Curriculum Vitae

Horacio Duarte

WBOB 300  
Minneapolis, MN 55454-1075  
hduarte@umn.edu

Education

|  |  |
| --- | --- |
| MS, University of Washington School of Pharmacy. Health Outcomes, Policy and Economics | 2018 |
| Certificate, Harvard School of Public Health. Program in Clinical Effectiveness | 2015 |
| MD, University of Texas Medical School at Houston. | 2011 |
| AB, Harvard College. Biological Anthropology | 2006 |

Licensures and Certifications

***Licensures***

|  |  |
| --- | --- |
| Medical License, State of Washington. (Licensure/Certification Number: MD 60476260) | 2011 - Present |

***Certifications***

|  |  |
| --- | --- |
| \*Pediatric Infectious Diseases, American Board of Pediatrics. | 2021 - Present |
| General Pediatrics, American Board of Pediatrics. | 2017 - Present |

Languages: Spanish

Fellowships, Residencies, and Visiting Engagements

Fellowship

|  |  |  |
| --- | --- | --- |
| Pediatric Infectious Diseases | | 2014 - 2017 |
|  | University of Washington, School of Medicine |  | |

Residency

|  |  |  |
| --- | --- | --- |
| Pediatrics | | 2011 - 2014 |
|  | University of Washington, School of Medicine |  | |

Academic Appointments

|  |  |  |
| --- | --- | --- |
| \*University of Minnesota | |  |
|  | School of Public Health, Division of Epidemiology & Community Health: Assistant Professor | July 2021 - Present |
| University of Washington | |  |
|  | School of Medicine, Department of Pediatrics, Division of Infectious Diseases: Acting Instructor | July 2019 - June 2021 |
| University of Washington | |  |
|  | School of Medicine, Department of Pediatrics, Division of Infectious Diseases: Acting Instructor/Senior Fellow | July 2017 - June 2019 |

**Other Professional Positions**

|  |  |  |
| --- | --- | --- |
| Seattle Children's Hospital | |  |
|  | Attending Physician | 2017 - 2021 |

HONORS AND RECOGNITION

External Sources

|  |  |
| --- | --- |
| Loan Repayment Program, NIH | 2019 |
| Fellow and Resident Research Day Award, Seattle Children's Hospital | 2017 |
| Loan Repayment Program, NIH | 2017 |
| Young Investigators Scholarship, Conference on Retroviruses and Opportunistic Infections | 2017 |
| Diagnostics Abstract Award, "IDWeek Conference", Infectious Diseases Society of America | 2016 |
| Summer Institute in Statistics and Modeling in Infectious Diseases, University of Washington | 2016 |
| Hispanic American Medical Association of Houston Medical | 2007 |
| Josephine L. Murray Traveling Fellowship, Harvard University Office of Career Services | 2006 |

RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

**Grants, Contract, Awards: External Sources**

|  |  |
| --- | --- |
| \*1. | **Award: Value of Information and Cost-Effectiveness Analysis to Optimize Research and Policy Decisions for HIV Care in Resource Limited Settings** Principal Investigator: Duarte, HoracioStatus: AcceptedSponsoring Organization: K01 - NIH/NIAIDAward Dates: July 20, 2021 - June 30, 2026Funded Amount: $687,825.00Direct Amount: $636,875.00Indirect Amount: $50,950.00  Purpose: This project aims to use innovative value of information analysis methods to efficiently inform the prioritization and design of potential clinical research studies related to managing virologic failure on dolutegravir-based antiretroviral therapy for adults (15 years and older) in Kenya, which will also have broader implications for resource-limited settings. |

|  |  |
| --- | --- |
| \*2. | **Award: Health Policy Modeling to Address Maternal HIV Pretreatment Drug Resistance in Kenya** Principal Investigator: Duarte, HoracioStatus: AcceptedSponsoring Organization: PhRMA Foundation Research Starter GrantAward Dates: September 1, 2021 - August 31, 2022Funded Amount: $100,000.00  Purpose: This project aims to evaluate strategies aimed at addressing the high prevalence of pretreatment drug resistance in HIV-infected Kenyan adolescent girls. *This grant was originally active at Seattle Children's Research Institute from 12/01/2019-03/03/2021, during which time I spent $29,915 of the total $100,000 funds. After transferring the grant to UMN, the grant became active again 09/01/2021 with a remaining balance of $70,085.* |

