Supplementary

Appendix 1 Search strategy

Search in Medline

#1 “COVID-19” [Supplementary Concept]
#2 “Severe Acute Respiratory Syndrome Coronavirus 2” [Supplementary Concept]
#3 “COVID-19” [Title/Abstract]
#4 "SARS-COV-2" [Title/Abstract]
#5 “Novel coronavirus” [Title/Abstract]
#6 “2019-novel coronavirus” [Title/Abstract]
#7 “coronavirus disease-19” [Title/Abstract]
#8 “coronavirus disease 2019” [Title/Abstract]
#9 “COVID 19” [Title/Abstract]
#10 “Novel CoV” [Title/Abstract]
#11 “2019-nCoV” [Title/Abstract]
#12 “2019-CoV” [Title/Abstract]
#13 #1-#12/ OR
#14 "Adolescent" [Mesh]
#15 "Infant" [Mesh]
#16 "Child" [Mesh]
#17 "Pediatrics" [Mesh]
#18 "pediatric* " [Title/Abstract]
#19 "paediatric*" [Title/Abstract]
#20 "child* " [Title/Abstract]
#21 "infant*" [Title/Abstract]
#22 "adolescent*" [Title/Abstract]
#23 "neonat* " [Title/Abstract]
#24 "newborn*" [Title/Abstract]
#25 "teenager*" [Title/Abstract]
#26 #14-#25/ OR
#27 "Practice Guideline" [Publication Type]
#28 "Guidelines as Topic"[Mesh]
#29 "guideline*" [Title]
#30 "recommendation*" [Title]
#31 "guidance* " [Title]
#32 "statement*" [Title]
#33 "consensus*" [Title]
#34 #27-#33/ OR
#35 #13 AND #26 AND #34

Search in Embase

#1 'coronavirus disease 2019'/exp
#2 'severe acute respiratory syndrome coronavirus 2'/exp
#3 'COVID-19': ab,ti
#4 'SARS-COV-2': ab,ti
#5 'novel coronavirus': ab,ti
#6 '2019-novel coronavirus': ab,ti
#7 'coronavirus disease-19': ab,ti

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#8 'coronavirus disease 2019': ab,ti
#9 'COVID 19': ab,ti
#10 'novel cov': ab,ti
#11 '2019-ncov': ab,ti
#12 '2019-cov': ab,ti
#13 #1-#12/ OR
#14 'child'/exp
#15 'child*': ab,ti
#16 'pediatric*': ab,ti
#17 'paediatric*': ab,ti
#18 'adolescent*': ab,ti
#19 'infant*': ab,ti
#20 'neonat*': ab,ti
#21 'newborn*': ab,ti
#22 'teenager*': ab,ti
#23 #14-#22/ OR
#24 'practice guideline'/exp
#25 'guideline*':ti
#26 'recommendation*':ti
#27 'guidance*':ti
#28 ' statement*':ti
#29 ' consensus*':ti
#30 #24-#29/ OR
#31 #13 AND #23 AND #30
#32 [medline]/lim in #31
#33 #31 NOT #32

Search in guideline databases

Website links

Guidelines International Network (G-I-N): www.g-i-n.net
National Institute for Health and Clinical Excellence (NICE): www.nice.org.uk
Scottish Intercollegiate Guidelines Network (SIGN): www.sign.ac.uk/our-guidelines.html
World Health Organization (WHO): https://www.who.int/emergencies/diseases/novel-coronavirus-2019
COVID-19 page on the International Pediatric Association website: https://ipa-world.org/covid-19-news-and-updates. php
European Centres for Disease Control: https://www.ecdc.europa.eu/en/coronavirus
US Centers for Disease Control and Prevention: https://www.cdc.gov/coronavirus/2019-nCoV/index.html
Canadian Paediatric Society: https://www.cps.ca/en/tools-outils/covid-19-information-and-resources-for-paediatricians
American Academy of Paediatrics: https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections
Indian Academy of Paediatrics: www.iapindia.org
UK Royal College of Paediatrics and Child Health guidance for paediatric services: https://www.rcpch.ac.uk/key-topics/covid-19

Search strategy

Combinations of the following key words were searched: 'COVID-19','child','guideline'.

Search in Google website

A search was conducted via the Google engine using the following terms: 'COVID-19'AND 'child'AND '(guideline or guidance or consensus or recommendation)' in English. We screened the first 100 records.

