SUPPLEMENTARY MATERIAL

"Outbreaks of publications about emerging infectious diseases: the case of SARS-CoV-2 and Zika virus"

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Supplementary Text 1. Search strategy
COVID:

EMBASE:

(SARS coronavirus/ OR middle east respiratory syndrome/ OR severe acute respiratory syndrome/ OR (coronavirus* OR corona virus* OR HCoV* or ncov* OR covid or covid19 OR sars-cov* or sarscov* or Sars-coronavirus* OR Severe Acute Respiratory Syndrome Coronavirus*).mp.) and 20191201:20301231.(dc).

MEDLINE:

("coronavirus"[MH] OR "coronavirus infections"[MH] OR "coronavirus"[TW] OR "corona virus"[TW] OR "HCoV"[TW] OR "nCov"[TW] OR "covid"[TW] OR "covid19"[TW] OR "Severe Acute Respiratory Syndrome Coronavirus 2"[TW] OR "SARS-CoV2"[TW] OR "SARS-CoV 2"[TW] OR "SARS Coronavirus 2"[TW] OR "MERS-CoV"[TW]) AND (2019/1/1:3000[PDAT])

From 01.04.2020, we retrieve the currate BioRxiv/MedRxiv dataset [https://connect.medrxiv.org/relate/content/181]

https://ispmbern.github.io/covid-19/living-review/collectingdata.html

Zika: All sources: Zika OR ZIKV OR “Zika virus”

Supplementary Table S1. Classification of study designs, and the group and original status to which we assigned studies.

Label	Code	Group
Case report	1	Epi
Case series	2	Epi
Case-control study	3	Epi
Cohort study	4	Epi
Cross-sectional study	5	Epi
Diagnostic study	6	Epi
Ecological study	7	Epi
Guidelines	8	Epi
Modelling study	9	Epi
Other	10	Epi
Outbreak or surveillance report	11	Epi
Qualitative study	12	Epi
Review	13	Epi
Trial	14	Epi
Animal experiment	21	Basic
In vitro experiment	22	Basic
Biochemical/protein structure studies	27	Basic
Sequencing and phylogenetics	23	Basic
Within-host modelling	24	Basic
Basic research review	25	Basic
Other	26	Other
Comment/editorial/non-original	30	Non-original

Epi: epidemiological study designs; Basic: basic research study design; Other: classified as neither Epi nor Basic research.

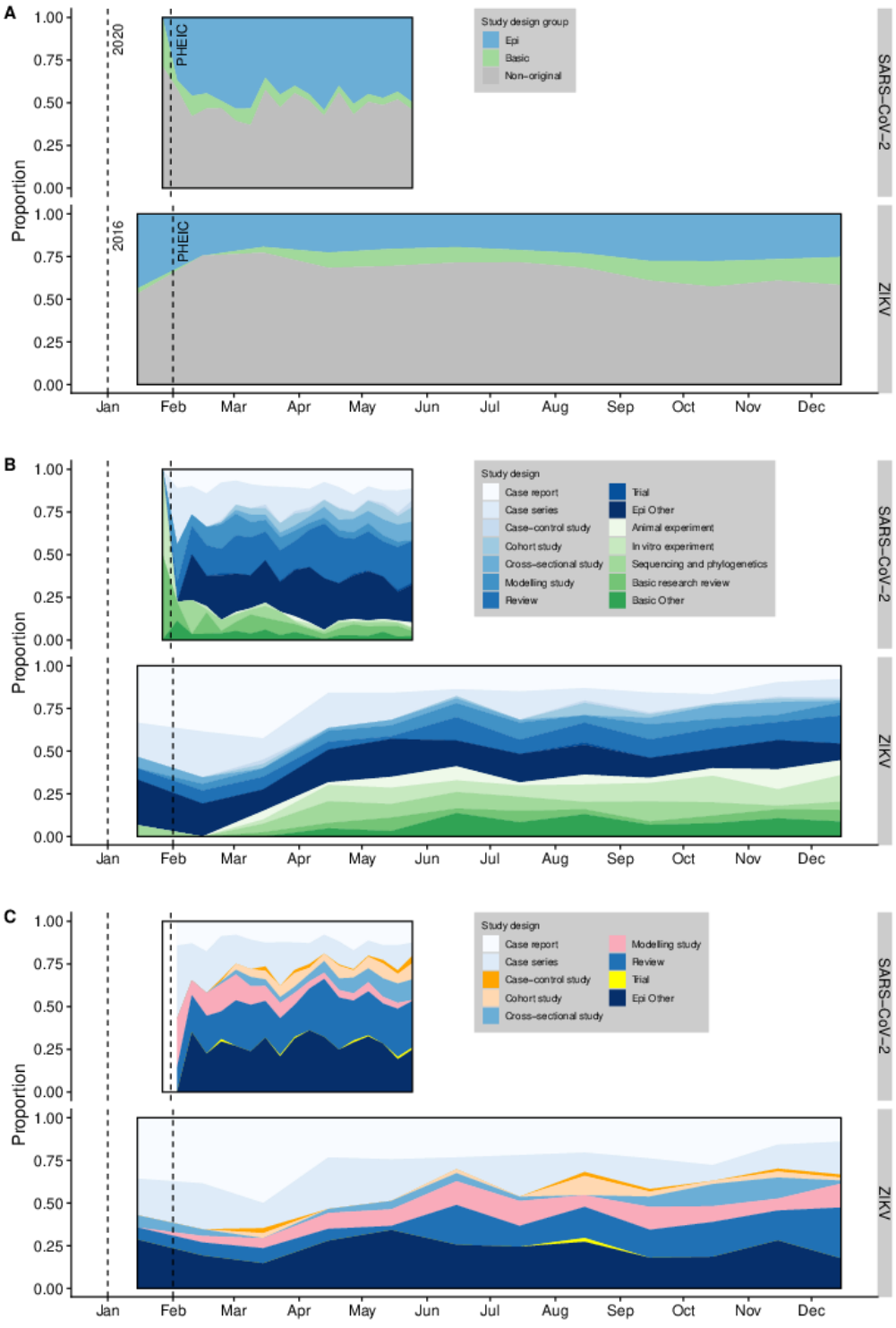
Supplementary Table S2. Number and proportion of publications on Zika virus by category and publication type.

