Saloni Patil, MPH, BDS

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EDUCATION

Boston University School of Public Health — Boston, MA
Master of Public Health, Epidemiology & Biostatistics | GPA 3.70 — Sept 2024 – May 2026

S.M.B.T. Dental College and Hospital, Maharashtra University of Health Sciences — Maharashtra, India
Bachelor of Dental Surgery (BDS) | GPA 3.72 — Aug 2018 – Dec 2023

RESEARCH INTERESTS

Epidemiologic methods, especially causal inference and the design and analysis of observational studies and clinical trials; infectious disease and vaccine epidemiology, focused on how well interventions work in low-resource settings; quantitative and computational analysis of large clinical, health record, surveillance, and population datasets to study intervention effectiveness, access to care, and health outcomes.

RESEARCH EXPERIENCE

Boston University School of Public Health — Boston, MA
Associate Researcher (Practicum), TB Household Contact Study — Nov 2025 – Apr 2026
Supervisors: Dr. Meredith Brooks and Dr. Amyn Malik

- Designed a secondary retrospective cohort analysis and linked four Zero TB Initiative (IRD) programmatic datasets, assembling a cohort of 4,430 index patients and 19,668 household contacts in Karachi and Peshawar, Pakistan (2018–2021).
- Drafted the pre-specified analysis plan, recoding logic, and a 30+ variable data dictionary under the Data Use Agreement and IRB protocol; resolved data discrepancies with supervisors.
- Applied multilevel logistic regression in SAS PROC GLIMMIX, handling missing data through complete-case analysis and exclusion of variables with more than 40% missing, with a sensitivity analysis restricted to contacts of bacteriologically confirmed index patients; identified contacts' own characteristics (young age, nutritional risk, TB symptoms, and prior TB) as the strongest predictors of TB, with no index-patient characteristic significant after adjustment.
- Produced 4 publication-ready tables and drafted the Methods and Results of the first-author manuscript; abstract selected from 2,993 submissions for oral presentation at The Union World Conference on Lung Health 2026.

Boston Medical Center — Boston, MA (Remote)
Research Volunteer (Part-time) — Sept 2026 – Present
Supervisors: Dr. Jeffrey Campbell and Dr. Matthew Murrill

- Synthesize definitions for 10 comorbidities and study variables from published EHR-based TB studies, including U.S. studies of healthcare engagement before TB diagnosis, to guide cohort, exposure, and covariate development for an Epic Cosmos study of missed opportunities for TB screening and diagnosis.
- Built an Epic Cosmos data dictionary of 17+ LOINC laboratory codes across six categories, including QuantiFERON-TB Gold Plus and T-SPOT.TB, HbA1c, hepatitis B and C, and pregnancy testing. Separately mapped ICD-9/10-CM diagnosis codes for TB/LTBI, HIV, and comorbidities to support consistent cohort construction.

Representation of People Living with HIV in mRNA TB Vaccine Studies
Scoping Review | Collaborators: Pallavi Gadre and Dr. Meredith Brooks — July 2026 – Present

- Leading a first-author scoping review; designed the PCC protocol, prepared it for OSF registration, and built PRESS peer-reviewed searches with a medical librarian across 7 sources (PubMed, Embase, Web of Science, CINAHL, Europe PMC, ClinicalTrials.gov, WHO ICTRP), retrieving 2,923 records and removing 683 duplicates; screening 2,240 in Covidence, with PRISMA-ScR manuscript submission targeted for June 2027.

GLP-1 Utilization, Cost Burden, and Prescription Access
MEPS 2019-2024 | Collaborators: Jannatul Naym, Haoran Tao, Dr. Paul Shafer — July 2026 – Present

- Direct a pooled 2019-2024 MEPS analysis with 2 collaborators and a faculty advisor, linking IPUMS person-level and prescribed-medicine files to flag GLP-1 use via Multum classes and running survey-weighted R analyses of utilization, out-of-pocket burden, payer mix, and cost-related access across income and insurance groups.

