

Supplementary Table 1. List of the article included in this study

No	Author	Country	Total specimen	Age group	Setting	Detection methods
1	Anders,2015	Vietnam	566	Children	outpatient	PCR
2	Arden,2006	Australia	315	All ages	inpatient	PCR,IF
3	Arnott,2011	Cambodia	7829	All ages	both	PCR
4	Baek YH,2012	Korea	965	Children	inpatient	PCR
5	Benet,2017	China	39	Children	inpatient	PCR
	Benet,2017	Mongolia	108	Children	inpatient	PCR
	Bennet,2017	Cambodia	179	Children	inpatient	PCR
6	Bolisetty,2005	Australia	167	Children	inpatient	PCR,IF,Culture
7	Buecher C, 2010	Cambodia	234	All ages	outpatient	PCR
8	Cai XY,2014	China	1980	Children	inpatient	PCR
9	Chan DCW,2007	HongKong	561	Children	inpatient	IF,vulture
10	Chan PKS,2015	HongKong	19405	All ages	inpatient	IF
11	Chan PW,2002	Malaysia	5691	Children	inpatient	Virus Culture, Directigen
12	Charles PG,2008	Australia	885	Adult	inpatient	PCR
13	Chaw L,2016	Mongolia	434	All ages	both	IF
14	Chen K,2015	China	1204	Children	inpatient	Serology
15	Chen X,2010	China	878	Children	inpatient	PCR
16	Chen Y,2016	China	4130	Children	inpatient	PCR
17	Chen Z,2014	China	42104	Children	inpatient	PCR
18	Chen ZR,2014	China	998	Children	inpatient	PCR
19	Chidlow,2012	Papua New Guinea	80	Children	outpatient	PCR
20	Chiu SS,2010	HongKong	1031	Children	inpatient	IF,Culture
21	Cho HJ,2013	Korea	108	Children	inpatient	PCR
22	Choi EH,2006	Korea	515	Children	inpatient	PCR
23	Chow A, 2006	Singapore	51370	All ages	both	IF and Virus

24	Chun JK,2009	Korea	296	Children	inpatient	PCR
25	Chung JY,2006	Korea	381	Children	inpatient	IF
26	Chung JY,2007	Korea	233	Children	inpatient	IF
27	Cui B,2015	China	1074	Children	outpatient	PCR
28	Cui G,2013	China	19942	Children	inpatient	IF
29	Dang JL,2017	China	411	Children	inpatient	PCR
30	Dapat IC,2010	Japan	1525	Children	outpatient	PCR
31	Dede,2010	Australia	NA	Children	inpatient	IF
32	Do AHL, 2011	Vietnam	309	Children	inpatient	PCR
33	Do La,2016	Vietnam	632	Children	inpatient	PCR
34	Dong W,2016	China	2819	Children	inpatient	PCR
35	Etemadi,2013	Malaysia	165	Children	inpatient	PCR
36	Fagan,2017	Australia	4305	All ages	inpatient	PCR, Culture
37	Fan,2017	China	238	Children	inpatient	PCR, IF
38	Fu YF, 2015	China	1970	All ages	outpatient	PCR
39	Feng L,2014	China	28369	All ages	inpatient	PCR
40	Fuller DG,2005	Australia	3955	Children	inpatient	Culture, IF
41	Grimwood,2008	New Zealand	230	Children	inpatient	IF
42	Guerrier,2013	Cambodia	1006	Children	inpatient	PCR
43	Han TH,2007	Korea	827	Children	inpatient	IF
44	Hara M,2014	Japan	495	Children	outpatient	PCR,Culture
45	Hara, 2008	Japan	379	Children	outpatient	EIA
46	Harada,2013	Japan	371	Children	inpatient	Immunochromatography
47	He Y,2014	China	2025	Children	inpatient	PCR
48	Homaira,2016	Australia	68913	Children	inpatient	PCR,IF
49	Hu P,2017	China	1827	Children	inpatient	PCR
50	Huang G,2013	China	279	Children	inpatient	PCR
51	Hui Ds, 2009	HongKong	259	Adult	outpatient	PCR
52	Huo X,2012	China	486	All ages	outpatient	PCR
53	Huo X,2013	China	511	Children	inpatient	PCR

