

Udita Singh

MBBS, MD Community Medicine

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Professional Profile

Physician and Community Medicine specialist with an MD from the All India Institute of Medical Sciences (AIIMS), New Delhi, and currently a Senior Resident at AIIMS Bathinda. Experienced in public health research, epidemiology, biostatistics, primary healthcare, and quality improvement, with research spanning non-communicable diseases, patient engagement, health systems, population health, and medical education. Trained in quantitative, qualitative, and mixed-methods research, with experience in study design, statistical analysis, systematic reviews and meta-analysis, and scientific writing. Committed to generating evidence that informs healthcare practice, strengthens health systems, and improves population health.

Education and Qualifications

MD, Community Medicine | *AIIMS New Delhi* | 2021–2024

- Ranked first in the MD Community Medicine batch.
- Postgraduate thesis: Patient engagement in disease management and its association with outcomes among individuals with hypertension and diabetes in rural Haryana.

MBBS | *Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar* | 2014–2020

- One year rotating internship at Pradyuman Bal Memorial Hospital, KIIT University Bhubaneswar

Professional Appointments

Senior Resident | *Department of Community and Family Medicine, AIIMS Bathinda* | May 2025–Present

- Deliver undergraduate and postgraduate teaching and academic sessions for medical and nursing students.
- Conduct public health and community-based research and contribute to primary healthcare service delivery.
- Lead and contribute to non-communicable disease (NCD) quality improvement initiatives, data analysis and research dissemination.
- Develop and evaluate innovations in medical education.
- Coordinate and participate in 20+ health camps across six districts of Haryana and Punjab, providing clinical services to approximately 1,800 people.

Consultant — Project-based | *WHO South-East Asia Journal of Public Health* | April 2025

- Screened submitted manuscripts and supported peer review.
- Liaised with authors and reviewers to facilitate manuscript processing and revisions.
- Coordinated editorial workflows to support timely publication of journal editions.

Junior Resident — MD Training | *Centre for Community Medicine, AIIMS New Delhi* | 2021–2024

- Conducted community-based surveys, demographic surveillance and primary healthcare assessments.
- Contributed to quality improvement initiatives in NCD screening, child growth monitoring and primary healthcare delivery.
- Designed a personalised health-record system for patients with diabetes and hypertension.
- Supported primary healthcare facility assessment and National Quality Assurance Standards (NQAS) accreditation activities.
- Completed ICD-10 cause-of-death coding and contributed to MINErVA physician-coding activities.

- Delivered primary, emergency and obstetric care in rural and urban settings; supported supervision and training of healthcare workers.
- Contributed to undergraduate teaching, seminars, journal clubs and research mentorship.

Research Interests

- Non-communicable disease epidemiology and prevention
- Patient engagement, treatment adherence, and patient-centred care
- Primary healthcare and health systems research
- Quality improvement and implementation of evidence-based interventions
- Epidemiology, biostatistics, and mixed-methods research
- Population health, ageing, and social determinants of health
- Medical education and research mentorship

Research Experience and Projects

Postgraduate Thesis

Patient engagement in disease management and its association with outcomes among individuals with hypertension and diabetes in rural Haryana | MD thesis, AIIMS New Delhi

- Conducted a mixed-methods study examining patient engagement in disease management and its determinants among adults with hypertension and diabetes in a rural population of Faridabad, Haryana.
- Assessed patient engagement using the Patient Assessment of Care for Chronic Conditions (PACIC) and examined treatment adherence using complementary measures, including the Hill-Bone Compliance to High Blood Pressure Therapy Scale and pill counts.
- Investigated factors associated with patient engagement and treatment adherence using multivariable statistical analysis.
- Applied mediation and decomposition analysis to explore pathways linking patient engagement with treatment-related outcomes and associated factors.

