

# Supplementary appendix

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## eText1. Full search strategy

### PubMed

preterm birth[MeSH Terms] AND China[MeSH Terms] AND (incidence[MeSH Terms] OR risk factors[MeSH Terms] OR prevalence[MeSH Terms])

### Embase

All field preterm OR pre-term OR premature OR pre-mature OR prematuritas OR prematurity OR pre-maturity

AND All field birth OR childbirth OR deliver OR delivery OR labor OR labour

AND Title or Abstract China OR Chinese

AND All field prevalence OR incidence OR rate OR risk factors

### Web of Science

TS= ((preterm OR pre-term OR premature OR pre-mature OR prematuritas OR prematurity OR pre-maturity) AND (birth OR childbirth OR deliver OR delivery OR labor OR labour) AND ((prevalence OR incidence OR rate) OR risk factors)) AND TI= (China OR Chinese)

### China National Knowledge Infrastructure

SU = ('流行'+'发生率'+ '影响因素'+ '出生结局') AND(TI='早产' OR KY='早产')

### China Science and Technology Journal Database

M=早产 AND (U=流行 OR U=发生率 OR U=影响因素 OR U=出生结局)

### Wanfang Data

题名或关键词:(早产) \*题名或关键词:(流行+影响因素+发生率+出生结局)

## eText2. List of included studies (n=162)

1. Hu CX, Li YP, Hua SP, et al. [Analysis of the related factors and neonatal outcomes of 470 cases of preterm deliveries]. *Mat Child Heal Care of China* 2013;28(18):2914-16.
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# PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
<b>TITLE</b>			
Title	1	Identify the report as a systematic review.	P1
<b>ABSTRACT</b>			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	P1
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	P1-P2
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	P2
<b>METHODS</b>			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	P2
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	P2
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	eText1
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	P2
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	P2-P3
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	P2-P3
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	P2-P3
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	P3
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	P3
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	P3
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	P3
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	P3
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	P3
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	P3
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	P3
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	P3



## PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	P3
<b>RESULTS</b>			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	P3, Fig1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	P3
Study characteristics	17	Cite each included study and present its characteristics.	eText2, eTable2
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	P4, eTable3
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	eFig1, Fig3
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	P3-P4
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	P3-P5
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	P3-P5
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	P4
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	P4
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	P3-P5
<b>DISCUSSION</b>			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	P5-P6
	23b	Discuss any limitations of the evidence included in the review.	P7-P8
	23c	Discuss any limitations of the review processes used.	P7-P8
	23d	Discuss implications of the results for practice, policy, and future research.	P7
<b>OTHER INFORMATION</b>			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	P2
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	P2
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	P2
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	P8
Competing interests	26	Declare any competing interests of review authors.	P8
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	P8

From: Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi:10.1136/bmj.n71

For more information, visit: [www.prisma-statement.org](http://www.prisma-statement.org).

**eTable2. Characteristics of included studies (n=162)**

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
1	2013	Hu Chunxia	Chinese	2011	Hainan	E	HS	3	No	28	37	No	W	1619	470	29.0
2	2015	Zhu Tong	English	2012	Liaoning	NE	HS	3	Yes	27 or less	37	Yes	N	821	180	21.9
3	2014	Kong Dechuan	Chinese	2012	Anhui	C	HS	3	Yes	27 or less	37	Yes	W	1028	219	21.3
4	2013	Zhou Shenglan	Chinese	2011	Liaoning	NE	HS	3	No	28	37	U <sup>d</sup>	W	6063	1123	18.5
5	2017	Reyihanguli Maimaiti	Chinese	2014	Anhui	C	HS	3	Yes	U	37	Yes	W	2758	449	16.3
6	2017	Guo Yanwei	Chinese	2013	Hebei	E	HS	3	Yes	27 or less	37	Yes	N	8094	1285	15.9
7	2016	Yang Yinxia	Chinese	2014	Shanxi	C	HS	3	No	U	37	U	W	4903	754	15.4
8	2016	Li Yanhong	Chinese	2012	Guangdong	E	HS	2	No	28	37	Yes	W	8963	1326	14.8
9	2016	Lei Qiong	English	2013	Guangdong	E	HS	3	Yes	27 or less	37	Yes	W	5535	810	14.6
10	2018	Liu Wenyan	English	2015	Zhejiang	E	HS	3	Yes	27 or less	37	Yes	N	37159	5428	14.6
11	2015	Guo Yeqing	Chinese	2012	Hunan	C	HS	3	Yes	28	37	Yes	W	1031	147	14.3
12	2014	Lei Qiong	Chinese	2011	Guangdong	E	HS	3	Yes	U	37	Yes	W	5498	726	13.2
13	2018	Zhu Hui	English	2016	Fujian	E	HS	3	Yes	U	37	Yes	W	596	76	12.8
14	2017	Zhang Yihui	English	2015	Jiangsu	E	HS	3	No	28	37	No	W	11006	1359	12.3
15	2013	Zhang Jingjing	Chinese	2012	Gansu	W	HS	U	Yes	28	37	Yes	N	1270	154	12.1
16	2018	Huang Huafei	Chinese	2015	Zhejiang	E	HS	3	No	28	37	Yes	N	33958	4090	12.0
17	2017	Xiong Jiangjun	Chinese	2014	Hunan	C	HS	3	No	U	37	U	W	3190	378	11.8