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Table S1 AGREE II scores for each item in each guideline

Guideline			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Domain1	Item1	Appraiser1	5	5	5	5	5	6	5	4	5	5	5	4	6	6	3	4	6	5	5	5
		Appraiser2	5	5	4	4	5	6	5	5	5	5	5	4	5	6	4	5	5	6	5	5
	Item2	Appraiser1	3	4	3	3	3	3	3	4	3	4	3	3	4	5	3	5	5	5	5	5
		Appraiser2	4	5	3	3	5	4	3	4	3	5	4	3	4	6	4	5	4	5	5	5
	Item3	Appraiser1	4	4	4	4	4	4	4	4	4	4	4	3	2	4	4	4	4	4	5	4
		Appraiser2	5	4	5	4	3	4	3	5	4	4	5	4	2	5	4	5	3	5	5	4
Domain2	Item4	Appraiser1	3	3	1	2	6	4	5	2	2	4	4	2	4	4	4	4	5	5	4	4
		Appraiser2	2	2	1	3	5	5	5	2	3	5	5	2	5	4	4	4	5	6	4	4
	Item5	Appraiser1	1	1	1	1	6	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
		Appraiser2	1	1	1	1	5	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1
	Item6	Appraiser1	2	2	2	3	5	4	2	3	3	2	3	3	2	5	2	1	4	4	4	1
		Appraiser2	2	2	3	4	4	4	2	4	4	3	4	4	2	5	3	1	3	4	4	1
Domain3	Item7	Appraiser1	1	2	1	1	6	1	1	1	1	1	1	1	1	6	1	5	3	1	2	1
		Appraiser2	1	2	1	1	5	1	1	1	1	1	1	1	1	6	1	6	3	1	2	1
	Item8	Appraiser1	1	1	1	1	2	1	1	1	1	1	1	1	1	6	1	2	1	1	1	1
		Appraiser2	1	1	1	1	2	1	1	1	1	2	1	1	1	6	1	4	1	1	1	1
	Item9	Appraiser1	1	1	1	1	6	1	1	1	1	4	1	1	1	6	1	1	1	1	1	1
		Appraiser2	1	1	1	1	5	1	1	1	1	5	1	1	1	5	1	1	1	1	1	1
	Item10	Appraiser1	1	1	1	1	1	1	1	1	1	4	1	1	1	6	1	2	6	7	2	1
		Appraiser2	1	1	1	1	1	1	1	1	1	5	1	1	1	6	1	2	6	7	2	1
	Item11	Appraiser1	2	2	5	3	5	2	2	4	2	5	2	1	5	6	2	4	6	5	6	2
		Appraiser2	3	3	4	4	4	3	3	5	3	5	3	1	5	5	2	3	4	6	6	2
	Item12	Appraiser1	2	2	2	4	5	2	2	5	2	5	2	1	6	5	2	4	5	5	6	2
		Appraiser2	2	2	3	4	4	3	3	5	2	5	2	1	4	6	2	5	4	5	6	2
	Item13	Appraiser1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
		Appraiser2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1
	Item14	Appraiser1	1	1	1	2	5	5	1	4	5	2	1	1	1	4	1	3	3	1	1	1
		Appraiser2	1	1	1	3	4	5	1	2	4	3	1	1	1	3	1	3	2	1	1	1
Domain4	Item15	Appraiser1	3	3	4	4	6	3	3	4	2	6	3	3	4	6	3	5	6	5	5	5
		Appraiser2	2	2	5	5	5	2	2	5	2	5	2	3	4	6	3	5	4	5	6	5
	Item16	Appraiser1	4	3	4	4	6	3	3	5	4	6	4	5	3	6	5	4	6	5	5	5
		Appraiser2	5	4	5	5	5	4	4	5	5	5	5	5	5	4	5	4	4	5	6	5
	Item17	Appraiser1	2	2	4	4	6	2	2	5	2	5	2	3	4	5	1	5	6	4	6	2
		Appraiser2	2	2	5	5	6	3	2	6	3	6	2	3	3	6	1	5	5	5	6	3
Domain5	Item18	Appraiser1	3	3	3	3	3	3	3	4	3	3	3	3	4	4	3	4	4	4	4	2
		Appraiser2	3	3	3	3	4	3	3	5	3	3	3	3	4	5	4	5	5	4	3	2
	Item19	Appraiser1	1	1	5	5	5	4	4	5	5	5	1	4	5	5	4	5	5	5	5	1
		Appraiser2	1	1	4	5	5	4	4	4	4	4	1	5	5	5	5	5	4	5	5	1
	Item20	Appraiser1	3	1	1	1	3	1	1	2	1	3	1	2	3	3	1	2	2	2	4	1
		Appraiser2	4	1	1	1	4	1	1	2	1	4	1	2	1	4	1	4	2	2	4	1
	Item21	Appraiser1	4	4	4	4	5	2	4	4	4	5	2	1	4	2	5	4	5	5	1	5
		Appraiser2	3	3	3	3	4	2	3	5	3	4	2	1	4	2	5	5	4	6	1	5
Domain6	Item22	Appraiser1	7	1	1	1	1	7	1	1	1	3	7	1	1	3	7	6	3	1	1	1
		Appraiser2	7	1	1	1	1	7	1	1	1	3	1	1	1	3	7	5	3	1	1	1
	Item23	Appraiser1	5	5	1	1	1	5	5	1	1	5	5	1	4	6	5	5	5	3	3	5
		Appraiser2	5	5	1	1	1	5	5	1	1	5	5	1	5	6	5	6	5	2	3	5

