SUPPLEMENTARY MATERIALS

Statistical Calculations and Analytic Hierarchy Process Pairwise Comparisons

Edsel Ing

FLOW CHART SUMMARY OF THE METHODS SECTION

1) The four ICMJE criteria were separated into nine distinct components of authorship

2) Medical editors (n=66) were surveyed to rank the relative importance of the nine authorship components on a Likert-like scale from 0 (no importance) to 10 (most important).

3) The median of each authorship component was used to determine the pair-wise comparisons of an Analytic Hierarchy Process (AHP). The AHP priority weight of each component of authorship was calculated.

4) A four-level ordinal effort/ability rating was assigned for each authorship component.

5) An online spreadsheet calculator with advance attestation was used to determine the final sum products of the AHP priority weights and effort/ability ratings.

SURVEY RESPONDENTS: DEMOGRAPHICS OF THE EDITORS THAT WERE SURVEYED (World Association of Medical Editors) March-April 2021, n=66

```
tab gender

                     Gender |      Freq.     Percent        Cum.
----------------------------+-----------------------------------
I identify myself as female. |         13       19.70       19.70
  I identify myself as male. |         48       72.73       92.42
                      Other |          1        1.52       93.94
      Prefer not to disclose |          4        6.06      100.00
----------------------------+-----------------------------------
                      Total |         66      100.00

tab age

              Age |      Freq.     Percent        Cum.
------------------+-----------------------------------
  35-44 years old |          4        6.06        6.06
  45-54 years old |         11       16.67       22.73
```

```
  55-64 years old |         32       48.48       71.21
  65-74 years old |         14       21.21       92.42
75 years or older |          5        7.58      100.00
------------------+-----------------------------------
            Total |         66      100.00
```

```
tab countrycode

CountryCode |      Freq.     Percent        Cum.
------------+-----------------------------------
       Asia |         18       27.27       27.27
     Europe |          7       10.61       37.88
         NA |         34       51.52       89.39
    Oceania |          5        7.58       96.97
         SA |          2        3.03      100.00
------------+-----------------------------------
      Total |         66      100.00
```

SUPPLEMENT TO TABLE 1 OF THE MANUSCRIPT. THE RELATIVE IMPORTANCE OF THE ICMJE AUTHORSHIP COMPONENTS AS RATED BY 66 OF THE EDITORS IN THE WORLD ASSOCIATION OF MEDICAL EDITORS IN 2021: MEDIAN, MEAN AND DISTRIBUTION

Authorship Component	Median	Mean (SD)	Min.	Max.	Skewness	Kurtosis
Conception	7.5	6.9 (2.4)	2	10	-0.72	-0.34
Design	8	7.0 (2.3)	2	10	-0.87	-0.12
Data Acquisition	7	6.3 (2.3)	0	10	-0.67	-0.05
Data Analysis	7	6.6 (2.3)	1	10	-0.86	0.05
Interpretation of Data	8	7.6 (2.0)	1	10	-1.25	1.77
Draft of Work	8	7.0 (2.2)	2	10	-0.46	-0.64
Revision for Intellectual Content	8	7.8 (1.9)	2	10	-1.00	0.55
Final Approval	9	8.1 (2.5)	1	10	-1.29	0.80
Accountability	10	8.4 (2.4)	1	10	-1.49	1.42

The rating of importance scale used by Editors in the survey to determine the Median was: 0 = Not at all important; 1 = Extremely unimportant; 2 = Largely unimportant; 3 =Somewhat unimportant; 4 = Slightly unimportant; 5 = Neither important nor Unimportant (Neutral); 6 = Slightly important; 7 = Somewhat important; 8 = Largely important; 9 = Extremely important; 10 = Most important

