

Supplementary Results:

File Extension	Non-Proprietary	Human-readable	Machine-readable
.ab1	1	0	1
.avi	0	1	NA
.bam	1	0	1
.csv	1	1	1
.doc	1	1	0
.docx	1	1	0
.fastq	1	1	1
.gif	0	1	NA
.jpg	1	1	NA
.maf	1	1	1
.mov	0	1	NA
.mp4	0	1	NA
.pdf	0	1	0
.raw*	0	1	1
.rtf	0	1	0
.sas	0	1	1
.sav	0	1	1
.tif	1	1	NA
.txt	1	1	1
.vcf	1	1	1
.wav	0	1	0
.xls	1	1	1
.xlsx	1	1	1
.xml	1	1	1

Table S1: Characteristics of file format.

In this table, “0” is no, and “1” is yes. NA was regarded as “yes” when scoring for “Data Reusability”. This table was adapted from Roche al (9).

		Non-Communicable Diseases Research (n=111)	Infectious Diseases Research (n=82)	Total (n= 193)
Year of publication	2014	7 (6.31%)	13 (15.85%)	20 (10.36%)
	2015	9 (8.11%)	6 (7.32%)	15 (7.77%)
	2016	7 (6.31%)	6 (7.32%)	13 (6.74%)
	2017	17 (15.31%)	9 (10.98%)	26 (13.47%)
	2018	8 (7.21%)	10 (12.20%)	18 (9.33%)
	2019	15 (13.51%)	12 (14.63%)	27 (13.99%)
	2020	11 (9.91%)	11 (13.41%)	22 (11.40%)
	2021	18 (16.21%)	7 (8.54%)	25 (12.95%)
	2022	19 (17.11%)	8 (9.76%)	27 (13.99%)
	Before FAIR (2014- 2016)	23 (20.72%)	25 (30.49%)	48 (24.87%)
Time Period – FAIR implementation	After FAIR (2017-2022)	88 (79.28%)	57 (69.51%)	145 (75.13%)
Time Period – COVID-19	Before COVID (2014- 2020)	74 (66.67%)	67 (81.70%)	141 (73.6%)
	After COVID (2021-2023)	37 (33.33%)	15 (18.29%)	52 (26.94%)
Data Sharing	Completeness >1	88 (79.28%)	63 (76.83%)	151 (78.24%)
	Completeness =1	23 (20.72%)	19 (23.17%)	42 (21.76%)
Image Data Sharing Status	Not Applicable	27 (24.32%)	50 (60.98%)	77 (39.90%)
	Not Shared	77 (69.37%)	28 (34.15%)	105 (54.40%)
	Shared	7 (6.31%)	4 (4.87%)	11 (5.70%)
Genomic Data Sharing Status	Not Applicable	46 (41.44%)	44 (53.66%)	90 (46.63%)
	Not Shared	25 (22.52%)	7 (8.54%)	32 (16.58%)
	Shared	40 (36.04%)	31 (37.80%)	71 (36.79)
Data Availability	DAS with Open Data	40 (36.04%)	35 (42.68%)	72 (37.31%)

Statement (DAS)	DAS with Data upon request	19 (17.11%)	8 (9.76%)	30 (15.54%)
	Not Required	52 (46.85%)	39 (47.56%)	91 (47.15%)
Analysis Program	Yes	110 (99.10%)	82 (100%)	192 (99.48%)
	No	1 (0.90%)	0 (0.00%)	1 (0.52%)
Code Archived	Code Sharing	34 (30.63%)	14 (17.07%)	48 (24.87%)
	No Code Sharing	13 (11.71%)	8 (9.76%)	21 (10.88%)
	No Code Used	64 (57.66%)	60 (73.17%)	124 (64.25%)
Preprint	Yes	27 (24.32%)	17 (20.73%)	44 (22.80%)
	No	84 (75.67%)	65 (79.27%)	149 (77.20%)
Table S2: Descriptive Characteristics of the 193 included Research Publications				