Selected Quality Improvement Projects

Quality Improvement Initiative to Improve Growth Monitoring of Children Attending an Immunisation Clinic in an Urban Primary Health Centre, Delhi

- Contributed to a quality improvement initiative to improve growth monitoring and growth-chart plotting among children attending an urban primary health centre.
- Contributed to efforts to strengthen identification of children at risk of malnutrition through improved growth-monitoring practices.
- Publication: Kaur R, Singh U, Srinath K, Ranjith A, Nongkynrih B. A quality improvement initiative to improve growth monitoring of children attending immunization clinic in an urban primary health centre in Delhi. *BMC Pediatrics*. 2025;25:39. doi:10.1186/s12887-024-05373-y.

Quality Improvement Initiative to Increase Fasting Blood Glucose Testing among People with Diabetes Mellitus Attending an Urban Health Centre, New Delhi

- Contributed to a quality improvement initiative using baseline assessment, process mapping, fishbone analysis, and three Plan-Do-Study-Act (PDSA) cycles to improve fasting blood glucose testing.
- Implemented interventions including priority consultation for patients arriving fasting, weekly patient-awareness discussions, and improved inventory management of glucose-testing strips.
- Monitored changes in testing uptake using laboratory registers, patient interviews, and run charts; conducted descriptive analysis using Stata 18.
- Improved fasting blood glucose testing from a baseline of 52.6% to 84.6% during the initial intervention period. Following a subsequent decline associated with testing-strip shortages, testing increased to 51% after inventory-management interventions.

Publication status: Formally accepted for publication in the Indian Journal of Community Medicine.

Personalised health records for diabetes and hypertension

- Designed a patient-centred personalised health-record system for patients attending an urban primary health centre.

Primary healthcare quality assessment

- Contributed to NQAS accreditation and quality assessment of primary healthcare facilities.

Projects During Senior Residency (Ongoing Research):

1. MAHILA: Maternal Moderate Anemia Heuristics from Smartphone Image Learning Algorithms

- Co-Investigator on a funded collaborative project between Khushi Baby and Yale School of Public Health, supporting implementation and validation at AIIMS Bathinda.

2. Development of an NCD Facility Preparedness Assessment Tool (NCD-FPAT)

- Co-investigator in developing a structured assessment tool to evaluate non-communicable disease service preparedness across primary, secondary and tertiary healthcare facilities.

3. Improving Opportunistic NCD Screening Through Sequential PDSA Cycles

- Quality improvement initiative at AIIMS Bathinda to strengthen opportunistic NCD screening through workflow redesign, standardised screening forms, digital data collection and improved referral pathways.

4. Effect of Gamification on Learner Engagement and Knowledge Retention During Routine Undergraduate Medical Teaching

- Quasi-experimental study evaluating modified Pictionary as a gamified teaching strategy, with outcomes including knowledge acquisition, learner engagement and retention.

5. Tuberculosis Preventive Treatment Coverage and Completion in India

- Systematic review and meta-analysis examining coverage and completion of tuberculosis preventive treatment in India.

6. Neglected in the Countryside: A Systematic Review of Mental Health Service Gaps Among Rural Adolescents

- Systematic review examining barriers to mental health service access among rural adolescents aged 10–19 years, including individual, community, health-system and structural factors.

7. Aging in Vulnerability: A Systematic Review of Elder Abuse Prevalence in WHO SEARO Countries

- Systematic review and meta-analysis assessing the prevalence of elder abuse among adults aged 60 years and above in the WHO South-East Asia Region.

8. NCD Risk Profiling Among Family Adoption Program Beneficiaries

- Secondary analysis of undergraduate Family Adoption Program data to assess NCD burden and associated behavioural, clinical and socioeconomic risk factors.