No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
18	2017	Qin Jiabi	English	2015	Hunan	C	HS	3	Yes	U	37	No	W	5639	661	11.7
19	2019	Zhao Quming	English	2012	China	China	HS	U	No	U	37	Yes	N	122765	13995	11.4
20	2015	Zhu Li	Chinese	2012	China	China	HS	U	Yes	27 or less	37	Yes	N	159334	17495	11.0
21	2018	Wang Renhong	Chinese	2011	Gansu	W	HS	U	Yes	28	37	No	N	33804	3682	10.9
22	2017	Yan Yan	English	2010	Shanghai	E	HS	3	No	U	37	U	W	1683	183	10.9
23	2013	Fan Lichun	Chinese	2010	Hainan	E	WP	- <sup>e</sup>	No	U	37	Yes	N	89854	9705	10.8
24	2015	Ji Deyong	Chinese	2013	Anhui	C	HS	U	Yes	28	37	Yes	N	6151	664	10.8
25	2012	Liu Lei	Chinese	2010	Anhui	C	HS	3	Yes	U	37	Yes	W	702	74	10.5
26	2015	Xu Haiqing	English	2012	Hubei	C	PS	-	No	U	37	Yes	N	NA <sup>f</sup>	NA	10.5
27	2018	Hou Xiaojing	Chinese	2015	Shanghai	E	HS	3	No	28	37	U	W	600	62	10.3
28	2015	Peng Tingting	Chinese	2013	Shanxi	C	HS	3	Yes	28	37	Yes	N	4804	494	10.3
29	2018	Zhao Xiaoli	Chinese	2012	Guangdong	E	PS	-	No	U	37	Yes	N	786	80	10.2
30	2015	Zhang Xiaobin	Chinese	2012	Xinjiang	W	HS	3	No	28	37	U	W	10880	1100	10.1
31	2012	Yu Yanhua	Chinese	2010	Guangdong	E	HS	3	No	28	37	U	W	2436	244	10.0
32	2016	Liu Xiaohui	English	2011	Gansu	W	HS	3	Yes	27 or less	37	Yes	W	10179	1019	10.0
33	2019	Xu Fengdan	English	2014	China	China	HS	U	No	27 or less	37	Yes	N	138247	13701	9.9
34	2014	Liu Xiyong	Chinese	2012	Zhejiang	E	HS	3	No	28	37	Yes	N	13381	1325	9.9
35	2012	Zhu Yan	Chinese	2011	China	China	HS	U	No	U	37	Yes	N	106078	10498	9.9
36	2016	Zhang Xiaosong	Chinese	2012	Beijing, Guangdong, Hunan, Hubei, Sichuan, Shaanxi	Cross	HS	U	No	27 or less	37	Yes	W	111095	10986	9.9

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
37	2015	Xu Xiaoying	Chinese	2011	Gansu	W	HS	3	Yes	28	37	Yes	W	6181	608	9.8
38	2016	MCT for RDS <sup>g</sup>	Chinese	2013	China	China	HS	U	No	27 or less	37	Yes	N	62880	6017	9.6
39	2018	Han Yingying	English	2015	Jiangsu	E	HS	3	Yes	28	37	Yes	N	6693	638	9.5
40	2019	Chen Chang	English	2016	China	China	HS	U	No	27 or less	37	No	N	75590	7179	9.5
41	2017	Sun Pengfei	English	2013	Hebei	E	WP	-	No	U	37	Yes	N	67718	6213	9.2
42	2016	Jiang Fang	Chinese	2012	Beijing	E	HS	3	No	27 or less	37	U	N	14544	1328	9.1
43	2014	Zhou Xin	Chinese	2011	Jiangsu	E	HS	3	No	28	37	Yes	W	11302	1030	9.1
44	2019	Liu Xijuan	Chinese	2017	Zhejiang	E	HS	3	No	27 or less	37	Yes	N	19800	1800	9.1
45	2017	Li Pengcheng	Chinese	2015	Hubei, Gansu	Cross	HS	U	No	U	37	Yes	W	29712	2662	9.0
46	2018	Yu Honghui	English	2013	Hubei	C	HS	U	No	U	37	No	W	797	71	8.9
47	2013	Tian Qing	Chinese	2011	Guangdong	E	HS	U	No	U	37	Yes	N	34572	3045	8.8
48	2016	Zhong Shilin	Chinese	2012	Guangdong	E	HS	3	No	28	37	Yes	W	19203	1688	8.8
49	2018	Ke Li	English	2015	Guangdong	E	HS	3	Yes	27 or less	37	Yes	W	3684	323	8.8
50	2016	Liu Weiliang	Chinese	2014	Henan, Guangxi, Shanghai	Cross	HS	U	No	28	37	U	W	6000	650	8.8
51	2015	Shen Chongrong	Chinese	2013	Jiangsu	E	HS	2	No	28	37	No	W	1564	136	8.7
52	2015	Fernando C. Barros	English	2011	Beijing	E	HS	U	No	27 or less	37	U	N	6510	547	8.4
53	2016	Zhao Qianqian	Chinese	2012	Beijing	E	HS	3	No	27 or less	37	No	W	11142	930	8.3
54	2014	Zhou J	English	2011	Guangdong	E	HS	3	No	U	37	Yes	W	1953	159	8.1

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
55	2017	Dong Renjing	Chinese	2013	Jilin	NE	HS	3	No	28	37	U	W	14243	1149	8.1
56	2013	Feng Fangfang	Chinese	2011	Hubei	C	HS	3	No	28	37	Yes	W	1400	110	7.9
57	2017	Zhuang Xun	English	2014	Jiangsu	E	HS	3	Yes	27 or less	37	No	W	36755	2875	7.8
58	2017	Liu Yajun	English	2011	Beijing, Jilin, Liaoning, Shanxi, Hebei, Inner Mongolia, Shandong, Shaanxi, Xinjiang	Cross	HS	U	Yes	28	37	Yes	N	65173	5092	7.8
59	2013	Sun Jianhua	Chinese	2011	Liaoning	NE	HS	U	No	28	37	U	W	2370	184	7.8
60	2018	Yan Junmei	Chinese	2013	Jiangsu	E	HS	3	No	27 or less	37	Yes	N	60730	4698	7.7
61	2017	Zeng Lixiang	Chinese	2015	Guangdong	E	HS	3	No	28	37	No	N	34082	2616	7.7
62	2017	Tan Jing	English	2010	Sichuan	W	HS	U	Yes	U	37	U	W	21942	1684	7.7
63 <sup>h</sup>	2017	Guo Tongjun	Chinese	2012	Hunan	C	PS	-	Yes	U	37	Yes	W	55654	4212	7.6
64	2015	Chen Ping	Chinese	2013	Zhejiang	E	HS	U	Yes	28	37	U	W	1958	148	7.6
65	2015	Liu Lu	English	2014	Beijing	E	HS	3	Yes	U	37	Yes	W	2973	223	7.5
66	2018	Huang Xin	English	2016	Hunan	C	WP	-	Yes	U	37	Yes	W	16780	1249	7.4
67	2017	Tang Wen	English	2013	China	China	HS	U	No	28	37	Yes	N	3915965	289381	7.4
68	2016	Xu Rong	Chinese	2012	Jiangsu	E	WP	-	Yes	U	37	Yes	W	157187	11530	7.3
69	2012	Lu Rongxian	Chinese	2011	Zhejiang	E	HS	3	No	28	37	Yes	W	3316	243	7.3
70	2018	Wang Xiaojie	Chinese	2017	Guangdong	E	HS	3	No	27 or less	37	Yes	N	6011	439	7.3
71	2017	Wang Shiwen	English	2012	Shandong	E	HS	U	No	U	37	Yes	N	10933	793	7.3