**Grants Funded and Concluded**

|  |  |
| --- | --- |
| 1. | **Award: Health Policy Modeling to Address Maternal HIV Pretreatment Drug Resistance in Kenya** Project Investigators: Duarte, Horacio (Principal)Status: ClosedSponsoring Organization: Gilead Sciences HIV Research Scholars AwardDate Proposal Submitted: 2019Award Dates: October 1, 2019 - June 30, 2021Funded Amount for Entire Grant Period or Proposed Grant Period: $130,000.00  Purpose: This project aims to develop an HIV mother-to-child transmission simulation model and evaluate strategies aimed at addressing the high prevalence of pretreatment drug resistance in HIV-infected women. |

|  |  |
| --- | --- |
| 2. | **Award: Health Policy Modeling to Address Pediatric HIV Drug Resistance in Kenya** Project Investigators: Duarte, Horacio (Principal)Status: ClosedSponsoring Organization: University of Washington Center for AIDS Research New Investigator AwardDate Proposal Submitted: 2018Award Dates: September 1, 2018 - August 30, 2020Funded Amount for Entire Grant Period or Proposed Grant Period: $106,243.00  Purpose: This project aims to develop a pediatric HIV simulation model and evaluate strategies aimed at addressing the high prevalence of pretreatment drug resistance in HIV-infected children. |

|  |  |
| --- | --- |
| 3. | **Award: Evaluation of the Feasibility and Economic Impact of HIV Drug Resistance Testing in Kenya** Project Investigators: Duarte, Horacio (Principal)Status: ClosedSponsoring Organization: Pediatric Scientist Development Program K12 - NIH/NICHDAward Dates: July 1, 2015 - June 30, 2017Funded Amount for Entire Grant Period or Proposed Grant Period: $204,660.00  Purpose: The main goals of this project are to evaluate a low-cost, novel HIV drug resistance test in Kenya with respect to its 1) feasibility, 2) impact on health-related quality of life, and 3) cost-effectiveness. |

**Submitted and Not Funded Proposals**

|  |  |
| --- | --- |
| 1. | **Award: Improving HIV Prevention in Young Women in South Africa through Network-Based Mathematical Modeling** Project Investigators: Duarte, Horacio (Principal)Status: Not FundedSponsoring Organization: K01 - NIH/NIAIDDate Proposal Submitted: May 2018Funded Amount for Entire Grant Period or Proposed Grant Period: $500,000.00  Note: I received a score of 33 but decided not to revise/resubmit due to issues with mentorship team. I generated an entirely new set of aims for K01 I applied for (and was funded) in May 2020. |

|  |  |
| --- | --- |
| 2. | **Award: Value of Information and Cost-Effectiveness Analysis to Optimize Research and Policy Decisions for Pediatric HIV Care in Resource Limited Settings** Project Investigators: Duarte, Horacio (Principal)Status: Not FundedSponsoring Organization: Robert Wood Johnson Foundation, Harold Amos Medical Faculty Development AwardDate Proposal Submitted: 2017Funded Amount for Entire Grant Period or Proposed Grant Period: $420,000.00  Note: Proposed grant was for 4 years of funding. I applied in 2017, 2018, 2019, and 2020, and was selected as a semi-finalist in 2019. There are ~100 applicants annually, and typically ~32 are semi-finalists, and ~16 are finalists. |

**Grants Awarded to Student/Trainee**

|  |  |
| --- | --- |
| 1. | **Award: Cost-Effectiveness Analysis of Strategies to Address HIV Drug Resistance in Kenya** Project Investigators: Duarte, Horacio (Training grant recipient)Status: ClosedSponsoring Organization: T32 - NIH/NIAID  Purpose: This project aims to further develop mathematical models to evaluate the cost-effectiveness of strategies to address HIV drug resistance in resource-limited settings, particularly Kenya. |

