



Sudha Chandrasekhar
Senior Consultant

Work Profile at HSTP

- Work closely and build working relationships with stakeholders in Odisha, including but not limited to the DOH&FW, Institute of Public health, Bhubaneswar.
- Provide technical assistance by undertaking rapid assessment to understand the state preparedness, capacity needs for the roll out and implementation of Biju Swasthya Kalyan Yojana (BSKY) and facilitate prioritization of the technical engagement.
- Provide technical and capacity support to the nodal implementing agency for BSKY to establish the processes for governance, administration, management, and operations
- Provide continued technical assistance in developing the operational guidelines for key functions- medical management, quality, hospital empanelment, grievance redressal, Public health financing, procedure pricing (package costing) and strategic purchase from private, misuse and fraud detection systems, Hospital network management, claim data analysis and similar processes.
- Provide need-based support for the research and implementation of interventions in the state by HSTP directly or through its partners, HSPH and IIPH in Odisha

Major Research Interests: Costing of health programs, occupational health, health care evaluation, cancer care

Education:

- **MPhil/PhD** in Health Economics (London School of Hygiene and Tropical Medicine) UK
- **Thesis Topic:** Scaling up HIV/AIDS Prevention in India: An economic analysis of Avahan interventions in four southern states
- **International Master's degree in Health economics and Pharmacoeconomics**-Pompeu Fabre University, Barcelona, Spain completed with distinction (Feb2007- 2009)
- **M.D-Master's degree in Community medicine** (2003) Kempegowda Institute of Medical Sciences, Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka, India, First class, First rank student in graduating class
- Post-graduate Diploma - Industrial Hygiene-2005, Annamalai University, Chennai, First class
- **MBBS- Bachelor of Medicine and Bachelor of Surgery** (1999), Kempegowda Institute of Medical Sciences, Bangalore University, Karnataka, India
- Certificate Course in Principles and practice of Epidemiology -Epidemiological Research Center Vellore (2000)
- Completed Post-graduate certificate in teaching and Learning (**PGCILT**) at London School of Hygiene and Tropical Medicine, (November 2012) and received Associate fellow of higher education academy, University of London
- Completed Distance Learning tutoring course, LSHTM Nov 2011
- Completed MSc Module on Qualitative methods, Infectious disease modeling at the London school of Hygiene and Tropical medicine and STATA course (2010)
- Post graduate diploma in medical law and ethics, National law school University, Bangalore 2019-2020

Memberships:

- Member, International AIDS Economic Network
- Member, International Health Economics Association, Scientific, Committee member, World congress on health economics, Sydney 2013.
- Member, Indian association of preventive and social medicine,



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- Member, Indian Public Health association
- Member, Indian academy of allergy

Employment Experience

- Executive Director, Health policy and Hospital engagement, National Health Authority, Government of India, November 2021 to November 2022
- Senior Consultant, World Bank, Dec 2018 -November 2021.....50% time
- Senior Consultant, Health System Transformation Platform funded by BMGF and Tata Trust, since Nov 2018 to Nov 2021.....50%time
- Director, Medical, Suvarna Arogya Suraksha Trust, Department of Health and Family welfare, Government of Karnataka 2015 till Nov 13th, 2018.
- Faculty, LSHTM (UK), Social and Mathematical Group, Global Health and development, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, University of London, UK (2005-2015) and St. John's Research Institute, Bangalore, India Associate Professor-2010-2014 and Assistant Professor-2007-2010
- Scientific officer, Department of Epidemiology 2003-2004, National Institute of Mental Health and Neurosciences (Deemed University) Bangalore, Karnataka, India
- Consultant in Occupational Health, Bangalore, Karnataka, India

Key Achievements:

HSTP:

- Ensured smooth roll out of BSKY in Odisha and supported the first year of implementation extensively by providing the needed capacity building and monitoring support to the team.
- Completed the first-year claims analysis report and a policy brief regarding one year of BSKY implementation
- Collaborated with IIPH-B to prepare the transition report of multiple schemes of Odisha to one integrated scheme BSKY
- Provided need-based support to HSTP in facilitating to set up urban primary health care project in Karnataka with state government and implementing partner Karnataka health promotion trust.