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
72	2013	Yi Lilan	Chinese	2012	Beijing, Heilongjiang, Hunan, Guangdong	Cross	HS	U	Yes	U	37	Yes	N	5539	399	7.2
73	2016	Du Huijuan	Chinese	2013	Hebei	E	HS	2	No	U	37	Yes	N	10644	764	7.2
74	2018	Guo Tongjun	English	2012	China	China	PS	-	Yes	27 or less	37	Yes	N	1020471	73240	7.2
75	2016	Ding Jie	Chinese	2014	Beijing	E	HS	3	Yes	28	37	Yes	W	642	46	7.2
76	2015	Luo Xiaolin	English	2011	China	China	HS	U	No	28	37	No	W	111767	7872	7.0
77	2018	Liu Yiwen	Chinese	2011	Hebei	E	PS	-	Yes	28	37	U	W	993	69	6.9
78	2017	Kang Huixian	Chinese	2012	Beijing	E	HS	3	Yes	28	37	Yes	W	1126	78	6.9
79	2019	Yuan Xiaosong	English	2016	Jiangsu	E	HS	3	Yes	28	37	Yes	W	11576	797	6.9
80	2016	Xue Qinqin	English	2011	Shanghai	E	HS	3	No	27 or less	37	Yes	W	37443	2541	6.8
81	2013	Liu Jingli	Chinese	2012	Jilin	NE	HS	U	No	28	37	U	W	3141	211	6.7
82	2018	Xu Qin	English	2015	China	China	PS	-	No	28	37	No	W	4832887	324207	6.7
83	2013	Ren Dafeng	Chinese	2011	Jiangsu	E	HS	3	No	28	37	U	W	4360	292	6.7
84	2014	Shan Xiaoyi	English	2010	Beijing	E	HS	U	No	U	37	Yes	N	22507	1496	6.6
85	2016	Yu Huiting	Chinese	2015	Shanghai	E	WP	-	No	U	37	Yes	W	191100	12513	6.5
86	2019	Yan Huina	English	2013	Beijing	E	HS	2	Yes	27 or less	37	Yes	W	3688	241	6.5
87	2013	Wang Chengshu	Chinese	2011	Beijing	E	HS	3	Yes	28	37	Yes	W	4090	261	6.4
88	2017	Li Shanshan	Chinese	2016	Guangxi	W	HS	3	No	U	37	Yes	W	1547	98	6.3
89	2017	Xin Qianqian	English	2013	China	China	HS	U	No	U	37	Yes	N	21994	1392	6.3
90	2019	Guan Tianjia	English	2010	Beijing	E	HS	2	No	27 or less	37	Yes	N	82000	5166	6.3

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
91	2014	Guo Yong	English	2012	Guangdong	E	WP	-	Yes	28	37	Yes	W	54575	3384	6.2
92	2018	Ye Lin	English	2014	Jiangsu	E	WP	-	Yes	U	37	Yes	W	24246	1501	6.2
93	2016	Han Shujing	English	2013	Beijing	E	HS	3	No	U	37	Yes	N	37573	2294	6.1
94	2018	Li Changchang	English	2011	Guangdong	E	WP	-	No	27 or less	37	Yes	N	587829	34946	5.9
95	2019	Yang M.	English	2014	Sichuan	W	HS	U	Yes	U	37	Yes	W	4340	252	5.8
96	2016	Zhang Dandan	Chinese	2013	Hubei	C	HS	3	Yes	28	37	Yes	W	11020	630	5.7
97	2015	Yu Rong	Chinese	2012	Beijing	E	HS	3	No	28	37	Yes	W	10678	588	5.5
98	2018	Zhao Jinqi	Chinese	2014	Beijing	E	WP	-	No	U	37	Yes	N	1366377	74994	5.5
99	2019	Su Weijuan	English	2014	Fujian	E	WP	-	No	U	37	No	W	62852	3350	5.3
100	2013	Zheng Feng	Chinese	2011	Liaoning	NE	HS	U	No	28	37	Yes	W	5472	290	5.3
101	2017	Xia Min	English	2012	Shandong	E	HS	3	No	27 or less	37	No	W	10868	571	5.3
102	2018	Xu Jing	English	2016	Shandong	E	HS	3	Yes	U	37	No	W	4552	239	5.3
103	2017	Wang Chen	Chinese	2013	Beijing	E	HS	U	Yes	28	37	Yes	W	14970	785	5.2
104	2018	Li Xiangyu	English	2015	Hubei	C	HS	U	Yes	28	37	Yes	N	10635	557	5.2
105	2019	Wei Liangjia	Chinese	2016	Guangxi	W	HS	U	Yes	28	37	Yes	W	12780	668	5.2
106	2017	Ye Juan	Chinese	2015	Guangxi	W	HS	U	Yes	28	37	U	W	2463	125	5.1
107	2013	Xu Hairong	Chinese	2010	Guangdong	E	HS	2	No	28	37	U	W	1785	90	5.0
108	2019	Lin Xianhua	English	2014	Shanghai	E	HS	3	Yes	28	37	Yes	W	49612	2494	5.0
109	2017	Hu Ronghua	English	2013	Hubei	C	WP	-	Yes	28	37	Yes	W	317463	15889	5.0
110	2015	Bo Sun	Chinese	2012	Shaanxi	W	WP	-	No	U	37	U	N	383976	19198	5.0

