

# INPLASY PROTOCOL

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**Support:** NSFC.

**Review Stage at time of this submission:** Piloting of the study selection process.

**Conflicts of interest:**  
There is no conflicts of interest.

## INTRODUCTION

**Review question / Objective:** All potential studies related to the prevalence of CP published from inception until September 2020 were identified from three English databases and four Chinese databases.

## The longitudinal trend of prevalence of cerebral palsy among Chinese children and adolescents from 1988 to 2020: a systematic review and meta-analysis

Yang, S<sup>1</sup>; Xia, J<sup>2</sup>; Gao, J<sup>3</sup>; Wang, L<sup>4</sup>.

**Review question / Objective:** All potential studies related to the prevalence of CP published from inception until September 2020 were identified from three English databases and four Chinese databases. Pooled prevalence was calculated to estimate the prevalence of CP with a random-effects meta-analysis model. Two-dimensional line chart and continuous fractional polynomial regression model was used to estimate the trend of CP prevalence over time. Subgroup analysis and meta-regression were conducted to address heterogeneity. Funnel plots and Egger's test was used to explore the potential publication bias in this meta-analysis. **Condition being studied:** We have a strong team, senior statisticians and advanced laboratories, as well as national project support. In addition, our team has published many systematic reviews in international journals.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 October 2020 and was last updated on 24 October 2020 (registration number INPLASY2020100095).

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## METHODS

**Search strategy:** Three English databases (PubMed, Embase, Web of Science) and four Chinese databases (China National Knowledge Infrastructure (CNKI), Wanfang, Weipu and China Biology Medicine disc (CBMdisc)) were searched by 1st Sept. 2020 to identify all potential studies related to the prevalence of CP published from inception until 1st Sept, 2020. The following searching terms were used: Cerebral palsy, Mixed Cerebral Palsy, Athetoid Cerebral Palsy, Spastic Diplegia, prevalence, morbidity, epidemiology, China, Chinese, children, and adolescent.

**Participant or population:** Chinese children and adolescents.

**Intervention:** No applicable.

**Comparator:** No applicable.

**Study designs to be included:** Data from cross-sectional studies or baseline investigations from prospective studies and randomized controlled trials (RCTs).

**Eligibility criteria:** This systematic review was performed with a complete search strategy and rigorous inclusion and exclusion criteria, adhering to 2009 PRISMA. In comparison with previous reviews, this research included with more databases, a large sample size and national representative, and also, we did a further subgroup analysis on the heterogeneity. The longitudinal trend of children CP in China in the past 30 years was found.

**Information sources:** Three English databases (PubMed, Embase, Web of Science) and four Chinese databases (China National Knowledge Infrastructure (CNKI), Wanfang, Weipu and China Biology Medicine disc (CBMdisc)).

**Main outcome(s):** Provide a comprehensive update on the trend of prevalence of CP in China, from 1988 to 2020, and to systematically review Childhood CP by areas, regions, age groups and birth weights in China.

**Quality assessment / Risk of bias analysis:** Two researchers assessed the quality of each included study using the quality assessment criteria for observational studies recommended by the Agency of Healthcare Research and Quality (AHRQ). And we will do the risk of bias analysis by Stata.

**Strategy of data synthesis:** Pooled prevalence and 95% CI of Children CP were calculated. Chi-squared-based Q test and the I<sup>2</sup> test were performed to evaluate the heterogeneity of the studies. The random-effects meta-analysis model were used when the heterogeneity was statistically significant (I<sup>2</sup>>50, P value<0.05).

**Subgroup analysis:** Subgroup information for a number of cases and number of population including gender (male, female), age (0-1years old, 1-3 years old, 3-6years old, 6-9years old, 9-12 years old, 12-15 years old, 15-18years old), geographic location (East China, Central China, South China, Southwest China, Northwest China, North China, Northeast China), regions (urban or rural), birthweight (under 2.5kg, 2.5-4kg, over 4kg ), gestation(under 37 weeks,37-42weeks, over 42weeks) and classification of cerebral palsy are collected.

**Sensibility analysis:** Sensitivity analysis was conducted with the 48 studies that were distributed on both sides of the pooled prevalence.

**Country(ies) involved:** China.

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**Keywords:** Cerebral palsy, Children, Prevalence, Meta-analysis, China.

**Contributions of each author:**

**Author 1 - Shengyi Yang.**

**Author 2 - Jiayue Xia.**

**Author 3 - Jing Gao.**

**Author 4 - Lina Wang.**