Other Research/Research in Progress

\*Duarte, H. Planning, "Value of Information and Cost-Effectiveness Analysis to Optimize Research and Policy Decisions for Pediatric HIV Care in Resource Limited Settings".  
Sponsoring Organization: Robert Wood Johnson Foundation, Harold Amos Medical Faculty Development Award  
Planned Submission Date: March 2022  
Requested Amount: Total $105,000 annual direct x 4 years

Publications

*Asterisk(\*) - indicates items since hire*

*Underline - indicates student author*

Peer-Reviewed Journal Article

1. Joslyn, S. L., Savelli, S., **Duarte, H. A.**, Burgeno, J., Qin, C., Han, J. H., & Gulacsik, G. COVID-19: Risk perception, risk communication and behavioral intentions. *Journal of Experimental Psychology*. [Accepted: 2021]

Role: Provided intensive clinical infectious disease expertise to psychology collaborators and helped design and revise the questionnaire that was administered to study participants. Participated in writing the manuscript and revising it critically for important intellectual content.

1. Krebs, E., Enns, E., Zang, X., Mah, C. S., Quan, A. M., Behrends, C. N., **Duarte, H. A.**,.. Nosyk, B. (2021). Attributing health benefits to preventing HIV infections versus improving health outcomes among people living with HIV: An analysis in six US cities. *AIDS (London, England), 35*(13), 2169-2179. [doi: 10.1097/QAD.0000000000002993](http://dx.doi.org/10.1097/QAD.0000000000002993)

Role: Co-developed the central method that was applied in this manuscript and advised the first and senior authors in how to implement it. Participated in revising the manuscript.

3. Siriruchatanon, M., Liu, S., Carlucci, J. G., Enns, E. A., & **Duarte, H. A.** (2021). Addressing pediatric HIV pretreatment drug resistance and virologic failure in sub-Saharan Africa: A cost-effectiveness analysis of diagnostic-based strategies in children >= 3 years old. *Diagnostics, 11*(3). [doi: 10.3390/diagnostics11030567](http://dx.doi.org/10.3390/diagnostics11030567)

Role: Conceptualized the research question and necessary model development, obtained funding, and wrote the manuscript. Supervised graduate student in implementing necessary computer programming, executing model simulations, and preparing and interpreting data.

4. **Duarte, H. A.**, Babigumira, J. B., Enns, E. A., Stauffer, D. C., Shafer, R. W., Beck, I. A., . . . Bendavid, E. (2020). Cost-effectiveness analysis of pre-ART HIV drug resistance testing in Kenyan women. *EClinicalMedicine, 22*, 100355. PubMed Central ID Number: PMC7256304 [doi: 10.1016/j.eclinm.2020.100355](http://dx.doi.org/10.1016/j.eclinm.2020.100355)

Role: Conceptualized the research question, developed the model, executed necessary simulations and data analysis, and led writing and revising of manuscript.

5. **Duarte, H. A.**, Beck, I. A., Levine, M., Kiptinness, C., Kingoo, J. M., Chohan, B., . . . Frenkel, L. M. (2018). Implementation of a point mutation assay for HIV drug resistance testing in Kenya. *AIDS, 32*(16), 2301-2308. PubMed Central ID Number: PMC6170675 [doi: 10.1097/QAD.0000000000001934](http://dx.doi.org/10.1097/QAD.0000000000001934)

Role: Co-conceptualize the study, co-led data analysis, and led the writing and revising of manuscript.

6. **Duarte, H. A.**, Panpradist, N., Beck, I. A., Lutz, B., Lai, J., Kanthula, R. M., . . . Frenkel, L. M. (2017). Current status of point-of-care testing for human immunodeficiency virus drug resistance. *The Journal of Infectious Diseases, 216*(suppl\_9), S824-S828. PubMed Central ID Number: PMC5853236 [doi: 10.1093/infdis/jix413](http://dx.doi.org/10.1093/infdis/jix413)

Role: Participated in conceptualizing this review and led the writing and revising of this review.

7. Thiara, D. K., Liu, C. Y., Raman, F., Mangat, S., Purdy, J. B., **Duarte, H. A.**, . . . Hadigan, C. (2015). Abnormal myocardial function is related to myocardial steatosis and diffuse myocardial fibrosis in HIV-infected adults. *The Journal of Infectious Diseases, 212*(10), 1544-51. PubMed Central ID Number: PMC4621251 [doi: 10.1093/infdis/jiv274](http://dx.doi.org/10.1093/infdis/jiv274)

Role: Participated in study coordination, data collection, and revising the manuscript.