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
111	2019	Guo Pi	English	2015	Guangdong	E	WP	-	Yes	U	37	Yes	N	1098600	54521	5.0
112	2019	Liu Tao	Chinese	2017	Guangxi	W	HS	U	No	28	37	U	W	21891	1080	4.9
113	2018	He Jianrong	English	2013	Guangdong	E	HS	3	Yes	U	37	Yes	W	9044	444	4.9
114	2017	Yang Wenjia	English	2012	Beijing	E	HS	3	Yes	U	37	No	W	979	48	4.9
115	2017	Liu Shiping	English	2015	Hunan	C	PS	-	No	U	37	Yes	W	882	43	4.9
116	2018	Xiao Yue	English	2013	Liaoning	NE	HS	U	Yes	U	37	Yes	W	1569	76	4.8
117	2013	Li Guijuan	Chinese	2011	Shandong	E	HS	2	No	U	37	Yes	W	4214	202	4.8
118	2019	Dai Xiaowei	Chinese	2016	Guangdong	E	HS	3	Yes	U	37	Yes	W	1377	66	4.8
119	2018	Wang Chen	English	2014	Beijing, Guangdong, Sichuan	Cross	HS	U	Yes	U	37	U	W	21577	1027	4.8
120	2018	Tang Jiangbing	Chinese	2013	Zhejiang	E	HS	U	No	U	37	U	N	79850	3778	4.7
121	2017	Li Run	English	2013	Sichuan	W	HS	U	Yes	U	37	Yes	W	688	32	4.7
122	2018	Wang Yaocheng	Chinese	2014	Zhejiang	E	WP	-	No	28	37	Yes	N	120819	5532	4.6
123	2015	Pan Lei	English	2011	Tianjin	E	WP	-	Yes	U	37	Yes	W	17545	803	4.6
124	2019	Hu Jie	English	2014	Hubei	C	HS	3	Yes	28	37	Yes	W	16345	721	4.4
125	2018	Xiao Qingyang	English	2012	Shanghai	E	WP	-	Yes	27 or less	37	Yes	N	132783	5856	4.4
126	2014	He Jifei	Chinese	2011	Chongqing	W	HS	U	No	28	37	U	W	8567	366	4.3
127	2015	Xue Xiaoping	Chinese	2010	Shanxi	C	WP	-	Yes	28	37	Yes	N	50871	2163	4.3
128	2014	Xu Xin	Chinese	2011	Hunan	C	HS	U	No	28	37	Yes	W	6270	265	4.2
129	2012	Yang Qing	Chinese	2010	Shanghai	E	HS	2	No	U	37	Yes	N	9741	409	4.2
130	2016	Long Xinzhi	Chinese	2015	Guangdong	E	HS	2	No	28	37	U	W	2000	83	4.2

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
131	2013	Guo Yawei	Chinese	2011	Hunan	C	PS	-	No	28	37	U	W	6270	259	4.1
132	2015	Zhang Cuihong	English	2012	Beijing	E	HS	U	Yes	U	37	Yes	W	14196	586	4.1
133	2019	Zhu Beibei	English	2014	Anhui	C	HS	2	Yes	U	37	Yes	W	3273	134	4.1
134	2018	Ding Haiyan	Chinese	2013	Zhejiang	E	WP	-	No	27 or less	37	No	N	18276	748	4.1
135	2016	Wang Fen	Chinese	2012	Hubei	C	HS	3	No	28	37	Yes	W	24145	986	4.1
136	2019	Ma Haihui	Chinese	2015	Beijing	E	HS	2	Yes	27 or less	37	Yes	W	34726	1418	4.1
137	2015	Zhou Miao	Chinese	2014	Liaoning, Sichuan	Cross	WP	-	No	28	37	Yes	W	7171	289	4.0
138	2018	Tian Jiarong	Chinese	2015	Guangxi	W	WP	-	Yes	28	37	Yes	W	10122	404	4.0
139	2017	Zhao Yanjie	Chinese	2012	Jiangsu	E	WP	-	No	U	37	Yes	N	34022	1339	3.9
140	2018	Wang H.	English	2012	Jiangsu	E	WP	-	No	27 or less	37	No	N	119454	4643	3.9
141	2018	Hu Chengyang	English	2011	Anhui	C	PS	-	No	27 or less	37	Yes	W	16983	656	3.9
142	2018	Zheng Wei	English	2014	Beijing	E	HS	3	Yes	U	37	Yes	N	10366	400	3.9
143	2018	Huang Aiqun	English	2014	Hebei, Liaoning, Hunan, Fujian, Sichuan, Yunnan	Cross	WP	-	Yes	U	37	Yes	W	40152	1331	3.8
144	2014	Fei Lixiao	Chinese	2013	Henan	C	WP	-	No	27 or less	37	U	W	19120	727	3.8
145	2017	Fang Haiqin	Chinese	2015	Jiangsu	E	WP	-	No	28	37	Yes	N	10241	369	3.6
146	2018	Yang Jin	English	2015	Henan	C	HS	U	Yes	U	37	Yes	W	2320	82	3.5
147	2015	Wen Tingyuan	English	2011	Beijing	E	HS	3	Yes	U	37	U	W	13776	485	3.5
148	2015	Jia Xiaomin	Chinese	2011	Anhui	C	HS	3	Yes	28	37	Yes	W	2729	96	3.5
149	2014	Chen Liangmiao	English	2010	Zhejiang	E	HS	3	No	28	37	No	W	8012	281	3.5

No.	Publication year	First author	Language	Study year	Study setting(s)	Region <sup>a</sup>	Data source <sup>b</sup>	HS level	Singleton only	Lower boundary	Upper boundary	Live birth only	Unit of analysis <sup>c</sup>	Total participants	Number of cases	Rate (%)
150	2017	Fan Xiaojing	English	2011	Tibet	W	PS	-	Yes	28	37	Yes	W	701	23	3.3
151	2019	Fang Jing	English	2014	Hubei	C	HS	3	Yes	U	37	Yes	W	1028	33	3.2
152	2014	Li Yanhua	Chinese	2010	Fujian	E	HS	3	Yes	U	37	Yes	W	592	19	3.2
153	2019	Li Minmin	Chinese	2012	Shaanxi	W	PS	-	Yes	U	37	Yes	W	28841	894	3.1
154	2016	Hu Yan	Chinese	2013	Hubei	C	HS	3	No	28	37	Yes	W	5242	160	3.1
155	2016	Jin Wenyuan	English	2011	Zhejiang	E	HS	3	Yes	28	37	Yes	W	934	27	2.9
156	2018	Zhao Xiang	Chinese	2017	Shandong	E	HS	3	Yes	U	37	Yes	W	1300	37	2.8
157 <sup>h</sup>	2017	Guo Tongjun	English	2014	Henan	C	PS	-	Yes	U	37	U	N	244305	6709	2.7
158	2016	Guo Yanwei	Chinese	2010	Hebei	E	HS	U	No	28	37	No	W	4966	131	2.6
159	2014	Wang Jing	Chinese	2012	Beijing	E	HS	2	No	U	37	U	W	4042	103	2.5
160	2016	Jiang Yan	Chinese	2010	Guangdong	E	HS	2	No	U	37	U	W	5000	120	2.4
161	2013	Wang Mei	Chinese	2011	Ningxia	W	HS	2	Yes	U	37	Yes	W	600	13	2.2
162	2019	Wang Feixue	Chinese	2016	Zhejiang	E	PS	-	No	U	37	Yes	W	520695	8151	1.6
CR <sup>i</sup> (%)	99.4	95.7	100.0	90.7	96.9	-	91.4	-	96.9	73.5	92.6	73.5	86.4	84.0	87.0	79.0

<sup>a</sup> “NE”: Northeastern China; “E”: Eastern China; “C”: Central China; “W”: Western China.

