

YASMIN TOLEDO

Epidemiologist | Real-World Evidence (RWE) | Infectious Diseases | AI and Machine Learning in Healthcare

Rio de Janeiro, Brazil • hello@yasmin.toledo.com • [LinkedIn](#) • [Lattes](#) • [Website](#)

PROFESSIONAL SUMMARY

Epidemiologist (MSc & PhD ongoing in Public Health Epidemiology at ENSP/FIOCRUZ) working with Real-World Evidence and observational research within IQVIA's global team. Appointed AI Champion, bringing artificial intelligence and machine learning into epidemiological research. 6+ years of evidence generation in infectious diseases — COVID-19, measles, influenza and arboviruses — with three peer-reviewed international publications and CNPq- and FAPERJ-funded projects. Combines rigorous observational methods with in-depth knowledge of the Brazilian healthcare system (public SUS and private sector), and works effectively in global, remote, cross-functional environments.

PROFESSIONAL EXPERIENCE

Research Epidemiologist | AI Champion — IQVIA

Nov 2025 – Present | Global Team — CEL cluster / Latin America | Remote

- **Real-World Evidence (RWE) and Real-World Data (RWD):** designs and conducts observational studies and secondary database analyses to support evidence generation for pharmaceutical and life sciences clients, contributing to study design, protocol development, statistical analysis and scientific reporting of results.
- **AI agent development:** designed and built an AI agent adopted and recognized internally at IQVIA, improving the quality and efficiency of deliverables and saving approximately 30 hours per project.
- **Machine learning and AI in epidemiology:** as AI Champion, acts as an internal reference for AI adoption across analytical and scientific workflows.
- **Global scope and compliance:** collaborates remotely with cross-functional teams and international stakeholders in a matrix environment, in alignment with ICH-GCP guidelines and company SOPs.

Epidemiologist | Hospital Epidemiological Surveillance — Rio de Janeiro City Hall — Hospital Municipal Evandro Freire / Ilha do Governador Regional Emergency Coordination

Feb 2024 – Jan 2025 | Rio de Janeiro, Brazil

- **Disease burden and data analysis:** conducted morbidity and mortality analyses and implemented monitoring of strategic surveillance indicators (KPIs) through interactive dashboards and technical reports.
- **Vaccine pharmacovigilance:** coordinated the 2024 influenza vaccination campaign, including systematic monitoring of adverse events following immunization (AEFI).
- **Process optimization:** redesigned and automated epidemiological surveillance workflows, reducing response time and optimizing routine operations.
- **Stakeholder engagement:** interfaced with clinical and management teams, translating epidemiological evidence into applied decision-making.

Research Fellow — Measles Risk Stratification — FAPERJ (Rio de Janeiro State Research Foundation)

Oct 2021 – Oct 2023 | Rio de Janeiro, Brazil

- **Observational research and modeling:** conducted epidemiological studies on measles transmission and reintroduction in the post-elimination period, applying spatio-temporal modeling, risk stratification and sociodemographic analysis.
- **Evidence for immunization strategy:** adapted and validated the WHO measles risk stratification tool for municipalities in Rio de Janeiro, supporting targeted vaccination strategies and prioritization of surveillance areas.
- **Scientific output:** produced three manuscripts published in peer-reviewed international journals, including a systematic review.

Research Fellow — COVID-19 & Severe Acute Respiratory Syndrome Surveillance Models — CNPq (Brazilian National Council for Scientific and Technological Development)

Jan 2020 – Oct 2021 | Rio de Janeiro, Brazil

- **Evidence synthesis:** conducted a scoping review characterizing public health surveillance models for COVID-19 and severe acute respiratory syndromes, analyzing scientific literature and official documents from national and multilateral health agencies.
- **Pandemic preparedness:** synthesized how previous epidemic experiences (SARS, MERS, Ebola, H5N1, H1N1) informed the design of surveillance and response systems.