54	Ikematsu,2012	Japan	401	Adult	outpatient	PCR
55	Jacoby P,2017	Australia	87981	Children	inpatient	PCR, IF,Culture
56	Ji Wei, 2010	china	7789	Children	inpatient	IF
57	Jin Y,2009	China	406	Children	inpatient	PCR
58	Jin Y,2012	China	813	Children	inpatient	PCR
59	Ju X, 2014	China	1046	All ages	outpatient	PCR
60	Kadji, 2016	Philippines	440	Children	inpatient	PCR
61	Kaida, 2014	Japan	1044	Children	outpatient	PCR
62	Kamigaki,2016	Philippines	7141	All ages	outpatient	PCR
63	Kamigaki,2017	Philippines	9229	All ages	both	PCR
64	Kaneko,2002	Japan	535	Children	inpatient	EIA, Serology
65	Khor CS,2012	Malaysia	10,269	Children	inpatient	IF, culture
66	Kim CK, 2010	Korea	1008	Children	inpatient	PCR, IF
67	Kim KY,2017	Korea	504	Children	inpatient	PCR
68	Kim MR, 2000	Korea	1389	Children	inpatient	IF,Culture
69	Kim YJ,2014	Korea	36404	All ages	inpatient	PCR
70	Kim YK,2008	Korea	400	Children	inpatient	Directigen, Culture
71	Ko DH,2017	Korea	3467	All ages	inpatient	PCR
72	Ko,2007	HongKong	505	Adult	inpatient	culture
73	Koh C, 2017	Singapore	237	Children	inpatient	IF
74	Kono,2014	Papua New Guinea	300	All ages	outpatient	PCR
75	Kushibuchi, 2013	Japan	739	Children	inpatient	PCR, Culture
76	Kusuda, 2011	Japan	8163	Children	inpatient	NA
77	Lambert SB,2007	Australia	483	Children	outpatient	PCR
78	Lazzaro, 2007	Australia	73	Children	inpatient	Culture,IF
79	Lee WK,2006	HongKong	185	Children	inpatient	serology, other
80	Li H,2013	China	924	All ages	outpatient	PCR
81	Liao H,2015	China	70	Adult	outpatient	PCR
82	Liao X,2015	China	12502	All ages	inpatient	PCR

83	Lim, 2017	Australia	43627	Children	inpatient	PCR, Culture
84	Lim,2017	Australia	2356	Children	inpatient	PCR, Culture
85	Liu C,2015	China	3356	All ages	inpatient	PCR
86	Liu J,2014	China	2407	Children	outpatient	PCR
87	Liu J,2015	China	39756	Children	inpatient	IF
88	Liu T,2015	China	607	All ages	inpatient	PCR
89	Liu W,2016	China	5483	Children	inpatient	PCR
90	Liu Wk,2014	China	4242	Children	inpatient	PCR
91	Liu Y,2016	China	4449	Children	inpatient	Culture
92	Lu G,2013	China	1028	Children	inpatient	PCR
93	Lu L,2015	China	1803	Children	inpatient	PCR
94	Lu R,2012	China	981	Adult	inpatient	PCR
95	Lu Y,2013	China	596	Adult	inpatient	PCR
96	Lu Y,2013	China	720	Children	both	PCR
97	Ma HM,2013	HongKong	475	Adult	inpatient	Culture
98	Malasao,2015	Philippines	1505	Children	inpatient	PCR
99	Mermond,2012	New Caledonia	108	Children	inpatient	PCR
100	Miyaji,2013	Japan	214	Children	inpatient	PCR
101	Mizuta,2013	Japan	13325	All Ages	inpatient	Culture
102	Moore,2012	Australia	8166	Children	inpatient	PCR,IFA,Culture
103	Moriyama,2010	Japan	402	Children	inpatient	PCR
104	Murdoch	New Zealand	NA	All Ages	both	IFA
105	Nathan AM,2014	Malaysia	604	Children	inpatient	IFA
106	Ng KF,2017	Malaysia	59291	Children	inpatient	DFA
107	Nguyen DNT,2016	Vietnam	480	All ages	outpatient	PCR
108	Nguyen, 2017	Lao	383	Children	inpatient	PCR
109	Nguyen, 2017	Vietnam	975	All ages	inpatient	PCR
110	Nishimura,2005	Japan	892	Children	outpatient	EIA
111	Noh,2013	Korea	1983	Adult	outpatient	PCR
112	Nolan et al,2015	Australia	111	Children	outpatient	PCR

