

Factors Influencing Manuscript Development Time

Joelle Suchy, PhD,¹ Suzanne Van de Water,² Catherine Martin,² Roger McCarter, MBA,¹ and Beth Burke, PhD¹

¹ Nucleus Global, Hamilton, NJ, USA; ² Nucleus Global, Atlanta, GA, USA

Abstract

Objective: We aimed to determine factors affecting manuscript development time to maximize efficiency and minimize cost.

Research Design and Methods: Data were collected from 27 manuscripts developed by Nucleus Global in conjunction with external clients for publication in peer-reviewed journals. Mean number of hours was calculated, and predictors were examined. 2-tailed t-tests were used to determine the relationship between key predictors and development time. For continuous predictors, a median split was performed prior to conducting the t-test.

Results: Results are presented in table 1.

Conclusion: Consistent with our previous findings, having a kickoff call was associated with shorter development time, as was having more internal (client) authors. Resubmitting to multiple journals resulted in longer development time, as did producing a more detailed outline. Most factors had a bigger impact on project management time vs content development.

Table 1. Factors Impacting Manuscript Development Time

	Content Development Time			Project Management Time			Total Time			
	Yes, h	No, h	P Value	Yes, h	No, h	P Value	Yes, h	No, h	P Value	
Kick-off call with both client and lead author	116.7	102.1	.55	52.3	77.9	.056	169.0	179.9	.70	
Data available prior to commencing	116.3	106.6	.72	54.3	64.2	.41	170.6	172.8	.93	
Detailed outline produced	112.5	117.5	.85	64.1	31.3	.02	176.5	148.8	.36	
	Median (range), number	≤ Median, h	> Median, h	P value	≤ Median, h	> Median, h	P value	≤ Median, h	> Median, h	P value
Number of internal authors	3 (0, 16)	117.4	109.1	.69	71.6	43.3	.009	189.0	152.5	.12
Number of external authors	5 (0, 12)	112.9	114.0	.96	55.0	61.7	.56	167.9	175.7	.75
Number of drafts	7 (3, 23)	120.4	105.9	.48	56.1	60.0	.74	176.5	165.9	.66
Number of journals	1 (1, 2)	105.0	137.5	.16	57.5	59.5	.87	162.4	197.0	.20

Background

- Medical communications agencies are involved in the development of primary scientific manuscripts in conjunction with pharmaceutical clients and external authors
- A number of factors may influence the time it takes to develop a manuscript, both in terms of scientific content and project management, including:
 - Holding a project kickoff call with both the client and lead author(s)
 - Availability of data prior to commencement of writing
 - Production of a detailed outline prior to first draft
 - Number of authors (internal client and external key opinion leader [KOL])
 - Number of drafts
 - Number of journals to which the manuscript was submitted

Objective

- To scientifically analyze data from a selection of projects to better understand factors that can increase or decrease development time for a primary scientific manuscript

Methods

- Data were collected from primary manuscripts developed by Nucleus Global (N = 27) in conjunction with external pharmaceutical clients for publication in scientific journals
- This was a convenience sample of data from recent projects
- Data were collected retrospectively after project completion and were supplied by the project managers
- The primary outcome was mean number of hours spent by Nucleus Global on the project, including the breakdown of content development time by the scientific team and project management time
- A variety of predictors were examined. In order to collect the appropriate data, project managers responded to the following queries:
 - Was a kickoff call held with the lead author?
 - Was data available and agreed upon prior to initiating the writing of the manuscript?
 - Was a detailed outline (>3 pages and including references) produced and discussed with authors prior to initiating writing of the manuscript?
 - How many internal authors were included?
 - How many external authors were included?
 - How many drafts were produced (including all submissions)?
 - How many journals was the manuscript submitted to?
 - How many editorial hours were used?
 - How many CS hours were used?
- For continuous predictors, median values and ranges were calculated
- Two-tailed t tests were used to determine the relationship between dichotomous predictors and hours, including Yes/No categories and >½ median occurrence