Key initiatives undertaken in NHA

- Lead the key initiatives of Health benefit package rationalization 2022
- Enhanced the adoption and adherence of standard treatment guidelines and review of new STGs prepared for HBP 2022 packages
- Developed new policy initiatives and guidelines to be adopted by NHA to improve the implementation of the scheme pan India such as rare disease policy, antimicrobial resistance review and management in PMJAY, peritoneal dialysis adoption, unspecified surgical package guidelines,
- Initiated the roll out of international classification of diseases 11 and international classification of health interventions in the transaction management system of PMJAY and capacity building of



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states for its implementation

- Lead the DRG pilot initiation and engagement with the states and hospitals in 5 states
- Co-conceptualized the value-based care initiative and prepared the ground for the initiation of pilot in 5 states
- Co-devised the strategic purchasing policy initiative for PMJAY Scheme
- Organized National level Health Benefit package workshop “Optimizing Updating of Health Benefits Package for Universal Health Coverage” for states with support from World Bank, WHO and Joint learning network
- Organized National level consultation with states on Grievance redressal management with World Bank
- Organized the session on Strengthening Provider payments and value-based incentives session with support of World Bank in Arogyamanthan 2022
- Organized State and district level sensitization session on quality accreditation and value-based incentive in Kerala, November 2022 with support from Giz

World Bank:

- Institutionalization of medical audit with fraud control
- Co-lead the revision of health benefit package rationalization HBP 2.0
- Lead the standard treatment guidelines customization for adoption for PMJAY packages
- Lead the cancer cell activities of NHA
- Support Department of health research GOI DHR as a costing expert and Health technology assessment expert in their technical advisory committees
- Involved in capacity building activities at national and state level workshops as resource person

Suvarna Arogya Suraksha Trust, Department of Health, Government of Karnataka:

- National Health Protection scheme cabinet approval from the State. Worked closely With GOI in various sub-committees to give inputs to NHPS design and implementation plan. Technical committee member for restructuring RSBY at the national level as National Health Protection scheme.
- Yashaswini scheme and RSBY Scheme transition to SAST
- Universal Health coverage Cabinet note preparation and completed activities for implementation of merged Ayushman Bharath Arogya Karnataka scheme.
- Prepared key proposal for World Bank assistance to GOK
- Contributed to the state proposal to be taken up under SATH initiative with Nitiyog. Karnataka was selected as one of the states where this initiative would be piloted for health sector.
- Played a Key role in organizing E-lets conference and SATH workshop
- Active role in World Bank milestones activities by preparing required reports and in Joint Learning network initiative.
- Contributed to Medical Audit collaborative of JLN in preparing the Medical audit tool kit and attended three workshops held in Korea
- Revision of package rates done consecutively for 3 years and co-ordinated the costing study undertaken by SAST with world bank assistance.
- Provided inputs for the development of curriculum for international workshop on costing methodology organized by Joint Learning network and handled one of the sessions on provider payments during the workshop. Participated in the workshop on markets for health organized by World bank
- Ensuring capacity building of various stake holders involved in quality care and determine executable strategy for scheme designing and management. Developing of guidelines and



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protocols for various service providers.

- Report prepared on the status of road traffic injuries in Karnataka and Clinical Care pathway for management of trauma patients. Assisted required data and co-authored the economic analysis of road traffic accidents in Karnataka report.
- Have assisted the health department Principal Secretaries in preparing various cabinet notes and Government Orders.

Brief Bio

Sudha's work focuses on HSTP's state health systems transformation in Odisha where she advises on health financing and government health insurance program Biju Swasthya Kalyan Yojana (BSKY). She has over 20 years of experience as an academician and a clinical researcher in various national and international research institutions like NIMHANS, St. John's Research Institute.

She has been faculty with the London School of Hygiene and Tropical Medicine (UK) for the project "*Monitoring and evaluation of the Avahan project in India: impact assessment and cost-effectiveness analyses using enhanced surveillance methods and mathematical modelling of HIV transmission dynamics*", funded by the Bill and Melinda Gates Foundation (2005-2015).

Her most recent assignment was with Suvarna Arogya Suraksha Trust, Karnataka as Medical Director leading the convergence of health schemes in Karnataka. She has co-authored the medical audit toolkit with technical support from JLN and HIRA, South Korea.

Sudha is a medical doctor, public health specialist and a health economist. She is the recipient of Global Health Leadership Award from IDRC, Canada in 2008. She has also been a recipient of two Young Scientist awards from the Karnataka Association of Community health and Indian Association for occupational health for her research work in the field of Occupational Medicine.

She is also significantly involved in teaching and supporting master students at LSHTM and universities in India. She is an accredited examiner for the University of London. She has shared her work by presenting in various state, national (received many best paper awards like P. Ashwath award, Mohanmal award, Mahadevan award) and international level conferences and expert group meetings on health economics both as invited speaker and peer reviewed presentation. She has co-authored research papers in the field of health economics with a focus on costing health programmes and occupational health.

