1. Economic evaluation and equity analysis on the intelligent assisted diagnosis technology for function assessment of patients with cerebrovascular disease

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The project is a health economic evaluation and equity analysis along with randomized clinical trials in collaboration with Zhongshan Hospital affiliated to Fudan University. The purpose is to explore whether intelligent assisted diagnosis technology can save resources and is more cost effective, and if it is possible to increase the accessibility of high-quality services and improve equity of health outcomes? We will continue to recruit patients with cerebrovascular disease in Shanghai and Guizhou, and provide intelligent assessment or manual assessment of gait and cognitive function screening according to randomized grouping, respectively. We will make natural interventions for all of them and follow them up for one year. We are collecting the baseline clinical and cost data during March to May, 2019. The expected result is that the intelligent assessment group has better effects than the control group, and is more cost effective. Moreover, the results vary among different regions, institutions, and populations and the distribution is improved towards equalization.
2. Indoor and outdoor environment and health

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Childhood asthma and allergic diseases have been increasing in China during the last decades. Almost 10 years ago, a 10-city survey on the prevalence of asthma and allergies in preschool children were performed. A 10-year repeated survey in 7 out of the 10 cities is planning to initiate in 2019. Data collection by questionnaire survey, data cleaning and data analyses are all needed in the project. In addition, a cohort in primary school students in 3 cities of China will be set up by data collection in questionnaire first.
3. Study on the cognitive status and influencing factors of the elderly in community

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Objective To study the cognitive impairment and its influencing factors in people aged 60 years old or above. Methods A total of 4997 people aged 60 years or above in Shanghai were selected by the cluster random sampling method. The general information questionnaire will be used to assess the demographic information, including age, gender, family income, degree of education, marital status, chronic disease and other information. The degree of education will be divided into illiteracy, primary, junior, senior, junior college, bachelor, master or above. Marital status was divided into unmarried, married, divorced, widowed and others. The cognitive function of the respondents will be evaluated by Mini-Mental State Examination (MMSE). Chi-square test will be used to compare cognitive status between different demographic characteristics. Multivariate logistic regression model will be used to analyze the influencing factors for cognitive impairment in the elderly.
4. Thyroid disorder among children of school-age

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Objectives: We aimed to prospectively observe and compare the risk for thyroid disorders in both thyroid volume and functions among different pubertal stages in a children cohort. **Methods**: A multi-stage cluster sampling method was used to select one junior middle school in Shanghai Minhang District, Haimen City of Jiangsu Province, Yuhuan City and Deqing County of Zhejiang Province, respectively. A total of nearly 500 girls aged 11 to 12 years from these schools were enrolled in this cohort. Baseline investigation was conducted in 2017 and information on demographic data, anthropometric measurements, and pubertal stage were collected. Individual iodine nutrition was assessed by integrating several indicators, including urinary iodine concentration, iodized salt consumption status, as well as a questionnaire on food consumption preference. Thyroid ultrasonography was performed to assess thyroid volume and nodules. All the participants have been followed up in 2019. The expected results of our study include the identification of starting point for the high risk of thyroid disorders in females, the assessment for long-term effect of pubertal iodine deficiency, and therefore the development of surveillance strategy for iodine nutrition susceptible groups.
Hepatitis E virus (HEV) infection is one of the leading causes of acute viral hepatitis worldwide with four different genotypes (1–4) responsible for most human infections. HEV genotype 3 predominates in high-income countries, including those in Europe. Transmission of this genotype is usually zoonotic and has been linked to the consumption of pork products, and in some instances, shellfish. The study aims to determine the zoonotic prevalence of HEV in Nordic countries, which consists of following two parts: 1) A systematic review of publications in local (Nordic countries) and international journals will be conducted. Zoonotic, temporal, and geographical prevalence of HEV RNA and/or anti-HEV antibodies will be summarized. 2) HEV nucleotide sequences isolated in Nordic countries will be retrospectively collected in the GenBank database for phylogenetic analysis. Zoonotic phylogenetics and potential transmission dynamics will be reconstructed.