<sup>b</sup> “WP”: Whole population; “PS”: Population sample; “HS”: Hospital.

<sup>c</sup> “N”: Neonate; “W”: Woman.

<sup>d</sup> “U”: Unknown. Hospital level of hospital-based studies was unknown if: 1) it could not be determined according to the online system, 2) there was no specific hospital name provided, 3) hospitals were of different types.

<sup>e</sup> “-”: Not applicable, including: 1) hospital level for studies from whole population or population sample; 2) consistency rates for region and hospital level, as they were not directly extracted from studies.



<sup>f</sup>Data were unobtainable.

<sup>g</sup> “MCT for RDS”: Multicenter Collaborative Team for the Respiratory Distress Syndrome.

<sup>h</sup> See eText2 by No. for details on two studies with same publication year and first author.

<sup>i</sup> “CR”: Consistency rate (of data extraction between two reviewers), the percentage of studies from which the data extracted by the two reviewers were consistent relative to the total number of studies included.

eTable3. Study quality assessment (n=162)

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
1	2013	Hu Chunxia	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes
2	2015	Zhu Tong	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	No
3	2014	Kong Dechuan	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
4	2013	Zhou Shenglan	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear
5	2017	Reyihanguli Maimaiti	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	2017	Guo Yanwei	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	2016	Yang Yinxia	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
8	2016	Li Yanhong	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
9	2016	Lei Qiong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	2018	Liu Wenyuan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	2015	Guo Yeqing	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
12	2014	Lei Qiong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	2018	Zhu Hui	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
14	2017	Zhang Yihui	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	2013	Zhang Jingjing	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	Unclear
16	2018	Huang Huafei	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
17	2017	Xiong Jiangjun	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
18	2017	Qin Jiabi	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	No

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
19	2019	Zhao Quming	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	2015	Zhu Li	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	2018	Wang Renhong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	2017	Yan Yan	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	Unclear
23	2013	Fan Lichun	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
24	2015	Ji Deyong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	2012	Liu Lei	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
26	2015	Xu Haiqing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	2018	Hou Xiaojing	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
28	2015	Peng Tingting	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	2018	Zhao Xiaoli	Yes	No	No	Yes	Unclear	Yes	Yes	Yes	Unclear
30	2015	Zhang Xiaobin	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
31	2012	Yu Yanhua	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	2016	Liu Xiaohui	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	No
33	2019	Xu Fengdan	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	2014	Liu Xiyong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	2012	Zhu Yan	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	2016	Zhang Xiaosong	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	2015	Xu Xiaoying	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
38	2016	MCT for RDS	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	2018	Han Yingying	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	2019	Chen Chang	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	2017	Sun Pengfei	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
42	2016	Jiang Fang	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43	2014	Zhou Xin	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
44	2019	Liu Xijuan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	2017	Li Pengcheng	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	2018	Yu Honghui	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
47	2013	Tian Qing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	2016	Zhong Shilin	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
49	2018	Ke Li	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	2016	Liu Weiliang	No	Unclear	Yes	No	Yes	Yes	Yes	Yes	Yes
51	2015	Shen Chongrong	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
52	2015	Fernando C. Barros	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53	2016	Zhao Qianqian	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54	2014	Zhou J	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	No
55	2017	Dong Renjing	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
56	2013	Feng Fangfang	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
57	2017	Zhuang Xun	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	2017	Liu Yajun	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
59	2013	Sun Jianhua	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
60	2018	Yan Junmei	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	2017	Zeng Lixiang	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62	2017	Tan Jing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63 <sup>j</sup>	2017	Guo Tongjun	Yes	Unclear	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear
64	2015	Chen Ping	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	Unclear
65	2015	Liu Lu	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	2018	Huang Xin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67	2017	Tang Wen	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
68	2016	Xu Rong	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	2012	Lu Rongxian	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	2018	Wang Xiaojie	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	2017	Wang Shiwen	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	2013	Yi Lilan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73	2016	Du Huijuan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	2018	Guo Tongjun	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
75	2016	Ding Jie	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	No

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
76	2015	Luo Xiaolin	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
77	2018	Liu Yiwen	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes
78	2017	Kang Huixian	No	No	No	Yes	Unclear	Yes	Yes	Yes	Yes
79	2019	Yuan Xiaosong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
80	2016	Xue Qinqin	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
81	2013	Liu Jingli	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
82	2018	Xu Qin	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
83	2013	Ren Dafeng	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
84	2014	Shan Xiaoyi	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
85	2016	Yu Huiting	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
86	2019	Yan Huina	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
87	2013	Wang Chengshu	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
88	2017	Li Shanshan	No	Yes	No	Yes	Unclear	Yes	Unclear	Yes	No
89	2017	Xin Qianqian	Yes	No	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear
90	2019	Guan Tianjia	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
91	2014	Guo Yong	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
92	2018	Ye Lin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
93	2016	Han Shujing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
94	2018	Li Changchang	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
95	2019	Yang M.	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
96	2016	Zhang Dandan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
97	2015	Yu Rong	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
98	2018	Zhao Jinqi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
99	2019	Su Weijuan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
100	2013	Zheng Feng	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
101	2017	Xia Min	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
102	2018	Xu Jing	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
103	2017	Wang Chen	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
104	2018	Li Xiangyu	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
105	2019	Wei Liangjia	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
106	2017	Ye Juan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
107	2013	Xu Hairong	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes
108	2019	Lin Xianhua	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
109	2017	Hu Ronghua	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
110	2015	Bo Sun	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
111	2019	Guo Pi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
112	2019	Liu Tao	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear
113	2018	He Jianrong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
114	2017	Yang Wenjia	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	Unclear
115	2017	Liu Shiping	Yes	Unclear	No	Yes	Yes	Yes	No	Yes	Yes
116	2018	Xiao Yue	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes
117	2013	Li Guijuan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
118	2019	Dai Xiaowei	No	Yes	No	Yes	Unclear	Yes	Yes	Yes	Unclear
119	2018	Wang Chen	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
120	2018	Tang Jiangbing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
121	2017	Li Run	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
122	2018	Wang Yaocheng	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
123	2015	Pan Lei	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
124	2019	Hu Jie	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
125	2018	Xiao Qingyang	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
126	2014	He Jifei	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
127	2015	Xue Xiaoping	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
128	2014	Xu Xin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
129	2012	Yang Qing	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
130	2016	Long Xinzhi	No	Yes	Yes	No	Unclear	Yes	Yes	Yes	Unclear
131	2013	Guo Yawei	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
132	2015	Zhang Cuihong	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist									
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>	
133	2019	Zhu Beibei	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
134	2018	Ding Haiyan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
135	2016	Wang Fen	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
136	2019	Ma Haihui	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	No
137	2015	Zhou Miao	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
138	2018	Tian Jiarong	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
139	2017	Zhao Yanjie	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
140	2018	Wang H.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
141	2018	Hu Chengyang	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
142	2018	Zheng Wei	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
143	2018	Huang Aiqun	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
144	2014	Fei Lixiao	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
145	2017	Fang Haiqin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
146	2018	Yang Jin	No	No	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	No
147	2015	Wen Tingyuan	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Unclear
148	2015	Jia Xiaomin	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	No
149	2014	Chen Liangmiao	No	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Unclear
150	2017	Fan Xiaojing	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
151	2019	Fang Jing	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No.	Publication year	First author	The 9 domains of Joanna Briggs Institute Critical Appraisal Checklist								
			Sample frame <sup>a</sup>	Sampling method <sup>b</sup>	Sample size <sup>c</sup>	Subject and setting description <sup>d</sup>	Identified sample coverage <sup>e</sup>	Identification method <sup>f</sup>	Measurement <sup>g</sup>	Statistical analysis <sup>h</sup>	Response rate <sup>i</sup>
152	2014	Li Yanhua	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
153	2019	Li Minmin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
154	2016	Hu Yan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
155	2016	Jin Wenyuan	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
156	2018	Zhao Xiang	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
157 <sup>j</sup>	2017	Guo Tongjun	Yes	Unclear	Yes	No	Unclear	Yes	Yes	Yes	Unclear
158	2016	Guo Yanwei	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
159	2014	Wang Jing	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
160	2016	Jiang Yan	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
161	2013	Wang Mei	No	Unclear	No	No	No	Yes	Yes	Yes	Unclear
162	2019	Wang Feixue	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
Consistency rate (%)			84.0	80.9	96.9	72.2	75.3	92.6	94.4	932	80.3

