**Supplementary Table 1.** Search strategy

|  |  |
| --- | --- |
| Database | Search strategy |
| Medline (by PubMed) | ("covid 19"[All Fields] OR "covid 19"[MeSH Terms] OR "covid 19 vaccines"[All Fields] OR "covid 19 vaccines"[MeSH Terms] OR "covid 19 serotherapy"[All Fields] OR "covid 19 serotherapy"[Supplementary Concept] OR "covid 19 nucleic acid testing"[All Fields] OR "covid 19 nucleic acid testing"[MeSH Terms] OR "covid 19 serological testing"[All Fields] OR "covid 19 serological testing"[MeSH Terms] OR "covid 19 testing"[All Fields] OR "covid 19 testing"[MeSH Terms] OR "sars cov 2"[All Fields] OR "sars cov 2"[MeSH Terms] OR "severe acute respiratory syndrome coronavirus 2"[All Fields] OR "ncov"[All Fields] OR "2019 ncov"[All Fields] OR (("coronavirus"[MeSH Terms] OR "coronavirus"[All Fields] OR "cov"[All Fields]) AND 2019/11/01:3000/12/31[Date - Publication])) AND ("child\*"[All Fields] OR "pediatr\*"[All Fields]) AND ("ear"[MeSH Terms] OR "ear"[All Fields] OR "oto"[All Fields] OR ("cough"[MeSH Terms] OR "cough"[All Fields] OR "coughing"[All Fields] OR "coughs"[All Fields] OR "coughed"[All Fields]) OR ("hearing"[MeSH Terms] OR "hearing"[All Fields] OR "hearings"[All Fields]) OR ("vertigo"[MeSH Terms] OR "vertigo"[All Fields] OR "vertigos"[All Fields] OR "vertigoes"[All Fields]) OR ("dizziness"[MeSH Terms] OR "dizziness"[All Fields] OR "dizzy"[All Fields] OR "vertigo"[MeSH Terms] OR "vertigo"[All Fields]) OR ("pharynx"[MeSH Terms] OR "pharynx"[All Fields] OR "pharynxs"[All Fields] OR "pharynxes"[All Fields]) OR "pharyng\*"[All Fields] OR ("pharynx"[MeSH Terms] OR "pharynx"[All Fields] OR "throat"[All Fields] OR "throats"[All Fields]) OR ("larynx"[MeSH Terms] OR "larynx"[All Fields] OR "larynxes"[All Fields]) OR "laryng\*"[All Fields] OR "hoarse\*"[All Fields] OR ("taste"[MeSH Terms] OR "taste"[All Fields] OR "tastes"[All Fields] OR "tasting"[All Fields] OR "tasted"[All Fields] OR "tasteful"[All Fields] OR "tastings"[All Fields]) OR ("smell"[MeSH Terms] OR "smell"[All Fields] OR "smelled"[All Fields] OR "smelling"[All Fields] OR "smells"[All Fields]) OR "olfact\*"[All Fields] OR ("nasalance"[All Fields] OR "nasality"[All Fields] OR "nasalization"[All Fields] OR "nasalized"[All Fields] OR "nasally"[All Fields] OR "nose"[MeSH Terms] OR "nose"[All Fields] OR "nasal"[All Fields] OR "nasals"[All Fields]) OR ("nose"[MeSH Terms] OR "nose"[All Fields]) OR "naso\*"[All Fields] OR "rhino\*"[All Fields] OR ("paranasal sinuses"[MeSH Terms] OR ("paranasal"[All Fields] AND "sinuses"[All Fields]) OR "paranasal sinuses"[All Fields] OR "sinus"[All Fields] OR "sinus s"[All Fields]) OR ("ageusia"[MeSH Terms] OR "ageusia"[All Fields]) OR ("dysgeusia"[MeSH Terms] OR "dysgeusia"[All Fields] OR "dysgeusias"[All Fields])) |
| Embase | ('covid 19'/exp OR 'covid 19') AND (child\* OR pediatr\*) AND ('ear'/exp OR ear OR oto\* OR 'cough'/exp OR cough OR 'hearing'/exp OR hearing OR 'vertigo'/exp OR vertigo OR 'dizziness'/exp OR dizziness OR 'pharynx'/exp OR pharynx OR pharyng\* OR 'throat'/exp OR throat OR 'larynx'/exp OR larynx OR laryng\* OR hoarse\* OR 'taste'/exp OR taste OR 'smell'/exp OR smell OR olfact\* OR nasal OR 'nose'/exp OR nose OR naso\* OR rhino\* OR 'sinus'/exp OR sinus OR 'ageusia'/exp OR ageusia OR 'dysgeusia'/exp OR dysgeusia)  |
| Cochrane Central | #1 "SARS-CoV-2" 379#2 "severe acute respiratory syndrome coronavirus 2" 818#3 "covid-19" 8035#4 "2019-nCoV" 55#5 "corona virus disease 2019" 61#6 #1OR#2OR#3OR#4OR#5 8130#7 ''ear'' 8133#8 "cough" 10893#9 "hearing" 8232#10 "vertigo" 4940#11 "dizziness" 15236#12 "pharynx" 1731#13 "throat" 7303#14 "larynx" 2938#15 "hoarse\*" 65#16 "taste" 6245#17 "smell" 2002#18 "olfact\*" 3#19 "nasal" 21075#20 "nose" 9211#21 "naso\*" 521#22 "rhino\*" 1741#23 "sinus" 9884#24 "ageusia" 105#25 "dysgeusia" 983#26 #7OR#8OR#9OR#10OR#11OR#12OR#13OR#14OR#15OR#16OR#17OR#18OR#19OR#20OR#21OR#22OR#23OR#24OR#25 86141#27 "children" 178047#28 "child" 178049#29 "pediatric" 56293#30 "adolescent" 137887#31 "infant" 54218#32 #27OR#28OR#29OR#30OR#31 292051#33 #32AND#26AND#6 159 |

