

Public Health Research: From California to Lusaka

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Overview

- Background/Introduction
- Methods
- Results
- Discussion
- Conclusions/Questions

Background

- Bachelor of Science in Biology and Genetics
- Master of Public Health (MPH) in Epidemiology and Biostatistics
- Doctor of Philosophy in Epidemiology
- Post-doctoral Research Associate



TEXAS A&M
UNIVERSITY



TEXAS A&M UNIVERSITY
School of Public Health

UCDAVIS
HEALTH



Washington
University in St. Louis
SCHOOL OF MEDICINE

Background

- Laboratory work in Lusaka with the Zambia-Emory HIV Research Project (ZEHRP)
 - Loved it **and** needed more training
- Returned to the states and began my PhD at Davis while working as an epidemiologist in Sacramento, CA
- In the second year of my PhD I returned to Lusaka with the Centre for Infectious Disease Research in Zambia (CIDRZ)



Background

- Go deep to go wide
 - I was very reluctant to spend most of my time in HIV not wanting to be "trapped" in HIV work
- CIDRZ is (was) a (very) large non-governmental organization operating, primarily, as an implementing partner for PEPFAR in Zambia
 - I had the opportunity, as a pre-doctoral fellow, to complete my dissertation on emerging NCD with CIDRZ
- Laying the foundations as a global health researcher takes time

Methods

- The PhD was a big piece to moving toward being able to lead projects in Zambia with the Ministry of Health
- Partnering with an established NGO like CIDRZ allowed mobility and room to grow
 - Disclaimer: this growth and trajectory may look very different than anticipated (as some of you are well aware, I am sure)
- In September 2020 I took a job in California that connected me back to UC Davis as an instructor
 - This position allowed me to split time between California and Zambia

Methods

- Now teaching one quarter of the year (about 11 weeks) in person at School of Medicine at the University of California, Davis (UCD)
 - Principles of Epidemiology
 - Social and Behavioral Determinants of Health
 - Advanced Epidemiologic Methods
 - Epidemiology for Health Professionals
 - Topics in Public Health (seminar)
 - Conversations in Global Health (seminar)

Methods

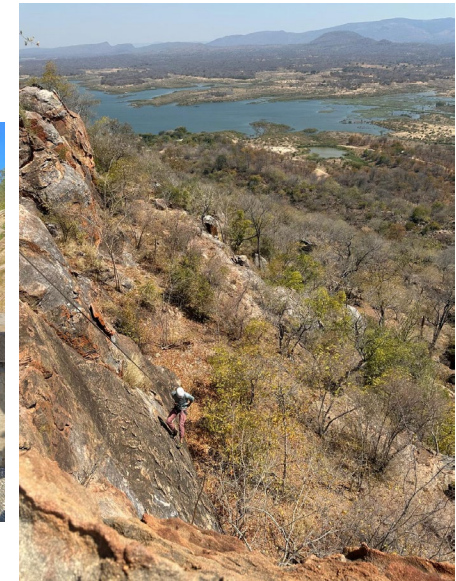
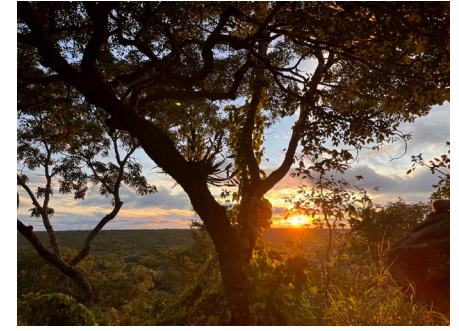
- Other than teaching one quarter of the year in California, I am in Lusaka, Zambia
 - Now a more senior part of the CIDRZ team, I am involved in a variety of spaces from cervical cancer and cholera to depression
- “Figure it out”
- The value of a willingness to wear multiple hats

Results

- Travel – I really enjoy this part though...
- Splitting time – can be difficult
- Research – love writing papers, love less writing grants (but it is critical nonetheless)
- Teaching – Not really my thing though still enjoy it (mostly)
- Balance – Also not really my thing however, I really love my work
- Adaptation – Absolutely necessary
- Capacity building – (nothing pithy to add here, it is just hard)