8. **Duarte, H. A.**, Harris, D. R., Tassiopoulos, K., Leister, E., Negrini, S. F., Ferreira, F. F., . . . Hazra, R. (2015). Relationship between viral load and behavioral measures of adherence to antiretroviral therapy in children living with human immunodeficiency virus in Latin America. *The Brazilian Journal of Infectious Diseases, 19*(3), 263-71. PubMed Central ID Number: PMC4911806 [doi: 10.1016/j.bjid.2015.01.004](http://dx.doi.org/10.1016/j.bjid.2015.01.004)

Role: Participated in data analysis and led the writing of the manuscript.

9. **Duarte, H.**, Matta, J. R., Muldoon, N., Masur, H., Hadigan, C., & Gharib, A. M. (2012). Non-calcified coronary plaque volume inversely related to CD4(+) T-cell count in HIV infection. *Antiviral Therapy, 17*(4), 763-7. PubMed Central ID Number: PMC3777235 [doi: 10.3851/IMP1994](http://dx.doi.org/10.3851/IMP1994)

Role: Participated in data analysis and led the writing of the manuscript.

10. Stevens, L., **Duarte, H.**, & Park, J. (2007). Promising implications for integrative medicine for back pain: A profile of a Korean hospital. *Journal of Alternative and Complementary Medicine, 13*(5), 481-4. [doi: 10.1089/acm.2007.6263](http://dx.doi.org/10.1089/acm.2007.6263)

Role: Participated in conducting interviews, analyzing qualitative data, and writing and revising the manuscript.

11. Ginde, A. A., Acholonu, U., **Duarte, H.**, & Camargo, C. A. (2007). Suboptimal diabetes preventive care among Massachusetts emergency department patients: A missed opportunity. *Practical Diabetes International, 24*(4), 197-200. [doi: 10.1002/pdi.1096](http://dx.doi.org/10.1002/pdi.1096)

Role: Participated in administering surveys for data collected and in revising the manuscript.

12. McGowan, C. P., **Duarte, H. A.**, Main, J. B., & Biewener, A. A. (2006). Effects of load carrying on metabolic cost and hindlimb muscle dynamics in guinea fowl (Numida meleagris). *Journal of Applied Physiology, 101*(4), 1060-9. PubMed Central ID Number: PMC2413411 [doi: 10.1152/japplphysiol.01538.2005](http://dx.doi.org/10.1152/japplphysiol.01538.2005)

Role: Participated in conducting experiments, analyzing data, and writing and revising the manuscript.

Publications Submitted or in Progress

*Asterisk(\*) - indicates items since hire*

*Underline - indicates student author*

Peer-Reviewed Journal Article

\*1. **Duarte, H. A.**, Parrish, C., Richardson, B. A., Chung, N., Frenkel, L., & Babigumira, J. Effect of pre-ART HIV drug resistance on health-related quality of life in Kenyan adults. [In Preparation; Not Yet Submitted: 2021]

Presentations, Posters, and Exhibits

*Underline - indicates student presenter*

Poster

|  |  |
| --- | --- |
|  | Siriruchatanon, M., Liu, S., **Duarte, H.** "Cost-Effectiveness of Pediatric ART Policy Options in the Presence of HIV Pretreatment NNRTI Drug Resistance in Kenya," 42nd Annual Meeting Society for Medical Decision Making, Virtual. (2020). |

|  |  |
| --- | --- |
|  | Siriruchatanon, M., Liu, S., **Duarte, H.** "Cost-effectiveness Analysis of Pre-ART Drug Resistance Testing for HIV-Infected Children in Kenya," 41st Annual Meeting of the Society for Medical Decision Making, Portland, Oregon. (October 2019). |

|  |  |
| --- | --- |
|  | **Duarte, H.**, Enns, E., Stauffer, D., Shafer, R. W., Bendavid, E. "Dolutegravir Rollout and Expected Prevalence of Pretreatment Drug Resistance to Antiretroviral Therapy Among Kenyan Women," STI & HIV 2019 World Congress, Vancouver, Canada. (July 2019). |