GRADUATE RESEARCH PROJECTS

Boston University School of Public Health Boston, MA
Graduate Researcher, MPH coursework and Integrative Learning Experience Sept 2024 – May 2026

Sex as an Effect Modifier in Acupuncture for Chronic Headache | *Integrative Learning Experience* Jan 2026 – May 2026
- Designed and ran a secondary analysis of a multi-site pragmatic RCT (N=401) of acupuncture for chronic headache, using a complete-case, modified intention-to-treat analysis (n=301) and assessing sex as an effect modifier of clinically meaningful improvement.
- Built 3 sequential logistic regression models in SAS (PROC LOGISTIC, delta-method ESTIMATE statements), estimating sex-stratified odds ratios; delivered a written report and presented findings to faculty and peers.

West Nile Virus Vaccine Clinical Development Plan | *Vaccine development course* Sept 2025 – Dec 2025
- Co-designed a Target Product Profile (TPP) and Phase I–III development plan for a recombinant West Nile virus vaccine, completing six deliverables: the TPP; Phase IIb dose (N=354), booster (N=390), and adjuvant (N=400) studies; a Phase III efficacy and lot-consistency trial; and a licensure recommendation addressing a manufacturing-lot failure. Presented each phase to faculty and peers.
- Authored a WHO SAGE policy memo proposing tiered PRN-50 thresholds (≥1:100 one month after dose 3) as a correlate of protection, with 5 recommendations on correlate acceptance and priority populations.

TB and LTBI Household Contact Cohort Study Protocol | *Data collection methods course* Sept 2025 – Nov 2025
- Designed a prospective TB cohort protocol for 400 household contacts and 400 matched unexposed adults, including serial TST/QuantiFERON testing, an exposure intensity score, a structured questionnaire, and an analysis plan using log-binomial regression and multiple imputation; powered at 80% to detect a relative risk of 2.0.

Interactive TB Surveillance Dashboard | *WHO Global TB data* Nov 2025 – Dec 2025
- Built an interactive Excel dashboard covering 14 years of WHO Global TB data (2010-2023), 6 regions, and 932,340 deaths; presented it to a public health practitioner audience.

Seasonal Depression and Student Wellbeing | *Mixed-methods study* Sept 2025 – Dec 2025
- Co-led a mixed-methods study of seasonal affective symptoms among graduate students (N=102): wrote recruitment and data-collection SOPs, administered PHQ-2 surveys via Kobo Toolbox, ran a focus group, led the quantitative analysis, coded 10 themes in NVivo, co-authored the manuscript, and presented findings to faculty and peers.

Periodontal Disease and Gastric Cancer Risk | *Systematic review and cohort protocol* Jan 2025 – May 2025
- Synthesized 7 studies in a PRISMA-guided systematic review and graded certainty of evidence with GRADE; identified higher gastric cancer risk among men under 65 with periodontal disease.
- Designed and presented a 30-year retrospective cohort protocol using directed acyclic graphs for confounder selection, propensity scores, and Cox regression stratified by sex and age.

Child Stunting Determinants, 2018 Zambia DHS | *Secondary survey analysis* Jan 2025 – May 2025
- Cleaned and recoded 2018 Zambia DHS data in SAS for 8,744 children under 5 and modeled stunting with linear and logistic regression adjusted for 7 covariates; children in poorer households had 25% higher odds of stunting than those in the middle wealth quintile, and urban/rural residence modified the wealth effect on height-for-age z-scores.

Sex Differences in Hypertension, Framingham Heart Study | *Secondary cohort analysis* Sept 2024 – Dec 2024
- Analyzed new-onset hypertension in 1,631 Framingham Heart Study participants with chi-square tests and adjusted logistic regression in R; found no association with sex and nearly twice the odds with diabetes; co-authored the final report.

HPV Vaccine Uptake and Barriers Among Young Men | *Qualitative study* Sept 2024 – Dec 2024
- Ran focus groups on HPV vaccine hesitancy, coded transcripts against the Health Belief Model, and turned findings into tailored health messages, a 30-second PSA, and a stakeholder report.

Childhood Diarrheal Disease in Rural India | *Determinants and Strategies Project* Sept 2024 – Dec 2024
- Synthesized 5 studies on childhood diarrhea in rural India, mapped its determinants with the Social Ecological Model, evaluated 3 prevention strategies, and designed a caregiver peer-support intervention based on Social Cognitive Theory.

