





# Myo Minn Oo

MBBS, PhD

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Myo-Minn-Oo |  myominnoo |  myominnoo

*I am an epidemiologist with keen interests in infectious diseases in vulnerable populations, global health, and implementation research. I have a deep driven passion for the application of data science, automation, and data products in health research. This very CV was even data-driven and compiled with code*

## Education

### Prince of Songkla University

*Hat Yai, Thailand*

PHD, EPIDEMIOLOGY

*Aug 2018 – Jul 2021*

- Dissertation: “Myanmar Migrants with Tuberculosis: Health Insurance, Delays in Access to Healthcare, Model of Care on Treatment Outcomes and Quality of Life in a Border Area of Thailand and Myanmar”
- Committee: François Henry Nosten (Chair), Tippawan Liabsuetrakul (Advisor), Virasakdi Chongsuvivatwong, Sawitri Assanangkornchai, Wit Wichaidit
- Received an excellent evaluation after successfully defending my PhD thesis.

### The Union, MSF Luxembourg, WHO-TDR

*Nepal & Sri Lanka*

STRUCTURAL OPERATIONAL RESEARCH INITIATIVE (SORT-IT) TRAINING COURSE

*Mar 2016 – Dec 2016*

- Research project: “Alarming attrition rates among HIV-infected individuals in pre-antiretroviral therapy care in Myanmar, 2011–2014” (doi: 10.3402/gha.v9.31280)

### University of Medicine

*Mandalay, Myanmar*

MBBS

*Jan 2007 – Dec 2012*

- Produced a report on vital statistics for a township in Myanmar that is among the most under-developed and remote areas of the country

## Research Interests

Infectious Disease Epidemiology (HIV/STI, TB, Malaria), Vulnerable Populations (Sex workers, gbMSM, Migrants), Global Health, Implementation Research, SRHR, MCH, Mental Health

## Professional Experience

### University of Manitoba

*Winnipeg, Canada*

POST-DOCTORAL FELLOW

*May 2022 – Present*

- Currently involved in projects in Nairobi, Kenya that aim to enhance understanding of the epidemiology and transmission dynamics of HPV in female sex workers and men who have sex with men (MSM).
- Learning bioinformatics workflows, specifically focusing on pipelines for bulk and single-cell RNA sequencing.
- Currently exploring health service research, access to health, mortality, and maternal and child health-related projects and secondary data to develop concept notes, protocols, and publications independently.
- Developed interactive Shiny projects and automated dashboards for improved monitoring and communication purposes.

### Swiss Tropical and Public Health Institute (University of Basel)

*Basel, Switzerland*

POST-DOCTORAL SCIENTIFIC COLLABORATOR

*Aug 2021 – Apr 2022*

- Conducted a feasibility study to assess the accuracy, reliability, and viability of calculating under-five mortality through repeated malaria surveys.

### Papua New Guinea Institute of Medical Research

*Goroka, Papua New Guinea*

SENIOR RESEARCH FELLOW

*Aug 2021 – Apr 2022*

- Successfully oversaw the National Health Facility Survey of 2021 and ensured its timely and effective completion.
- Designed and developed an automated interactive dashboard to facilitate the monitoring of the survey in a streamlined and efficient manner.
- Delivered technical consultations to both the Institute and the National Technical Working Group for Malaria.
- Completed a draft for an automated report for the 2021 Health Facility Survey.
- Conceptualized a QR linkage system for implementation in the upcoming malaria indicator survey.

### Prince of Songkla University

*Hat Yai, Thailand*

DOCTORAL STUDENT (CAREER BREAK)

*Aug 2018 – Jul 2021*

- Earned a full doctoral scholarship and secured two research grants to support my PhD field project.
- Published five first-authored papers, presented at the CDC Migration Summit in Singapore, and received the best oral presentation award in Indonesia.

## The Union, South-East Asia Office

RESEARCH FELLOW & TECHNICAL AIDE (BASED IN MYANMAR)

Mandalay, Myanmar

Aug 2016 — Jul 2018

- Undertook over 20 research projects across various countries, including Myanmar, Bhutan, Nepal, India, and China.
- Supervised and mentored over 10 participants
- Generated over 25 research outputs published in peer-reviewed international journals.
- Organized and led the third National SORT-IT course, as well as a workshop on TB research agenda in Myanmar.