The key words were:COVID-19 AND (child\* OR pediatr\*) AND (ear OR Oto\* OR cough OR hearing OR vertigo OR dizziness OR pharynx OR pharyng\* OR throat OR larynx OR laryng\* OR hoarse\* OR taste OR smell OR olfact\* OR nasal OR nose OR naso\* OR rhino\* OR sinus OR ageusia OR dysgeusia)

**Supplementary Table 2.** Meta-regression analysis for pooled prevalence of nasal discharge

|  |  |  |
| --- | --- | --- |
| Covariate | Co-efficient (95% CI) | *P*-value |
| Multicentric | −0.27 (−0.80, 0.26) | 0.31 |
| Sample size | −0.00015 (−0.0009, 0.0006) | 0.70 |
| Study design | −0.027 (−0.53, 0.48) | 0.92 |
| Risk of bias |  0.33 (−0.14, 0.80) | 0.16 |

CI = confidence interval

<Supplementary Table 3>

**Supplementary Table 3.** Meta-regression analysis for pooled prevalence of sore throat

|  |  |  |
| --- | --- | --- |
| Covariate | Co-efficient (95% CI) | *P*-value |
| Multicentric | 0.28 (−0.16, 0.73) | 0.21 |
| Sample size | 0.0002 (−0.0002, 0.0007) | 0.25  |
| Study design | −0.105 (0.60, 0.39) | 0.67  |
| Risk of bias | 0.39 (−0.09, 0.88) | 0.11 |

CI = confidence interval

<Supplementary Table 4>

**Supplementary Table 4.** Meta-regression analysis for pooled prevalence of cough

|  |  |  |
| --- | --- | --- |
| Covariate | Co-efficient (95% CI) | *P*-value |
| Multicentric | 0.002 (−0.63, 0.64) | 0.994  |
| Sample size | −0.0006 (−0.001, 0.0002) | 0.147  |
| Study design | −0.10 (−0.70, 0.51) | 0.744  |
| Risk of bias | 0.18 (−0.34, 0.70) | 0.481  |

CI = confidence interval

<Supplementary Figure 1>

**Supplementary Figure 1.** Forest plot showing the pooled prevalence of loss of smell (anosmia). ES = effect size; CI = confidence interval