	Nolan et al.2015	Singapore	49	Children	outpatient	PCR
	Nolan et al.2015	Philippines	1045	Children	outpatient	PCR
113	O'Grady,2017	Australia	817	Children	inpatient	PCR
114	Ohno,2013	Philippines	2150	Children	inpatient	PCR
115	Park E,2017	Korea	4028	All ages	outpatient	PCR
116	Park JY,2016	Korea	291	Adult	outpatient	PCR
117	Park HW,2012	Korea	175	Children	inpatient	Directigen, Culture
118	Park K, 2017	Korea	3531	All ages	inpatient	PCR
119	Paynter,2013	Philippines	10913	Children	inpatient	PCR,culture
120	Qin X,2013	China	921	Children	inpatient	PCR
121	Qu JX,2015	China	1013	Adult	inpatient	PCR
122	Rahman MM,2014	Malaysia	505	All ages	inpatient	PCR, Culture, IF
123	Ranmuthugala,2011	Australia	NA	Children	inpatient	NA
124	Reeve, 2006	Australia	12171	Children	inpatient	IF,Culture
125	Ren L, 2009	China	5808	Adult	outpatient	PCR
126	Ren,2015	China	3167	Children	inpatient	PCR,Culture
127	Saraya, 2017	Japan	106	Adult	Both	PCR
128	Sato, 2005	Japan	499	Children	outpatient	PCR
129	Sentilhes,2013	Lao	292	All ages	inpatient	PCR
130	Seo KH, 2017	Korea	322	Adult	inpatient	PCR
131	Seo YB,2014	Korea	23806	All ages	inpatient	Culture, IF
132	Shi,2015	China	3978	All ages	inpatient	PCR
133	Shobugawa,2009	Japan	1103	Children	outpatient	PCR
134	Song, 2017	China	4246	All ages	Both	PCR
135	Sugaya, 2000	Japan	1959	Children	inpatient	EIA
136	Sun H, 2016	China	709	Children	inpatient	PCR
137	Sung, 2009	Hong Kong	475	Children	inpatient	PCR
138	Suzuki, 2012	Philippines	819	Children	inpatient	PCR
139	Takeyama,2014	Japan	412	Children	inpatient	PCR
140	Tan BH,2009	Singapore	500	Children	inpatient	PCR

141	Tan W,2016	China	700	Children	inpatient	PCR
142	Tang LF, 2008	China	34885	Children	inpatient	Culture, IF
143	Tian DD,2017	China	36500	Children	outpatient	PCR,IF
144	Tran DN, 2013	Vietnam	1082	Children	inpatient	PCR
145	Tran TD,2012	Vietnam	2144	All ages	both	PCR
146	Trenholme AA, 2017	New Zealand	1371	Children	inpatient	PCR
147	Tsung, 2010	Hong Kong	475	Children	inpatient	IF
148	Tsukagoshi, 2013	Japan	1113	Children	outpatient	PCR,Culture
149	Tuan TA,2015	Vietnam	1439	Children	inpatient	PCR
150	Vong S, 2013	Cambodia	1904	Children	inpatient	PCR
151	Wang D, 2016	China	3662	Children	inpatient	PCR
152	Wang H,2016	China	30443	Children	outpatient	IF
153	Wang W,2010	China	817	Children	inpatient	PCR
154	Wang Y, 2013	China	6655	Children	inpatient	IF
155	Wang Y,2015	China	674	Children	inpatient	IF
156	Watson, 2006	Australia	10,045	All ages	inpatient	IF,Culture
157	Wei L, 2015	China	3181	Children	inpatient	PCR
158	Wertheim HFL, 2015	Vietnam	800	All ages	inpatient	PCR
159	Wu Z, 2014	China	10435	Children	inpatient	Serology
160	Xia Q,2014	China	1800	Children	inpatient	PCR, Culture
161	Xiang Z, 2013	China	9871	Adult	inpatient	PCR
162	Xiao Q, 2015	China	1742	Children	inpatient	PCR
163	Xie M, 2017	China	8031	Children	inpatient	IF
164	Xu L, 2012	China	3460	All ages	inpatient	PCR
165	Yamaguchi M, 2011	Japan	1560	Children	outpatient	PCR
166	Yan XL,2017	China	387	Children	inpatient	PCR
167	Yan Y,2017	China	6196	Children	inpatient	IF
168	Yang L,2015	HongKong	120571	All ages	inpatient	IF
169	Yasuno T, 2008	Japan	54	Children	inpatient	EIA
170	Ye C, 2017	China	967	Adult	both	PCR

