Supplementary table 1. The search strategy of viral shedding time of SARS-CoV-2*

Database	Searches
Pubmed	(((((((severe acute respiratory syndrome coronavirus 2[Supplementary Concept]) OR COVID-19[Supplementary Concept]) OR COVID-19[Text Word]) OR SARS-CoV-2[Text Word]) OR coronavirus disease 2019[Text Word]) OR novel coronavirus[Text Word]) OR coronavirus[Text Word]) AND (((((((shed*[Text Word]) OR (conversion[Text Word])) OR (clearance[Text Word])) OR (carr*[Text Word])) OR (communicable[Text Word])) OR (excret*[Text Word])) OR (secret*[Text Word])) Filters: from 2020 - 2020
Web of Science	TS: (((((((severe acute respiratory syndrome coronavirus 2) OR COVID-19) OR SARS-CoV-2) OR coronavirus disease 2019) OR novel coronavirus) OR coronavirus))) AND TS: (((((((shed*) OR (conversion)) OR (clearance)) OR (carr*)) OR (communicable)) OR (excret*)) OR (secret*)) Filters: from 2020 - 2020
MedRxiv	(COVID-19 OR 2019-nCoV OR SARS-CoV-2) AND (shed OR conversion OR clearance OR carriage OR communicable OR excrete OR secrete) Filters: 2020/01/01-2020/10/25
BioRxiv	(COVID-19 OR 2019-nCoV OR SARS-CoV-2) AND (shed OR conversion OR clearance OR carriage OR communicable OR excrete OR secrete) Filters: 2020/01/01-2020/10/25

* Only the search strategies of English databases were shown.

Supplementary table 2. The quality of the included studies

First Author, Year	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Total	Quality
Cai JH,2020(1)	1	1	1	1	1	0	1	0	0	1	1	8	High
Xiong XL,2020(2)	1	1	1	1	1	0	1	0	0	1	1	8	High
Yang MC,2020(3)	1	1	1	1	1	0	1	0	0	1	1	8	High
Noh, J.Y.,2020(4)	1	1	1	1	1	0	1	0	0	1	1	8	High
Zheng T,2020(5)	1	1	1	1	1	0	1	0	0	1	1	8	High
Lee, S.,2020(6)	1	1	1	1	1	0	1	0	0	1	1	8	High
Song WL,2020(7)	1	1	1	1	1	0	1	0	0	1	1	8	High
Chen J,2020(8)	1	1	1	1	1	0	1	0	0	1	1	8	High
Zhu L,2020(9)	1	1	1	1	1	0	1	0	0	1	1	8	High
Han CQ,2020(10)	1	1	1	1	1	0	1	0	0	1	1	8	High
Yan XQ,2020(11)	1	1	1	1	1	0	1	0	0	1	1	8	High
Gong Y,2020(12)	1	1	1	1	1	0	1	0	0	1	1	8	High
Warabi, Y.,2020(13)	1	1	1	1	1	0	1	0	0	1	1	8	High
Pan YF,2020(14)	1	1	0	1	1	0	1	0	0	1	1	7	Medium
Hua CZ,2020(15)	1	1	1	1	1	0	1	0	0	1	1	8	High
Cano, E.,2020(16)	1	1	0	1	1	0	1	0	0	1	1	7	Medium
Wu YJ,2020(17)	1	1	1	1	1	0	1	0	0	1	1	8	High
Otsubo, S.,2020(18)	1	1	0	1	1	0	1	0	0	1	1	7	Medium
Tan F,2020(19)	1	1	1	1	1	0	1	0	0	1	1	8	High
Xiao TY,2020(20)	1	1	1	1	1	0	1	0	0	1	1	8	High
Yao XY,2020(21)	1	1	1	1	1	0	1	0	0	1	1	8	High
Liu YJ,2020(22)	1	1	1	1	1	0	1	0	0	1	1	8	High
Shi ZY,2020(23)	1	1	1	1	1	0	1	0	0	1	1	8	High