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Appendix 2 Formulas

1. The overall AGREE II scores of each guideline, each domain, and each item were calculated as follows:

$$\textit{AGREE II score of each guideline} = \frac{\textit{Total AGREE II scores of domains in each guildeline}}{\textit{Toal number of domains}}$$

$$\textit{AGREE II score of each domain} = \frac{\textit{Total AGREE II scores of guidelines in each domain}}{\textit{Total number of guidelines}}$$

2. The RIGHT reporting rates of each guideline, each domain, and each item were calculated as follows:

$$\textit{RIGHT reporting rate of each guideline} = \frac{\textit{Total number of "reported" in each guideline}}{\textit{Total number of "reported" and "unreported" in each guideline}} * 100\%$$

$$\textit{RIGHT reporting rate of each domain} = \frac{\textit{Total number of "reported" in each domain}}{\textit{Total number of "reported" and "unreported" in each domain}} * 100\%$$

$$\textit{RIGHT reporting rate of each item} = \frac{\textit{Total number of "reported" in each item}}{\textit{Total number of "reported" and "unreported" in each item}} * 100\%$$

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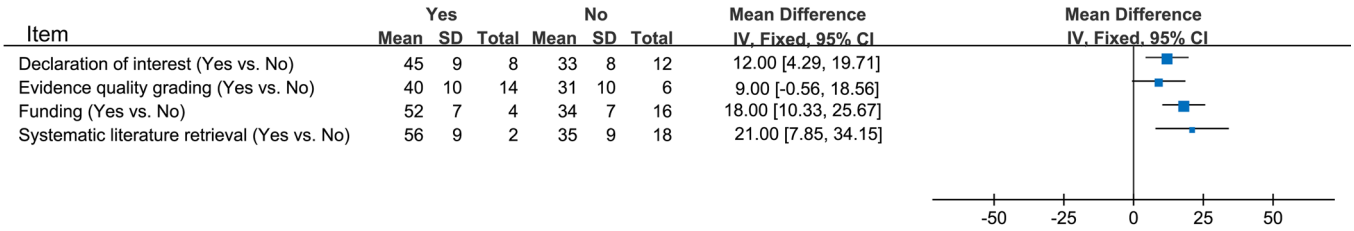

Figure S1 Weight mean difference (WMD) of AGREE II score between groups.

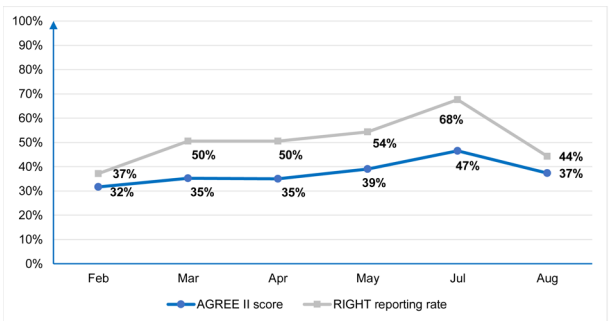

Figure S2 AGREE II score and reporting rate in the RIGHT checklist reported by month.

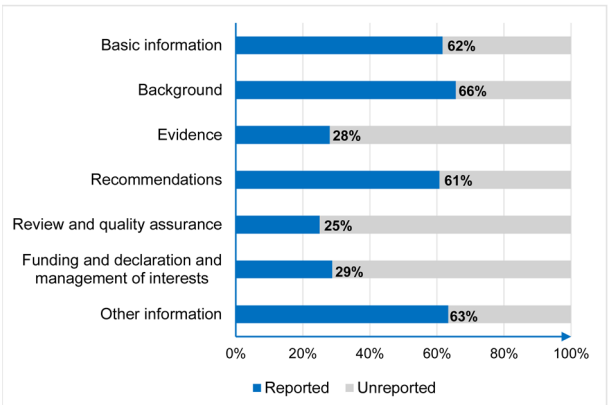

Figure S3 Percentage of reporting items in each domain in the RIGHT checklist.

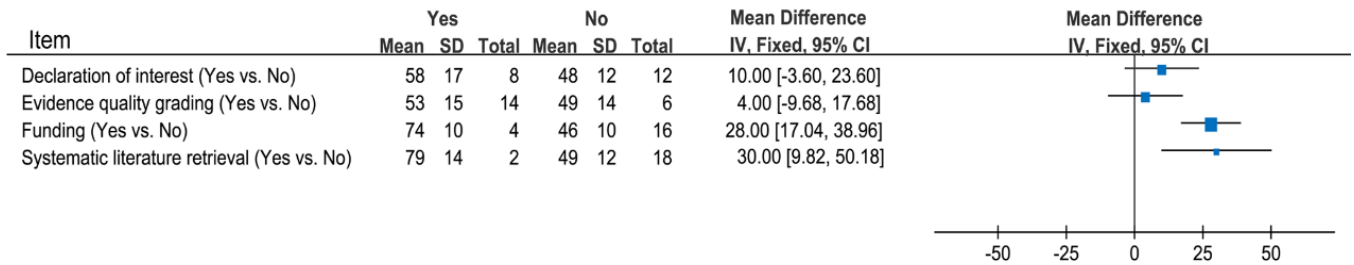

Figure S4 Difference of reporting rates in the RIGHT checklist between groups.