<sup>a</sup> The target population should be addressed appropriately with the sample frame. “Yes” for the census, studies with individual sample from whole population, and studies with cluster sample from all hospitals.

<sup>b</sup> Study participants should be recruited in an appropriate way. “Yes” for the census and studies with random samples.

<sup>c</sup> The sample size should be adequate. “Yes” for sample size  $\geq 2000$ .

<sup>d</sup> The study subjects and setting should be described in detail. “Yes” for studies with sufficient details on subjects and settings.

<sup>e</sup> Data analysis should be conducted with sufficient coverage of the identified sample. “Yes” for same response rate among different subgroup sample.

<sup>f</sup> Valid methods should be used for the identification of the condition. “Yes” for studies using an upper boundary of 37 gestational weeks to define preterm delivery.

<sup>g</sup> The condition should be measured in a standard, reliable way for all participants. “Yes” for population-based studies with reliable measurement of gestational weeks and hospital-based studies.

<sup>h</sup> Statistical analysis should be appropriate. “Yes” for studies from which the numerator and denominator of preterm delivery can be directly obtained.

<sup>i</sup> The response rate should be adequate, and if not, the low response rate should be managed appropriately. “Yes” for studies with response rate not less than 85%.

<sup>j</sup> See eText2 by No. for details on two studies with same publication year and first author.

**eTable4. Stratified analysis within population-based studies (n=37)**

	Number of records	Participants	Rate (%; 95% CI)	$I^2$ (%; 95% CI); $P_{\text{heterogeneity}}^a$	$P_{\text{between-subgroup}}^a$
<b>Total studies</b>	37	11728601	4.9 (4.5, 5.4)	99.91 (99.90, 99.91); <0.001	-
<b>Language</b>					
Chinese	19	3072375	4.8 (4.0, 5.9)	99.92 (99.91, 99.92); <0.001	0.621
English	18	8656226	5.1 (4.6, 5.6)	99.89 (99.88, 99.90); <0.001	
<b>Study year</b>					
2010	2	140725	6.8 (2.7, 16.9)	99.94 (99.92, 99.95); <0.001	0.747
2011	6	630321	4.7 (3.8, 5.8)	97.73 (96.58, 98.50); <0.001	
2012	10	1987749	5.5 (4.7, 6.4)	99.84 (99.82, 99.86); <0.001	
2013	4	422577	5.2 (3.5, 7.7)	99.85 (99.82, 99.88); <0.001	
2014	7	1865922	4.4 (3.4, 5.5)	99.83 (99.80, 99.85); <0.001	
2015	6	6143832	5.0 (4.3, 5.9)	99.89 (99.88, 99.91); <0.001	
2016	2	537475	3.4 (0.7, 15.7)	99.96 (99.96, 99.97); <0.001	
<b>Singleton only</b>					
Yes	17	3271289	5.0 (4.3, 5.7)	99.87 (99.85, 99.88); <0.001	0.927
No	20	8457312	4.9 (4.3, 5.6)	99.93 (99.93, 99.93); <0.001	
<b>Lower boundary</b>					
28	11	5412113	4.7 (4.1, 5.4)	99.66 (99.61, 99.71); <0.001	0.868
27 or less	7	1914916	4.6 (3.9, 5.5)	99.84 (99.82, 99.86); <0.001	
<b>Live birth only</b>					

	Number of records	Participants	Rate (%; 95% CI)	$I^2$ (%; 95% CI); $P_{\text{heterogeneity}}^a$	$P_{\text{between-subgroup}}^a$
Yes	28	6040468	5.1 (4.5, 5.7)	99.91 (99.90, 99.91); <0.001	0.812
No	4	5033469	4.9 (3.6, 6.7)	99.83 (99.79, 99.86); <0.001	
<b>Unit of analysis</b>					
Woman	21	6382219	4.7 (4.0, 5.6)	99.90 (99.90, 99.91); <0.001	0.396
Neonate	16	5346382	5.2 (4.6, 5.9)	99.91 (99.91, 99.92); <0.001	
<b>Region</b>					
Total studies	34 <sup>b</sup>	5837273	4.9 (4.4, 5.5)	99.88 (99.88, 99.89); <0.001	-
Eastern China	20	4675952	5.3 (4.6, 6.2)	99.92 (99.91, 99.92); <0.001	0.066
Central China	9	728328	4.6 (3.6, 6.0)	99.77 (99.73, 99.80); <0.001	
Western China	5	432993	3.8 (2.9, 4.9)	98.46 (97.68, 98.97); <0.001	
<b>Sample Size</b>					
Yes	33	11725239	4.9 (4.4, 5.3)	99.92 (99.92, 99.92); <0.001	0.377
No	4	3362	5.9 (3.8, 9.2)	90.64 (79.07, 95.81); <0.001	
<b>Identified sample coverage</b>					
Yes	27	5028856	5.0 (4.6, 5.5)	99.78 (99.76, 99.80); <0.001	0.294
No	7	6399000	4.3 (3.3, 5.7)	99.97 (99.96, 99.97); <0.001	
<b>Response rate</b>					
Yes	33	11110393	4.9 (4.5, 5.3)	99.91 (99.90, 99.91); <0.001	0.573
No	1	317463	5.0 (4.9, 5.1)	-	

<sup>a</sup> Tested by Cochrane Q.