Discussion

- I have now been working in Zambia for fifteen years and physically living there for ten years
- Support for my work has been a mosaic:
 - Gates Foundation
 - UC Davis
 - NIH / CDC
 - J&J
- The funding landscape is... dynamic
 - Many new players are coming to the fore



Discussion: Research

- I have had the opportunity to ask questions of the data across several places on many topics though much of my work can be described in the HIV and COVID spaces

Discussion: Intention to Vaccinate

- The question: Is COVID vaccine uptake a predictor of intention to receive future novel vaccine(s) in urban Zambia?
- There are many new vaccines on the horizon, notably, tuberculosis the roll-out for which we would like to optimize

Discussion: Loss of Suppression

- Research question: Is (hazardous) alcohol consumption related to loss of HIV viral load suppression among individuals being released from an incarceration setting?

Discussion: Loss of Suppression

- Yes

Table 4. Primary Analysis Estimating Risk of Loss of Viral Suppression Postrelease Among Participants With Viral Suppression Prerelease (N = 205)^a

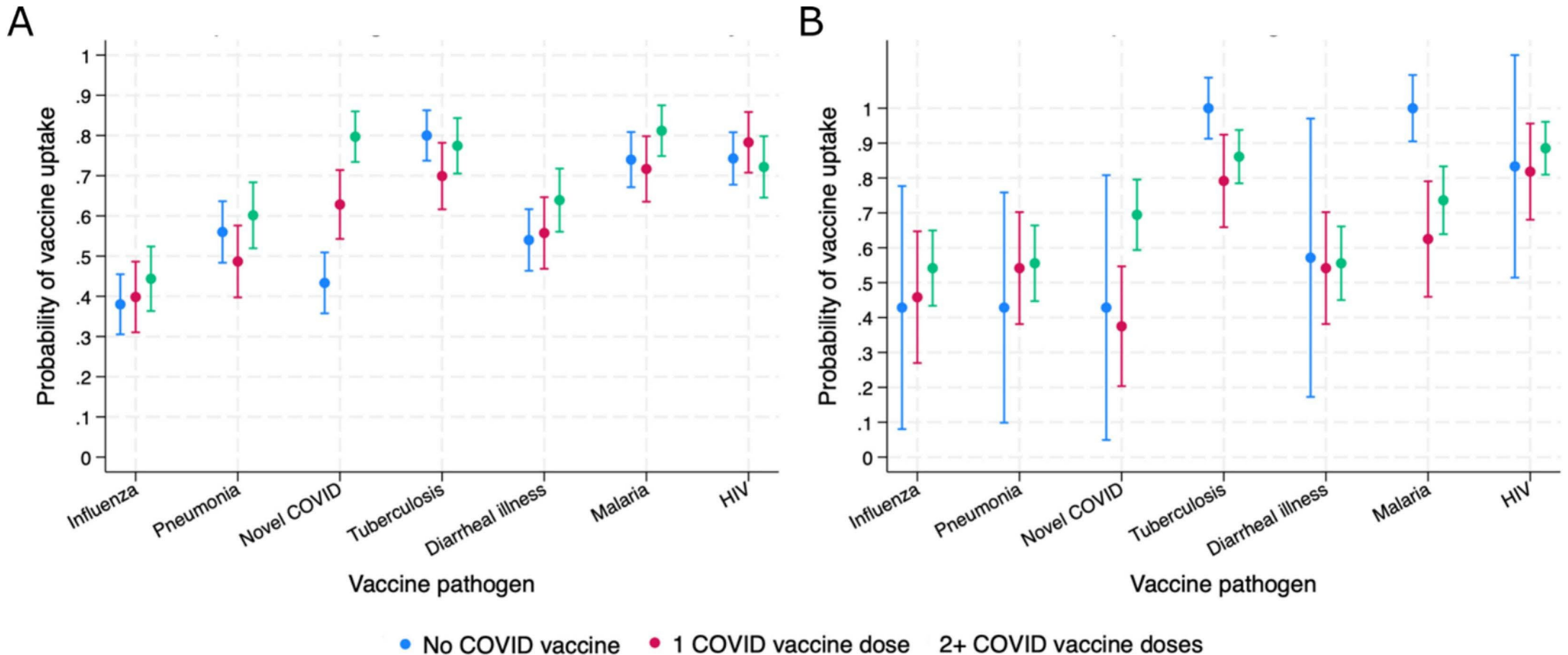
Factor	RR (95% CI)	<i>P</i> value	aRR (95% CI) ^b	<i>P</i> value
Unhealthy alcohol use ^c				
No	1 [Reference]	NA	1 [Reference]	NA
Yes	4.00 (1.90-8.42)	<.001	4.07 (1.97-8.42)	<.001