SELECTED EARLIER EXPERIENCE

- **FIOCRUZ / AstraZeneca — Paquetá Vacinada Project (2021):** impact and effectiveness assessment of the ChAdOx1-nCoV-19 vaccine; field data collection and epidemiological survey.
- **Public Defender's Office of Rio de Janeiro State (2023):** built a monitoring system classifying municipalities by their response to arboviral diseases; institutional engagement with the State Health Secretariat and Ministry of Health.
- **Rio de Janeiro City Hall — Epidemiological Intelligence Center | EpiSUS Rio (2023):** outbreak investigation and public health emergency response; epidemiological analyses in R, R Markdown and Power BI.
- **Rio de Janeiro City Hall — Hospital Surveillance & Infection Control (2022):** managed notifications in national health information systems (SINAN, SIVEP-Gripe, e-SUS); active case finding; continuous education for healthcare teams.
- **Federal University of Rio de Janeiro (UFRJ) — Teaching Assistant (2023):** Demography & Health — demographic and health indicators and data analysis methods applied to population health.

EDUCATION

PhD in Epidemiology in Public Health — ENSP/FIOCRUZ — Oswaldo Cruz Foundation

Jan 2026 – 2029 (ongoing)

MSc in Public Health Epidemiology — ENSP/FIOCRUZ — Oswaldo Cruz Foundation

Feb 2024 – Dec 2025 (completed) | Focus: Infectious Diseases and Statistical Modeling

BSc in Public Health — Federal University of Rio de Janeiro (UFRJ)

Mar 2019 – Jan 2024 | Focus: Epidemiology and Health Management

Coursework included advanced biostatistics, health economics and health technology assessment (HTA), economic evaluation, evidence-based medicine, health regulatory surveillance (ANVISA), health information systems, and the policy, financing and regulation of the Brazilian healthcare system (SUS, ANS, CONITEC).

PEER-REVIEWED PUBLICATIONS

- The spatiotemporal diffusion of measles: an intra-urban analysis in Rio de Janeiro, Brazil.
- Mapping priority areas for measles surveillance: stratifying reintroduction and transmission risk in Rio de Janeiro, Brazil.
- Stratification of risk areas for measles transmission: a systematic review.

Peer reviewer for a scientific journal. Presentations at scientific and public health forums.

TECHNICAL SKILLS

Real-World Evidence & epidemiological methods: RWE and Real-World Data (RWD); observational study design (cohort, case-control, cross-sectional, ecological) and protocol development; pharmacoepidemiology; systematic and scoping reviews; health surveillance and outbreak investigation; pharmacovigilance and adverse events following immunization (AEFI); vaccine effectiveness and safety evaluation; secondary database analysis (SINAN, SIVEP-Gripe, e-SUS, SIM, SINASC).

AI & machine learning: Machine learning and AI applied to epidemiological studies and health data; AI agent development; large language models (LLMs); predictive modeling; analytical automation.

Biostatistics & modeling: Advanced biostatistics; statistical, spatial and spatio-temporal modeling; time-series analysis; risk stratification; quantitative and qualitative (mixed) methods.

Health economics, HTA & health systems (academic training): Health economics and health technology assessment; economic evaluation (cost-effectiveness, cost-utility, budget impact); evidence-based medicine; technology incorporation in the Brazilian public (CONITEC) and private (ANS) systems; regulatory surveillance (ANVISA); health management, planning and financing.

Quality & compliance: ICH-GCP (Good Clinical Practice); standard operating procedures (SOPs); data quality and integrity.

Tools: R (R Markdown, R Shiny), Python, SQL, QGIS, Power BI, Tableau, Looker Studio, advanced Excel, Microsoft Office.

Scientific communication: Medical and scientific writing; international peer-reviewed publication; protocols, technical reports and dossiers; abstracts and conference presentations; training of multidisciplinary teams.

CERTIFICATIONS & TRAINING

- ICH-GCP — Good Clinical Practice (2 courses) — IQVIA
- Spatial and Spatio-Temporal Modeling in R: Applications for Infectious Diseases — Global Health Network
- From Field to Dashboard: Informatics in Action for Disease Detectives — US CDC
- Infectious Disease Transmission Models for Decision-Makers — Johns Hopkins University (40h)
- Peer Reviewer Course — Elsevier
- Health-care Associated Infection Surveillance — WHO (10h) | InfoDengue and InfoGripe — FIOCRUZ (40h) | One Health — FIOCRUZ (30h)

LANGUAGES

Portuguese: Native.

English: Intermediate (B1) — critical reading and scientific writing, works daily within a international team.

Spanish: Intermediate (B1).