## The Union, Country Office

MONITORING & EVALUATION OFFICER/MANAGER

Mandalay, Myanmar

May 2014 — Jul 2016

- Completed a one-year SORT-IT training program with success and published my first paper as the primary author, despite facing difficult health conditions and personal challenges during that period.
- Spearheaded the Monitoring and Evaluation Unit responsible for maintaining accurate records for more than 35,000 patients.
- Examined the attrition rates of the program and assessed the existing tracing system, resulting in subsequent improvements and more effective call-back procedures.
- Enhanced daily oversight of a team of 15 or more employees to promote streamlined workflows and enhanced communication.

## The Union, Country Office

MEDICAL OFFICER

Mandalay, Myanmar

Feb 2014 — Dec 2015

- Conducted daily outpatient consultations for over 50 patients with TB/HIV.
- Provided medical care and support to patients, which included prescribing essential treatments such as anti-retroviral drugs.
- Conducted an analysis and authored my inaugural abstract on the survival analysis of patients with HIV.

## Selected Publications

Since 2016, I have authored **34 research papers**. Some highlights are listed below, with citations taken from Google Scholar on 24 February 2023. My **h-index** is **12** with total citations of 386.

For a complete list of publications, see *my Google Scholar profile*.

1. Oo, M., Liabsuetrakul, T., Boonathapat, N., Aung, H., & Pungrassami, P. (2022). Treatment success among myanmar migrants with TB in thailand. *The International Journal of Tuberculosis and Lung Disease*, 26(6), 550–557.
2. Oo, M. M., Boonathapat, N., Aung, H. K. K., Pungrassami, P., & Liabsuetrakul, T. (2021). Changes in health-related quality of life and the associated factors among myanmar migrants with tuberculosis: A cohort study. *BMC Infectious Diseases*, 21(1), 1–8.
3. Feng, N., Edwards, J. K., Owiti, P. O., Zhang, G.-M., Rueda Vallejo, Z. V., Hann, K., Zhou, S.-S., Oo, M. M., Geoffroy, E. M., Ma, C., et al. (2021). Operational research capacity building through the structured operational research training initiative (SORT-IT) in china: Implementation, outcomes and challenges. *Infectious Diseases of Poverty*, 10(1), 1–4.
4. Oo, M. M., Liabsuetrakul, T., Boonathapat, N., Aung, H. K. K., & Pungrassami, P. (2021). Association of health insurance and documentation with stigma and social support among myanmar migrants with tuberculosis before and during thailand's policy on border closure due to COVID-19: A cross-sectional study. *Journal of Racial and Ethnic Health Disparities*, 1–13.
5. Oo, M. M., Tassanakijpanich, N., Phyu, M. H., Safira, N., Kandel, S., Chumchuen, K., Zhang, L. M., Kyu, H. A., Sriwannawit, P., Bilmumad, B., et al. (2020). Coverage of tuberculosis and diabetes mellitus screening among household contacts of tuberculosis patients: A household-based cross-sectional survey from southern thailand. *BMC Public Health*, 20(1), 1–10.
6. Oo, M. M., Tun, N. A., Lin, X., & Lucero-Prisno III, D. E. (2020). COVID-19 in myanmar: Spread, actions and opportunities for peace and stability. *Journal of Global Health*, 10(2).

## BOOKS

1. Oo, M. M. (2020). *A beginner guide to research data collection using EpiData*. Amazon Self-Publishing. <https://www.amazon.com/Beginner-Guide-Research-collection-EpiData/dp/B08F7M67QP>
2. Oo, M. M. (2023). *Principles and application of evidence-based public health practice: Chapter (16) the need for a paradigm shift to ensure adequate skilled human resources for effective public health practice*. Under Editorial Review @ Elsevier.