Discussion: Intention to Vaccinate

- Community members quasi-randomly recruited using “spin the pen” method from four difference urban communities in Lusaka, Zambia
- Healthcare workers recruited through convenience sampling across ten clinics located around the communities surveyed



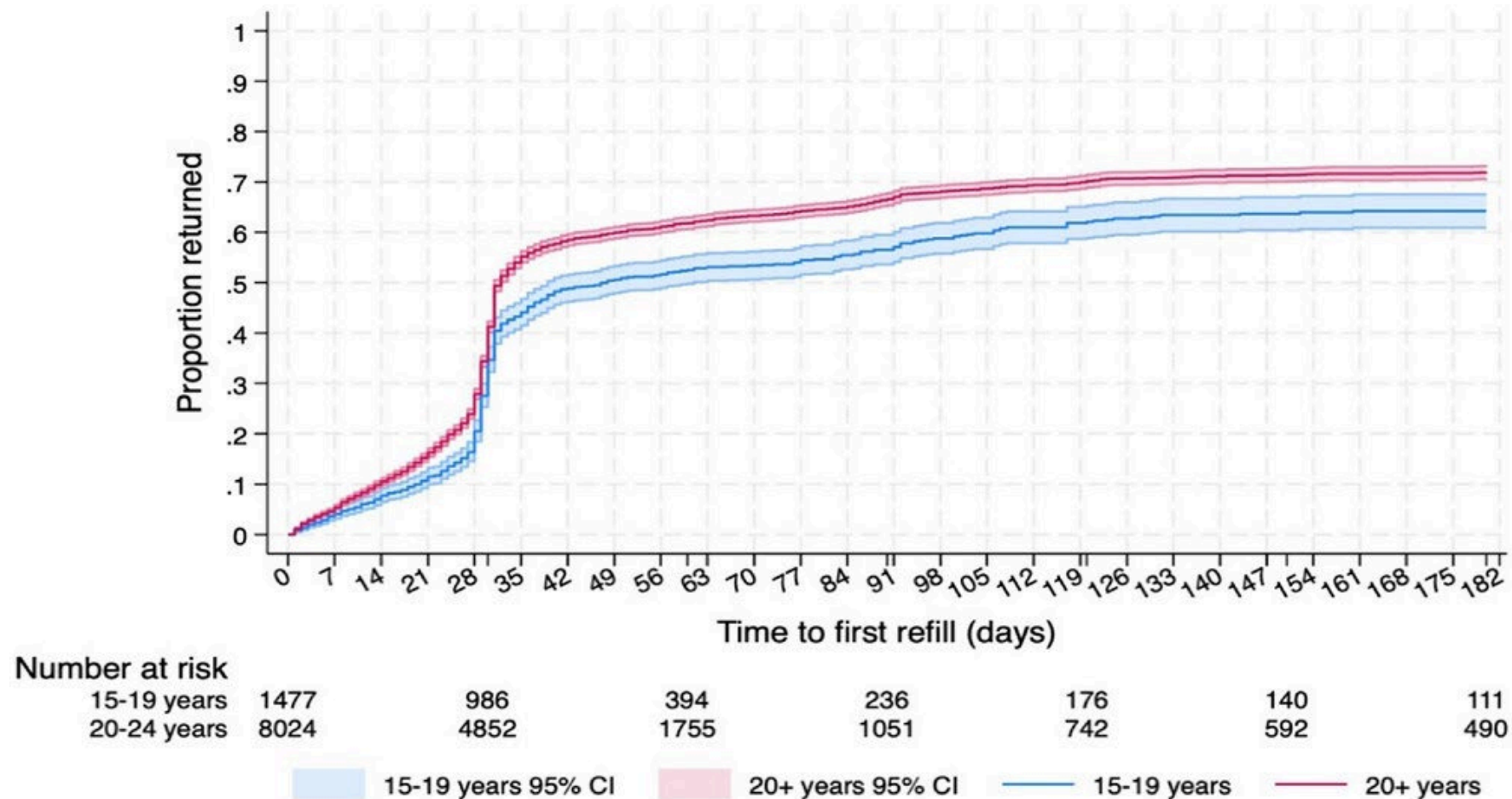
Discussion: Intention to Vaccinate



Discussion: Key populations and PrEP

- The question: Are DREAMS houses (United Nations funded safe spaces for young women to receive sexual and reproductive health services) effective places to engage and retain young women for receipt of HIV pre-exposure prophylaxis (PrEP)?
- In Zambia, young people, especially young women, participate in sex work
- In clinical settings, stigma and other factors often discourage PrEP uptake and maintenance

Discussion: Key populations and PrEP



Discussion: Person centered care (PCC)

- The question: Does supporting healthcare workers with mentorship and training improve client-reported HIV care satisfaction?
- Previous work by Elvin Geng (Professor of Medicine, Washington University) has shown that those out of HIV care often remain out of care for fear of the return visit
- So, does training on empathy and “being nice” to clients help keep people in care?

Discussion: Person centered care (PCC)

- The answer is, not really... at least not with suppression as an outcome
- However, it does improve perceived quality of care

	Participants	Control (n=632)		<6 months intervention (n=249)		≥6 months intervention (n=230)		Control vs <6 months intervention		Control vs ≥6 months intervention	