	Preprint (N=98)	Peer-reviewed (N=2188)	Overall (N=2286)
Study design group			
Epi	31 (31.6%)	521 (23.8%)	552 (24.1%)
Basic	37 (37.8%)	215 (9.8%)	252 (11.0%)
Other	30 (30.6%)	1452 (66.4%)	1482 (64.8%)
Source			
MedRxiv	0 (0%)	0 (0%)	0 (0%)
BioRxiv	98 (100%)	0 (0%)	98 (4.3%)
EMBASE	0 (0%)	356 (16.3%)	356 (15.6%)
Pubmed	0 (0%)	1832 (83.7%)	1832 (80.1%)
Study design			
Case report	1 (1.0%)	128 (5.9%)	129 (5.6%)
Case series	2 (2.0%)	92 (4.2%)	94 (4.1%)
Case-control study	0 (0%)	5 (0.2%)	5 (0.2%)
Cohort study	0 (0%)	13 (0.6%)	13 (0.6%)
Cross-sectional study	0 (0%)	27 (1.2%)	27 (1.2%)
Diagnostic study	0 (0%)	30 (1.4%)	30 (1.3%)
Ecological study	3 (3.1%)	9 (0.4%)	12 (0.5%)
Guidelines	0 (0%)	22 (1.0%)	22 (1.0%)
Modelling study	22 (22.4%)	52 (2.4%)	74 (3.2%)
Other	6 (6.1%)	37 (1.7%)	43 (1.9%)
Outbreak or surveillance report	0 (0%)	33 (1.5%)	33 (1.4%)
Qualitative study	0 (0%)	23 (1.1%)	23 (1.0%)
Review	0 (0%)	82 (3.7%)	82 (3.6%)
Trial	0 (0%)	1 (0.0%)	1 (0.0%)
Animal experiment	8 (8.2%)	45 (2.1%)	53 (2.3%)
In vitro experiment	8 (8.2%)	79 (3.6%)	87 (3.8%)
Biochemical/protein structure studies	10 (10.2%)	62 (2.8%)	72 (3.1%)
Sequencing and phylogenetics	21 (21.4%)	57 (2.6%)	78 (3.4%)
Within-host modelling	0 (0%)	0 (0%)	0 (0%)
Basic research review	0 (0%)	34 (1.6%)	34 (1.5%)
Non-original	8 (8.2%)	1248 (57.0%)	1256 (54.9%)
Mosquito	9 (9.2%)	109 (5.0%)	118 (5.2%)

Supplementary Table S3. Number and proportion of publications on SARS-CoV-2 by category and publication type.

