

# JOE BREW

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## Education

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### PhD (in progress)

*Institut de Salut Global (host institution)*

*Vrije Universiteit (secondary institution)*

*January 2016-*

BARCELONA, SPAIN

AMSTERDAM, HOLLAND

- Research on the cost effectiveness and efficacy of malaria control interventions in southern Mozambique

### Master of Public Health

*Kobenhavns Universitet (year 2)*

*Escuela Andaluza de Salud Pública (year 1)*

*September 2011 - July 2013*

COPENHAGEN, DENMARK

GRANADA, SPAIN

- Coursework in epidemiology, economic evaluation, demography, advanced biostatistics, management, health policy, health promotion

### Master of Arts

*Institut Catholique de Paris*

*September 2009-June 2010*

PARIS, FRANCE

- MA in Contemporary Diplomatic History, fieldwork on negotiations leading to Paris Peace Accords

### Bachelor of Arts

*Sewanee: The University of the South*

*August 2004-May 2008*

SEWANEE, TN, USA

- Triple major in Contemporary Non-Western History, Spanish, French

## Publications

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### Peer-reviewed papers

Lednicky J, Iovine N, **Brew J**, Loeb J, Sugimoto J, Rand K, Morris J. *Hemagglutinin Gene Clade 3C.2a Influenza A(H3N2) Viruses, Alachua County, Florida, USA, 2014–15*. Emerging Infectious Diseases

DOI: 10.3201/eid2201.151019

(2016)

Potash E, **Brew J**, Loewi A, Majumdar S, Reece A, Walsh J, Rozier E, Jorgenson E, Mansour R, Ghani R. *Predictive Modeling for Public Health: Preventing Childhood Lead Poisoning*. ACM SIGKDD International Conference on Knowledge Discovery and Data Mining

DOI: 10.1145/2783258.2788629

(2015)

Iovine M, Morris JG, Fedenburg K, Rand K, Alnuaimat H, Lipori G, **Brew J**, Lednicky JA. *Increased severity of H1N1 influenza in the 2013-14 season and emergence of the D225G variant*. Emerging Infectious Diseases  
DOI: 10.3201/eid2104.141375 (2015)

**Brew J**. *(Mis)measurement in the study of food environment: we need better methods to solve the puzzle*. Journal of Epidemiology and Community Health  
DOI:10.1136/jech-2014-205163 2015

Tran CH, Sugimoto JD, Pulliam JR, Ryan KA, Myers PD, Castleman JB, Doty R, Johnson J, Stringfellow J, Kovacevich N, **Brew J**, Cheung LL, Caron B, Lipori G, Harle CA, Alexander C, Yang Y, Longini IM Jr, Halloran ME, Morris JG, Small PA Jr. *School-Located Influenza Vaccination Reduces Community Risk for Influenza and Influenza-Like Illness Emergency Care Visits*. PLOS ONE  
DOI: 10.1371/journal.pone.0114479 2014

## Academic theses

*Youth overweight in Denmark: prevalence, ethnicity and other risk factors*. Kobenhavns Universitet (MPH dissertation) 2013

*Estrés laboral en trabajadoras domésticas en Andalucía*. Escuela Andaluza de Salud Pública 2012

*La Presse comme arme politique: le role des journaux américains dans les négociations des accords de Paris*. Institut Catholique de Paris (MA dissertation) 2009

*Religion and Counterrevolution: Fundamentalist Evangelicalism and the Dictatorship of Efraín Ríos Montt*. Sewanee: The University of the South (BA thesis) 2008

## Non-academic

*Control Flu Data Insights: Consent form return and vaccine hesitance*  
Florida Department of Health, Alachua County (internal) 2015

*Community Health Improvement Plan: Evaluation Reports*  
Florida Department of Health, Alachua County (internal) 2014

*Quantifying capacity at Health Posts in Tigray, Ethiopia*  
Tigray Regional Health Bureau (internal) 2013

*Ciudad Quetzal: A Guatemalan City Grapples with Gang Terrorism*  
Tico Times, Costa Rica 2011

*Heart of the sky, heart of the earth: religious division and its sociopolitical causes and consequences in San Juan Sacatepequez, Guatemala*

Biehl Fellowship Paper

2007

## Experience

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### Data scientist

OAKLAND, CA

*Lendable*

*January 2015 - present*

- Work to expand access to financial products to the developing world (East Africa, India)
- Program machine learning algorithms to predict financial risk
- Develop and implement stochastic simulation methods
- Devise creative means for extracting and generating features in a low-data context
- Create internal and client-facing visualization tools