**Supplementary Figure 2.** (a–c) Subgroup analysis on pooled prevalence of cough, based on case definition of coronavirus disease 2019, study design and risk of bias. ES = effect size; CI = confidence interval; **Supplementary Figure 3.** (a–c) Subgroup analysis on pooled prevalence of sore throat, based on case definition of coronavirus disease 2019, study design and risk of bias. ES = effect size; CI = confidence interval; CDC = Centers for Disease Control and Prevention; Covid-19 = coronavirus disease 2019







– Please label the three images ‘(a)’, ‘(b)’ and ‘(c)’, above the top right corner of each image

– Please ensure text is legible

– Please change all blue backgrounds to white, and remove borders

– Please change all ‘Study’ to ‘Study & year’

– Please change all: ‘Duramaz2020’ to ‘Duramaz2021’; ‘Foster2020’ to ‘Foster2021’; ‘Seon Han 2020’ to ‘Han 2021’; ‘Jamjoon 2020’ to ‘Jamjoon 2021’, ‘CDC-MMR2020’ to ‘CDC COVID-19 Response Team 2020’; ‘Andriana Costa 2020’ to ‘Costa 2022’; ‘Benito2020’ to ‘Natera-de Benito2021’; ‘Ming He 2020’ to ‘He 2020’; ‘Temel 2020’ to ‘Temel 2021’; ‘Manishi 2020’ to ‘Mamishi 2020’; ‘Peng 2020’ to ‘Peng 2021’; ‘Ramteke 2020’ to ‘Ramteke 2021’; ‘Hurst 2020’ to ‘Hurst 2021’; ‘Kokmaz 2020’ to ‘Korkmaz 2020’; ‘R.Otto 2020’ to ‘Otto 2020’; ‘Goss 2020’ to ‘Goss 2021’; ‘ozkan 2021’ to ‘Ozkan 2021’; *p* = 0.000’ to ‘*p* < 0.001’

– Please remove first names ‘James A.’, ‘Qin’, ‘Nina’, ‘Nan’ and ‘Thais Lira’ in all images

– Please ensure that, in column one, there is a space between the author name and the year in all images

<Supplementary Figure 4>

**Supplementary Figure 4.** (a–c) Subgroup analysis on pooled prevalence of nasal discharge, based on case definition of coronavirus disease 2019, study design and risk of bias. ES = effect size; CI = confidence interval; CDC = Centers for Disease Control and Prevention; Covid-19 = coronavirus disease 2019







– Please label the three images ‘(a)’, ‘(b)’ and ‘(c)’, above the top right corner of each image

– Please ensure text is legible

– Please change all blue backgrounds to white, and remove borders

– Please change all ‘Study’ to ‘Study & year’

– Please change all: ‘Duramaz2020’ to ‘Duramaz2021’; ‘Foster2020’ to ‘Foster2021’; ‘Seon Han 2020’ to ‘Han 2021’; ‘Jamjoon 2020’ to ‘Jamjoon 2021’, ‘CDC-MMR2020’ to ‘CDC COVID-19 Response Team 2020’; ‘Andriana Costa 2020’ to ‘Costa 2022’; ‘Benito2020’ to ‘Natera-de Benito2021’; ‘Ming He 2020’ to ‘He 2020’; ‘Temel 2020’ to ‘Temel 2021’; ‘Manishi 2020’ to ‘Mamishi 2020’; ‘Peng 2020’ to ‘Peng 2021’; ‘Ramteke 2020’ to ‘Ramteke 2021’; ‘Hurst 2020’ to ‘Hurst 2021’; ‘Kokmaz 2020’ to ‘Korkmaz 2020’; ‘R.Otto 2020’ to ‘Otto 2020’; ‘Goss 2020’ to ‘Goss 2021’; ‘ozkan 2021’ to ‘Ozkan 2021’; *p* = 0.000’ to ‘*p* < 0.001’

– Please remove first names ‘James A.’, ‘Qin’, ‘Nina’, ‘Nan’ and ‘Thais Lira’ in all images

– Please ensure that, in column one, there is a space between the author name and the year in all images