<sup>b</sup> Studies covered more than one region without obtainable region-specific data were not included in region stratified analysis.

**eTable5. Stratified analysis within hospital-based studies (n=124)**

	Number of records	Participants	Rate (%; 95% CI)	$I^2$ (%; 95% CI); $P_{\text{heterogeneity}}^a$	$P_{\text{between-subgroup}}^a$
<b>Total studies</b>	124	6171419	7.2 (6.9, 7.6)	99.53 (99.50, 99.55); <0.001	-
<b>Study year</b>					
2010	12	161366	5.5 (4.6, 6.5)	98.21 (97.69, 98.62); <0.001	0.006
2011	27	496240	7.4 (6.5, 8.3)	99.36 (99.28, 99.43); <0.001	
2012	23	561104	8.4 (7.5, 9.3)	99.32 (99.22, 99.40); <0.001	
2013	22	4279003	7.2 (6.5, 8.0)	99.36 (99.26, 99.44); <0.001	
2014	15	302009	7.0 (5.7, 8.6)	99.51 (99.43, 99.57); <0.001	
2015	14	214677	7.7 (6.2, 9.5)	99.57 (99.50, 99.63); <0.001	
2016	7	108018	6.8 (5.3, 8.8)	98.51 (97.93, 98.93); <0.001	
2017	4	49002	5.7 (3.9, 8.3)	99.01 (98.52, 99.34); <0.001	
<b>Singleton only</b>					
Yes	58	704214	6.9 (6.2, 7.7)	99.41 (99.37, 99.46); <0.001	0.284
No	66	5467205	7.4 (7.0, 7.9)	99.56 (99.53, 99.59); <0.001	
<b>Lower boundary</b>					
28	55	4582634	7.2 (6.7, 7.8)	99.36 (99.31, 99.41); <0.001	<0.001
27 or less	24	937863	9.4 (8.4, 10.3)	99.58 (99.53, 99.62); <0.001	
<b>Live birth only</b>					
Yes	82	5552503	7.2 (6.8, 7.7)	99.57 (99.55, 99.60); <0.001	0.413
No	16	353142	7.8 (6.6, 9.1)	99.43 (99.33, 99.51); <0.001	
<b>Unit of analysis</b>					

	Number of records	Participants	Rate (%; 95% CI)	$I^2$ (%; 95% CI); $P_{\text{heterogeneity}}^a$	$P_{\text{between-subgroup}}^a$
Woman	88	901221	6.7 (6.1, 7.3)	99.24 (99.18, 99.29); <0.001	<0.001
Neonate	36	5270198	8.5 (7.9, 9.3)	99.76 (99.74, 99.78); <0.001	
<b>Hospital level</b>					
Tertiary	68	708531	8.0 (7.2, 8.8)	99.37 (99.32, 99.42); <0.001	0.001
Secondary	14	172240	4.9 (3.8, 6.3)	99.27 (99.13, 99.39); <0.001	
<b>Region</b>					
Total studies	134 <sup>b</sup>	1329755	7.4 (6.9, 7.9)	99.33 (99.29, 99.37); <0.001	-
Northeastern China	8	35147	8.7 (5.8, 13.0)	99.24 (99.03, 99.40); <0.001	0.703
Eastern China	75	984762	7.1 (6.5, 7.8)	99.46 (99.43, 99.50); <0.001	
Central China	26	129146	7.6 (6.1, 9.5)	99.21 (99.09, 99.30); <0.001	
Western China	25	180700	7.6 (6.6, 8.7)	98.59 (98.34, 98.80); <0.001	

<sup>a</sup> Tested by Cochrane Q.

<sup>b</sup> Studies covered more than one region without obtainable region-specific data were not included in region stratified analysis.

**eTable6. Province-level pooled rates and nationwide weighted rate**

Study setting	Number of records <sup>a</sup>	Participants	Rate (%; 95% CI) <sup>b</sup>	Number of live births <sup>c</sup>	Estimated number of preterm deliveries
Anhui	1	16983	3.9 (3.6, 4.2)	6638456	256423
Beijing	1	1366377	5.5 (5.5, 5.5)	1358237	74547
Fujian	1	62852	5.3 (5.2, 5.5)	4581584	244198
Guangdong	4	1741790	6.3 (5.5, 7.2)	12798165	800819
Guangxi	1	10122	4.0 (3.6, 4.4)	7112152	283868
Hainan	1	89854	10.8 (10.6, 11.0)	1058478	114325
Hebei	2	68711	8.2 (6.3, 10.7)	8604691	703731
Hebei, Liaoning	1	16691	3.8 (3.6, 4.1)	2716689 <sup>d</sup>	104169
Henan	2	263425	3.2 (2.3, 4.4)	13354764	430761
Hubei	1	317463	5.0 (4.9, 5.1)	5698488	285209
Hunan	4	79586	6.0 (4.9, 7.3)	7180633	427266
Jiangsu	5	345150	4.8 (3.4, 6.7)	6744659	322902
Shaanxi	2	412817	3.9 (2.5, 6.3)	3525820	138954
Shanghai	2	323883	5.4 (3.6, 7.9)	1039668	55876
Shanxi	1	50871	4.3 (4.1, 4.4)	3153449	134082
Sichuan, Yunnan	1	9353	3.5 (3.2, 3.9)	12156002 <sup>e</sup>	426298
Tianjin	1	17545	4.6 (4.3, 4.9)	864963	39588
Tibet	1	701	3.3 (2.2, 4.9)	411515	13502
Zhejiang	3	659790	3.1 (1.4, 7.0)	4297752	132518



Sum	103296165	4989035
<b>Weighted rate (%)</b>	<b>4.8 (4.0, 5.9)</b>	

<sup>a</sup> Studies with nationwide samples were not included as their province-level data were unobtainable.

