

Ridhima Sodhi

Economist & Data Scientist | Public Policy Professional
Technical Expert (Tuberculosis), WHO SEARO

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Economist and policy professional with ~13 years of experience working at the intersection of public health, social protection, and data systems, supporting evidence-driven decision-making. Authored scientific publications, assessing programmatic and clinical evidence ([details](#)). Developed and scaled innovative open-source decision-making tools; adopted by governments, I-NGOs and multilateral agencies, across multi-state / national level programs ([link](#)). Designed & led several capacity-building initiatives, across academic, public and private settings.

Academics

- **Research Scientist;**
New York University
(2017-18)
- **MS Public Policy & Management,**
Carnegie Mellon University, Heinz College, United States, Dec 2016
- **MA Economics; Delhi School of Economics,** Delhi University, India, July 2012

Methods

Linear & non-linear Regression, Propensity Score, Causal Inference, Cost Effectiveness, Clinical Protocol Development (Survey Design), GIS, Visualization

Tools

R- Studio, Python, Stata, SQL, GAMS

Capacity Training

- (India, CHAI); Economics & Data Science Methods
- (USA, NYU); Data Science Methods for Employees at international organizations (USDA, World Bank), Government officials, and Graduate Students
- (India); Machine Learning for Government Officials & Business leaders
- (India); Analytics Workshop for Engineering/MBA

WORK EXPERIENCE

Senior Consultant – Evidence and System Strengthening, Tuberculosis Programs *William J. Clinton Foundation (WJCF), India | Jul 2020 – Mar 2026*

Led evidence integration and operational system design across multi-state TB programs, working at the intersection of financing transitions, private-sector engagement, and program performance.

- **Research & Evaluation:** Led multiple quantitative/qualitative analyses across the TB care continuum (funding transitions, adherence, health financing, private sector engagement, diagnostic pathways). Workstreams included scientific protocol writing, survey design, leading on-ground field efforts, selecting and managing research agencies, conducting modeling & data visualization, and authoring manuscripts ([Manuscript section](#)); Selected examples:
 - Strengthening TB Pathways: Integrating Informal and AYUSH Practitioners ([accepted PLOS GPH](#))
 - Large Scale Program Evaluation: Public Private Models for TB elimination ([pre-print on request](#))
 - Implementation Research: Operational Cascade of Latent TB programs ([pre-print on request](#))
 - Implementation Research: Importance of Chest X Ray screening for TB ([pre-print on request](#))
 - Cohort Study: Understanding TB incidence among household contacts of TB patients ([Pre-Print](#))
 - Primary Research: Investigating incidence and impact of ADRs among TB patients ([PLOS GPH](#))
- **Systems and Innovations**
Designed and implemented [Smart M&E](#), an automated decision-support reporting system, adopted in 11+ states, embedding statistical analysis directly into routine decision making
- **Resource Mobilization & Program Design:**
 - Supported and led grant writing for multiple projects, including subsequent donor communications and program design activities
 - Supported restructuring of program logic and reporting systems during funding transitions and donor review cycles across multi-state TB initiatives
- **Partnerships:** Supported collaborations with NTEP, Global Fund, and Gates Foundation to align strategy, funding, and research priorities. Managing academic partnerships (Imperial College, Indian School of Business) to strengthen evidence generation

MERL Manager, FHM Engage (*Frontier Health Markets, USAID's Health Markets Program*) *Chemonics International | Sep 2023 – June 2024*

Core leadership team for FHM Engage, USAID's flagship \$135m+ market shaping multi-national program, targeting 1M+ women in India to improve access to reproductive health products and services. Designed the MERL architecture during program setup, aligning performance metrics, sub-recipient systems, and financing frameworks

- **MERL:** Developed the MERL portfolio for India, whilst leading M&E functions for sub-recipients; led and supported research activities (independently and through contracted agencies)
- **Market Strengthening & Demand Generation:** Supported market-shaping for improved women's health products, including higher-generation contraceptives and Long-Acting Reversible Contraceptives (LARCs).
Managed partners for digital and offline demand generation; including through mapping and engagement of India's [Community Service Centres \(CSCs\)](#) to strengthen distribution.
- **Partnerships:** Facilitated collaborations among government regulators, digital health providers, and NGOs; towards the creation of [Women's Health & Livelihood coalition \(WoHLA\)](#), a multi-stakeholder initiative to align policy, service delivery, and market-based solutions.

Health Financing & Data Expert

P4H Network, WHO HQ (Geneva) | Nov 2021 – Oct 2022

P4H Network is a coalition / network, situated out of the WHO HQ (Geneva), supporting multiple governments across the world in their health financing and data needs.