Li L,2020(24)	1	1	1	1	1	0	1	0	0	1	1	8	High
Jiang Y,2020(25)	1	1	1	1	1	0	1	0	0	1	1	8	High
Gong HL,2020(26)	1	1	1	1	1	0	1	0	0	1	1	8	High
Zhao BN,2020(27)	1	1	1	1	1	0	1	0	0	1	1	8	High
Zhang BY,2020(28)	1	1	1	1	1	0	1	0	0	1	1	8	High
Xu LX,2020(29)	1	1	1	1	1	0	1	0	0	1	1	8	High
Xie CM,2020(30)	1	1	1	1	1	0	1	0	0	1	1	8	High
Sun LL,2020(31)	1	1	1	1	1	0	1	0	0	1	1	8	High
Ren HJ,2020(32)	1	1	1	1	1	0	1	0	0	1	1	8	High
Ran QH,2020(33)	1	1	1	1	1	0	1	0	0	1	1	8	High
Liu JJ,2020(34)	1	1	1	1	1	0	1	0	0	1	1	8	High
Li N,2020(35)	1	1	1	1	1	0	1	0	0	1	1	8	High

Item 1: Define the source of information (survey, record review); Item 2: List inclusion and exclusion criteria for exposed and unexposed subjects (cases and controls) or refer to previous publications; Item 3: Indicate time period used for identifying patients; Item 4: Indicate whether or not subjects were consecutive if not population-based; Item 5: Indicate if evaluators of subjective components of study were masked to other aspects of the status of the participants; Item 6: Describe any assessments undertaken for quality assurance purposes (e.g., test/retest of primary outcome measurements); Item 7: Explain any patient exclusions from analysis; Item 8: Describe how confounding was assessed and/or controlled; Item 9: If applicable, explain how missing data were handled in the analysis; Item 10: Summarize patient response rates and completeness of data collection; Item 11: Clarify what follow-up, if any, was expected and the percentage of patients for which incomplete data or follow-up was obtained.

Supplementary table 3. Meta-regression for heterogeneity

Mean age

Mixed-Effects Model (k = 26; tau^2 estimator: REML)

tau^2 (estimated amount of residual heterogeneity): 0.1284 (SE = 0.0379)

tau (square root of estimated tau^2 value): 0.3583

I^2 (residual heterogeneity / unaccounted variability): 99.78%

H^2 (unaccounted variability / sampling variability): 460.16

R^2 (amount of heterogeneity accounted for): 35.28%

Test for Residual Heterogeneity:

QE(df = 24) = 4822.2862, p-val < .0001

Test of Moderators (coefficient 2):

QM(df = 1) = 14.3224, p-val = 0.0002

Model Results:

	estimate	se	zval	pval	ci.lb	ci.ub	
intrcpt	2.3082	0.1812	12.7369	<.0001	1.9530	2.6634	***
age	0.015	0.004	3.7845	0.0002	0.0072	0.0228	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

The proportion of the asymptomatic cases

Mixed-Effects Model (k = 42; tau^2 estimator: REML)

tau^2 (estimated amount of residual heterogeneity): 0.1737 (SE = 0.0395)

tau (square root of estimated tau^2 value): 0.4167

I^2 (residual heterogeneity / unaccounted variability): 99.78%

H^2 (unaccounted variability / sampling variability): 461.58

R^2 (amount of heterogeneity accounted for): 22.64%

Test for Residual Heterogeneity:

QE(df = 40) = 9227.5981, p-val < .0001

Test of Moderators (coefficient 2):

QM(df = 1) = 12.5236, p-val = 0.0004

Model Results:

	estimate	se	zval	pval	ci.lb	ci.ub	
intrcpt	2.9743	0.074	40.1947	<.0001	2.8292	3.1193	***
asym	-0.0059	0.0017	-3.5389	0.0004	-0.0091	-0.0026	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Mean age and the proportion of the asymptomatic cases

Mixed-Effects Model (k = 25; tau^2 estimator: REML)

tau^2 (estimated amount of residual heterogeneity): 0.1100 (SE = 0.0340)

tau (square root of estimated tau^2 value): 0.3317

I^2 (residual heterogeneity / unaccounted variability): 99.72%

H^2 (unaccounted variability / sampling variability): 360.21

R^2 (amount of heterogeneity accounted for): 44.18%

Test for Residual Heterogeneity:

QE(df = 22) = 4524.7241, p-val < .0001

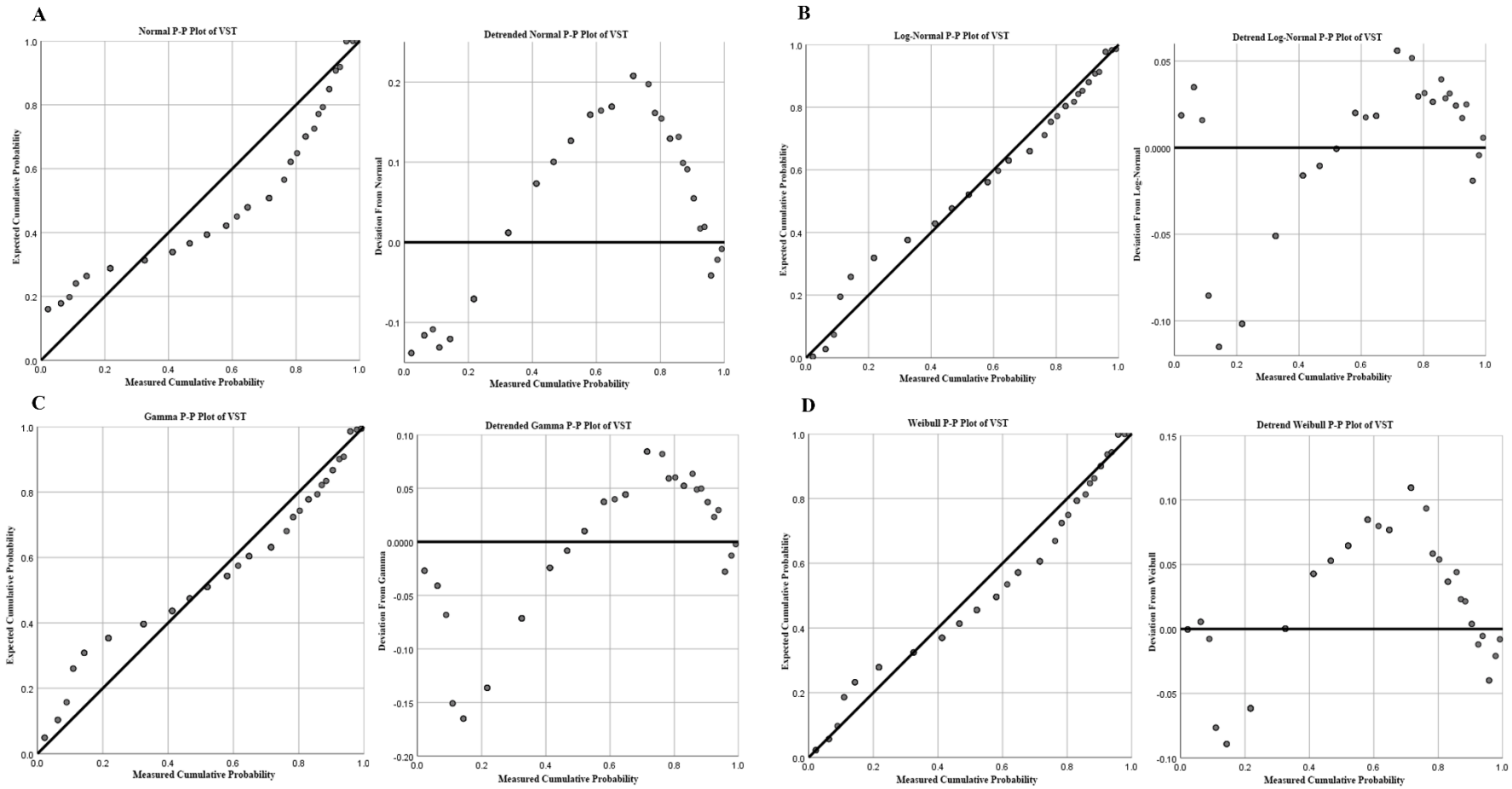
Test of Moderators (coefficients 2:3):

QM(df = 2) = 20.3544, p-val < .0001

Model Results:

	estimate	se	zval	pval	ci.lb	ci.ub	
intrcpt	2.5262	0.2148	11.7619	<.0001	2.1053	2.9472	***
age	0.012	0.0043	2.7932	0.0052	0.0036	0.0204	**
asym	-0.0035	0.0021	-1.6235	0.1045	-0.0076	0.0007	

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1



Supplementary figure 1. The P-P plots of viral shedding time of SARS-CoV-2

The individual VSTs of 74 persons infected with SARS-COV-2 were extracted from 6 published articles (1,3,7,14,19,21). Compared with the normal distribution, Weibull distribution and Gamma distribution, we found that the distribution type of the VST was approximately in accordance with the log-normal distribution by using the P-P plots.

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