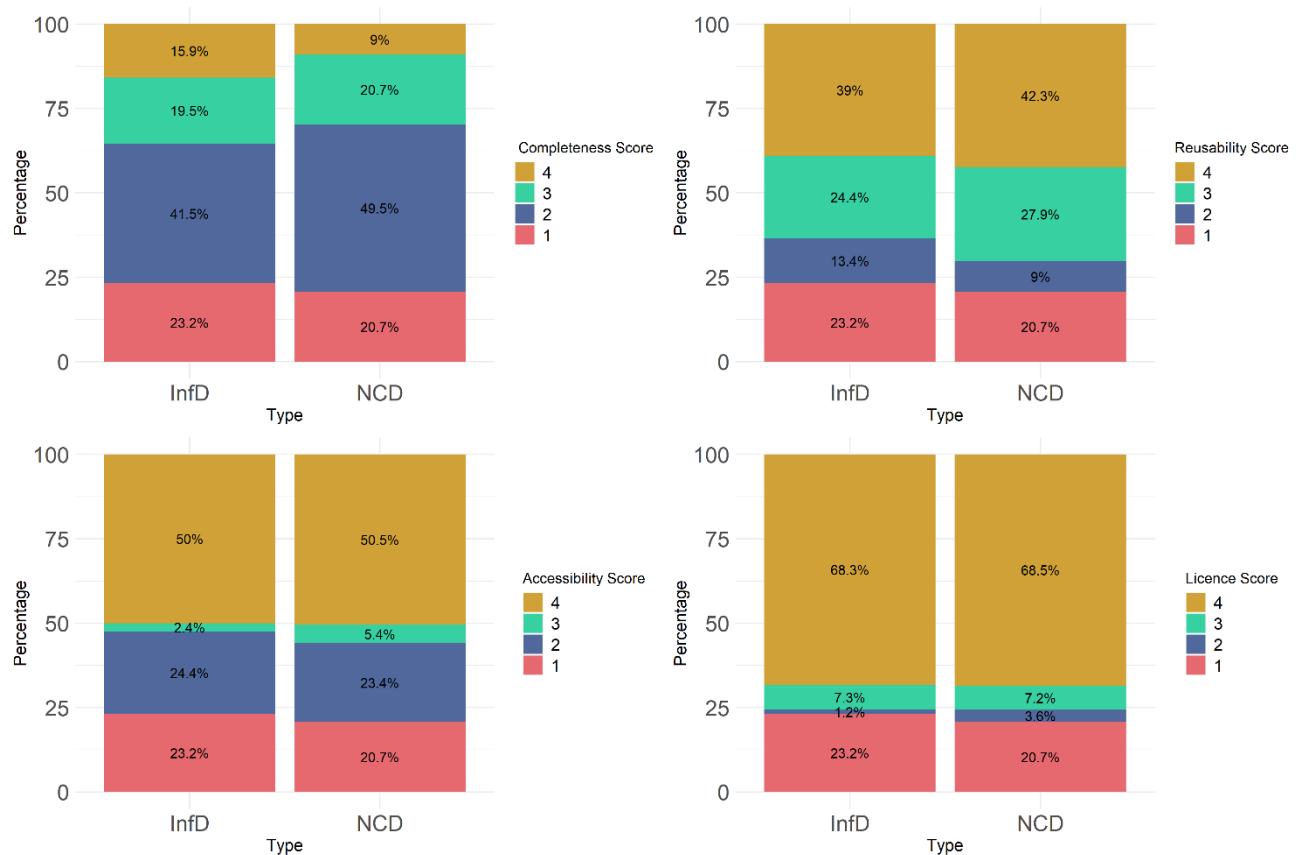


Figure S1: Stacked Bar Chart of Scoring Criteria Categories compared between the two types of research field (Non-Communicable diseases = 111, Infectious Diseases = 82).

	Completeness	Reusability	Accessibility	Licence
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Year	1.19 (1.08 - 1.33) ***	1.24 (1.12 - 1.38) ***	1.21 (1.09 - 1.35) ***	1.16 (1.03 - 1.31) ***
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Table S3: Yearly Influence on Scoring Criteria: An Ordinal Regression Analysis for each Criteria

Notes:

- The numbers presented are Odds Ratios (OR) with 95% Confidence Intervals (CI).
- Statistical significance is indicated by asterisks:
*p-value < 0.05, **p-value < 0.01, and ***p-value < 0.001.