- **Technical Support:** Advised country-partners on domestic health financing reforms and evidence driven decision making, with a focus on sustainable UHC pathways
- **Partnerships:** Led collaborations with private, public and academic organizations such as Alliance for Health Systems and Research, Seoul National University, Results Development (R4D), OpenIMIS, GIZ, and Swiss TPH
- **Data Science / Technology:** Led the design and development of a data-intensive web dashboard focusing on unmet needs and catastrophic healthcare expenditures – [*p4h.world*](#)
- **Resource Mobilization:** Secured and co-led a USAID [Health Policy & Systems Research](#) (HPSR) grant to assess domestic financing opportunities

Short Term Consultancies

- **Technical Expert, TB, WHO SEARO (2024 – 2029; rostered position)**
- **Clinton Health Access Initiative, Global TB Teams (2024 - 2025):** Provided technical advisory on clinical protocol development and cost - benefit evaluation of advanced TB diagnostics (e.g., pooled swab testing) in Vietnam and China. Designed sampling strategies and survey instruments to compare unit costs across community testing approaches, and supported project design to assess diagnostic yield and programmatic impact.
- **Indian Institutes of Public Health, Gandhinagar, India (Jul 2023 - Sep 2023):** Led quantitative evaluation of *Nikshay Mitra*, India's largest community-driven nutrition support programme for TB patients; **Manuscript** published in the Indian Journal of Community Medicine (2025)
- **Treemouse, India (Mar 2023 – Sep 2023):** Led a nationwide primary-quantitative study on digital knowledge patterns and access to social services via national biometric systems; supported by [UIDAI, Government of India](#), and Omidyar Foundation
- **International Trading Economics, Mauritius (Feb 2020 - Apr 2020):** Modelled trade agreement scenarios using nonlinear methods in R Studio to inform FTA negotiations; piloted a semi-automated simulation system
- **Infinite Sum Modeling, Seattle, USA (Jan 2017 - Apr 2020):** Advised on health systems modelling; co-led data science trainings for government and policy practitioners on machine learning and econometrics
- **Palladium International, Washington D.C. (USA) (Jun 2016 - Aug 2016):** Supported **HP+ project** on health financing, HIV treatment estimates, reproductive health, and catastrophic health expenditure analysis.

Research Fellow

McKinsey India | Apr 2019 – June 2020

Augmented the *Future of Work* econometric model to assess global job transitions driven by Artificial Intelligence (AI) and Internet of Things (IoT) adoption. The model was enhanced to expand country portfolio (60+ countries), extending forecasts, and migrating the model to an open-source framework for broader application and transparency.

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), whilst providing support to state healthcare departments

Teaching & Education:

- Founding member of the [*Coleridge Initiative*](#) – *Data Driven Decision Making for Government*, a data science training program for policy professionals integrating advanced analytics and **machine learning** applications
- Co-Designed and supported teaching a new graduate level course '*Applied Data Analytics for Public Policy*', equipping students with skills in statistical modelling, predictive analytics, and evidence-based decision-making.

Assistant Manager, Credit and Fraud Risk Modeling

Barclays (India) | Feb 2013 – Jul 2015

Predictive modeling and routine inspections for credit & fraud risk for real-time segmentation and transaction decision

Assistant Manager, Analytics & Research

IBM (India) | May 2012 – Jan 2013

Predictive analytics and optimization solutions for clients across sectors

Publications | [embedded links where available](#)

- Sodhi R, Goel S, et al. Strengthening TB Care Pathways: Integrating Informal and AYUSH Practitioners for Early Diagnosis and Referral; PLOS Glob Public Health. doi:10.1371/journal.pgph.0004149 (*accepted; publication awaited*)
- Sodhi R, Kapoor T, Vatsyayan V, Seth I, Chandra H, Gill N, et al. Adverse drug reactions in tuberculosis treatment: Incidence, duration and resolution pathways from a mixed-methods patient-centric study in India. Robinson J, editor. PLOS Glob Public Health. 2025;5: e0004149. doi:[10.1371/journal.pgph.0004149](https://doi.org/10.1371/journal.pgph.0004149)
- H. Shah et al., "Assessing the Role of Pradhan Mantri TB Mukta 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
- 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)

Under Peer-Review | [pre-prints available](#)

- Private Sector Engagement in Tuberculosis Response in India: Transitioning from International Donor to Domestic Funding; Ridhima Sodhi, Pranati Das, Manoj Singh, Raghuram Rao, Harkesh Dabas, Shamim Mannan, Mohammed A Yassin
- Operational Cascade of Latent Tuberculosis Infection Management in India: Learnings from a Multi-State Implementation Program; 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
- Post-TPT Risk of Tuberculosis Among Household Contacts: A Multistate Observational Cohort Study from India, Research Square. November 2025; Ridhima Sodhi, Shamim Mannan, Pranati Das et al; doi: [10.21203/rs.3.rs-8176310/v1](https://doi.org/10.21203/rs.3.rs-8176310/v1)

Selected Projects | Carnegie Mellon University | [reports available on request](#)

US Department of Agriculture (USDA)

Analyzed public & private investment trends in agricultural research since early 1900s, built a panel dataset, and applied econometric methods to estimate R&D's impact on production, policy implications for food security and innovation.

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 identify administrative constraints for regulatory change; 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 at improving awareness of HIV prevention, treatment, and safe sex behaviors; part of the POWER (Prevention Options for Women Evaluation Research) study.