

Ridhima Sodhi

Health Economist | Data Science and Policy Professional
WHO Technical Expert (Tuberculosis)

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[Website](#) | [LinkedIn](#)

+91-9711209174
ridhimasodhi@gmail.com

WHO Supplier: 52281
ORCID ID: [0000-0003-2401-1065](https://orcid.org/0000-0003-2401-1065)

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

Health 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 - present

Lead research and data analytics for **Tuberculosis (TB) programs** and serve as a 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 in the world for TB – commonly known as JEET or Joint Effort for Elimination of Tuberculosis. Published studies include:
 - **Free drug availability** and its impact on treatment outcomes (**BMC 2023**)
 - Assessment of **Digital Technologies** in improving treatment outcomes (**PLOS 2024**)
- Presently authoring a series of research papers & briefs on **latent TB management in India**. Ongoing studies include:
 - Investigating TB incidence among those who have completed latent TB treatment
 - Exploring practical considerations of using screening tools (CxR/IGRA)
- Designed and implemented **automated M&E platforms (in R Studio)** to manage program activities for WJCF's on-ground interventions. Also contributed to developing similar tools for the **Central TB Division**, Ministry of Health & Family Welfare, India.
- 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

Served as a core member for the USAID flagship private health sector project

- Played a pivotal role in the early stages of the project by drafting activity workplans and conceptualizing the **Monitoring and Evaluation (M&E)** framework, including the development of the **Performance Indicator Reference Sheet (PIRS)** for 50+ indicators
- Led stakeholder engagement efforts, contributing to the formation of the **Women's Health & Livelihood Alliance (WoHLA)**, uniting government, private, and public sector partners
- Conducted research on key women's health issues, focusing on **unintended pregnancy** and market-based solutions for improving contraceptive use, counseling services, and post-abortion care
- Supported the first comprehensive analysis of **Long-Acting Reversible Contraceptives (LARCs)** in India, identifying market constraints and opportunities, and proposing strategies for market development
- Facilitated **partnerships between key organizations**, enabling joint clinic and pharmacy mapping, and advancing digital demand for contraceptive products through collaborations with partners such as Samhita and NIVI

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 under review.

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 country-projects

- Led the design and development of a data-intensive web dashboard focusing on UHC indicators, catastrophic health expenditure, and unmet healthcare needs
- Co-led partnerships with the Health Systems Strengthening Accelerator and facilitated collaborations with organizations such as AHPSR, Seoul National University, R4D, OpenIMIS, GIZ, and Swiss TPH
- 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
- Provided technical support to country partners on health financing activities and authored a needs-evaluation report for capacity building in data analytics

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

- Supported a range of research activities, teaching, and government-sponsored projects in urban healthcare, social welfare, and disruptive innovation.
- Founding member of federal-award winning program called Coleridge Initiative, working to further data driven decision making for development
- Managed projects for U.S. government and academic partners, and provided support to the New York Healthcare Department and the New York Mayor's Office.

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

Long Term Collaborations | Intermittent Work & Advisory

Consultant, Include Labs

Provide strategic support and guidance on strengthening healthcare systems and undertaking research, for advancing the mission of improving the quality of healthcare delivery

Consultant, Treemouse, India

Strategic thought partner for quantitative analysis undertaken by the design firm. Recent full-scale projects include leading a nation-wide quantitative study (10 states, 8500 residents) for assessing and recommending ways to enhance the citizen's' access and usage of public services for Omidyar Network India

Advisor, Infinite Sum Modeling

Provide support to ongoing research projects, along with development of training programs in econometric analysis, food security, healthcare & trade

Manuscripts (embedded links)

- 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 Digital Health 2024**); *Ridhima Sodhi, Vindhya Vatsyayan, Vikas Panibatla, Khasim Sayyad, Jason Williams, Theresa Patterry, Arnab Pal*
- **Operational priorities** for engaging with India's private healthcare sector for the control of tuberculosis: a modelling study (**BMJ Open 2024**), *Saskia Ricks, Ananya Singh, Ridhima Sodhi, Arnab Pal, Nimalan Arinaminpathy*
- Impact of **free drugs** on patient management and treatment outcomes, a quasi-experimental study using propensity choice modeling, 2023 (**BMC Infectious Diseases, 2023**); *Ridhima Sodhi, Mike Penkunas, Arnab Pal*
- 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*
- Money for Something: The Links between Research Funding and Innovation (**IZA, 2018**); *Britta Glennon, Julia Lane, Ridhima Sodhi*
- 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) Family Planning in the Context of Latin America's Universal Health Coverage Agenda (**Global Health: Science & Practice**)
- (Research support) Can differentiated care models solve the crisis in HIV treatment financing? Analysis of prospects for 38 countries in sub-Saharan Africa (**Global Health: Science & Practice**)

Working Papers (selected papers available on request)

- Understanding care-seeking pathways of individuals with TB: an operational study from Durg district in Chhattisgarh, India; *Ridhima Sodhi, et al*
- Adverse effects: A mixed-methods study across 7 Indian cities among TB patients; *Ridhima Sodhi, et al*
- Impact of counseling guides in improving ADR management among TB patients: A mixed-methods study across 7 Indian cities among TB patients; *Ridhima Sodhi, et al*
- Piloting Interactive Voice Response System (IVRS) based communication with TB patients to improve bank account seeding for Direct Benefit Transfers (DBT) in Uttar Pradesh & Bihar, India
- Engaging private sector providers in TB care - Understanding incentive mechanisms among frontline healthcare employees

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.