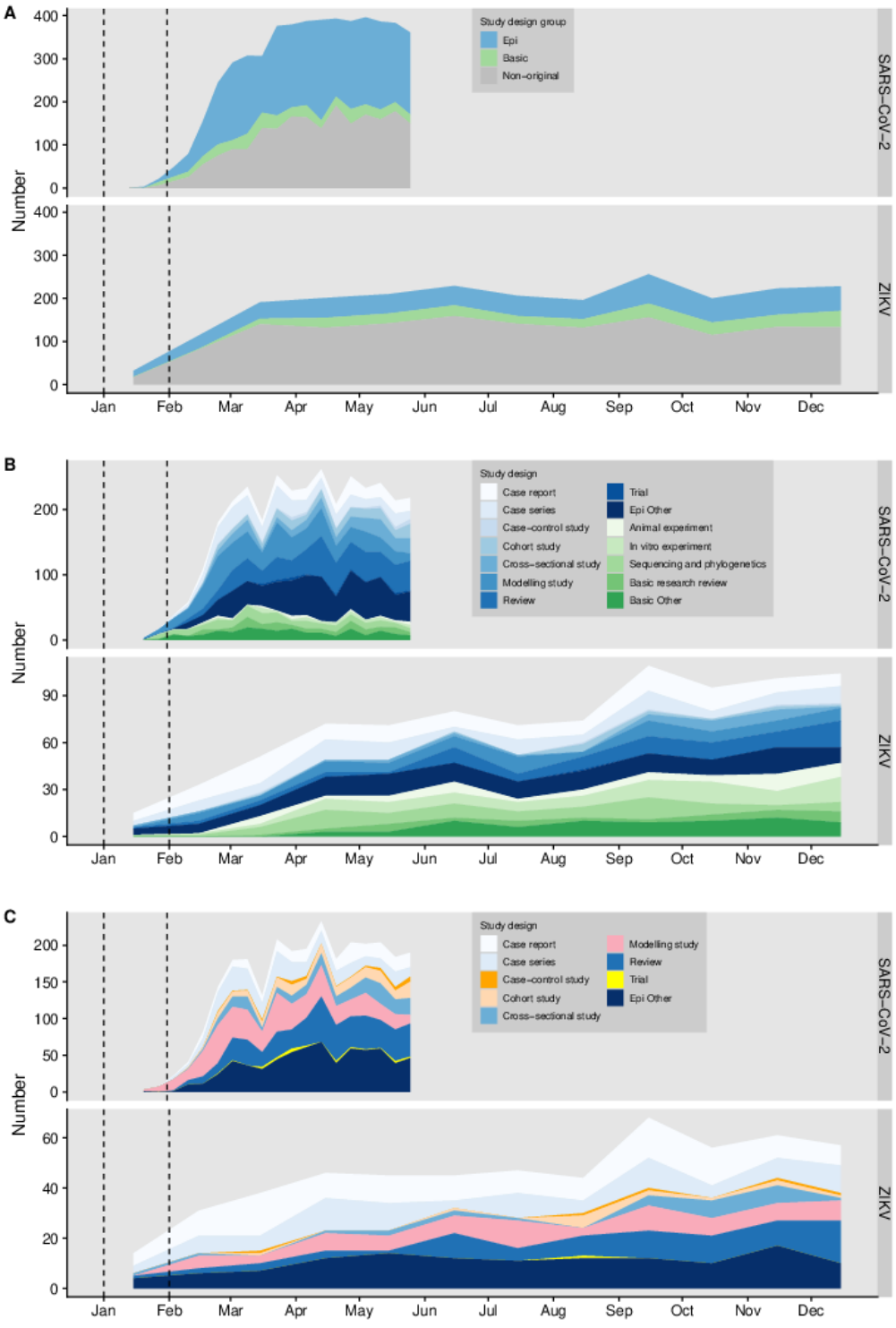
	Preprint (N=1244)	Peer-reviewed (N=4050)	Overall (N=5294)
Study design group			
Epi	909 (73.1%)	1874 (46.3%)	2783 (52.6%)
Basic	194 (15.6%)	218 (5.4%)	412 (7.8%)
Other	141 (11.3%)	1958 (48.3%)	2099 (39.6%)
Source			
MedRxiv	950 (76.4%)	0 (0%)	950 (17.9%)
BioRxiv	294 (23.6%)	0 (0%)	294 (5.6%)
EMBASE	0 (0%)	676 (16.7%)	676 (12.8%)
Pubmed	0 (0%)	3374 (83.3%)	3374 (63.7%)
Study design			
Case report	5 (0.4%)	231 (5.7%)	236 (4.5%)
Case series	67 (5.4%)	264 (6.5%)	331 (6.3%)
Case-control study	13 (1.0%)	24 (0.6%)	37 (0.7%)
Cohort study	70 (5.6%)	105 (2.6%)	175 (3.3%)
Cross-sectional study	94 (7.6%)	125 (3.1%)	219 (4.1%)
Diagnostic study	73 (5.9%)	61 (1.5%)	134 (2.5%)
Ecological study	36 (2.9%)	24 (0.6%)	60 (1.1%)
Guidelines	3 (0.2%)	264 (6.5%)	267 (5.0%)
Modelling study	413 (33.2%)	122 (3.0%)	535 (10.1%)
Other	45 (3.6%)	166 (4.1%)	211 (4.0%)
Outbreak or surveillance report	23 (1.8%)	78 (1.9%)	101 (1.9%)
Qualitative study	4 (0.3%)	25 (0.6%)	29 (0.5%)
Review	66 (5.3%)	475 (11.7%)	541 (10.2%)
Trial	17 (1.4%)	10 (0.2%)	27 (0.5%)
Animal experiment	17 (1.4%)	14 (0.3%)	31 (0.6%)
In vitro experiment	40 (3.2%)	21 (0.5%)	61 (1.2%)
Biochemical/protein structure studies	116 (9.3%)	66 (1.6%)	182 (3.4%)
Sequencing and phylogenetics	118 (9.5%)	65 (1.6%)	183 (3.5%)
Within-host modelling	14 (1.1%)	2 (0.0%)	16 (0.3%)
Basic research review	5 (0.4%)	116 (2.9%)	121 (2.3%)
Non-original	5 (0.4%)	1792 (44.2%)	1797 (33.9%)