Min. = minimum
Max. = maximum

THE INTER-RATER RELIABILITY OF THE 66 WAME EDITORS WHO COMPLETED THE SURVEY USING KRIPPENDORF'S ALPHA

```
. krippalpha var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 var15 var16 var17 var18 var19
var20 var21 var22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var36 var37
var38 var39 var40 var41 var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54 var55
var56 var57 var58 var59 var60 var61 var62 var63 var64 var65 var66 var67, method (ordinal)

------------------------------------------------------------------------------
 Krippendorff's Alpha reliability coefficient

 Variable/Coders var2 var3 var4 var5 var6 var7 var8 var9 var10 var11 var12 var13 var14 var15 var16 var17 var18
var19 var20 var21 var22 var23 var24 var25 var26 var27 var28 var29 var30 var31 var32 var33 var34 var35 var36
var37 var38 var39 var40 var41 var42 var43 var44 var45 var46 var47 var48 var49 var50 var51 var52 var53 var54
var55 var56 var57 var58 var59 var60 var61 var62 var63 var64 var65 var66 var67
 Method   ordinal
 Units    9
 Raters   66
 alpha    .09762303
```

WILCOXON SIGNED RANK TESTS OF THE MEDIAN SCORE OF THE 9 AUTHORSHIP COMPONENTS: WAME Editors, n=66, March-April, 2021 (SPSS)

PAIRWISE COMPARISON	Z	Asymp. Sig. (2-tailed)	| Δ Medians |
Design - Conception	-.423b	0.672	0.5
Data_Acquisition - Conception	-2.880c	0.004	0.5
Data_Analysis - Conception	-1.574c	0.115	0.5
Interpret_Data - Conception	-1.441b	0.15	0.5
Draft - Conception	-.128b	0.898	0.5
Revision - Conception	-2.295b	0.022	0.5
Final_Approval - Conception	-2.763b	0.006	1.5
Accountability - Conception	-3.807b	<0.001	2.5
Data_Acquisition - Design	-3.082c	0.002	1
Data_Analysis - Design	-1.916c	0.055	1
Interpret_Data - Design	-1.705b	0.088	0
Draft - Design	-.125c	0.901	0
Revision - Design	-2.266b	0.023	0
Final_Approval - Design	-2.762b	0.006	1
Accountability - Design	-4.059b	<0.001	2
Data_Analysis - Data_Acquisition	-1.525b	0.127	0
Interpret_Data - Data_Acquisition	-4.566b	<0.001	1
Draft - Data_Acquisition	-2.225b	0.026	1
Revision - Data_Acquisition	-4.106b	<0.001	1
Final_Approval - Data_Acquisition	-4.165b	<0.001	2
Accountability - Data_Acquisition	-5.071b	<0.001	3

Interpret_Data - Data_Analysis	-3.851b	<0.001	1
Draft - Data_Analysis	-1.227b	0.22	1
Revision - Data_Analysis	-3.205b	0.001	1
Final_Approval - Data_Analysis	-3.717b	<0.001	2
Accountability - Data_Analysis	-4.935b	<0.001	3
Draft - Interpret_Data	-2.153c	0.031	0
Revision - Interpret_Data	-.822b	0.411	0
Final_Approval - Interpret_Data	-1.860b	0.063	1
Accountability - Interpret_Data	-2.943b	0.003	2
Revision - Draft	-2.786b	0.005	0
Final_Approval - Draft	-3.075b	0.002	1
Accountability - Draft	-4.038b	<0.001	2
Final_Approval - Revision	-1.540b	0.124	1
Accountability - Revision	-2.461b	0.014	2
Accountability - Final_Approval	-1.264b	0.206	1

(Statistically significant p values in red)

b) based on negative ranks

c) based on positive ranks

THE DIFFERENCES IN THE MEDIAN SCORES OF THE AUTHORSHIP COMPONENTS AND THE COVERSION KEY THAT WAS USED TO CALIBRATE THE PAIRWISE COMPARISONS OF THE ANALYTIC HIERARCHY PROCESS

Difference in Median Score of Any Two Authorship Components	AHP Intensity of Importance (Saaty T. , 2008)
0	1 (Equal importance)
0.5	2 (Weak or Slight importance)
1	3 (Moderate importance)
2	4 (Moderate “plus” importance)
3	5 (Strong importance)
4	6 (Strong “Plus” importance)
5	7 (Very Strong or Demonstrated importance)
6	8 (Very, Very Strong importance)
>= 7	9 (Extreme importance)

THE ACTUAL PAIRWISE COMPARISONS USED FOR THE ANALYTIC HIERARCHY PROCESS

36 pairwise comparison(s). Please do the pairwise comparison of all criteria. When completed, click *Check Consistency* to get the priorities.

With respect to *AHP priorities*, which criterion is more important, and how much more on a scale 1 to 9?