Equity in Indian Medical Education | *Personal Leadership Case Analysis* Sept 2024 – Dec 2024
- Analyzed equity gaps in India's medical education reservation system at 4 levels using adaptive leadership theory, and proposed need-based tuition aid, admissions with structured interviews, and an independent review board.

INDEPENDENT PROJECTS

Measles Watch USA | ***Interactive surveillance dashboard (Python, Streamlit)*** | **GitHub**
- Built and deployed a public dashboard combining CDC NNDSS measles case data, CDC SchoolVaxView kindergarten MMR coverage, and U.S. Census population data to track state-level case rates and vaccination coverage.

CLINICAL AND PROFESSIONAL EXPERIENCE

Nair Hospital Dental College — Mumbai, India
Program Coordinator and Dental Intern (Full-time) — Dec 2022 – Dec 2023

- Managed 700+ patient encounters across 8 departments, conducting examinations, histories, blood pressure and glucose checks, radiographs, and restorative, endodontic, prosthetic, and pediatric care under supervision.
- Recorded structured case histories in Oral Medicine, Diagnosis, and Radiology, including oral signs of systemic and autoimmune disease such as lichen planus and lupus-related lesions.
- Led recruitment, consent, and follow-up for an oral tobacco-cessation program, enrolling 80-85% of eligible patients, completing paper case report forms, and explaining study procedures, confidentiality, and withdrawal rights.
- Provided individualized tobacco-cessation counseling, explaining medical and dental information in plain language for patients with varying health literacy.

Health Assure Pvt. Ltd. — Mumbai, India
Medical Officer (Full-time) — Feb 2024 – May 2024

- Conducted 500+ structured telephone and video medical interviews, obtaining verbal consent and collecting medical histories for underwriting risk assessment while meeting daily data-completion targets.
- Recorded interview data in EMR and Excel for risk assessment, earning a 98% quality rating over a 3-month audit; explained medical information clearly while maintaining confidentiality.

S.M.B.T. Dental College and Hospital — Maharashtra, India
Dental Student (BDS Clinical and Laboratory Training) — Aug 2018 – Nov 2022

- Completed hands-on biomedical laboratory training in 6 techniques (microscopy, Western blotting, ELISA, staining, blood-smear preparation, hematologic testing), preparing and handling blood samples under standardized protocols.
- Conducted oral-health screenings, health-history collection, preventive education, and referrals for 100+ individuals per event through dental camps, school programs, and NSS camps in rural, tribal, and underserved communities.

TECHNICAL SKILLS

Statistical methods: Multilevel (mixed-effects), multivariable logistic, and linear regression | Modified Poisson regression | Effect modification, interaction testing, and delta-method contrasts | Survey-weighted analysis | Sensitivity analysis | Intention-to-treat analysis | Sample size and power calculation
Software: SAS Studio (PROC GLIMMIX, LOGISTIC, GENMOD) | R (tidyverse, survey) | Python (pandas, Streamlit) | REDCap | Kobo Toolbox | Epic Cosmos | Covidence | NVivo | Power BI (Basic) | Excel (Advanced)
Research methods: Cohort studies (retrospective, prospective) | RCT secondary analysis | Vaccine trial design | Secondary survey data (MEPS, DHS) | EHR-based cohort construction (ICD-9/10-CM and LOINC code lists, medication-based phenotypes) | Surveillance data analysis (CDC NNDSS, WHO Global TB) | Data linkage across sources | Directed acyclic graphs (DAGs) | Systematic and scoping reviews (PRISMA, PRISMA-ScR, GRADE, PCC) | Mixed methods, focus groups, and qualitative coding | Study protocol design
Clinical research: Recruitment and informed consent | Case report forms | Structured patient interviewing | IRB and Data Use Agreement compliance | HIPAA | Data dictionaries and SOPs

CERTIFICATIONS

CITI Biomedical Researchers | BUMC HIPAA and Research Data Security | Race in Clinical Research: Ethics and IRB Decision Making | ICH-GCP, in progress

LEADERSHIP AND SERVICE

Rising Up Together — Layton, Utah (Remote)
Curriculum Research & Outreach Specialist (Part-time Internship) — Sept 2026 – Present

- Leading a compliance and risk review of 13 policies and forms (curriculum, consent, medical) against 10 youth-protection areas; identified gaps, drafted corrections, and escalated 6 decisions to leadership with recommendations.
- Coordinating publication of 13 youth-safety documents across 5 categories and supporting fundraising through sponsor outreach, donation requests, and grant development.