		Sum score*	Bad experience†	Sum score*	Bad experience†	Sum score*	Bad experience†	Adjusted difference for sum score (95% CI; p value)	Adjusted difference for bad experience, percentage points (95% CI; p value)	Adjusted difference for sum score (95% CI; p value)	Adjusted difference for bad experience, percentage points (95% CI; p value)
Overall	1111	9.9 (2.3)	147/632 (23.3%)	10.7 (1.9)	33/249 (13.3%)	11.1 (1.2)	8/230 (3.5%)	0.4 (0.0 to 0.8; 0.036)	-5.4 (-13.4 to 2.6; 0.19)	1.0 (0.5 to 1.5; 0.0003)	-16.9 (-24.8 to -8.9; <0.0001)

Discussion

- You are a GloCal fellow with global health experience – hopefully you have ideas about what you want to do next
- Finding what you are passionate about is more than half the battle
- Balance between doing what you want (autonomy) and compensation
 - Disclaimer: each has their own balance/price though having both is (probably) possible

Discussion

- Funding continues to be a tricky thing
 - My strategy has been to spread experience across multiple groups and funders (NIH, private, academic, etc.)
 - This is rarely conducive to balance
 - Networking and collaborating well (playing nice) has, for me, been an extremely important element of staying funded
 - Be open to iteration – suppress the Narcissist/ego

Zambia-Emory HIV Research Project (MPH)

- ZEHRP – Projects in Atlanta, Rwanda, and Zambia
- Contact: info@rzhrg-mail.org
- Website: School of Medicine, Emory University
(<https://med.emory.edu/departments/pathology/research/rzhrg/opportunities.html>)
- Open to MPH graduates – usually one year appointment with option to extend if desired

Many Thanks

- Please feel free to ask questions here or contact me via email

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