	A - wrt **AHP priorities** - or B?		Equal	How much more?
1	○ Conception	● Design	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
2	● Conception	○ Data Acquisition	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
3	● Conception	○ Data Analysis	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
4	○ Conception	● Interpretation of Data	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
5	○ Conception	● Drafting the work	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
6	○ Conception	● Revising for intellectual content	○ 1	● 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
7	○ Conception	● Final approval	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
8	○ Conception	● Accountability	○ 1	○ 2 ○ 3 ○ 4 ● 5 ○ 6 ○ 7 ○ 8 ○ 9
9	● Design	○ Data Acquisition	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
10	● Design	○ Data Analysis	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
11	○ Design	● Interpretation of Data	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
12	○ Design	● Drafting the work	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
13	○ Design	● Revising for intellectual content	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
14	○ Design	● Final approval	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
15	○ Design	● Accountability	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
16	○ Data Acquisition	● Data Analysis	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
17	○ Data Acquisition	● Interpretation of Data	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
18	○ Data Acquisition	● Drafting the work	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
19	○ Data Acquisition	● Revising for intellectual content	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
20	○ Data Acquisition	● Final approval	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
21	○ Data Acquisition	● Accountability	○ 1	○ 2 ○ 3 ○ 4 ● 5 ○ 6 ○ 7 ○ 8 ○ 9
22	○ Data Analysis	● Interpretation of Data	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9

	A - wrt **AHP priorities** - or B?			Equal	How much more?
23	○	Data Analysis	● Drafting the work	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
24	○	Data Analysis	● Revising for intellectual content	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
25	○	Data Analysis	● Final approval	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
26	○	Data Analysis	● Accountability	○ 1	○ 2 ○ 3 ○ 4 ● 5 ○ 6 ○ 7 ○ 8 ○ 9
27	●	Interpretation of Data	○ Drafting the work	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
28	○	Interpretation of Data	● Revising for intellectual content	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
29	○	Interpretation of Data	● Final approval	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
30	○	Interpretation of Data	● Accountability	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
31	○	Drafting the work	● Revising for intellectual content	● 1	○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
32	○	Drafting the work	● Final approval	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
33	○	Drafting the work	● Accountability	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
34	○	Revising for intellectual content	● Final approval	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
35	○	Revising for intellectual content	● Accountability	○ 1	○ 2 ○ 3 ● 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9
36	○	Final approval	● Accountability	○ 1	○ 2 ● 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9

CR = 2.2% OK

Calculate

Download_(.csv) ☐ dec. comma

AHP Scale: 1- Equal Importance, 3- Moderate importance, 5- Strong importance, 7- Very strong importance, 9- Extreme importance (2,4,6,8 values in-between).

With respect to *AHP priorities*, which criterion is more important, and how much more on a scale 1 to 9?

	A - wrt AHP priorities - or B?		Equal	How much more?
1	○ Conception	◉ Design	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
2	◉ Conception	○ Data Acquisition	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
3	◉ Conception	○ Data Analysis	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
4	○ Conception	◉ Interpretation of Data	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
5	○ Conception	◉ Drafting the work	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
6	○ Conception	◉ Revising for intellectual content	○1	◉2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
7	○ Conception	◉ Final approval	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
8	○ Conception	◉ Accountability	○1	○2 ○3 ○4 ◉5 ○6 ○7 ○8 ○9
9	◉ Design	○ Data Acquisition	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
10	◉ Design	○ Data Analysis	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
11	○ Design	◉ Interpretation of Data	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
12	○ Design	◉ Drafting the work	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
13	○ Design	◉ Revising for intellectual content	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
14	○ Design	◉ Final approval	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
15	○ Design	◉ Accountability	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
16	○ Data Acquisition	◉ Data Analysis	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
17	○ Data Acquisition	◉ Interpretation of Data	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
18	○ Data Acquisition	◉ Drafting the work	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
19	○ Data Acquisition	◉ Revising for intellectual content	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
20	○ Data Acquisition	◉ Final approval	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
21	○ Data Acquisition	◉ Accountability	○1	○2 ○3 ○4 ◉5 ○6 ○7 ○8 ○9
22	○ Data Analysis	◉ Interpretation of Data	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
23	○ Data Analysis	◉ Drafting the work	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
24	○ Data Analysis	◉ Revising for intellectual content	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
25	○ Data Analysis	◉ Final approval	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
26	○ Data Analysis	◉ Accountability	○1	○2 ○3 ○4 ◉5 ○6 ○7 ○8 ○9
27	◉ Interpretation of Data	○ Drafting the work	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
28	○ Interpretation of Data	◉ Revising for intellectual content	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
29	○ Interpretation of Data	◉ Final approval	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
30	○ Interpretation of Data	◉ Accountability	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
31	○ Drafting the work	◉ Revising for intellectual content	◉1	○2 ○3 ○4 ○5 ○6 ○7 ○8 ○9
32	○ Drafting the work	◉ Final approval	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
33	○ Drafting the work	◉ Accountability	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
34	○ Revising for intellectual content	◉ Final approval	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9
35	○ Revising for intellectual content	◉ Accountability	○1	○2 ○3 ◉4 ○5 ○6 ○7 ○8 ○9
36	○ Final approval	◉ Accountability	○1	○2 ◉3 ○4 ○5 ○6 ○7 ○8 ○9