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Table S3 Summary of recommendations for antivirus drugs by included guidelines

Guideline	Ribavirin	Interferon	Remdesivir	Lopinavir/ritonavir	Chloroquine/Hydroxy-chloroquine	Abidol	Oseltamivir	Favipiravir
1	Not recommend	Recommend Dosing regimen: Interferon- α 2b nebulization: 100,000–200,000 IU/kg for mild cases, and 200,000–400,000 IU/kg for severe cases, two times/day for 5–7 days	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
2	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
3	Not recommend	Not recommend	Recommend Dosing regimen: <40 kg: 5 mg/kg IV loading dose on day 1; followed by 2.5 mg/kg IV q24h >40 kg: 200 mg IV loading dose on day 1; followed by 100 mg IV q24h	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
4	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
5	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
7	Not recommend	Not recommend	Recommend for severe case	Recommend Dosing regimen: Age >6 months and <18 years 7–15 kg: 12/3 mg/kg, 15-40 kg: 10/2.5 mg/kg, >40 kg: 400 mg/100 mg; every 12 h Age 2 weeks to 6 months 16/4 mg/kg (equivalent to 0.2 mL/kg), given twice daily with food	Not recommend	Not recommend	Not recommend	Not recommend
8	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
9	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
10	Not recommend	Not report	Recommend for critical case Dosing regimen: <40 kg: 5 mg/kg IV loading dose on day 1; followed by 2.5 mg/kg IV q24h >40 kg: 200 mg IV loading dose on day 1; followed by 100 mg IV q24h Recommended duration: Up to 10 days, with 5-day duration favored for fast responders	Not recommend	Recommend Dosing regimen: 13 mg/kg (maximum: 800 mg) PO followed by 6.5 mg/kg (maximum: 400 mg) PO at 6, 24, and 48 hours after initial dose (duration could be extended for up to 5 days on a case-by-case basis) OR 6.5 mg/kg/dose (maximum: 400 mg/dose) PO bid on day 1, followed by 3.25 mg/kg/dose (maximum: 200 mg/dose) PO bid for up to 5 days Neonates: dosing not established; consider use on a case-by-case basis Recommended duration: No more than 5 days. The duration studied for acute malaria is 3 days.	Not report	Not report	Not report
11	Not recommend	Recommend Dosing regimen: IFN- α spray: 1–2 sprays on each side of the nasal cavity, 8–10 sprays to the oropharynx for 8–10 times/day, with a treatment course of 5–7 days for high-risk children who had close contact with suspected patients or those with upper respiratory tract symptoms in the early stage of virus infection. IFN- α nebulization: 200,000–400,000 IU/kg or 2–4 μg/kg, 2 times/day, at a treatment course of 5–7 days.	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
12	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
14	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend	Not recommend
15	Not report	Not report	Recommend Dosing regimen: 5 mg/kg load IV once (max dose 200 mg) on day 1, then 2.5 mg/kg (100 mg max dose) IV daily for 9 days.	Not report	Not report	Not report	Not report	Not report
19	Not report	Not recommend	Not report	Not report	Not report	Not report	Not report	Not report
20	Recommend Dosing regimen: 10 mg/kg/time, via intravenous infusion, 2 to 3 times daily	Recommend Dosing regimen: 200,000 to 400,000 IU/kg in 2 mL sterile water, with nebulization two times per day for 5–7 days	Recommend	Recommend Dosing regimen: Weight 7–15 kg, 12 mg/3 mg/kg; weight 15–40 kg, 400 mg/100 mg as adult each time, twice a day for 1–2 weeks	Recommend Dosing regimen: 3–5 mg/kg/day (max dose 400 mg), twice daily for 5 days	Not recommend	Not recommend	Recommend

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Table S4 Summary of supporting evidences for recommendations for remdesivir