Publications

1. Singh U, Krishnan A, Bairwa ML, Nongkynrih B. Patient engagement in treatment and its determinants among rural Indian adults with hypertension and diabetes. Indian Journal of Community Medicine. 2026;51(3):553–559. doi:10.4103/ijcm.ijcm_543_25.
2. Halder P, Bisoi S, Singh U, et al. Association of sleep disorders with current marital status among Indian population aged 45 years and above: insight from Longitudinal Ageing Study in India. Sleep Science and Practice. 2026;10:26. doi:10.1186/s41606-026-00182-x.
3. Singh U, Sabharwal V, Sabharwal K. Improving access to safe drinking water in a rural government school in Haryana: A public health case report. Journal of Public Health and Primary Care. Published online 31 August 2026. doi:10.4103/jphpc.jphpc_22_26.

4. Halder P, Singh U, Kansal S, et al. Association of road traffic accident with sleep disturbances among Indian population aged 45 years and above: nested multilevel modelling analysis of nationally representative cross-sectional survey. *Sleep Science and Practice*. 2025;9:30. doi:10.1186/s41606-025-00153-8.
5. Kaur R, Singh U, Srinath K, Ranjith A, Nongkynrih B. A quality improvement initiative to improve growth monitoring of children attending immunization clinic in an urban primary health centre in Delhi. *BMC Pediatrics*. 2025;25:39. doi:10.1186/s12887-024-05373-y.
6. Alwani AA, Singh U, Sankhyan S, Chandra A, Rai SK, Nongkynrih B. Hypertension-related distress and its associated factors: findings from an urban primary health centre of South Delhi, India. *Journal of Family Medicine and Primary Care*. 2023;12(9):1885–1892. doi:10.4103/jfmpc.jfmpc_1909_22.

Accepted for Publication

1. A quality improvement initiative to increase the fasting blood glucose testing among people with diabetes mellitus attending an Urban Health Centre in New Delhi. *Indian Journal of Community Medicine*. Accepted for publication. (Third author.)

Conference Presentations and Academic Engagement

EFICON 2026: PGIMER Chandigarh 2-4 October 2026

- Poster presentation Prevalence of Elder Abuse Among Older Adults in the WHO South-East Asia Region: A Systematic Review and Meta-analysis

MEDED Conclave: 8th -12th Sept 2026: AIIMS New Delhi

- Poster presentation: Development and Evaluation of the TRACE Framework Through Modified Pictionary in Undergraduate Medical Education: A Quasi-Experimental Study
- Awarded the best practice pitch for “The READ Framework: Teaching Person-Centred Health Education”

3 C's of Integrated teaching CME: 24th July 2026, AIIMS Bathinda

- Second prize in poster competition. Poster titled: READ: Development and evaluation of a structured framework for teaching patient education skills to undergraduate medical students

5th International Youth Forum (IYF 5.0) | UN Conference Centre, Bangkok, Thailand | 2025 | Oral presentation

- Improving NCD screening through a quality improvement initiative in a tertiary hospital in Punjab as a step towards Universal Health Coverage.

IAPSMCON 2024 | KMC, Mangaluru | Oral presentation

- Facilitators and barriers to patient engagement in disease management among persons with diabetes and hypertension.

IPHACON 2024 | Manali, Himachal Pradesh | Poster presentation

- Compliance to treatment and associated factors among adults with diabetes and hypertension in a rural population of Haryana.

AIIMS Delhi Annual Research Day | 2024 | Poster presentation

- Patient engagement in disease management and associated factors among persons with selected non-communicable diseases in rural Faridabad, Haryana.

National Civil Society Consultation on NCDs and Universal Health Coverage | New Delhi | 2023 | Panel speaker

- Sensitising medical professionals towards people-friendly healthcare services.

EFICON | 2023 | Poster presentation

- Poor patient engagement in disease management among persons with diabetes mellitus or hypertension in a rural population of Faridabad, Haryana.
- First place in Mindbenders quiz and Treasure Hunt. [Also list under awards if desired]

5th Young Leaders in NCDs Conclave (YLNC) | AIIMS New Delhi | 9-10 November 2024

- Helped organise the conclave and coordinated the quiz.