CR = 2.2% OK

Resulting Priorities

Priorities

These are the resulting weights for the criteria based on your pairwise comparisons:

Cat		Priority	Rank	(+)	(-)
1	Conception	5.3%	7	1.1%	1.1%
2	Design	8.9%	3	1.3%	1.3%
3	Data Acquisition	3.6%	8	1.2%	1.2%
4	Data Analysis	3.6%	8	1.2%	1.2%
5	Interpretation of Data	8.9%	3	1.3%	1.3%
6	Drafting the work	8.9%	3	1.3%	1.3%
7	Revising for intellectual content	8.9%	3	1.3%	1.3%
8	Final approval	20.2%	2	6.2%	6.2%
9	Accountability	32.0%	1	12.3%	12.3%

Decision Matrix

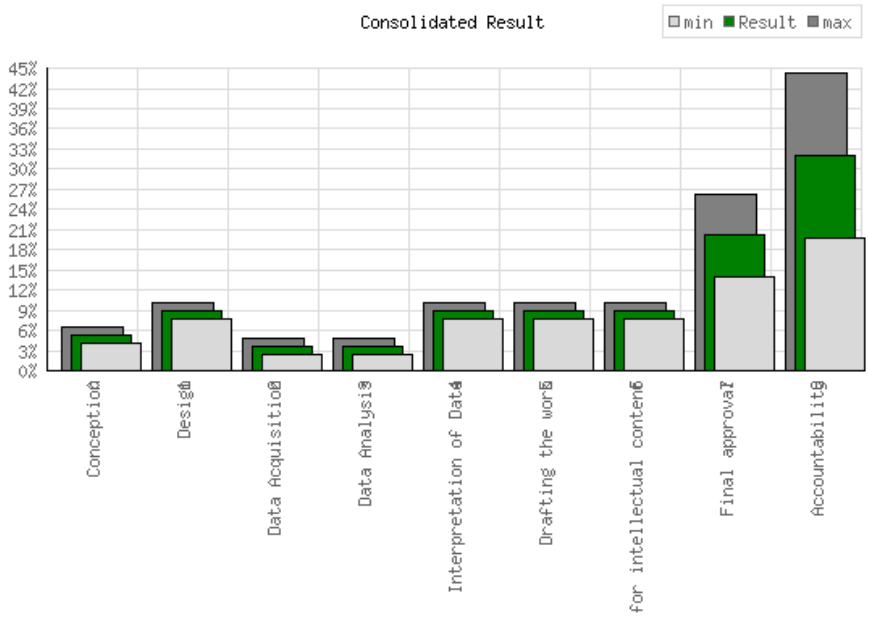
The resulting weights are based on the principal eigenvector the decision matrix:

	1	2	3	4	5	6	7	8	9
1	1	0.50	2.00	2.00	0.50	0.50	0.50	0.25	0.20
2	2.00	1	3.00	3.00	1.00	1.00	1.00	0.33	0.25
3	0.50	0.33	1	1.00	0.33	0.33	0.33	0.25	0.20
4	0.50	0.33	1.00	1	0.33	0.33	0.33	0.25	0.20
5	2.00	1.00	3.00	3.00	1	1.00	1.00	0.33	0.25
6	2.00	1.00	3.00	3.00	1.00	1	1.00	0.33	0.25
7	2.00	1.00	3.00	3.00	1.00	1.00	1	0.33	0.25
8	4.00	3.00	4.00	4.00	3.00	3.00	3.00	1	0.33
9	5.00	4.00	5.00	5.00	4.00	4.00	4.00	3.00	1

