# Nicola Cloete Foster, PhD

**Statistical Epidemiologist**

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LinkedIn | GitHub | Location: London, UK

## Profile

Statistical Epidemiologist with over 15 years of applied experience analysing infectious-disease data to inform policy and optimise resource allocation in high-burden settings. Combines advanced biostatistical expertise with pragmatic health-economic evaluation to generate actionable insights for country treatment programmes. Proven collaborator across academia, government, and global-health partners, with a record of mentoring analysts, publishing high-impact research, and ensuring reproducible, policy-relevant analytics.

## Key Skills

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| Programming | R (advanced), STATA (advanced), SQL (intermediate), Python (basic) |
| Trials | Full development experience in late phase (phases III–IV) trials; cluster randomised trials; pragmatic trials |
| RWE | CPRD data; observational study design and analysis |
| Methods | Causal inference, Bayesian hierarchical modelling, meta-analysis; high dimensional data analysis; state-transition modelling (Markov models); fitting complex models to observed outcomes; multiple imputation; sequencing analyses; time-to-event analyses. |
| Regulatory | Led regulatory engagement for the work packages I was responsible for. GCP; ICH E9 (familiarity); data privacy; FAIR open science. |
| HTA | Trial-based cost-effectiveness analysis; equity analyses; cost analyses; and cost-effectiveness modelling |
| Workflow | Reproducible pipelines using Quarto; RMarkdown; GitHub |
| Team leadership | Mentoring, collaboration in cross-functional (matrix) global teams |

## Education

**PhD in Public Health**, University of Cape Town, South Africa, 2013–2019

**MPH** (Econometrics & Statistics), University of Cape Town, South Africa, 2008–2011

**BPharm**, Nelson Mandela University, South Africa, 2002–2005

## Employment History

### Statistical consultancy service – Equicalcs

*2024 to present*

- Developed an innovative programme of work, examining health inequalities among migrant populations globally.

### Post-doctoral Biostatistician – University College London

*2024 - 2025*

- Statistician for the MARES project, evaluating case finding approaches for chronic respiratory diseases in Brazil.
- Designed and delivered statistical analysis -, and data management plans.
- Statistical support for clinical research (>9 projects) at Royal Free Hospital, London.

### Research Fellow (Lead Health Economist) - LSHTM/ ASCENT Trials Consortium
*2020–Present*
- Lead statistician of the economic evaluation of a cluster-randomised trial supporting tuberculosis treatment adherence in Ethiopia.
- Developed equity and cost-outcome analysis plans; led simulation-informed model specification; implemented imputation of clustered missing data; conducted sensitivity analyses; meta-analysis and heterogeneity assessment from systematic reviews.
- Managed junior analysts and led regulatory engagement for the economic evaluation.

### Research Fellow - Lancaster University, United Kingdom
*2019–2020*
- Led analytical components of real-world data evaluation of NHS palliative care services.
- Statistical analysis plans and design for Phase IV trials in NHS.

### Researcher/PhD Researcher - University of Cape Town, South Africa
*2013–2018*
- Funding acquisition for PhD work (BMGF & SAMRC).
- Developed Markov multi-state models for TB screening and disease progression.
- Led regulatory engagement for the socio-economic and modelling work packages.
- Supervised MSc students in statistics & econometrics.

### Junior Research Officer – University of Cape Town, South Africa
*2011-2013*
- Led a team of 4 analysts in data collection & production of analysis datasets for the XTEND cluster randomized trial & XPHACTOR studies.
- Developed CRFs, SOPs and data analysis plans.
- Led the socio-economic work package for the XTEND study which informed SA government multi-agency engagements on additional socio-economic support for patients with TB.
- Provided senior-level leadership, identifying mediators of intervention effectiveness – which informed the mathematical modelling work.

### Pharmacist – Department of Health, South Africa
*2007-2008*
- Responsible pharmacist for outreach pharmaceutical care in rural health service.

### Various Clinical Posts – South Africa
*1999 – 2006*
- Clinical posts in private and public sector in South Africa.

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**Publications & Selected Outputs** (full list available from: [Google Scholar](#))
- FOSTER N et al. Evaluating the equity impact and cost-effectiveness of digital adherence technologies with differentiated care to support tuberculosis treatment adherence in Ethiopia: protocol and analysis plan for the health economics component of a cluster randomised trial. *Trials* (2023) *24* (1), 292.
- FOSTER N et al. Social determinants of the changing tuberculosis prevalence in Việt Nam: Analysis of population-level cross-sectional studies. *PLoS Medicine* (2022) *19* (3).

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**Technical Advisory Group Memberships**

- World Health Organisation/ South African National Department of Health Technical Advisory Group for Tuberculosis Patient Cost Studies in South Africa.
- TB Modelling and Analysis Consortium (TB-MAC) and Adherence Support Coalition to End TB (ASCENT).
- LSHTM Co-chair of the Gender Equality Taskforce (Athena Swan); LSHTM race equity group

**Leadership, Training & Certifications**
- Advance HE Aurora Leadership Programme for Women (2023/24); Leader at Lancaster Programme (2020)
- Short courses: Model fitting and inference for ID dynamics (LSHTM), Design & Analysis of Cluster Randomised & Stepped Wedge Trials (LSHTM), Causal inference (Charité/ Harvard)