### Analyst

WASHINGTON, DC, USA

*Analyst Institute*

*April 2014 - April 2015*

- Analyze voter data from controlled experiments
- Create tools for statistical analysis
- Design tools for data visualization

### Surveillance Epidemiologist

GAINESVILLE, FL, USA

*Florida Department of Health, Alachua County*

*July 2013 - December 2015*

- Write programs to detect clusters/abnormalities for ER data stream
- Analyze mosquito trap data to prevent arbovirus transmission
- Coordinate flu surveillance operations through school system
- Oversee program evaluation, billing, revenue modeling activities

### "Data Science for Social Good" Fellow

CHICAGO, IL, USA

*University of Chicago*

*June 2014 - August 2014*

- Analyzed large datasets to predict pediatric lead poisoning
- Worked in close collaboration with the Chicago Dept. of Public Health
- Used tools like R, Python and D3
- Worked closely with industry experts like Rayid Ghani and Ben Yuhas
- Designed tools for data exploration

### Erasmus Mundus Researcher

COPENHAGEN, DENMARK

*Skolesundhed*

*February 2012-June 2013*

- Redesigned school health screening system to bring to digital platform
- Analyzed 3 years of youth health data on immigration and overweight

### Health Systems Researcher

BARCELONA, SPAIN

*Agència de Salut Pública de Barcelona*

*November 2012-February 2013*

- Worked on SOPHIE project on immigration and health disparities

### Maternal Health Epidemiologist

MEKELLE, ETHIOPIA

*Tigray Regional Health Bureau*

*May 2012-August 2012*

- Collected, analyzed and reported on data from rural regional Health Posts near the Eritrean border

**Teacher**

*St. Andrew's-Sewanee School*

SEWANEE, TN, USA

*January 2010-June 2011*

- Taught middle and high school Spanish and Technology

**Assistant Coach**

*The University of the South*

SEWANEE, TN, USA

*August 2009-December 2010*

- Coached men and women's cross country and track and field

**Health Educator**

*Promotion et Développement Humain*

AVEDJI CITÉ, TOGO

*May 2009-August 2009*

- Lead sexual health education workshops for teens
- Assessed medication adherence among HIV/AIDS patients through visits/interviews
- Assisted in accounting, data organization, process improvement

**Recreation Coordinator / Teacher**

*Instituto Experimental de Ciudad Quetzal*

CIUDAD QUETZAL, GUATEMALA

*2006-2008 (summers)*

- Organized youth recreation clinics for the *Cases Interculturales* program
- Taught English and Spanish in impoverished and violence-stricken area

## **Honors and Awards**

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**Data Science for Social Good Fellowship**

*2014*

Funded by the University of Chicago to spend 3 months tackling big problems with big data

**Erasmus Mundus Fellowship**

*2011*

European Commission award for full MPH funding

**Highest honors ("mention très bien") on MA thesis**

*2009*

*La Presse comme arme politique: le role des journaux américains dans les négociations des accords de Paris*

**Highest honors ("summa cum laude") and Phi Beta Kappa**

*2008*

Top 5% of graduating class at Sewanee

**Linda Wheat Fellowship**

*2008*

Full funding for graduate studies at the Institut Catholique de Paris

**Fulbright ETA (Andorra)**

*2008*

Awarded, but I declined in order to pursue graduate studies

**Algernon Sydney Sullivan Award**

*2008*

Granted to one graduate annually, Sewanee's "most prestigious prize"

**Joseph Cushman Scholarship** 2007  
Highest award given to History major at Sewanee

**Gessell Fellowship** 2007  
Funding to carry out research on African-American history at Sewanee

**Biehl Social Science Fellowship** 2007  
Full funding to investigate the religious roots of social division in Guatemala

**Lilly Grant** 2006  
Full funding for vocational institute and internship in Guatemala

**Wright-Bentley Scholarship** 2005  
For strong academic skills and service to the community

**Wilkins Scholarship** 2004  
Merit and community award

## Community Service

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**Translator** PORT-AU-PRINCE, HAITI  
*Physicians for Haiti* 2010-present

- Translated medical education documents between French and English

**Founder** SEWANEE, TN, USA  
*Weekend English for Migrants* 2009-2011

- Organized language exchanges between high-schoolers and undocumented immigrants

**Co-founder** SEWANEE, TN, USA  
*ABRE* 2006-2008

- Co-founded and presided over social awareness organization

## Personal

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Happily married, father, likes to fix and ride bikes, enjoys travel, doesn't enjoy airplanes, loves running, hates sitting, morning person.