Number of comparisons = 36
Consistency Ratio CR = 2.2%

Principal eigen value = 9.260
Eigenvector solution: 5 iterations, delta = 1.8E-8

** In the paper “Final Approval” was decreased by 0.01% to 20.1% and “Accountability” was decreased by 0.02% to 31.8% compared to the above AHP calculator output, in order to round the total contribution to 100%.



THE PROPOSED EFFORT/CAPABILITY LEVELS FOR EACH AUTHORSHIP COMPONENT

Authorship Component	Effort / Capability level			
	No Score (0/3)	Low Score (1/3)	Medium Score (2/3)	High Score (3/3)
Conception	No contribution	Supporter of idea(s)	Collaborator on idea(s)	Originator of idea(s)
Design	No contribution	< 1 hour	1 to 8 hours	> 8 hours
Data Acquisition	No contribution	< 8 hours	8-24 hours	> 24 hours
Data Analysis	No contribution	< 1 hour	1 to 8 hours	> 8 hours
Interpretation of Data	No contribution	< 1 hour	1 to 4 hours	> 4 hours
Draft of Manuscript	No contribution	< 4 hours	4-24 hours	> 24 hours
Revision of Manuscript	No contribution	< 1 hour	1 to 8 hours	> 8 hours
Final approval**	No contribution	< 1 hour	1 to 2 hours	> 2 hours
Accountability	Unable to respond to any of the questions or details about the work	Can respond to <50% of the questions and details about the work	Can respond to 50-80% of the questions and details about the work	Guarantor* of article, able to respond to all questions and details about the work

GEOGRAPHIC ANALYSIS of the Survey Scores from North American Editors versus Editors from Other Continents

```
. kwallis conception, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1103.00 |
  |        1 |  34 |  1108.00 |
  +---------------------------+
```

```
chi-squared =     0.158 with 1 d.f.
probability =     0.6908

chi-squared with ties =     0.162 with 1 d.f.
probability =     0.6875

. kwallis design , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1069.00 |
  |        1 |  34 |  1142.00 |
  +---------------------------+

chi-squared =     0.001 with 1 d.f.
probability =     0.9693

chi-squared with ties =     0.002 with 1 d.f.
probability =     0.9686

. kwallis data_acquisition, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1042.00 |
  |        1 |  34 |  1169.00 |
  +---------------------------+

chi-squared =     0.148 with 1 d.f.
probability =     0.7003

chi-squared with ties =     0.152 with 1 d.f.
probability =     0.6964

. kwallis data_analysis , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1064.00 |
  |        1 |  34 |  1147.00 |
  +---------------------------+

chi-squared =     0.011 with 1 d.f.
probability =     0.9182

chi-squared with ties =     0.011 with 1 d.f.
probability =     0.9168

. kwallis interpret_data , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1039.00 |
  |        1 |  34 |  1172.00 |
  +---------------------------+

chi-squared =     0.179 with 1 d.f.
probability =     0.6720

chi-squared with ties =     0.187 with 1 d.f.
probability =     0.6655

. kwallis draft , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test
```

```
  +----------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1066.00 |
  |        1 |  34 |  1145.00 |
  +----------------------------+

chi-squared =     0.006 with 1 d.f.
probability =     0.9386

chi-squared with ties =     0.006 with 1 d.f.
probability =     0.9376

. kwallis revision , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +----------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1178.00 |
  |        1 |  34 |  1033.00 |
  +----------------------------+

chi-squared =     1.850 with 1 d.f.
probability =     0.1738

chi-squared with ties =     1.942 with 1 d.f.
probability =     0.1635

. kwallis final_approval , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +----------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1216.50 |
  |        1 |  34 |   994.50 |
  +----------------------------+

chi-squared =     3.437 with 1 d.f.
probability =     0.0637

chi-squared with ties =     3.852 with 1 d.f.
probability =     0.0497
Given the extensive repeated multiple testing, with a Bonferroni correction the p value should be at most .05/9
= 0.0056 if not lower.


. kwallis accountability , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +----------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  32 |  1033.50 |
  |        1 |  34 |  1177.50 |
  +----------------------------+

chi-squared =     0.244 with 1 d.f.
probability =     0.6213

chi-squared with ties =     0.288 with 1 d.f.
probability =     0.5915
```