Guideline	Recommendation	Reference number	Study type of supporting evidence							
			Guidelines/ Consensuses	SR/meta-analysis	Review	RCT/CCT	Cohort studies	Case-control studies	Case series/ case reports	Animal studies/ *in vivo* studies
1	Not recommend	0	0	0	0	0	0	0	0	0
2	Not recommend	0	0	0	0	0	0	0	0	0
3	Recommend	2	0	0	0	2	0	0	0	0
4	Not recommend	2	0	0	0	1	0	0	0	1
5	Not recommend	1	1	0	0	0	0	0	0	0
7	Recommend	2	0	0	0	0	0	0	1	1
8	Not recommend	1	0	0	0	0	0	0	0	1
9	Not recommend	0	0	0	0	0	0	0	0	0
10	Recommend	13	0	0	0	1	0	0	1	11
11	Not recommend	0	0	0	0	0	0	0	0	0
12	Not recommend	0	0	0	0	0	0	0	0	0
14	Not recommend	0	0	0	0	0	0	0	0	0
15	Recommend	0	0	0	0	0	0	0	0	0
20	Recommend	3	0	0	2	0	0	0	0	1

Guideline	Recommendation	Supporting evidence							
		Evidence source of SR/Meta-analysis				Evidence source of original studies			
		Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence	Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence
1	Not recommend	0	0	0	NA	0	0	0	NA
2	Not recommend	0	0	0	NA	0	0	0	NA
3	Recommend	0	0	0	NA	0	0	2	0%
4	Not recommend	0	0	0	NA	0	1	1	0%
5	Not recommend	0	0	0	NA	0	0	0	NA
7	Recommend	0	0	0	NA	0	1	1	0%
8	Not recommend	0	0	0	NA	0	0	1	0%
9	Not recommend	0	0	0	NA	0	0	0	NA
10	Recommend	0	0	0	NA	0	1	12	0%
11	Not recommend	0	0	0	NA	0	0	0	NA
12	Not recommend	0	0	0	NA	0	0	0	NA
14	Not recommend	0	0	0	NA	0	0	0	NA
15	Recommend	0	0	0	NA	0	0	0	NA
20	Recommend	0	0	0	NA	0	0	1	0%

Original studies include RCT/CCT, cohort studies, case-control studies, case series/case reports, animal studies and *in vivo* studies. Other evidence includes studies of patients with other diseases, animal studies or *in vivo* studies. The proportion of direct evidence, evidence from children with COVID-19/(evidence from patients with COVID-19 + other evidence). NA, not applicable; CCT, clinical controlled trials; RCT, randomized controlled trials; SR, systematic review.

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Table S5 Summary of supporting evidences for recommendations for interferon

Guideline	Recommendation	Reference number	Study type of supporting evidence							
			Guidelines/ consensuses	SR/meta-analysis	Review	RCT/CCT	Cohort studies	Case-control studies	Case series/case reports	Animal studies/ *in vivo* studies
1	Recommend	0	0	0	0	0	0	0	0	0
2	Not recommend	0	0	0	0	0	0	0	0	0
3	Not recommend	0	0	0	0	0	0	0	0	0
4	Not recommend	0	0	0	0	0	0	0	0	0
5	Not recommend	1	1	0	0	0	0	0	0	0
7	Not recommend	1	0	0	1	0	0	0	0	0
8	Not recommend	1	0	0	1	0	0	0	0	0
9	Not recommend	0	0	0	0	0	0	0	0	0
11	Recommend	11	5	0	1	1	1	0	0	3
12	Not recommend	0	0	0	0	0	0	0	0	0
14	Not recommend	1	0	1	0	0	0	0	0	0
19	Not recommend	21	0	0	6	3	3	1	4	4
20	Recommend	1	1	0	0	0	0	0	0	0

Guideline	Recommendation	Supporting evidence							
		Evidence source of SR/meta-analysis				Evidence source of original studies			
		Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence	Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence
1	Recommend	0	0	0	NA	0	0	0	NA
2	Not recommend	0	0	0	NA	0	0	0	NA
3	Not recommend	0	0	0	NA	0	0	0	NA
4	Not recommend	0	0	0	NA	0	0	0	NA
5	Not recommend	0	0	0	NA	0	0	0	NA
7	Not recommend	0	0	0	NA	0	0	0	NA
8	Not recommend	0	0	0	NA	0	0	0	NA
9	Not recommend	0	0	0	NA	0	0	0	NA
11	Recommend	0	0	0	NA	0	0	5	0%
12	Not recommend	0	0	0	NA	0	0	0	NA
14	Not recommend	0	0	5	0%	0	0	0	NA
19	Not recommend	0	0	0	NA	0	8	7	0%
20	Recommend	0	0	0	NA	0	0	0	NA

Original studies include RCT/CCT, cohort studies, case-control studies, case series/case reports, animal studies and *in vivo* studies. Other evidence includes studies of patients with other diseases, animal studies or *in vivo* studies. The proportion of direct evidence, evidence from children with COVID-19/(evidence from patients with COVID-19 + other evidence). NA, not applicable; CCT, clinical controlled trials; RCT, randomized controlled trials; SR, systematic review.

