

Ridhima Sodhi

Economist | Data Science and Policy Professional

WHO SEARO (Technical Expert, Tuberculosis)

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Education

- MS Public Policy & Management, Carnegie Mellon University, H. John Heinz III College, United States, Dec 2016

- MA Economics; Delhi School of Economics, India, July 2012

Methods

- Econometric Analysis
- Impact Evaluation
- Cost Benefit Analysis
- Qualitative Analysis
- Propensity Modeling
- Survival Analysis
- Survey Methods

Tools

- R- Studio & Python
- STATA
- SAS & SQL
- GAMS (General Algebraic Modeling Language)

Capacity/Data Science

Training

Audience examples include employees at major international think-tanks (e.g., USDA), state governments (e.g., New York, Illinois), government bodies (e.g., US Census Bureau, India's NITI Aayog), and mission-driven organizations like the William J. Clinton Foundation

Policy professional with 12+ years of experience across programmatic disease management, impact evaluation, social protection, health financing, and international trade.

Clients/collaborations include international organizations (WHO, Clinton Foundation, Chemonics International, USAID, Access Health International, Gates Foundation, Palladium), academic institutes (New York University, University of Michigan, Indian Institute of Public Health, ISB, Imperial College London), and consulting/design firms.

Experienced instructor in data science, quantitative methods, and data visualization.

WORK EXPERIENCE

Consultant, TB Programs, William J Clinton Foundation

Jul 2020 – March 2025

Led research and data analytics for **TB programs**, whilst also supporting program design / implementation and grant writing. Strategic thought partner for **infectious disease programs**

- Authored a series of studies on **patient & provider engagement** for one of the largest private sector engagement programs – commonly known as JEET (Joint Effort for Elimination of Tuberculosis). A full list of published studies can be found in the *manuscript* section. Selected studies include:
 - **Adverse Drug Reactions (ADRs)** among TB patients (*expected PLOS GPH*, 2025)
 - **Evaluation exercise** to study the impact of global investments in TB
 - Assessment of **Digital Technologies** in improving treatment outcomes (**PLOS 2024**)
 - **Free drug availability** and its impact on treatment outcomes (**BMC 2023**)
 - **Cost evaluation exercise** comparing different service delivery models for TB
- Authored a series of research papers & briefs on **latent TB management**
 - Investigating TB incidence among those who have completed latent TB treatment
 - Exploring practical considerations of using screening tools (CxR/IGRA)
- Designed and implemented a **unique automated M&E solution (R markdown)** to manage WJCF's on-ground interventions. Also contributed to developing similar tools for the **Central TB Division**, Ministry of Health & Family Welfare, India.

Solution exhibited at **India Innovation Summit (March 2025)**, New Delhi, for national scale-up. A sample of the solution can be viewed online at this [link](#)

- Supported grant writing and protocol development for projects funded by **USAID, Gates Foundation**, and **Global Fund**. These include initiatives on **differentiated healthcare, Active Case Finding (ACF)** for at-risk populations, utilizing innovative methods such as **digital/mobile CxR** and **pooled swab** testing

MERL Manager, FHM-Engage, Chemonics International

Sep 2023 – June 2024

FHM Engage is a USAID flagship project aimed at enhancing health markets to address supply-side gaps and consumer needs, focusing on family planning (FP) and other health services worldwide.

- Led the **Monitoring and Evaluation (M&E)** for the program – centrally, as well as for SR partners
- Led **stakeholder engagement & partnerships** efforts – bringing together partners from across the government (regulatory agencies), non-profit, and industry partners.
 - Women's Health & Livelihood (**WoHLA**), a unique cross-sectoral coalition, was launched as part of this initiative
- Supported **program implementation** to drive demand – through **CSCs (Common Service Centres, Government of India initiative)**, private clinics / hospitals, and digital partners
- Led **research on key women's health issues** (unintended pregnancy, contraceptive use, counselling, post-abortion care). Supported the first comprehensive analysis of **Long-Acting Reversible Contraceptives (LARCs)** in India

Consultant, Clinton Health Access Initiative (Vietnam)