GEOGRAPHIC ANALYSIS of Survey Scores from Editors in (North America + Oceania) versus Other Continents

```
. replace countrydiv =1 if countrycode =="Oceania"
(5 real changes made)

. kwallis conception, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test
```

```
  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   876.50 |
  |        1 |  39 |  1334.50 |
  +---------------------------+

chi-squared =     0.133 with 1 d.f.
probability =     0.7150

chi-squared with ties =     0.136 with 1 d.f.
probability =     0.7119

. kwallis design , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   832.00 |
  |        1 |  39 |  1379.00 |
  +---------------------------+

chi-squared =     0.894 with 1 d.f.
probability =     0.3444

chi-squared with ties =     0.931 with 1 d.f.
probability =     0.3345

. kwallis data_acquisition, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   797.50 |
  |        1 |  39 |  1413.50 |
  +---------------------------+

chi-squared =     1.947 with 1 d.f.
probability =     0.1629

chi-squared with ties =     2.002 with 1 d.f.
probability =     0.1571

. kwallis data_analysis , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   834.00 |
  |        1 |  39 |  1377.00 |
  +---------------------------+

chi-squared =     0.845 with 1 d.f.
probability =     0.3579

chi-squared with ties =     0.875 with 1 d.f.
probability =     0.3497

. kwallis interpret_data , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   822.00 |
  |        1 |  39 |  1389.00 |
  +---------------------------+

chi-squared =     1.158 with 1 d.f.
probability =     0.2819

chi-squared with ties =     1.207 with 1 d.f.
```

```
probability =     0.2720

. kwallis draft , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   853.00 |
  |        1 |  39 |  1358.00 |
  +---------------------------+

chi-squared =     0.451 with 1 d.f.
probability =     0.5018

chi-squared with ties =     0.465 with 1 d.f.
probability =     0.4952

. kwallis revision , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   935.50 |
  |        1 |  39 |  1275.50 |
  +---------------------------+

chi-squared =     0.163 with 1 d.f.
probability =     0.6860

chi-squared with ties =     0.172 with 1 d.f.
probability =     0.6787

. kwallis final_approval , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |  1000.50 |
  |        1 |  39 |  1210.50 |
  +---------------------------+

chi-squared =     1.568 with 1 d.f.
probability =     0.2106

chi-squared with ties =     1.757 with 1 d.f.
probability =     0.1850

. kwallis accountability , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  27 |   810.50 |
  |        1 |  39 |  1400.50 |
  +---------------------------+

chi-squared =     1.503 with 1 d.f.
probability =     0.2202

chi-squared with ties =     1.774 with 1 d.f.
probability =     0.1829
```