## R PACKAGES

1. Oo, M. M. (2020). *mStats: Medical data analysis*. <https://CRAN.R-project.org/package=mStats>
2. Oo, M. M. (2021). *u5mr: Under-five child mortality estimation*. <https://CRAN.R-project.org/package=u5mr>

## Works in progress

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1. Oo, M. M., MOORE, S., GIBBONS, S., ADHIAMBO, W., MUTHOGA, P., SIELE, N., AKOLO, M., Henok, G., SIVRO, A., BALL, B. T., LORWAY, R. R., SEVERINI, A., KIMANI, J., & MCKINNON1, L. R. (2023). High prevalence of vaccine-preventable anal human papilloma virus infections is associated with treated HIV infection among gay, bisexual, and men who have sex with men in nairobi, kenya. In *Cancer Medicine*.
2. Flow cytometry analysis and single cell transcriptome profiling of tissue resident memory t cells within the human cervical mucosa: Comparison of ectocervix and endocervix. (2023). In *Writing*.
3. Human papilloma virus genotypes and associated factors among female sex workers in nairobi, kenya. (2023). In *Analysis & Writing*.
4. Longitudinal trajectories of SARS-CoV-2 antibodies and incidence of breakthrough infections in a 2-year follow-up cohort. (2023). In *Analysis & Writing*.
5. Under-five child mortality estimation from repeated malaria indicator surveys in papua new guinea. (2023). In *Analysis & Writing: Vols. In collaboration with Swiss TPH and PNG IMR*.
6. Divergent HIV acquisition and inflammation outcomes associated with IFN-a2 and IFN-b expression in the female genital tract. (2023). In *Data Acquisition & Analysis*.

## Projects

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1. *SWOP HPV cohort with support from bill & melinda gates foundation*. (2023).
2. *COVID-19 antibody trajectory analysis project*. (2023).
3. *Patterns of healthcare access and health service utilization at SWOP clinics (data acquisition)*. (2023).
4. *Mortality and mental health among female sex workers in nairobi (preparing data collection)*. (2023).
5. *Hotspot mapping of sex workers in nairobi before and after COVID0-19 pandemic (data acquisition)*. (2023).

## Programming projects

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### mStats: Epidemiological Data Analysis

R

- R package for data management and epidemiological data analysis inspired by STATA

### u5mr: Under-Five Child Mortality Estimation

R

- R package for estimating under-five mortality rates using indirect methods mentioned in UN X manual and papers by Rajaratnam e.t.

### MalCon

R, RMARKDOWN, GITHUB

- A GitHub static webpage for Malaria Control Unit (MalCon) at Papua New Guinea Institute of Medical Research (PNGIMR)

### MalCon Dashboard

R, RMARKDOWN, AUTOMATION, CICD, ODK, FLEXDASHBOARD

- An interactive dashboard for monitoring the Health Facility Survey 2021 conducted in Papua New Guinea

### Personal Budget Manager

R, SHINY, MONGODB, SHINYAPP.IO

- A Shiny budget management app built with the Golem framework, free user registration, passcode authentication

### COVID-19 Antibody Trajectory App

R, SHINY, SHINYAPP.IO

- A Shiny data exploratory app for the purpose of communication with stakeholders, build with the Golem framework with user authentication

### XpertMagic

R, SHINY, SHINYAPP.IO

- A Shiny app to convert raw outputs from Gene Xpert machine for HPV genotypes and CTNG to tidy format, pre-specified upload data size

### Personal Webpage hosted on GitHub

R, RMARKDOWN, GITHUB

- A GitHub static personal webpage





## Presentations

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### STD/HIV/SRH Collaborative Research Group Annual Review Meeting

Kenya

ORAL PRESENTATION

Jan 2022

- HPV epidemiology and preliminary findings from SWOP HPV Study
- High prevalence of vaccine-preventable anal human papilloma virus infections is associated with treated HIV infection among gay, bisexual, and men who have sex with men in Nairobi, Kenya.