Nov 2023 – Jan 2024

Assisted in developing a research protocol to evaluate the efficiency of **pooled swab testing** versus standard TB testing for Active Case Finding (ACF) camps and general diagnostics

Consultant, Indian Institutes of Public Health

Jul 2023 – Sep 2023

Led the quantitative evaluation of Nikshay Mitra, India's largest community-driven nutrition support program for TB patients. The study analyzed program uptake across different groups and evaluated its impact on TB treatment outcomes. Manuscript published in the **Indian Journal of Community Medicine**

Consultant, Treemouse

Jul 2023 – Sep 2023

Led a nation-wide quantitative study to understand a) digital knowledge patterns among citizens, and b) access and usage of social services through government biometric systems

Health Financing & Data Expert, P4H Network, WHO HQ

Nov 2021 - Oct 2022

Supported the network in adopting a data-driven approach to **Universal Health coverage**, across LMICs

- Provided technical support to country partners on health financing activities and authored a needs-evaluation report for capacity building in data analytics
- Led the design and development of a data-intensive web dashboard focusing on UHC indicators, catastrophic health expenditure, and unmet healthcare needs
- Contributed to grant writing and co-creation processes, including support for the HPSR (Health Policy & Systems Research) project funded by USAID, which focused on assessing domestic health financing opportunities
- Co-led partnerships with the Health Systems Strengthening Accelerator and facilitated collaborations with organizations such as AHP SR, Seoul National University, R4D, OpenIMIS, GIZ, and Swiss TPH

Research Fellow, McKinsey India

Apr 2019- Jun 2020

Built a 60+ country econometric model to understand the effects of advances in technology (Artificial Intelligence and Internet of Things – AI & IoT) on employment within the Future of Work (FoW) stream

Consultant, International Trading Economics

Feb 2020 – Apr 2020

Simulated the effect of multiple trade-agreement scenarios to inform an ongoing FTA (free trade agreement) negotiation. Piloted a semi-automated system for simulating trade agreement scenarios using nonlinear methods in R Studio (originally in GAMS)

Associate Research Scientist, New York University

May 2017- Dec 2018

Provided support to various research activities, teaching, and government sponsored projects in urban healthcare, social welfare, and disruptive innovation. Managed projects for US government (USPTO, White House); academic partners (IRIS, University of Michigan). Provided support to New York Healthcare Department, New York Mayor's office and state governments

Teaching & Education:

- Coleridge Initiative, Data Driven Decision Making for Government, Founding member
- Graduate Teaching, Applied Data Analytics for Public Policy

Research Assistant, Palladium, Washington D.C.

Jun 2016 - Aug 2016

Supported the HP+ project on health financing, HIV treatment estimates, reproductive health data analysis, and catastrophic health expenditure assessment in Guatemala

Assistant Manager, Credit & Fraud Risk; Barclays (India)

Feb 2013 - Jul 2015

Assistant Manager, Analytics & Research; IBM (India)

May 2012 - Jan 2013

Manuscripts *(embedded links where available)*

- (pre-publishing) Strengthening TB Care Pathways: Integrating Informal and AYUSH Practitioners for Early Diagnosis and Referral; Ridhima Sodhi, Shruti Goel, Rohit Bhagel, Kiran Rade, Kshitij Khaparde, Harkesh Dabas, Shamim Mannan, Manoj Singh; *ongoing peer review – expected 2025*
- (pre-publishing) Adverse Drug Reactions in Tuberculosis Treatment: Incidence, Reporting and Outcomes; Insights from a Mixed-Methods study across eight Indian cities; Ridhima Sodhi, Tunisha Kapoor, Vindhya Vatsyayan, Iti Seth, Harsh Chandra, Nishita Gill, Manoj Singh, Arnab Pal, Shamim Mannan; *PLOS Global Public Health (expected 2025)*