GEOGRAPHIC ANALYSIS of Survey Scores of Editors from ASIA VERSUS OTHER CONTINENTS

```
drop countrydiv
gen countrydiv =1
replace countrydiv = 0 if countrycode=="Asia"
(18 real changes made)

. kwallis conception, by(countrydiv)
```

```
Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   602.50 |
  |        1 |  48 |  1608.50 |
  +---------------------------+

chi-squared =     0.000 with 1 d.f.
probability =     0.9948

chi-squared with ties =     0.000 with 1 d.f.
probability =     0.9947

. kwallis design , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   526.50 |
  |        1 |  48 |  1684.50 |
  +---------------------------+

chi-squared =     1.213 with 1 d.f.
probability =     0.2707

chi-squared with ties =     1.264 with 1 d.f.
probability =     0.2609

. kwallis data_acquisition, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   587.00 |
  |        1 |  48 |  1624.00 |
  +---------------------------+

chi-squared =     0.053 with 1 d.f.
probability =     0.8178

chi-squared with ties =     0.055 with 1 d.f.
probability =     0.8153

. kwallis data_analysis , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   479.50 |
  |        1 |  48 |  1731.50 |
  +---------------------------+

chi-squared =     3.162 with 1 d.f.
probability =     0.0754

chi-squared with ties =     3.271 with 1 d.f.
probability =     0.0705

. kwallis interpret_data , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   456.00 |
  |        1 |  48 |  1755.00 |
  +---------------------------+

chi-squared =     4.479 with 1 d.f.
probability =     0.0343
```

```
chi-squared with ties =     4.669 with 1 d.f.
probability =     0.0307
Given the extensive repeated multiple testing, with a Bonferroni correction the p value should be at most .05/9
= 0.0056 if not lower.


. kwallis draft , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   538.50 |
  |        1 |  48 |  1672.50 |
  +---------------------------+

chi-squared =     0.862 with 1 d.f.
probability =     0.3531

chi-squared with ties =     0.889 with 1 d.f.
probability =     0.3457

. kwallis revision , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   570.00 |
  |        1 |  48 |  1641.00 |
  +---------------------------+

chi-squared =     0.226 with 1 d.f.
probability =     0.6347

chi-squared with ties =     0.237 with 1 d.f.
probability =     0.6264

. kwallis final_approval , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   642.00 |
  |        1 |  48 |  1569.00 |
  +---------------------------+

chi-squared =     0.315 with 1 d.f.
probability =     0.5744

chi-squared with ties =     0.353 with 1 d.f.
probability =     0.5522

. kwallis accountability , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  18 |   581.00 |
  |        1 |  48 |  1630.00 |
  +---------------------------+

chi-squared =     0.100 with 1 d.f.
probability =     0.7514

chi-squared with ties =     0.118 with 1 d.f.
probability =     0.7307
```

GEOGRAPHIC ANALYSIS: OF SURVEY SCORES FROM EDITORS IN TRADITIONALLY ENGLISH-SPEAKING COUNTRIES VERSUS EDITORS FROM OTHER COUNTRIES

```
drop countrydiv

. gen countrydiv = 0

. replace countrydiv = 1 if country=="United Kingdom"
(1 real change made)

. replace countrydiv = 1 if country=="North America"
(0 real changes made)

. replace countrydiv = 1 if countrycode=="NA"
(34 real changes made)

. replace countrydiv = 1 if countrycode=="Oceania"
(5 real changes made)

. replace countrydiv = 0 if country=="Mexico"
(1 real change made)

. replace countrydiv = 0 if country=="Cuba"
(1 real change made)

. kwallis conception, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   965.00 |
  |        1 |  38 |  1246.00 |
  +---------------------------+

chi-squared =     0.123 with 1 d.f.
probability =     0.7261

chi-squared with ties =     0.126 with 1 d.f.
probability =     0.7231

. kwallis design , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   922.00 |
  |        1 |  38 |  1289.00 |
  +---------------------------+

chi-squared =     0.043 with 1 d.f.
probability =     0.8355

chi-squared with ties =     0.045 with 1 d.f.
probability =     0.8322

. kwallis data_acquisition, by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   843.50 |
  |        1 |  38 |  1367.50 |
  +---------------------------+

chi-squared =     1.503 with 1 d.f.
probability =     0.2202

chi-squared with ties =     1.545 with 1 d.f.
probability =     0.2138

. kwallis data_analysis , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
```

```
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   889.50 |
  |        1 |  38 |  1321.50 |
  +--------------------------+

chi-squared =     0.396 with 1 d.f.
probability =     0.5292

chi-squared with ties =     0.410 with 1 d.f.
probability =     0.5221

. kwallis interpret_data , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   858.00 |
  |        1 |  38 |  1353.00 |
  +--------------------------+

chi-squared =     1.077 with 1 d.f.
probability =     0.2993

chi-squared with ties =     1.123 with 1 d.f.
probability =     0.2893

. kwallis draft , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   933.00 |
  |        1 |  38 |  1278.00 |
  +--------------------------+

chi-squared =     0.004 with 1 d.f.
probability =     0.9483

chi-squared with ties =     0.004 with 1 d.f.
probability =     0.9475

. kwallis revision , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   954.00 |
  |        1 |  38 |  1257.00 |
  +--------------------------+

chi-squared =     0.043 with 1 d.f.
probability =     0.8355

chi-squared with ties =     0.045 with 1 d.f.
probability =     0.8315

. kwallis final_approval , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +--------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |  1059.00 |
  |        1 |  38 |  1152.00 |
  +--------------------------+

chi-squared =     2.465 with 1 d.f.
probability =     0.1164

chi-squared with ties =     2.762 with 1 d.f.
probability =     0.0965
```

```
. kwallis accountability , by(countrydiv)

Kruskal-Wallis equality-of-populations rank test

  +---------------------------+
  | countr~v | Obs | Rank Sum |
  |----------+-----+----------|
  |        0 |  28 |   870.00 |
  |        1 |  38 |  1341.00 |
  +---------------------------+

chi-squared =     0.778 with 1 d.f.
probability =     0.3776

chi-squared with ties =     0.919 with 1 d.f.
probability =     0.3378
```