Results

- As anticipated, there was considerable variance in the parameters assessed (Table 1)
- There was no significant difference in content development time based on whether or not a kick-off call was held with the client and lead author; however, not holding a kick-off call trended toward a greater number of project management hours (Figure 1)
- Availability of data prior to initiation of manuscript development did not influence either content development time or project management time (Figure 2)
- Production of a detailed outline resulted in significantly more project management time vs no detailed outline ($P = .020$), but did not influence content development time (Figure 3)
- Having more than the median (3) internal authors was associated with significantly fewer project management hours ($P = .009$), but no difference in content development time (Figure 4)
- There were no significant differences in either content development time or project management time regardless of the number of external authors (Figure 5), number of drafts produced (Figure 6), or number of journals to which the manuscript was submitted (Figure 7)
- No factor studied significantly influenced the total time spent on development of primary manuscripts in this convenience sample; however trends were observed in the following parameters:
 - Holding a kick-off call was associated with shorter total development time
 - Production of a detailed outline resulted in longer total development time
 - Having more internal (client) authors was associated with shorter total development time
 - Submitting to multiple journals resulted in longer total development time

Figure 1. Impact of Client/Lead Author Kick-Off Call on Manuscript Development Time

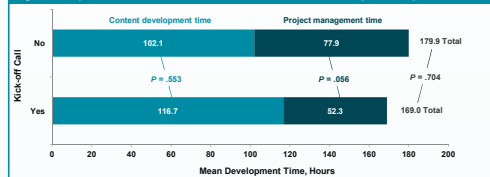


Figure 2. Impact of Data Availability on Manuscript Development Time

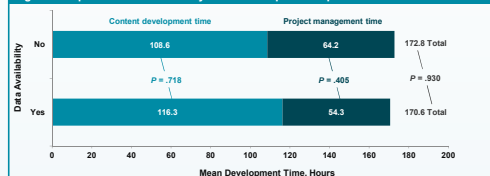


Figure 3. Impact of Production of Detailed Outline on Manuscript Development Time

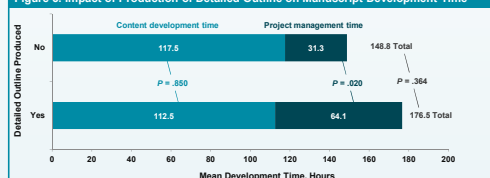


Figure 4. Impact of Number of Internal Authors on Manuscript Development Time

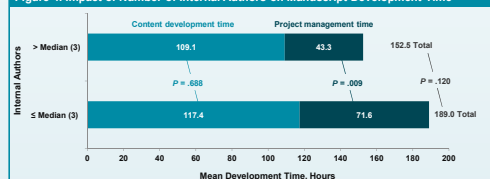


Figure 5. Impact of Number of External Authors on Manuscript Development Time

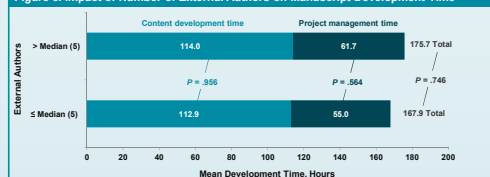


Figure 6. Impact of Number of Drafts on Manuscript Development Time

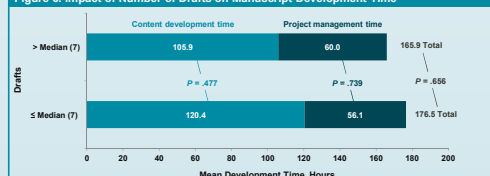
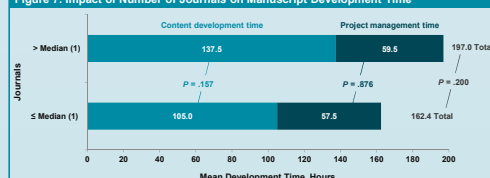


Figure 7. Impact of Number of Journals on Manuscript Development Time



Conclusions

- Most factors studied had a larger impact on project management time vs content development
- Consistent with our previous findings on factors influencing abstract development time, having more internal authors was associated with shorter development time, including significantly fewer project management hours
- Production of a detailed outline resulted in significantly more project management time
- Trends were observed with regard to fewer project management hours logged when a kick-off call was held
- Study limitations included the following:
 - A relatively small convenience sample was retrospectively collected
 - Manuscript length and journal requirements were not included as variables
- Future directions may include:
 - Collection of prospective data on a larger sample size of manuscript
 - Collection of prospective data on review or other types of manuscripts
 - Communication of this information to a broader audience to promote efficiency in publications deliverables overall

