film regarding the impact of HIV care delivery on stigma in western Kenya.

2006 Monica Kumar (9 month rotation on site in Kenya)  
Project: Introduction of Diagnostic Testing and Counseling for HIV in the TB Clinic of Moi Teaching and Referral Hospital.

2013 – Present Caitlin Naurekas

Summer research grant: TB Case Finding in Western Kenya.

**Mentoring – Brown University Fellows:**

- 1994 – 1996 William Pomputius, M.D. – Pediatric Infectious Diseases Fellow  
Continuity care clinic, once per week for one year; see publication #7.
- 2006 – 2009 Elizabeth Dufort, M.D. – Pediatric Infectious Diseases Fellow  
Mentor panel participant; manuscript paper – Pediatric TB in Western Kenya.
- 2017 – 2018 Dan Gutman, M.D. – Pulmonary Fellow  
Non Tuberculosis Mycobacteria in Rhode Island – abstract at ATS 2018 International Conference; manuscript in preparation.
- 2018 – 2019 Rajiv Patel, M.D. – Pulmonary Fellow  
Tuberculosis Mortality in the State of New Mexico- abstracts at both the ATS 2019 International Conference and the National TB Controller’s Conference; manuscript in preparation

**Mentoring – Fogarty International Clinical Research Scholars:**

- 2009 – 2010 Todd Fojo  
Projects: Does Contact Tracing for Active TB Increase Yield in an Intensified Case Finding Program?; Miliary TB – The Conundrum of Task Shifting – Is the Benefit Worth the Risk?
- 2010 – 2011 Daria Szkarko  
Projects: Intensified Case Finding in PMTC and ANC Clinics in Western Kenya; Institution of a Child Tracker System for TB Household Contacts.
- 2011 – 2012 Ben Pederson  
Project: Implementation of the Use of Gen Expert in TB Case Finding.
- 2009 – 2010 Gerald Bloomfield  
Project: Prevalence of Markers of Atherosclerosis among Adult Patients with Congestive Cardiac Failure.
- 2010 – 2011 Thomas Holland  
Project: Prevalence of Rheumatic Heart Disease in Western Kenya – An Echocardiographic Study.
- 2010 – 2011 Matthew Strothers  
Project: Phase II Trial of Single Agent Gemcitabine for HIV Associated Kaposi Sarcoma in Western Kenya.
- 2011 – 2012 Erin Dainty  
Project: Screening for Cervical Cancer in HIV Positive Kenyan Women: The Role of Human Papillomavirus Typing.
- 2015 – Present Quayson Solomon (Ghana)

Project: Pulmonary Tuberculosis and Other Bacterial Infections in HIV/AIDS Patients in a Tertiary Hospital in Ghana.

**Mentoring – International Trainees:**

- 2002 – 2005      Bernard Olayo, M.D.  
Medical Director, Millennium Village Project, Nairobi, Kenya.  
Mentor since medical school training at Moi University School of Medicine ('02) and through year of training at Harvard School of Public Health ('05).
- 2003 – 2005      Lameck Diero, M.D.  
Assisted in his training as first bronchoscopy trained physician at Moi University School of Medicine (including procurement of equipment, set-up of bronchoscopy suite on site and protocol development). See Abstract #28.
- 2005 – 2007      Sopheak Thai, M.D. – AITRP Trainee  
TB Chief, Center of Hope Hospital, Phenm Phen, Cambodia.  
Supervision for six months training on site at Brown followed by grant work consultation and assistance (writing and editing).
- 2006 – 2007      Yanis Ben Amor, Ph.D.  
Director, TB Initiatives at the Millenium Village Projects, EASRTH Institute.  
I have provided mentorship consultation through the last year of his fellowship and his first years in his present role; technical clinical advice in TB issues as well as manuscript advice and review.
- 2007 – 2008      Abraham Siika, M.D.  
I was a mentor panel member during Masters in Clinical Research, Indiana University, thesis development: Cause of Death in HIV Patients Cared for in the USIAD AMPATH Partnership (submitted to NIH December 2008).

**Mentoring – Non-Brown University Students:**

- 2008 – 2009      Paul Park – one year rotation on site in Kenya  
TB logistics including development of first community based MDR treatment program in Kenya.
- 2009 – 2010      Koreem Khozain – one year rotation on site in Kenya  
Cervical cancer screening HIV infected women cared for in the USAID AMPATH partnership (NIH funded).
- 2011 – Present      Julia Jezmir – Fulbright Scholarship – one year rotation in Kenya  
Lot Quality Assessment for TB Resistance in Western Kenya.

**Mentoring – Brown University Junior Faculty Members:**

- 2018 – Present      Helena Kuhn, M.D., Assistant Professor of Dermatology  
Project: Prevalence of Leprosy in Kenya

**HOSPITAL TEACHING, ADVISING AND MENTORING ROLES**

**Hospital Teaching:**

1986 – 1988; 1990 – 1995	Teaching Attending, Internal Medicine	Roger Williams Medical Center Providence, Rhode Island
2000	Teaching Attending, Internal Medicine	Rhode Island Hospital Providence, Rhode Island
2013 – Present	Pulmonary Consult Service Teaching Service	The Miriam Hospital Providence, Rhode Island

**Teaching Conferences:**

1990 – Present	Chest Conference – Weekly Pulmonary Conference – 1 lecture per year	Brown University Providence, Rhode Island
1993 – 1998	Tuberculosis Lecture Series – 3 lectures	Roger Williams Medical Center Providence, Rhode Island
1993 – 2013	Infectious Disease Conference – Weekly conference – 1 tuberculosis lecture per year	Brown University Providence, Rhode Island
1994 – 2013	Tuberculosis Lecture Series – 2 lectures	The Miriam Hospital Providence, Rhode Island
1994 – Present	Introductory lecture series on tuberculosis, diagnosis and management	Brown University Providence, Rhode Island
1997 – 2009	Active Tuberculosis – 1 lecture	Veterans Affairs Medical Center Providence, Rhode Island
1997 – 2013	Active Tuberculosis – 2 lecture series	Rhode Island Hospital Providence, Rhode Island
1998 – 1999	Tuberculosis Management – 1 lecture	Women & Infants Hospital Providence, Rhode Island
2001 – 2013	Weekly lecture series with one conference per year on AIDS and TB issues in Africa	Center for AIDS Research Brown-Tufts Providence, Rhode Island

**Other Teaching:**

2016 – Present	Principles of Tuberculosis Care and Prevention: Translating Knowledge to Actions Faculty, Facilitator and Moderator 2016 – Mandalay, Myanmar 2017; 2018 – Bulawayo, Zimbabwe 2017 – Sweet Waters, Kenya; Sagana, Kenya 2018 – Mombasa, Kenya; Nyahururu, Kenya 2019- Nakuru, Kenya; Mombassa, Kenya	The Union (International Union Against TB and Lung Disease)     Union led but funded by USAID Union led but funded by USAID Union led but funded by USAID
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