GENERALIZABILITY OF EDITOR RATINGS OF THE COMPONENTS OF AUTHORSHIP

WAME EDITORS (n=66) VERSUS OPHTHALMOLOGY[“E”ye] EDITORS (n=36)

Wilcoxon Signed Rank

	EConception - Conception	EDesign - Design	EDataAQ - Data_Acquisition	EDataAnal - Data_Analysis	EInteprData - Interpret_Data	EDraft - Draft	ERevision - Revision	EFinal Approval - Final_Approval	EAccountability - Accountability
Z	-1.409[b]	-.770[b]	-.962[b]	-1.467[b]	-.462[b]	-.115[c]	-.327[b]	-.332[c]	-1.635[b]
Asymp. Sig. (2-tailed)	0.159	0.441	0.336	0.142	0.644	0.909	0.744	0.740	0.102

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

Authorship Component Ratings WAME Editors versus Ophthalmology (Eye) Editors

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25th	**50th (Median)**	75th
Conception	66	6.94	2.436	2	10	6.00	7.50	9.00
EConception	*36*	*7.53*	*2.396*	*1*	*10*	*6.00*	*8.00*	*9.00*
Design	66	7.00	2.327	2	10	6.00	**8.00**	9.00
EDesign	*36*	*7.39*	*2.018*	*1*	*10*	*6.00*	***8.00***	*9.00*
Data_Acquisition	66	6.26	2.303	0	10	5.00	**7.00**	8.00
Edata_ACQ	*36*	*6.47*	*2.396*	*1*	*10*	*5.00*	***7.00***	*8.00*

Data_Analysis	66	6.64	2.264	1	10	5.75	7.00	8.00
EDataAnal	*36*	*7.14*	*2.127*	*1*	*10*	*5.25*	*8.00*	*9.00*
Interpret_Data	66	7.58	2.008	1	10	7.00	**8.00**	9.00
EInteprData	*36*	*7.72*	*1.876*	*1*	*10*	*7.00*	***8.00***	*9.00*
Draft	66	7.02	2.166	2	10	5.00	8.00	9.00
EDraft	*36*	*7.00*	*2.242*	*2*	*10*	*5.25*	*7.00*	*9.00*
Revision	66	7.82	1.913	2	10	6.00	8.00	9.00
ERevision	*36*	*8.03*	*2.091*	*2*	*10*	*7.00*	*9.00*	*9.00*
Final_Approval	66	8.09	2.498	1	10	6.75	**9.00**	10.00
EFinal Approval	*36*	*7.92*	*2.951*	*1*	*10*	*7.25*	***9.00***	*10.00*
Accountability	66	8.38	2.352	1	10	7.00	**10.00**	10.00
EAccountability	*36*	*8.81*	*2.175*	*1*	*10*	*8.00*	***10.00***	*10.00*

COMPARISON OF MEDIAN SURVEY SCORES OF THE WAME VERSUS OPHTHALMOLOGY EDITORS

```
signrank wame = ophtho
Wilcoxon signed-rank test
        sign |      obs    sum ranks    expected
-------------+--------------------------------
    positive |        1            8          15
    negative |        3           22          15
        zero |        5           15          15
-------------+--------------------------------
         all |        9           45          45
unadjusted variance        71.25
adjustment for ties        -0.50
adjustment for zeros      -13.75
                     ----------
adjusted variance          57.00

Ho: wame = ophtho
              z =  -0.927
    Prob > |z| =   0.3538
```