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Table S6 Summary of recommendations for glucocorticoids by included guidelines

Guideline	Recommendation	Indication	Dosing regimen
1	Recommend	1. With rapidly deteriorating chest imaging and occurrence of ARDS. 2. With obvious toxic symptoms, encephalitis, or encephalopathy, hemophagocytic syndrome and other serious complications. 3. With septic shock. 4. With obvious wheezing symptoms.	Intravenous methylprednisolone (1–2 mg/kg/day) Short-duration (3–5 days)
2	Not recommend	Not applicable	Not applicable
3	Recommend	mechanical ventilation, or high levels of oxygen support	Dexamethasone: 0.15 mg/kg/dose IV q24h (max: 6 mg/dose) Duration: maximum 10 days, or until discharge.
4	Recommend	1.Respiratory support: oxygen or invasive mechanical ventilation 2. Continuation for underlying condition requiring chronic steroid treatment 3. Additional diagnosis where steroid therapy is appropriate 4. MIS-C	Preferred: Dexamethasone-0.15 mg/kg once daily (Max: 6 mg) Alternatives: Preterm infant: Corrected GA <40 weeks: Hydrocortisone (0.5 mg/kg q12h × 7 days, 0.5 mg/kg daily × 3 days) Duration: up to 10 days
5	Not recommend	Not applicable	Not applicable
7	Recommend	ARDS, septic shock, encephalitis, hemophagocytic syndrome or with severe bronchospasm associated with wheezing	Intravenous methylprednisolone (1–2 mg/kg/day) Short-duration (3–5 days)
8	Recommend	used if clinically indicated	Not report
9	Not recommend	Not applicable	Not applicable
11	Recommend	Severe COVID-19	Intravenous methylprednisolone (1–2 mg/kg/day) Short-duration (3–5 days)
14	Not recommend	Not applicable	Not applicable
15	Recommend	Patients have presented with severe inflammation with or without KD features consistent with CSS in particular if they are not responding to supportive care or first line treatments	Not report
17	Recommend	MIS-C COVID-19 and hyperinflammation	Low-moderate dose glucocorticoids: MIS-C. High dose, IV pulse glucocorticoids: life-threatening complications, such as shock, and specifically, if a patient requires high dose or multiple inotropes and/or vasopressors
19	Recommend	Pediatric patients with critical COVID-19	Not report
20	Recommend	Fever over 38.5 ℃ for 3 days, CRP ≥30 mg/L, serum ferritin ≥1,000 μg/kg, the rapid progressing of imaging findings, significant hypoxia, patients manifesting the symptoms of ARDS, and obvious wheezing.	Short periods (3–5 days) Methylprednisolone not exceed 1–2 mg/kg/day

ARDS, acute respiratory distress syndrome; MIS-C, multisystem inflammatory syndrome in children; GA, gestational age; KD, Kawasaki disease; CSS, cytokine storm syndrome

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Table S7 Summary of supporting evidences for recommendations for glucocorticoid

Guideline	Recommendation	Reference number	Study type of supporting evidence							
			Guidelines/ consensuses	SR/meta-analysis	Review	RCT/CCT	Cohort studies	Case-control studies	Case series/ case reports	Animal studies/ *in vivo* studies
1	Recommend	5	3	0	1	0	1	0	0	0
2	Not recommend	0	0	0	0	0	0	0	0	0
3	Recommend	1	0	0	0	1	0	0	0	0
4	Recommend	2	0	0	0	2	0	0	0	0
5	Not recommend	1	1	0	0	0	0	0	0	0
7	Recommend	5	3	0	0	0	2	0	0	0
8	Recommend	0	0	0	0	0	0	0	0	0
9	Not recommend	0	0	0	0	0	0	0	0	0
11	Recommend	0	0	0	0	0	0	0	0	0
14	Not recommend	1	0	1	0	0	0	0	0	0
15	Recommend	0	0	0	0	0	0	0	0	0
17	Recommend	19	0	4	0	10	4	1	0	0
19	Recommend	0	0	0	0	0	0	0	0	0
20	Recommend	3	1	0	2	0	0	0	0	0

Guideline	Recommendation	Supporting evidence							
		Evidence source of SR/meta-analysis				Evidence source of original studies			
		Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence	Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence
1	Recommend	0	0	0	NA	0	0	1	0%
2	Not recommend	0	0	0	NA	0	0	0	NA
3	Recommend	0	0	0	NA	0	1	0	0%
4	Recommend	0	0	0	NA	0	2	0	0%
5	Not recommend	0	0	0	NA	0	0	0	NA
7	Recommend	0	0	0	NA	0	0	2	0%
8	Recommend	0	0	0	NA	0	0	0	NA
9	Not recommend	0	0	0	NA	0	0	0	NA
11	Recommend	0	0	0	NA	0	0	0	NA
14	Not recommend	0	5	18	0%	0	0	0	NA
15	Recommend	0	0	0	NA	0	0	0	NA
17	Recommend	0	0	65	0%	1	5	9	7%
19	Recommend	0	0	0	NA	0	0	0	NA
20	Recommend	0	0	0	NA	0	0	0	NA

Original studies include RCT/CCT, cohort studies, case-control studies, case series/case reports, animal studies and *in vivo* studies. Other evidence includes studies of patients with other diseases, animal studies or *in vivo* studies. The proportion of direct evidence, evidence from children with COVID-19/(evidence from patients with COVID-19 + other evidence). NA, not applicable; CCT, clinical controlled trials; RCT, randomized controlled trials; SR, systematic review.

