



Title of PhD project	Adverse pregnancy and birth outcomes and child mortality in Brazil: A population linkage study among low-income families	
Supervisor	Dr Enny Cruz	LSHTM
Co-Supervisor	Dr Amber Raja	LSHTM
Co-Supervisor	Dr Lizzy Brickley	LSHTM
Brief description of project	<p>Sibling comparison studies are a useful epidemiological method for controlling unmeasured family-level confounders (e.g., shared genetics and maternal education). Using nation-wide “big data” routinely collected on more than 24 million children born between 2011 and 2018 in Brazil and followed up in the CIDACS Birth Cohort, this project proposes to undertake sibling comparison studies to investigate paediatric health outcomes over the early life course.</p> <p>The specific objectives will be to:</p> <ol style="list-style-type: none"> 1. Investigate whether the interpregnancy interval between first and second singleton births is associated with increased risks of adverse perinatal outcomes as well as all-cause and cause-specific paediatric deaths. 2. Investigate the relations of birth order and maternal age with risks of adverse perinatal outcomes as well as all-cause and cause-specific paediatric deaths. 3. Estimate the recurrence of large and small for gestational age births among singleton siblings and, among discordant sibling pairs, investigate the associations of intrauterine growth with all-cause and cause-specific paediatric deaths. <p>This valuable research will help to inform public health efforts to reduce the burden of adverse birth outcomes and child mortality.</p> <p>We welcome applications from individuals whose life and professional experiences may contribute to a deeper understanding of the research topic.</p>	

<p>Skills we expect a student to develop/acquire whilst pursuing this project</p>	<p>In pursuing this project, the student will develop quantitative skills related to the epidemiologic analysis of large electronic health record datasets and interdisciplinary skills related to investigating health inequalities and interaction of risk factors. The student will have opportunities to participate in specialized training via standard accredited modules at LSHTM and distance learning courses on data linkage from CIDACS/Fiocruz.</p> <p>Over the course of their studies, the student will gain experience in critical thinking, coordination of international collaborations, acquisition of ethical approval, conduct of systematic reviews/meta-analyses, engagement with local stakeholders and policymakers, and dissemination of research findings via participation in international conferences and publication in peer-reviewed journals.</p> <p>The student will also have access to general courses on doctoral skills and data protection/management through the Bloomsbury Postgraduate Skills Network (https://doctoral-skills.ucl.ac.uk/bloomsbury/list-training.pht#).</p>
<p>Particular <u>prior</u> educational requirements for a student undertaking this project</p>	<p>MSc (or equivalent) in epidemiology, medical statistics, or a related field</p>
<p>Project key words</p>	<p>Adverse birth outcomes Child mortality Sibling Comparison Studies Epidemiology Big Data Brazil</p>
<p>Possible under 1+4 route? Master's options identified.</p>	<p>Yes LSHTM - MSc Epidemiology</p>
<p>MRC Core Skills developed through this project</p>	<p>Quantitative skills</p>
<p>MRC LID themes</p>	<p>Global Health Health Data Science</p>
<p>Further reading</p>	<p>Pre-eclampsia and risk of early-childhood asthma: a register study with sibling comparison and an exploration of intermediate variables</p> <p>Cohort Profile: Centro de Integração de Dados e Conhecimentos para Saúde (CIDACS) Birth Cohort</p>