### 14th Postgraduate Forum of Health Systems and Policy

Virtual

ORAL PRESENTATION

Dec 2020

- Health insurance and out-of-pocket expenditure from symptoms to tuberculosis diagnosis among Myanmar migrants in a border area of Thailand

### 51st Union World Conference on Lung Health

Virtual

POSTER PRESENTATION

Oct 2020

- Coverage of health insurance schemes among Myanmar migrants with tuberculosis in a border area of Thailand and its associated factors: An interim analysis

### US CDC Migration Summit

Singapore

ORAL PRESENTATION

Nov 2019

- Cross-border TB referral system: a case study from Thailand

### 7th International Health Literacy Conference

Vietnam

POSTER PRESENTATION

Nov 2019

- Tuberculosis literacy and completion of household contact investigations: A household-based survey from Southern Thailand

### 13th Postgraduate Forum of Health Systems and Policy

Indonesia

ORAL PRESENTATION

Jul 2019

- Unsuccessful treatment outcomes after oral direct-acting antivirals in people with chronic hepatitis C virus infection and its associated factors

### Ph.D. Candidate examination

Thailand

ORAL PRESENTATION

Feb 2019

- Unsuccessful treatment outcomes after oral direct-acting antivirals in people with chronic hepatitis C virus infection and its associated factors

## Grants, Awards, and Honors

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### Thailand Education Hub for ASEAN Countries (THE-AC)

Thailand

FULL DOCTORAL SCHOLARSHIP

Aug 2018 - Jul 2021

- Awarded a complete three-year scholarship to pursue a Doctoral degree in Epidemiology.

### Health System Research Institute (HSRI), Thailand

Thailand

RESEARCH GRANT (GRANT NUMBER: 62-082)

Jul 2019 - Jan 2021

- Awarded to conduct research and produce policy documents on the topics of health insurance, legal status, and their effects on the health outcomes of Myanmar migrants in Thailand.
- Funding amount: \$20,000 USD

### Fogarty International Center, National Institutes of Health, US

Thailand

RESEARCH GRANT (GRANT NUMBER: D43TW009522)

Jul 2019 - Jan 2021

- Awarded to conduct fieldwork for my PhD in the border area between Thailand and Myanmar.
- Funding amount: \$4,000 USD

### 13th International Post Graduate Forum on Health System and Policy

Yogyakarta, Indonesia

BEST ORAL PRESENTATION AWARD

Jul 2019

- Prize: \$100 USD

### The International AIDS Society

The IAS Conferences

ABSTRACT MENTORSHIP

2016 - Present

- Providing mentoring to improve the quality of abstracts and increase their chance of acceptance.

### Center for Operational Research, The Union

Myanmar

RESEARCH FELLOWSHIP

Aug 2016 - Jul 2018

- Facilitating evidence-based policy changes by conducting operational research.

- Advancing evidence-based policy changes through the implementation of operational research.

## Teaching

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### Swiss Tropical and Public Health Institute

INVITED SPEAKER

*Basel, Switzerland**Oct 2021*

- Shared a personal account of migration and health at the border area.

### Global Public Service Academies Program (USA)

INSTRUCTOR

*Mae Sot, Thailand**Oct 2019 - Feb 2020*

- Delivered two lectures on the topic of migration and public health with a focus on tuberculosis control, to high school students from Japan, Australia, Canada, and the United States.

### University of Community Health

INVITED LECTURER

*Myanmar/Burma**Feb 2019*

- Conducted a two-day training workshop on the application of R for medical statistics.

### SORT IT course

MENTOR

*Sri Lanka, China, Myanmar**Mar 2016 - Jul 2018*

- Provided mentorship to more than 20 international participants.
- Taught data management and applied statistics.
- Created and delivered a lecture on the subject of Effective Research Communication through Infographics.

## Skills

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**Development:** Version Control (Git) • Automation & CICD (Travis CI, GitHub Action) • Web Hosting (Netlify, GitHub) • Shiny app (Golem framework)

**Language:** Burmese (Native) • Lisu (Native) • English (C2) • Chinese (A2) • Thai (A2) • French (A1) • Tok Pisin (A1) • Swahili (A1)

**Markup Languages:** HTML • CSS • Markdown • Rmarkdown • YAML

**Programming Languages:** R • Python • SQL • JAVA • JavaScript • BASH

**Research:** Systematic Review • Epidemiology in TB (Mahidol University, 2019) • Lab Training in TB Microbiology (Mahidol University, 2019) • Cohort study design and analysis • Epidemiology in Public Health Practice Specialization (Johns Hopkins Bloomberg School of Public Health, 2020)