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Table S8 Summary of recommendations for intravenous immunoglobulin by included guidelines.

Guideline	Recommendation	Indication	Dosing regimen
1	Recommend	Severe COVID-19	1 g/kg/day for 2 days, or 400 mg/kg/ day for 5 days
2	Not recommend	Not applicable	Not applicable
4	Recommend	MIS-C (KD features and/or coronary artery changes)	2 g/kg (max dose 100g)
5	Not recommend	Not applicable	Not applicable
7	Recommend	Severe COVID-19	1 g/kg/day for 2 days, or 400 mg/kg/day for 5 days
9	Not recommend	Not applicable	Not applicable
11	Recommend	Severe COVID-19	Not report
12	Not recommend	Not applicable	Not applicable
14	Not recommend	Not applicable	Not applicable
15	Recommend	Patients with KD-like illness, evidence of excessive inflammation (ferritin >700 ng/mL, CRP >30 g/dL, or multisystem organ failure), or cardiac involvement.	2 g/kg
17	Recommend	MIS-C	1-2 g/kg
19	Not recommend	Not applicable	Not applicable
20	Recommend	Severe and critical COVID-19	1 g/kg/day for 2 days, or 400 mg/kg/day for 5 days

MIS-C, multisystem inflammatory syndrome in children; KD, Kawasaki disease; COVID-19, coronavirus disease 2019.

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Table S9 Summary of supporting evidences for recommendations for intravenous immunoglobulin

Guideline	Recommendation	Reference number	Study type of supporting evidence							
			Guidelines/ consensuses	SR/Meta-analysis	Review	RCT/CCT	Cohort studies	Case-control studies	Case series/ Case reports	Animal studies/ *in vivo* studies
1	Recommend	4	4	0	0	0	0	0	0	0
2	Not recommend	0	0	0	0	0	0	0	0	0
4	Recommend	0	0	0	0	0	0	0	0	0
5	Not recommend	1	1	0	0	0	0	0	0	0
7	Recommend	0	0	0	0	0	0	0	0	0
9	Not recommend	0	0	0	0	0	0	0	0	0
11	Recommend	0	0	0	0	0	0	0	0	0
12	Not recommend	0	0	0	0	0	0	0	0	0
14	Not recommend	1	0	1	0	0	0	0	0	0
15	Recommend	0	0	0	0	0	0	0	0	0
17	Recommend	9	3	1	1	3	0	0	1	0
19	Not recommend	6	0	1	2	0	0	0	3	0
20	Recommend	2	2	0	0	0	0	0	0	0

Guideline	Recommendatiodsn	Supporting evidence							
		Evidence source of SR/Meta-analysis				Evidence source of original studies			
		Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence	Children with COVID-19	Patient with COVID-19	Other evidence	The proportion of direct evidence
1	Recommend	0	0	0	NA	0	0	0	NA
2	Not recommend	0	0	0	NA	0	0	0	NA
4	Recommend	0	0	0	NA	0	0	0	NA
5	Not recommend	0	0	0	NA	0	0	0	NA
7	Recommend	0	0	0	NA	0	0	0	NA
9	Not recommend	0	0	0	NA	0	0	0	NA
11	Recommend	0	0	0	NA	0	0	0	NA
12	Not recommend	0	0	0	NA	0	0	0	NA
14	Not recommend	0	2	4	0%	0	0	0	NA
15	Recommend	0	0	0	NA	0	0	0	NA
17	Recommend	0	0	13	0%	0	1	4	0%
19	Not recommend	0	9	0	0%	0	2	1	0%
20	Recommend	0	0	0	NA	0	0	0	NA

Original studies include RCT/CCT, cohort studies, case-control studies, case series/case reports, animal studies and *in vivo* studies. Other evidence includes studies of patients with other diseases, animal studies or *in vivo* studies. The proportion of direct evidence, evidence from children with COVID-19/(evidence from patients with COVID-19 + other evidence). NA, not applicable; CCT, clinical controlled trials; RCT, randomized controlled trials; SR, systematic review.