<sup>b</sup> Rates for settings with records  $\geq 2$  were pooled using the random-effects model, and records in each corresponding group were highly heterogeneous with  $I^2$ 's ranging from 82.35% to 99.95%.

<sup>c</sup> Accumulated from 2010 to 2018 according to China Health Statistical Yearbook.

<sup>d</sup> Only data of Liaoning were used since a study purely from Hebei was already included.

<sup>e</sup> Including data from Sichuan and Yunnan.

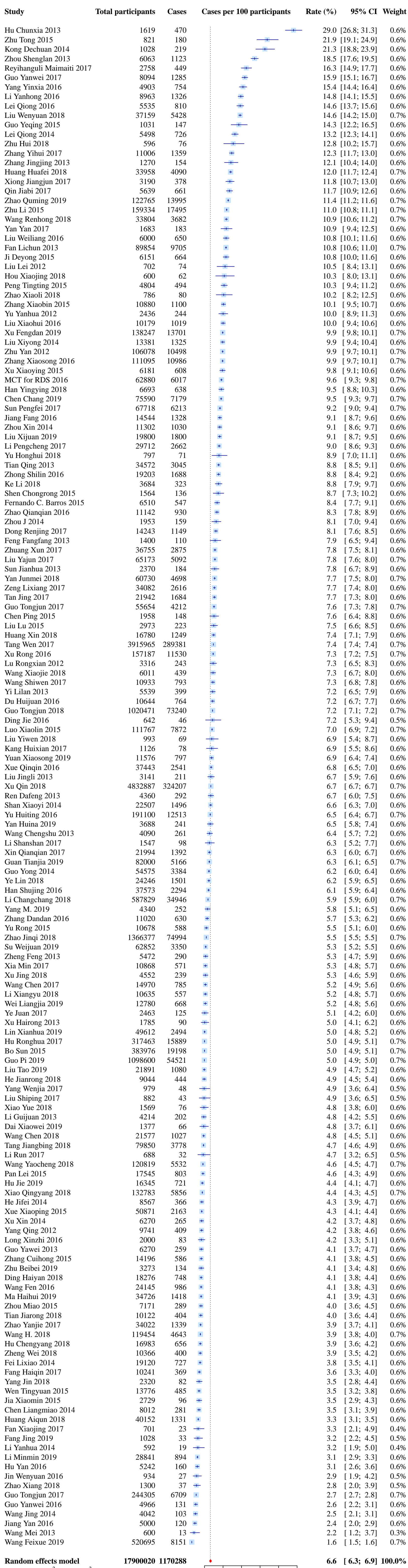
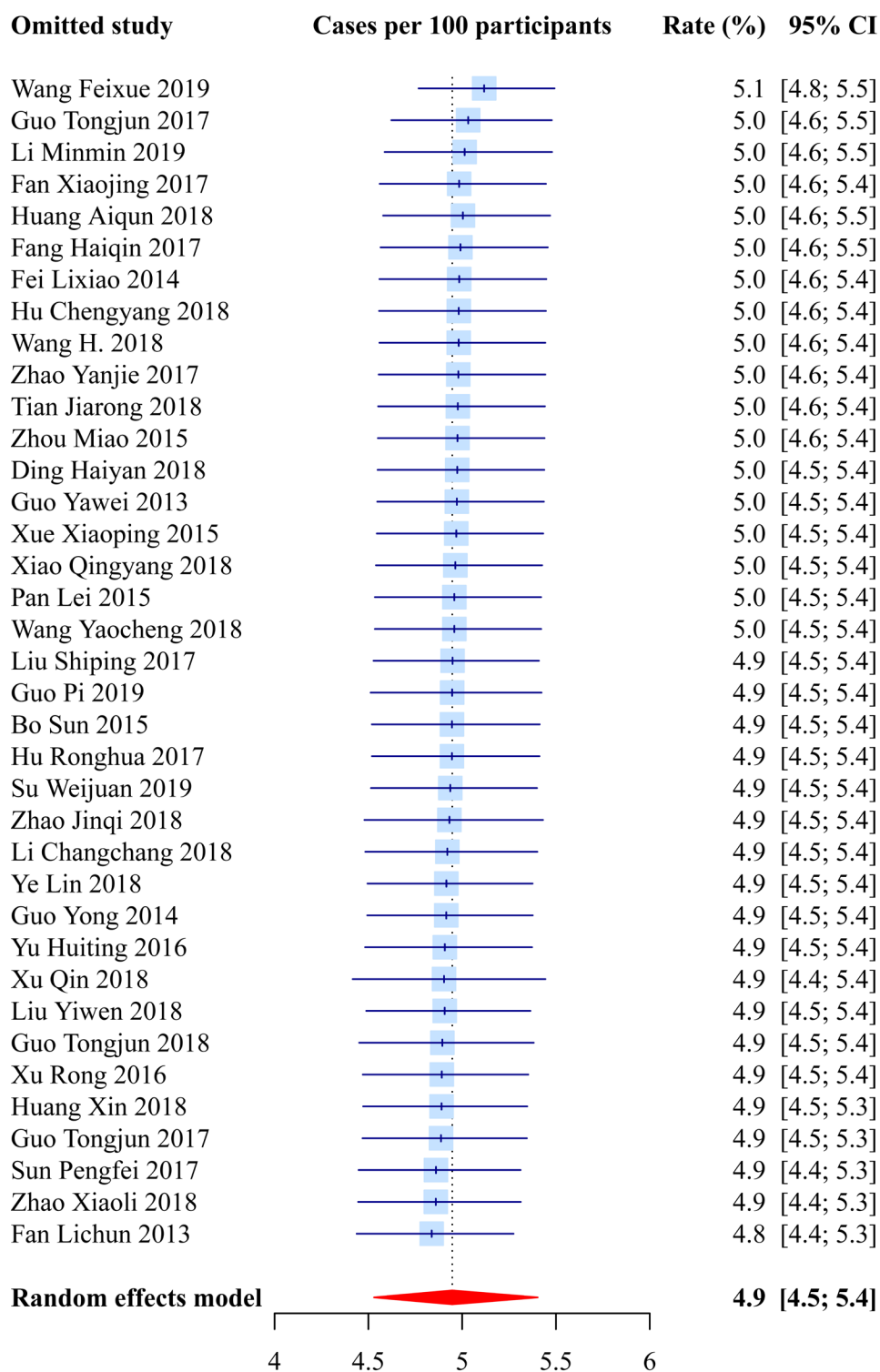


Figure 1. Forest plot of all the included studies (n=161)



**eFigure2. Sensitivity analysis within population-based studies (n=37)**