



Title of PhD project	<b>Improving the ability to study epilepsy in big data: development and validation of an epilepsy case classification algorithm</b>	
Supervisor	<a href="#">Dr Kevin Wing</a>	LSHTM
Co-Supervisor	<a href="#">Dr Elizabeth Williamson</a>	LSHTM
Co-Supervisor	<a href="#">Dr Charlotte Warren-Gash</a>	LSHTM
Brief description of project	<p>Approximately 50 million people worldwide have epilepsy, making it one of the most common neurological diseases. Large powerful anonymised databases of “real-world” electronic health record data provide enormous potential for studying epilepsy outcomes, treatment and comorbidity. There is, however, a notable lack of epilepsy studies performed using these data, with incomplete recording of phenotype a major challenge.</p> <p>This project aims to improve the ability to perform studies on the epidemiology and pharmacoepidemiology of epilepsy within UK non-interventional electronic health record data via the development of an innovative algorithm for improving epilepsy phenotype definition. The algorithm will then be applied to a cohort study addressing key unanswered questions relating to the efficacy and safety of epilepsy treatments in pregnant women.</p>	
Skills we expect a student to develop/acquire whilst pursuing this project	Experience of manipulating very large datasets and of developing and implementing novel statistical algorithms for disease classification.	
Particular <u>prior</u> educational requirements for a student undertaking this project	MSc in either epidemiology, medical statistics, health data science or equivalent	
Project key words	Epilepsy, classification, population data, drug treatment effects	