171	Ye Q,2016	China	36500	Children	outpatient	IF
172	Yoshida A,2012	Japan	709	Children	inpatient	PCR,Culture
173	Yoshida LM, 2013	Vietnam	1992	Children	inpatient	PCR
174	Yoshihara, 2016	Vietnam	1854	Children	inpatient	PCR
175	Yu X, 2012	China	416	Adult	inpatient	PCR
176	Yu X, 2015	China	1820	Children	both	PCR
177	Yui I, 2014	Japan	1690	Children	outpatient	EIA, IC
178	Zeng M, 2010	China	351	Children	inpatient	IF
179	Zeng Sz,2015	China	2613	Children	inpatient	PCR
180	Zhang C,2013	China	370	Children	inpatient	PCR
181	Zhang D,2014	China	14237	All ages	both	PCR
182	Zhang G, 2012	China	164	Children	inpatient	PCR
183	Zhang HY, 2009	China	412	Children	inpatient	IF
184	Zhang Q, 2011	China	821	Children	inpatient	Serology,IF
185	Zhang Q,2013	China	707	Children	inpatient	IF
186	Zhang RF,2010	China	894	Children	inpatient	PCR
187	Zhang T, 2014	China	17569	Children	inpatient	IF
188	Zhang XB,2014	China	1726	Children	inpatient	IF
189	Zhang XL,2013	China	42664	Children	inpatient	IF
190	Zhang ZY, 2010	China	1387	Children	inpatient	PCR
191	Zhao B, 2013	China	554	Children	inpatient	PCR
192	Zheng Y,2017	China	80	Children	inpatient	PCR
193	Zhou W,2013	China	273	Children	inpatient	PCR
194	Zou L,2016	China	3843	All ages	both	PCR
195	Zhu R, 2014	China	270	Children	both	IF, Luminex
196	Zhao M,2017	China	128	Adult	inpatient	PCR

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Supplementary Table 2

Supplementary table 2.RSV genotypes circulated in the WPRO countries

Country	Location/State	Year	Genotype	
			RSV A	RSV B
China	Chongqing, Southwestern China	2006	GA2*	GB3, GB1
		2007	GA2*	
		2008		BA*
		2009		BA*, GB3, GB1
		2009-2011	GA2	*GB2, BA
		2009-2010	NA1*	BA
		2010-2011	NA1*, NA3, NA4	BA, GB3
		2011-2012	NA1, NA3, NA4	GB5

	2012-2013	NA1, GA1, ON1	BA9, GB5
	2013-2014	NA1	
Lanzhou, Northwest China	2006-2007	GA2*	
	2007-2008	GA2*	BA
	2008-2009	GA2	BA*, GB2, GB3
Beijing, Northern China	2007-2008	NA1, NA4**	SAB4
	2008-2009	NA1*	BA9, CB1**, SAB4
	2009-2010	NA1*	BA9, CB1, Bac**
	2010-2011	NA1, NA3**	BA9, CB1, BA9
	2011-2012	NA1, NA4, ON1	BA9, CB1
	2012-2013		B
	2013-2014	ON1*, NA1	
Shanghai, China	2009-2010	NA1*,	BA9*, CB1**, Bac
	2010-2011	NA1*, ON1	BA9
	2011-2012	NA1*, NA4, NA3	BA9
	2012	NA1, NA4	BA9*
Zhejiang, Eastern China	2011-2013	NA1*, NA3, ON1	CB1, BA10, BA11**
Chengdu, Western China	2010	NA1	BA9, BAC, CB-1
	2011	NA1	BA9, BAC, CB-1
	2012	NA1, ON1	BA9, CB1
	2013	ON1	BA9
	2014		BA9
Changzhou, Eastern China	2014	ON1, NA1	BA9*, GB2