She is also currently a senior consultant at World Bank providing technical assistance to National Health Authority for the implementation of Ayushman Bharath-Pradhan Mantri Jan Arogya Yojana in the areas of health benefit packages, Standard treatment guidelines, cancer cell, institutionalizing medical audit and research studies.

Selected Research Publications

- Sudhashree, Rajanna M.S., Assessing scope and participation of Primary school teachers in Primary Health care in rural areas, Indian Journal of Community Health (2001), vol 7,Jan-Dec p:52-55.
- Sudhashree, Surendra VHH, Rajanna M.S., and Parasuramalu B.G, A study on Latex sensitization among employees in a condom manufacturing factory in Bangalore, Indian Journal of Occupational and environmental medicine, vol 6,p: 33-36 (2002)
- Sudhashree, Rohith K, Shrinivas Katti, Issues and concerns of health among call center employees, Indian Journal of occupational and environmental medicine (2005), vol 9, Sep-Dec p: 129-132.
- Sudhashree, Parasuramalu B.G, Rajanna M.S, A Clinic-Epidemiological study of allergens in
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patients with dermatitis, Indian Journal of Dermatology, Leporology, Venereology, 2006 | May-June | Volume 72 | Issue 3 page:235-238(MD dissertation topic)

- Sudhashree, Lalitha K, VHH Surendra, Rohith K, New Technologies, New hazards: Need for evidence base -A report on the health status and safety measures in a Biotechnology factory in Bangalore, Indian Journal of Community medicine, Vol. 32, No. 3, July 2007 p: 179-182
- Chandrashekar S^{1,4}, Guinness L¹, Kumaranayake L¹ Bhaskara Reddy R², Govindraj Y², Vickerman P¹ and Alary M³ "The effects of scale on the costs of targeted HIV Prevention interventions among female and male sex workers, MSM, and transgender in India", *Sex Transm Infect –British Medical Journal* 2010;86:i89-i94 doi:10.1136/sti.2009.038547
- Sudha Chandrashekar, Anna Vassall, Bhaskar Reddy Govindraj Shetty, Peter Vickerman, Michel Alary "The costs of HIV prevention for different target populations in Mumbai, Thane and Bangalore." BMC Public Health 2011, 11(Suppl 6):S7
- Cockrane Review (November 2013): Nadja van Ginneken, Prathap Tharyan, Simon Lewin, Girish N Rao, Jessica Pian, Meera S. M., Qin Liu, Sudha Chandrashekar, Vikram Patel, Non-specialist health worker interventions for the care of people with mental, neurological and substance abuse disorders in low- and middle- income countries.
- Tara Beattie, Parinita Bhattacharjee, Sudha Chandrashekar, H L Mohan, Shajy Isac, Ravi Prakesh, Lori Heise, BM Ramesh, Stephen Moses, Charlotte Watts, "Community mobilisation and empowerment: an approach to substantially reduce HIV/STI risk and STI prevalence among female sex workers in Karnataka state, South India". Published to American Journal of Public Health (2014) American Journal of Public Health | August 2014, Vol 104, No. 8
- Sudha chandrashekar, Michael pickles, Govindraj shetty, Michel alary, Peter vickerman, Anna vassall¹, Evaluation group Charme-I, "The costs of scaling up prevention programme for high risk groups: lessons learned from the Avahan Programme in four southern states of India". (Plos One 2014) September 2014 | Volume 9 | Issue 9 | e106582
- Anna vassall^{1*}, Michael pickles^{1,3}, Sudhashree chandrashekar^{1,2} Marie-claude boily³, Govindraj shetty⁴, Lorna guinness^{1,6}, Catherine m. lowndes⁷, Janet bradley⁵, Stephen mooses^{4,9}, Michel alary^{5,8}, Charme india group^{**}, Peter vickerman^{2,1} The cost-effectiveness of HIV prevention for high-risk groups at scale: an economic evaluation of the *Avahan* programme in south india. www.thelancet.com/lancetgh vol 2 september 2014 (lancet global health 2014)
- Panovska-Griffiths J.², Vassall A.², Lepine A.², Prudden H.², Boily MC.^{3,4}, Chandrashekar S.^{2,6}, Mitchell K.M.², Beattie T.², Alary M.^{4,5}, Martin N.K.^{1,2}, Vickerman P.^{1,2} Optimal allocation of resources in female sex worker targeted HIV prevention interventions: model insights from Avahan in South India. October 2014 | Volume 9 | Issue 10 | e107066 (PLOS ONE 2014)
- Vassall A, Chandrashekar S, Pickles M, Beattie TS, Shetty G, Bhattacharjee P, Boily MC, Vickerman P, Bradley J, Alary M, Moses S; CHARME India Group, Watts C. Community Mobilisation and Empowerment Interventions as Part of HIV Prevention for Female Sex Workers in Southern India: A Cost-Effectiveness Analysis. *PLoS One*. 2014 Oct 21; 9(10): e110562. doi: 10.1371/journal.pone.0110562. eCollection 2014.
- Lépine A, Vassall A, Chandrashekar S. The determinants of technical efficiency of a large scale HIV prevention project: application of the DEA double bootstrap using panel data from the Indian Avahan. *Cost Eff Resour Alloc*. 2015 Mar 29; 13:5. doi: 10.1186/s12962-015-0031-2. eCollection 2015
- Lépine A, Vassall A, Chandrashekar S, Blanc E, Le Nestour A. Estimating unbiased economies of scale of HIV prevention projects: a case study of Avahan. *Soc Sci Med*. 2015 Apr;131:164-72. doi: 10.1016/j.socscimed.2015.03.007. Epub 2015 Mar 5.
- Aurélia lépine, Sudhashree chandrashekar, Govindraj shetty, Peter vickerman, Janet bradley, Michel alary, Stephen mooses, charme india group,† and Anna vassall What determines hiv prevention costs at scale? Evidence from the avahan programme in India, *Health Economics*