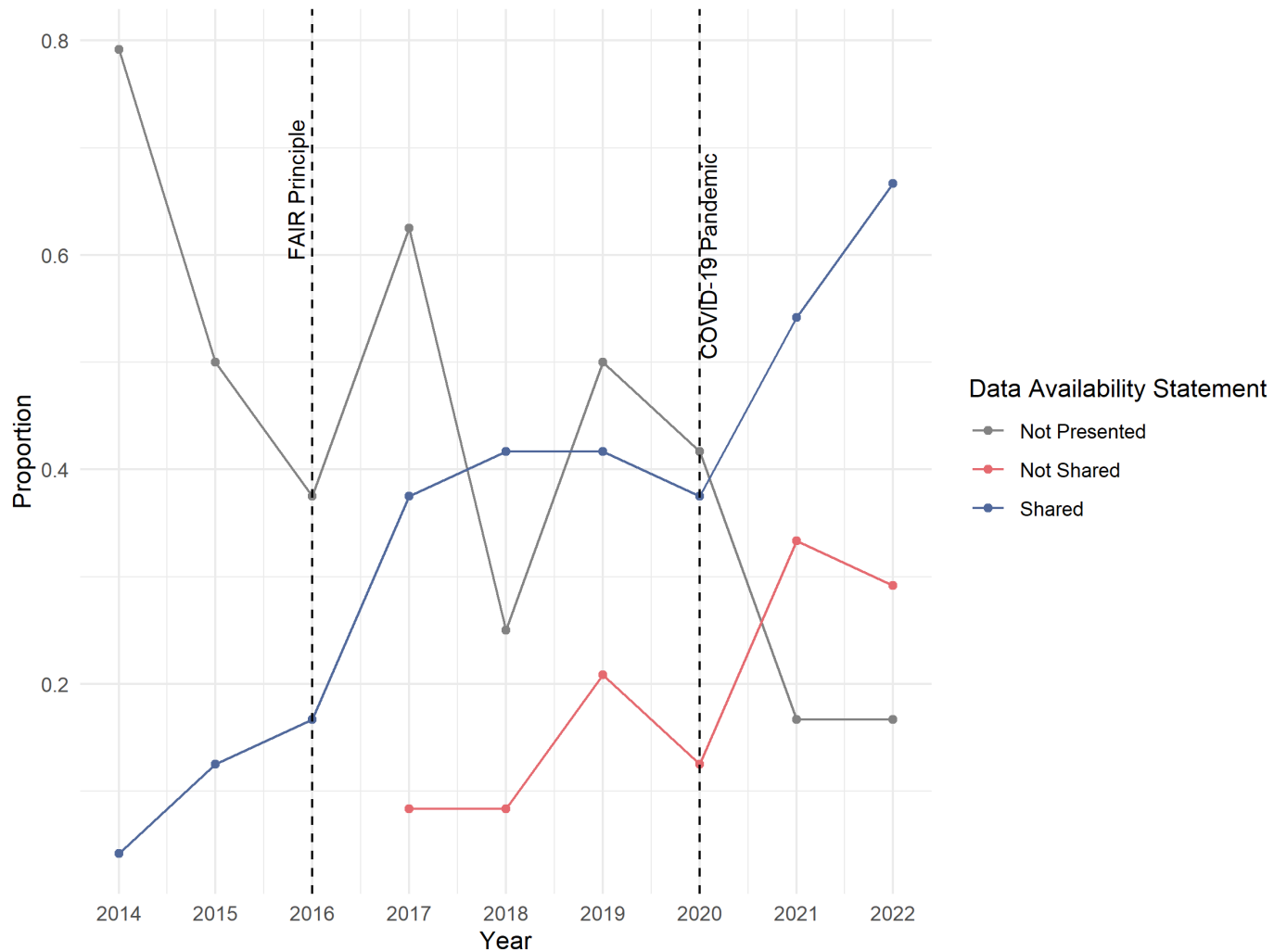


Figure S2: Trends in Data Availability Statements (DAS) from 2014 to 2022

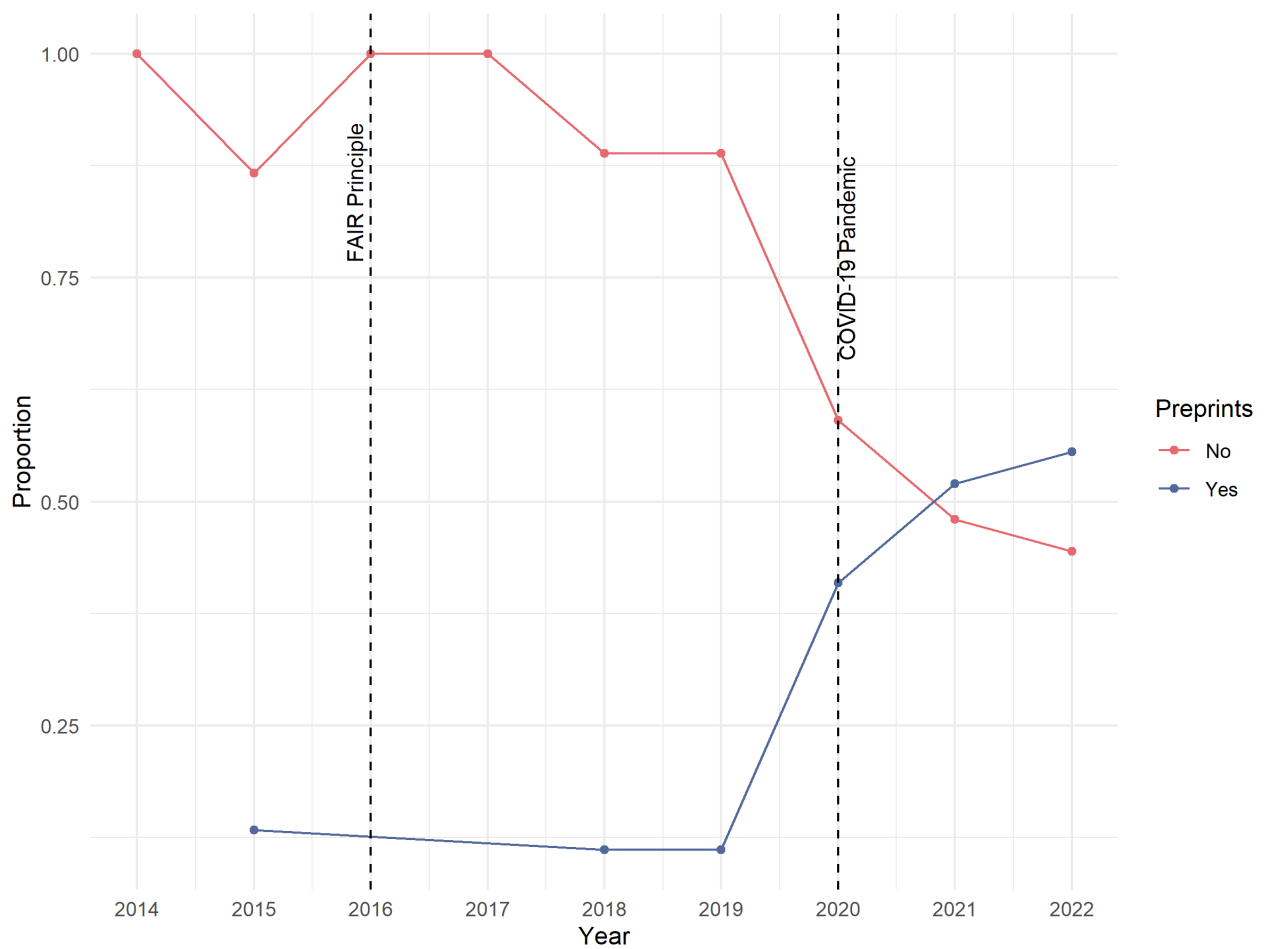


Figure S3: Proportion of Studies Publishing Preprints from 2014 to 2022

Fair Implementation in 2016		Before 2014-2016 (n=48)	After 2017-2022 (n=145)	P-Value
Data Availability Statement (DAS)	DAS with Open Data	8 (16.67%)	67 (46.21%)	<0.001***
	DAS with Data upon request	0 (0.00%)	27 (18.62%)	
	Not Presented	40 (83.33%)	51 (35.17%)	
Preprint	Yes	46 (95.83%)	42 (28.96%)	<0.001***
	No	2 (4.17%)	103 (71.03%)	

Table S4: Impact Analysis of FAIR Principles Implementation (2016) a on the Sharing variables (DAS, Preprints).

COVID-19 in 2020	Before 2014-2020	After 2021-2022	P-Value
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		(n=141)	(n=52)	
Data Availability Statement (DAS)	DAS with Open Data	46 (32.62%)	29 (55.77%)	<0.001***
	DAS with Data upon request	12 (8.51%)	15 (28.85%)	
	Not Required	83 (58.87%)	8 (15.38%)	
Preprint	Yes	16 (11.35%)	28 (53.85%)	<0.001***
	No	125 (88.65%)	24 (46.15%)	
Table S5: Impact Analysis of COVID-19 Pandemic (2020) on the Sharing variables (DAS, Preprints).				