Additional courses / academic meetings noted in older CV | 2022

- International Course on Public Health Approaches to Non-communicable Diseases (7th edition).
- Future Primary Healthcare System: Collaboration between AIIMS New Delhi and Johns Hopkins Bloomberg School of Public Health.

Teaching, Mentoring and Academic Service

- Undergraduate teaching: Conduct theory and demonstration classes for MBBS students on Community Medicine and public health topics.
- Field-based medical education: Facilitate undergraduate visits to public health facilities and household visits under the Family Adoption Program, linking classroom learning with community-based practice.
- Research mentorship: Mentor undergraduate medical students in quantitative and qualitative research, including study design, data collection, data management and analysis.
- Qualitative research: Guided seventh-semester MBBS students in a qualitative study exploring social media use among youth in rural Faridabad.
- Academic engagement: Participate in journal clubs, interactive discussions and other academic activities promoting critical appraisal and evidence-based practice.

Community Engagement and Public Health Practice

- Participated in 20+ health camps across six districts of Haryana and Punjab, providing clinical care to approximately 1,800 people.
- Delivered health education and community awareness sessions on priority health issues through health talks and street plays (nukkad natak).
- Conducted community-based health promotion and awareness activities to improve health literacy and encourage preventive health practices.
- Promoted Hands-Only CPR (HOCPR) awareness by training village residents in basic bystander resuscitation.

Awards and Achievements

- Ranked first in MD Community Medicine, AIIMS New Delhi.
- Selected for oral presentation at the 5th International Youth Forum, Bangkok, 2025.
- First place, Mindbenders Quiz and Treasure Hunt, EFICON 2023.
- Second prize, poster presentation, CME-cum-Workshop on the 3 Cs of Integrated Teaching, AIIMS Bathinda (24 July 2026).

Research Methods and Technical Skills

Research Software and Analytical Methods

Statistical Software and Data Analysis

- Stata: Data management, descriptive and inferential statistics, regression modelling, mediation analysis, decomposition analysis, and structural equation modelling (SEM).
- Microsoft Excel and Microsoft Office 365: Data management, analysis, visualisation, and reporting.

Systematic Review and Reference Management Tools

- Rayyan: AI-assisted literature screening and systematic review management.
- Zotero: Reference management, citation organisation, and bibliography preparation.

Qualitative Research Software

- NVivo
- ATLAS.ti

Digital Data Collection

- EpiCollect
- Google Forms

Quantitative Research and Biostatistics

- Epidemiological study design and statistical analysis.
- Logistic and linear regression.
- Structural equation modelling (SEM).
- Mediation analysis.
- Decomposition analysis.
- Quality improvement analysis using run charts and Plan–Do–Study–Act (PDSA) cycles.

Systematic Reviews and Evidence Synthesis

- Literature searching, screening, and study selection.
- Data extraction and risk-of-bias assessment.
- Systematic review methodology.
- Meta-analysis and assessment of statistical heterogeneity, where applicable.

Clinical and Public Health Competencies

- Primary healthcare; NCD prevention and screening; facility assessment; ICD-10 cause-of-death coding/MINErVA activities; supportive supervision and health-worker training.

Creative Work and Publications

The One Who Has Risen | *Poetry collection* | 2019

- Poetry collection, published in 2019.
- Showcased at the New Delhi World Book Fair in 2023.
- ISBN: 1646507797.
- Book listing: <https://www.amazon.in/One-Who-Has-Risen/dp/1646507797/>

Professional Memberships and Service

Professional Memberships

- Member, Indian Public Health Association (IPHA).
- Member, Indian Association of Preventive and Social Medicine (IAPSM).
- Member, Epidemiology Foundation of India (EFI).

Peer Review and Editorial Service

- Peer reviewer for international public health journals, including *BMC Public Health*.

Languages

- English
- Hindi

Professional Links

- ORCID: 0009-0002-5785-7008
- ResearchGate: <https://www.researchgate.net/profile/Udita-Singh-3/research>
- LinkedIn: www.linkedin.com/in/udita-singh-0b98a2236