- H. Shah et al., “Assessing the Role of Pradhan Mantri TB Mukh Bharat Abhiyaan in India’s Fight against TB: A National-level Data-based Research Investigation,” *Indian J. Community Med.*, Mar. 2025, doi: [10.4103/ijcm.ijcm_418_24](https://doi.org/10.4103/ijcm.ijcm_418_24)
- R. Sodhi et al., “Impact of a pilot mHealth intervention on treatment outcomes of TB patients seeking care in the private sector using Propensity Scores Matching—Evidence collated from New Delhi, India,” *PLOS Digit. Health*, vol. 3, no. 9, p. e0000421, Sep. 2024, doi: [10.1371/journal.pdig.0000421](https://doi.org/10.1371/journal.pdig.0000421).
- S. Ricks, A. Singh, R. Sodhi, A. Pal, and N. Arinaminpathy, “Operational priorities for engaging with India’s private healthcare sector for the control of tuberculosis: a modelling study,” *BMJ Open*, vol. 14, no. 3, p. e069304, Mar. 2024, doi: [10.1136/bmjopen-2022-069304](https://doi.org/10.1136/bmjopen-2022-069304)
- R. Sodhi, M. J. Penkunas, and A. Pal, “Free drug provision for tuberculosis increases patient follow-ups and successful treatment outcomes in the Indian private sector: a quasi-experimental study using propensity score matching,” *BMC Infect. Dis.*, vol. 23, no. 1, p. 421, Jun. 2023, doi: [10.1186/s12879-023-08396-5](https://doi.org/10.1186/s12879-023-08396-5).
- Global Spending on Family Planning and Reproductive Health, 2018 (Journal, Center for International Relations and Politics, Institute of Politics and Strategy, Carnegie Mellon University); *Ridhima Sodhi*
- Glennon, Britta & Lane, Julia & Sodhi, Ridhima, 2018. "Money for Something: The Links between Research Funding and Innovation," *IZA Discussion Papers 11711, Institute of Labor Economics (IZA)*
- Smart Street Sweeping in the City of Pittsburgh, PA (Panel Paper, **APPAM, Washington DC, 2017**); *Ridhima Sodhi, Justin Cole, Mark Egge, and Wei Zhang*
- (Research support) T. Fagan, A. Dutta, J. Rosen, A. Olivetti, and K. Klein, “Family Planning in the Context of Latin America’s Universal Health Coverage Agenda,” *Glob. Health Sci. Pract.*, vol. 5, no. 3, pp. 382–398, Sep. 2017, doi: [10.9745/GHSP-D-17-00057](https://doi.org/10.9745/GHSP-D-17-00057)
- (Research support) C. Barker, A. Dutta, and K. Klein, “Can differentiated care models solve the crisis in HIV treatment financing? Analysis of prospects for 38 countries in sub-Saharan Africa,” *J. Int. AIDS Soc.*, vol. 20, no. Suppl 4, p. 21648, Jul. 2017, doi: [10.7448/IAS.20.5.21648](https://doi.org/10.7448/IAS.20.5.21648)

Working Papers (selected papers available on request)

- Post-TPT (TB Preventative Therapy) Progression and Risk Factors: A Longitudinal Study of Household Contacts Across Nine Indian States; Ridhima Sodhi, et al
- Chest X-Ray as a Critical Screening Tool for TB Preventative Therapy: Lessons from Three Years of Programmatic Data Across Ten Indian States; Ridhima Sodhi, et al
- Engaging private sector providers in TB care - Understanding incentive mechanisms among frontline healthcare employees; Ridhima Sodhi, et al

Selected Projects | Carnegie Mellon University

Reports are available on request

US Department of Agriculture (USDA): Analyzed public and private investment in agricultural research, key players, and the evolving market structure. Detailed policy implications for food security, innovation, and international competition. Created a panel dataset from Compustat data on investment trends in agri-based industries since the early 1900s and used econometric methods to estimate R&D investment's impact on agricultural production.

Smart Street Sweeping, Pittsburgh, Pennsylvania: Developed a geo-spatial solution to improve daily cleaning operations by reducing parking offenders. Collaborated with city, county, and state officials to quantify potential losses (resident health, city revenue, and satisfaction) and identify administrative constraints for regulatory change. The solution was widely published and featured in the APPAM panel ([link](#)).

HIV Prevention Study in South Africa (USAID): Developed behavioral models to understand factors behind varying adoption rates of contraception and PrEP, aiming to improve awareness of HIV prevention, treatment, and safe sex behaviors. Part of the POWER (Prevention Options for Women Evaluation Research) study.