Japan

	Niigata, Japan	2001-2002	GA5*, GA7	SAB3, SAB2
		2002-2003	GA5, GA7	BA (BA2, BA5)*, GB3, GB4
		2003-2004	GA5*, GA2	BA (BA4, BA5, BA6)
		2004-2005	GA5, NA1*	BA (BA4, BA7), GB3
		2005-2006	GA5, NA1,NA2*	BA4, BA7*, BA8, BA9
		2006-2007	NA1, NA2*	BA8*, BA9
		2007-2008	GA5, NA2	BA10*, BA7, BA8, BA9
		2008-2009	NA1, NA2	BA9*, BA10
	Kanagawa	2005-2006	GA2	BA
	Aomori(northern Japan), Gunma (central Japan), Kumamoto(southern Japan)	2009-2010	GA2*	BA
	Chiba, Tochigi, Yamaguchi, Kanagawa, Japan	2012-2013	ON1	
	Tochigi, Japan	2008-2011	NA1	BA1, GB2
Malaysia	Selangor	2009	NA1	BA9, BA10*, BA4
	Kuala Lumpur	1994	GA2, GA3, GA7, NA1	
		1995	GA2, GA7	SAB3
		1996	GA2	
		1998	GA2, GA7	
		1999	GA2	SAB3, BA
		2000	GA7, NA1	BA
		2002	NA2	BA
		2003	GA2, GA5, NA2	BA

		2004	GA5, NA1, NA2	
		2005	GA5, NA2	SAB4
		2006	GA2, NA1	BA
		2007	GA5, GA7, NA1, NA2	BA
		2008	GA5, NA1	
		2009	NA1	BA
		2010	GA5, NA1	
		2011	NA1, ON1	BA
Philippines	Tacloban city, Leyte Island	2008-2012	NA1	BA9
	Biliran, Leyte, Palawan, Metro Manila	2012	ON1*, NA1	BA9*, GB2
	Biliran	2012-2013	NA1, ON1	BA9*
South Korea		2010-2011	NA1	
		2011-2012	NA1*, ON1, GA5	
		2012-2013	ON1*	
	Cheongju	2008-2009	NA1, GA5	BA10*, BA9, BA7, CBB
		2009-2010	NA1, GA5, CBA	BA10, BA9, BA11, CBB
	Gyeonggi			
		2009-2014	NA1*, ON1, GA1, GA5	BA9,B A10

	Chungnam	2011-2014	NA1, ON1*, GA5	BA4
Vietnam	Ho Chi Minh	2009-2010	NA1, GA5	BA4, BA9, BA10
		2010-2011	GA2*	BA9, BA10
	Khan Hoa, Nha trang	2010-2012	NA1, ON1	
Cambodia	Takeo, Kampong Cham, Battambang, Siem Reap, Phnom Penh	2005		BA7*
		2006	NA1*, GA2	
		2007	NA1*, GA5	BA10
		2008	NA1	BA10*, SAB4**
		2009		BA10*, SAB4**

Note: * =dominant genotypes, **=new genotypes

Supplementary table 3. PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
INTRODUCTION			

Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	N/A
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	4
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	4
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	4
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	4
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	4-5
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	N/A
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	N/A
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	5
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	5

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	N/A
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Figure 1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Suppl. table 1
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	N/A
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	N/A
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Table 1
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	N/A
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	8-13
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	12-13
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	13
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	13

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6):

e1000097. doi:10.1371/journal.pmed1000097

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