Journal, Jan 2016

- Chandrashekar S, Varghese B, Saha S, Mohan L, Govindraj S, Akash P, Avishek H, "Assessing costs and cost-effectiveness of health layering interventions implemented through women self -help groups in India, Plos One March 28, 2019, <https://doi.org/10.1371/journal.pone.0213723>

Research reports:

- 'Health risk Assessment of Prostaglandin Synthesis research and development lab of a pharmaceutical industry in Karnataka' at the 33rd International congress of Medicchem at Goa (2005)
- Assessment of ergonomic stressors in a garment manufacturing unit in Bangalore at the 57th National conference of Indian Association of Occupation Health at Chennai (2007)
- "Policy on HIV/AIDS at workplace" Where are we? Moving forward to make it happen in the workplace at the scientific meeting of the Indian Association of Occupational Health, Karnataka Branch (2007)
- Ergonomic Health Hazard evaluation of an automobile auto parts manufacturing factory in Bangalore, Karnataka, at the 58th National conference of IAOH at Mumbai, (2008)
- Kumaranayake L, Chandrashekar S, Washington R, And Alary M. "The economics of STI provision in scaling-up HIV prevention among high risk populations in Karnataka, India." XVI International AIDS Conference, Toronto. August 2006.
- Chandrashekar S, Kumaranayake L, Alary M. "Is it worth it? Opportunity costs of working as peer educators among sex workers." XVI International AIDS Conference, Toronto. August 2006.
- Carriere P, Kumaranayake L, Chandrashekar S. (2007). "Comparison of payment mechanisms for Peer Educators: A study from the Kolar and Chitradurga experiences." CHARME Project.
- Priya Mannava, Nandini Pillai, Indrajit Hazarik, Chandrashekar S, Michelle Kermode (2012), A Tale of Two States: The Evolution of the HIV Epidemic and Response in Manipur and Nagaland, North-East Knowledge Network
- Chandrashekar S, Ashwath Narayan, Govindraj Y, Cost Analysis of Adopt a village: A rural rabies prevention project in Karnataka, India funded by Global Alliance for Rabies Control (2012).
- Chandrashekar S, Anna Vassall , Govindraj Y, Peter Vickerman , An economic analysis of avahan interventions for people who inject drugs in Manipur, India funded by International development research centre, Canada (2013)
- Sudhashree Chandrshekar ^{1, 2*}, Govindraj SHETTY³, Michel ALARY ^{4, 5}, Peter VICKERMAN¹, CHARME-1 Evaluation Group, Anna VASSALL¹. Above service level costs of large-scale HIV prevention programme (*Avahan*) for high risk populations in four southern states of India
- Chandrashekar S, Ananda A, the Current status of road traffic injuries in Karnataka, submitted to World Bank, April 2015
- Chandrashekar S, Anna Vassall, Mohan L , Tara Beattie, Shetty G, Shajy Isac, Parinita Bhattacharya "Cost analysis of violence reduction interventions for female sex workers in Karnataka, India". International AIDS Economics Network (IAEN), Pre-conference and AIDS 2016, Durban, South Africa.