PhD Position “Natural history of respiratory diseases in children – using clinical data from hospitals to enrich cohort studies”

The Institute of Social and Preventive Medicine (ISPM) at the University of Bern performs research in a range of disciplines relevant to public health (www.ispm.unibe.ch). Groups cut across divisions, facilitating an interdisciplinary approach to research in the fields of clinical epidemiology, social and behavioural health, biostatistics, and international and environmental health.

The Child and Adolescent Health Group, headed by Prof. Dr. med. Claudia Kuehni, conducts population-based and clinical studies in child health.

Asthma is the most common chronic disease in childhood. Symptoms are highly variable over time, and it remains poorly understood what influences long-time disease course. If physicians were better in predicting the future, they could personalize their treatments by adapting it to the individual patient’s prognosis. Research projects, such as the Swiss Paediatric Airway Cohort, are essential instruments for studying long term disease course. However, manual data entry is time consuming and costly. Also, not all patients take part in studies, and many drop out before the study is finished, which can lead to selecting bias.

This project, funded by the Swiss Personalised Health Network (SPHN), will use data for research that is routinely collected in hospitals. We will enrich an existing national cohort study, the Swiss Paediatric Airway Cohort, which already includes over 4000 children seen in hospitals for respiratory problems. Instead of manually extracting information from medical records, this project aims to use data available in the clinical information systems of the hospitals and integrate them into the study. This will reduce manual work and provide long-term outcome data (hospitalisations) for all children (also those that don’t return questionnaires). Comparison with anonymous data from non-participants will allow to assess how representative study results are and put them into context.

We will use the data obtained to investigate long-term prognosis of asthma in children, to analyse lung function trajectories and to develop prognostic models that predict exacerbations leading to emergency visits or hospitalisations. You will help improve knowledge on long-term outcomes of asthma in children and contribute to the development of faster, cost-effective, and better-quality research in Switzerland. You will collaborate with a multidisciplinary team of paediatricians, epidemiologists, and statisticians, gain a broad understanding of epidemiological and statistical techniques, present your results at (inter)national conferences, and publish manuscripts in peer-reviewed journals.

Requirements:
- A university degree (MSc or equivalent) in medicine, epidemiology, biostatistics, or related field.
- Strong interest in child health; clinical experience is an asset.
- Strong interest in data and statistical analysis, and technical flair.
- Excellent organizational skills and ability to work both independently and interact with interdisciplinary teams e.g., hospital IT representatives, clinicians, and researchers.
- Excellent oral and written communication in English; mastery of German and French is an asset.

What we offer:
- Work in a large, motivated, and competent research team, including clinical researchers from the SPAC study and data scientists from the SPHN network
- Training of relevant methodological skills for a research career in a clinical setting (paediatric teaching hospital), in a university (epidemiology or preventive medicine), or in a public health institution
The positions count as training towards an FMH in Public Health or Paediatrics
Salary according to the Swiss National Science Foundation Salary Scales for PhD students

The position is available immediately, with negotiable date of start. If you are looking for an exciting position in a highly motivated interdisciplinary team please send your CV with motivation letter in a single PDF file to Christina Mallet (maria.mallet@unibe.ch) and Prof. Claudia Kuehni (Claudia.kuehni@ispm.unibe.ch). For further information, please contact us by e-mail. Please send your application as soon as possible, at the latest by July 30th.