Period Project, Boston University School of Public Health — Boston, MA
Social Media Manager — Oct 2024 – May 2026

- Led health communication on menstrual equity and reproductive health, creating educational content and presentations and increasing audience engagement by 40%.

Student Senate, Boston University School of Public Health Boston, MA
Social Media Coordinator Jan 2025 – May 2025
- Created Canva content for 5+ Student Senate events and supported outreach to more than 300 BUSPH students.

Boston University, Hillel Dining Services Boston, MA
Student Manager (Part-time) Oct 2024 – May 2026
- Supervised 12 student staff, coordinating schedules, shift coverage, and task assignments; served as point of contact between staff and management.

Boston University, Hyatt Regency Student Housing Cambridge, MA
Student Office Assistant (Part-time) Oct 2024 – May 2025
- Served as point of contact for about 500 student residents, answering housing inquiries, escalating issues, and keeping key, supply, and inventory records.

Nair Hospital Dental College Mumbai, India
Scientific Committee Member, Nonathon Oct 2023
- Managed the presentation track for a 3-day scientific event, scheduling sessions for more than 100 student presenters.

S.M.B.T. Dental College and Hospital Maharashtra, India
Cultural Representative and Class Representative Aug 2020 – Sept 2022
- As Cultural Representative and head of the art committee, organized Oral Hygiene Week and led a mask-distribution campaign for orphaned children in Sangamner during the COVID-19 pandemic.
- As Class Representative, served as the point of contact between faculty and a class of about 100 students.

VOLUNTEER EXPERIENCE

Rotary Club of Bombay Seacoast, Dental Camp Volunteer Wada, Maharashtra | Dec 2023
- Provided oral health screening and preventive care at a 1-day community dental camp.

Ashram School Dental Health Awareness and Screening Program Palghar, Maharashtra | Dec 2023
- Screened children and delivered oral health education over a 2-day program at a tribal-area residential school.

National Service Scheme (NSS) Volunteer, Oral Health Camp Vellhale, Maharashtra | Aug 2019 – Jul 2021
- Screened schoolchildren for oral disease and led role-plays on oral and menstrual hygiene during BDS years 2 and 3.

American Cancer Society, Making Strides Against Breast Cancer Boston, MA | Oct 2024
- Supported event operations for a local walk raising breast cancer awareness and funds.

CONFERENCE PRESENTATIONS

- **Patil S**, Hussain H, Malik AA, Brooks MB*. "Who Develops Tuberculosis? Evidence from a Large Real-World Household Contact Investigation in Pakistan." Accepted for oral presentation, The Union World Conference on Lung Health 2026, Rio de Janeiro, Brazil, November 2026. Selected from 2,993 submissions. *Presenting author.

MANUSCRIPTS IN PREPARATION

- **Patil S**, Hussain H, Malik AA, Brooks MB. "Who Develops Tuberculosis? Evidence from a Large Real-World Household Contact Investigation in Pakistan." Manuscript in preparation; first author (led the analysis plan, data management, and mixed-effects modeling; drafted Methods and Results). Target submission December 2026.
- **Patil S**, et al. "GLP-1 Utilization, Out-of-Pocket Burden, and Prescription Access Among U.S. Adults: MEPS 2019-2024." Manuscript in progress; target submission December 2026.
- **Patil S**, et al. "Representation of People Living with HIV in Preventive and Therapeutic mRNA Vaccine Studies for Tuberculosis: A Scoping Review." Protocol complete; screening in progress; target submission June 2027.

REFERENCES

Meredith B. Brooks, PhD, MPH | Assistant Professor of Global Health, Boston University School of Public Health
mbbrooks@bu.edu | (617) 358-2117 | MPH practicum supervisor and scoping review collaborator

Allison Portnoy, ScD, MSPH | Assistant Professor of Global Health, Boston University School of Public Health
aportnoy@bu.edu | (617) 358-0041 | Course instructor and PhD application mentor

Jeffrey Campbell, MD, MPH |Assistant Professor of Pediatrics, Pediatric Infectious Diseases Specialist, Boston Medical Center
jeffrey.campbell@bmc.org | Research Volunteer supervisor