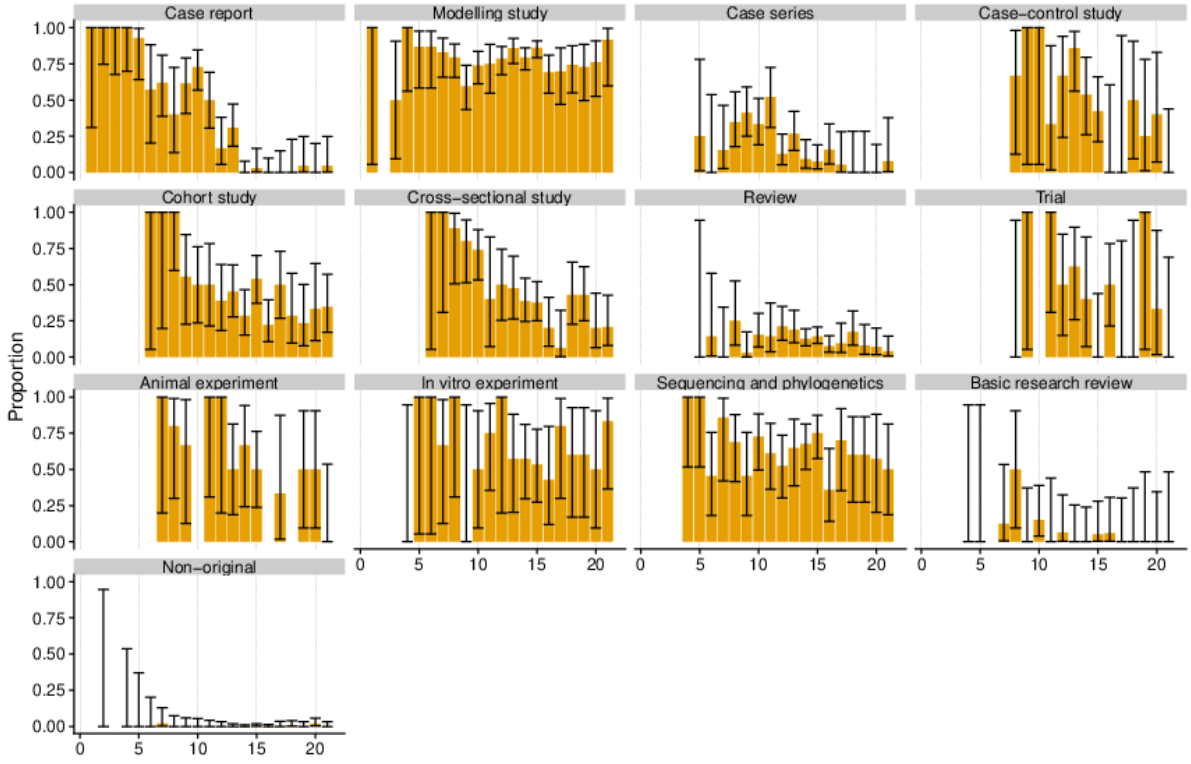
Supplementary Figure S1. Proportion of different study designs of published research on SARS-CoV-2 (SARS-CoV-2) and Zika virus (ZIKV) over time, without preprint publications.



Epidemiological (Epi), basic research and non-original research (A); Epidemiological and basic research by study design (B); epidemiological research by study design (C). PHEIC: Public Health Emergency of International Concern.

Supplementary Figure S2. Number of different study designs of published research on SARS-CoV-2 (SARS-CoV-2) and Zika virus (ZIKV) over time.



Epidemiological (Epi), basic research and non-original research (A); Epidemiological and basic research by study design (B); epidemiological research by study design (C). PHEIC: Public Health Emergency of International Concern.

Supplementary Figure S3. The proportion of preprint publications compared to and peer-reviewed publications for SARS-CoV-2 by study design and week.