Table S10 Summary of recommendations for biologics by included guidelines

Guideline	Recommendation	Anakinra (IL-1 inhibition)		Tocilizumab (IL-6 inhibition)		JAK inhibition		Infliximab	
		Indication	Dosing regimen	Indication	Dosing regimen	Indication	Dosing regimen	Indication	Dosing regimen
4	Recommend	Fevers >24 hrs post steroids/ IVIG or moderate/severe presentation	2–4 mg/kg/dose (max 100 mg/dose) SQ/IV BID, May ↑ to TID or QID if poor response Continue for 5–7 days	Consider adding to antiviral therapy for patients meeting criteria, criteria for risk high-risk of cytokine storm	<30 kg: 12 mg/kg IV; ≥30 kg: 8 mg/kg IV, max 800 mg (round dose to nearest full vial) Duration: One dose Consider additional dose 8–12 hours after if continued clinical decompensation	Not report	Not report	Not report	Not report
8	Recommend	Severe/critical case with evidence of hyperinflammation (raised CRP, Ferritin, IL6, sCD25)	SC: 2 mg/kg once daily Increase dose by 2 mg/kg per day if unresponsive Maximum dose 8 mg/kg, Stop if no clinical benefit at maximum dose IV: <20 kg 2 mg/kg stat loading dose, followed by a continuous infusion of 0.02 mL/kg/hr (2 mg/kg/day) >20 kg 2 mg/kg stat loading dose, followed by a continuous infusion of 0.01 mL/kg/hr (2 mg/kg/day) Increase by dose by 2 mg/kg/day every 12 hours if unresponsive; Maximum dose 12 mg/kg/day; Maximum dose in 24 hours 400 mg (excluding loading dose)	Severe/critical case with evidence of hyperinflammation (raised CRP, Ferritin, IL6, sCD25)	<30 kg 12 mg/kg, IV >30 kg 8 mg/kg (max dose 800 mg), IV If no improvement at 12 hours, repeat with same dose	Not report	Not report	Not report	Not report
15	Recommend	Patients have presented with severe inflammation with or without KD features consistent with CSS in particular if they are not responding to supportive care or first line treatments	Not report	Not report	Not report	Not report	Not report	If the presentation is most consistent with KD and there is failure of first line treatment	Not report
17	Recommend	MIS-C refractory to IVIG and glucocorticoids or in patients with contraindications to these treatments	>4 mg/kg/day IV or SQ Time: Initiation of anakinra before invasive mechanical ventilation may be beneficial	COVID-19 pneumonia and signs of hyperinflammation	<30 kg: 12 mg/kg IV; ≥30 kg: 8 mg/kg IV, max 800 mg	Not report	Not report	Not report	Not report
19	Recommend	Confirmed critical COVID-19 (SARS-CoV-2 PCR positive) with evidence of hyperinflammation	Not report	Confirmed critical COVID-19 (SARS-CoV-2 PCR positive) with evidence of hyperinflammation	Not report	Not recommend	Not applicable	Not report	Not report
20	Recommend	Not applicable	Not applicable	Recommend	Not report	Not applicable	Not applicable	Not applicable	Not applicable

KD, Kawasaki Disease; SC, subcutaneous; IV, intravenous; CSS, cytokine storm syndrome; MIS-C, Multisystem Inflammatory Syndrome in Children; IVIG, intravenous immunoglobulin; CD-25, cluster of differentiation-25; COVID-19, coronavirus disease 2019; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

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Table S11 Summary of recommendations for antiplatelet and anticoagulation drugs by included guidelines

Guideline	Recommendation	Aspirin		Enoxaparin		Warfarin	
		Indication	Dosing regimen	Indication	Dosing regimen	Indication	Dosing regimen
4	Recommend	Not report	Not report	COVID-19 patients unless contraindicated	Not report	Not report	Not report
11	Recommend	Not report	Not report	Increased D-dimer and at high risk of thrombosis	Not report	Not report	Not report
15	Recommend	Patients with KD-like illness, evidence of excessive inflammation (ferritin >700 ng/mL, CRP >30 g/dL, or multisystem organ failure), or cardiac involvement.	20–25 mg/kg/dose every 6 h (80–100 mg/kg/day) IVIG: intravenous immunoglobulin CRP: C-reactive protein CD-25: cluster of differentiation-25 KD: Kawasaki disease CSS: cytokine storm syndrome COVID-19: coronavirus disease 2019	Not report	Not report	Not report	Not report
17	Recommend	MIS-C patients with CAAs and a maximal z-score >2.5 and/or thrombocytosis (platelet count ≥450,000/μL)	3-5 mg/kg/day; max 81 mg/day	MIS-C patients with CAAs and a a z-score ≥10.0 Documented thrombosis or ongoing moderate to severe LV dysfunction	Not report	MIS-C patients with CAAs and a z-score ≥10.0 Documented thrombosis or ongoing moderate to severe LV dysfunction	Not report

IVIG, intravenous immunoglobulin; CRP, C-reactive protein; CD-25, cluster of differentiation-25; KD, Kawasaki disease; CSS, cytokine storm syndrome; COVID-19, coronavirus disease 2019.

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