|  |  |
| --- | --- |
|  | **Duarte, H.**, Babigumira, J., Stauffer, D., Shafer, R., Beck, I., Garrison, L., Chung, M., Frenkel, L., Bendavid, E. "Cost-effectiveness Analysis of Pre-ART HIV Drug Resistance Testing in Kenya," Conference on Retroviruses and Opportunistic Infections (CROI), Seattle, Washington. (February 2017). |

|  |  |
| --- | --- |
|  | **Duarte, H.**, Beck, I., Munyao, J., Levine, M., Kiptinness, C., Chohan, B., Sakr, S., Chung, M., Frenkel, L. "Implementation of HIV Drug Resistance in Kenya," ID Week IDSA, New Orleans, Louisiana. (October 2016).  Winner of a Diagnostics Abstract Award |

Presentation/Talk

|  |  |
| --- | --- |
|  | Krebs, E., Enns, E., Zang, X., Min, J. E., **Duarte, H.**, Nosyk, B. "Attributing Health Benefits to Treatment and Prevention Efforts in the HIV Response: An Analysis in Six U.S. Cities," 42nd Annual Meeting Society for Medical Decision Making, Virtual. (October 2020).  *PhD student Emanuel Krebs won the Milt Weinstein Award for Outstanding Presentation in Applied Health Economics.* |

|  |  |
| --- | --- |
|  | Enns, E., (Presenter), **Duarte, H.** "Attributing Benefits of HIV Interventions Portfolios to Prevention and Treatment Effects," 41st Annual Meeting of the Society for Medical Decision Making, Portland, Oregon. (October 2019). |

TEACHING

Scheduled Teaching

\*Modeling and Mapping for Infectious Disease Epidemiology: PUBH 6366/3365: Fall 2022

Instructional Activity

University of Minnesota

|  |  |
| --- | --- |
| \*Guest Lecture, PubH 6366/3365: Modeling and Mapping for Infectious Disease Epidemiology | October 2021 |
| Topic: Network Modeling and Sexually Transmitted Infections | |

Seattle Children's Hospital/University of Washington School of Medicine

|  |  |
| --- | --- |
| Clinical Preceptor for pediatric and adult medicine infectious diseases fellows, pediatric residents, and medical students, Pediatric Infectious Diseases Consultation Service, Seattle Children's Hospital/University of Washington School of Medicine | 2017 - 2021 |

ADVISING AND MENTORING

Graduate Student Activities

Advisees

|  |  |
| --- | --- |
| \*Asma Mohamed, Epidemiology MPH | 2021 - Present |
| \*Sirry Tassah, Epidemiology MPH | 2021 - Present |
| \*Eleanor Weisblat, Epidemiology MPH | 2021 - Present |

Other Advising Activities

University of Minnesota

|  |  |
| --- | --- |
| Independent Study.  \*MacKenzie O'Kane, Maternal Child Health MPH student | 2021 - Present |

University of Washington

|  |  |
| --- | --- |
| Supervised Research and Training.  Mutita Siriruchatanon, PhD student in Industrial Engineering. I served on her doctoral thesis committee. Since graduating, she is a Research Scientist at NYU Langone Health. | July 2018 - August 2021 |
| Supervised Research and Training.  Canada Parrish, PhD student in Health Services. Since graduating in August 2020, currently a Clinical Assistant Professor/Research Scientist at the University of Washington | December 2018 - August 2020 |

SERVICE

Service to the University/College/Department

University of Minnesota

Department

|  |  |
| --- | --- |
| \*Member, Epidemiology PhD Curriculum Committee | 2021 - Present |
|  | |
| \*Member, Global Health Research Pod | 2021 - Present |
|  | |
| \*Member, Infectious Disease Research Pod | 2021 - Present |
|  | |

Public and External Service

|  |  |
| --- | --- |
| Guest Speaker, University of Washington Center for AIDS Research, Seattle, Washington | May 2018 |
| Presentation title: HIV Pre-exposure Prophylaxis and Drug Resistance | |