**Statistics and Data Science:** Longitudinal Data Analysis (GEE, Mixed Models) • Causal Inference (SEM, DAG) • Meta-analysis • Epidemiological Methods • Child mortality Estimation • Statistical Modelling • Egocentric Network Analysis • Survey Methods • The Data Scientist's Toolbox (The Johns Hopkins University)

**Text Editors:** Rstudio • Visual Studio Code • Vim

**Communication:** Dashboard Design (R, Shiny, Flexdashboard) • Reproducible Research (Rmarkdown) • data visualization (ggplot2, arcGIS, qGIS) • peer-reviewed publications (journal, conference)

## Services

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**Academic Editor:** PLoS One (2022 - Present)

**Affiliate:** Prince of Songkla University (2018 - 21)

**Editorial Board:** Public Health Challenges (2021 - Present)

**Member:** National Technical Working Group (Malaria) (2021 - 22) • PNGIMR Research Network (2021 - 22) • SORT-IT OR Network, Myanmar Society of Epidemiology (MSE), Myanmar Medical Association (MMA) (2016 - Present)

**Mentor:** The International AIDS Society Conferences (2016 - Present)

**Myanmar R User Group (Monthly Meetup):** Virtual (2022 - Present)

**R for Researchers (Monthly Meetup):** University of Manitoba (2022 - Present)

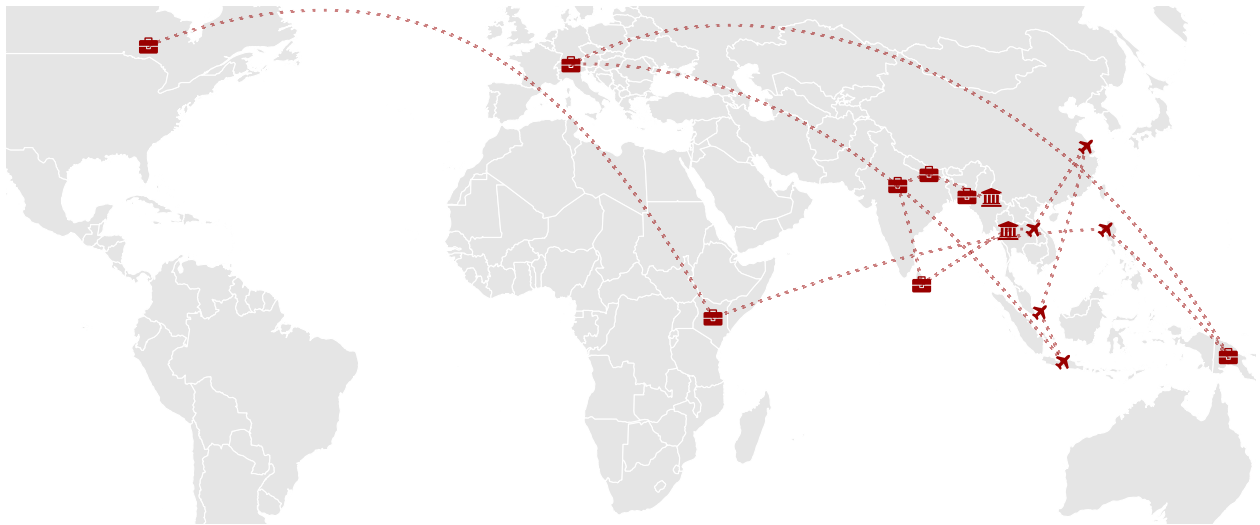
## Online Tutorials

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1. Create Publication-Ready Tables using `gtsummary`
2. R Webinars
3. Statistics & Public Health Webinars
4. Git & GitHub Basics
5. Making infographics using MS PowerPoint
6. Data entry using EpiData Manager & EntryClient
7. Introduction to R and RStudio
8. Statistics with R - ENGLISH Version
9. Statistics with R - MYANMAR Version

## Charting the Course: Reflecting on My Journey Thus Far

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This figure is created using the packages, `rnaturalearth`, `sf`, `sfnetworks`, `emojifont`, and `ggplot2`.

## References

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Available on request.

## Note

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This document is written in `rmarkdown` and generated using `vitae` package and `awesome-cv` template. All the source code behind this CV is available on this GitHub repo.