

Results From the 2016 Freelance Medical Communicator Tools of the Trade Survey

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ABSTRACT

Objective: To collect and analyze data about the software, apps, and other tech tools that freelance medical communicators use in their daily work.

Methods: I administered a 34-question survey via SurveyGizmo and recruited participants primarily via fliers handed out at the 2016 Medical Writing & Communication Conference, announcements posted on the AMWA Engage forum, and various LinkedIn venues.

Results: Of 381 people who started the survey, 79% completed it. Participants were primarily from the United States (70%); 85% were women; 61% were 40 to 59 years old; 52% were full-time freelancers; and 67% were writers as their primary function. Most participants worked on laptops (63%) powered by Microsoft Windows (70%) and backed up with an external hard-drive (66%) and/or an online/cloud service (52%). The most commonly used online/cloud-based backup services were Dropbox (29%), Carbonite (19%), and Google Drive (15%). Among the survey responders who had a business website (52%), 54% had designed it themselves. For accounting/bookkeeping, 42% used spreadsheets and 20% did not use any software/app. For time tracking, 32% used spreadsheets and 35% did not use any software or app. Also, 42% did not use any citation/reference management software. When asked about the one essential tool they would recommend to colleagues, the most popular responses were Microsoft Word, Adobe Acrobat, and PerfectIt for the software app category, and multiple and/or large monitors, a laptop, and an external back-up hard drive for the device category.

Conclusions: While this survey study is not intended to be a purchasing guide, the information it provides could help new and current freelance communicators identify new options and narrow down choices.

INTRODUCTION

In addition to producing quality deliverables that satisfy their clients' needs, freelance medical communicators (freelancers) have to juggle multiple business management-related tasks such as time tracking, bookkeeping, and invoicing. Old-fashioned approaches to handling some of these tasks involve the use of cumbersome spreadsheets and piles of receipts stuffed in boxes or drawers. Technological solutions include software, apps, and online services. In setting up their business, freelancers also have to decide which services to use for their business website and email.

Given the large number of available options, freelancers can spend countless unbillable hours researching and assessing the tools that they might want to demo or buy. To narrow down choices, it might be helpful to know which tools colleagues use in their work. This information has not been included in past medical communicator surveys conducted by the American Medical Writers Association (AMWA)^{1,2} or the European Medical Writers Association (EMWA),³ which instead have focused on analyses of types and hours of work, billing methods, and income. Further, while providing very useful guidance, current published literature⁴⁻⁸ on the practice of running a freelance business does not include updated and systematically gathered data on the specific tools used by these professional medical communicators. One source that does have some pertinent information is a self-published 2016 survey of software and equipment recommended by medical writers.⁹ However, this informal survey relied primarily on 4 open-ended questions that, while informative, are difficult to analyze.

To address this gap, this article describes the design, implementation, and analysis of an online survey that collected data about the software, apps, and other tools used by freelancers in their daily work.

METHODS

Survey Design

I used an online survey platform (standard license, SurveyGizmo; Widgiz, LLC dba SurveyGizmo, Boulder, Colorado) to design, administer, and analyze a 34-question survey (online supplemental material). The survey had 3 parts (or pages) and required participants to answer all the questions in each part before they could proceed to the next part. Selected responses to a few questions generated conditionally displayed questions that were not mandatory. The survey platform allowed backward navigation to completed parts of the survey. To initiate the survey, participants had to scroll down to the bottom of the introductory explanatory page and click on a button marked NEXT. The introductory information stated that the survey was open to currently working freelance (ie, self-employed) medical communications professionals (eg, writers, editors). The first part of the survey asked 9 work-history related questions; all but 1 of these questions permitted selection of a single answer (Figure 1). The second part of the survey asked 19 questions on tools of the trade. The third part of the survey asked 6 demographic questions and allowed participants to provide their email address if they wanted to receive an Adobe portable document format (.pdf) copy of the survey summary findings (the only incentive offered for participation). Email addresses were stripped from responses prior to data analysis.

Prior to launch, the author and a colleague tested the survey usability and technical functionality. SurveyGizmo (the

survey platform host) estimated that it would take participants approximately 6 minutes to complete the survey.

Participant Recruitment

The survey, which opened October 3, 2016, and closed December 15, 2016, could be accessed through a direct link hosted by SurveyGizmo and the author's business website. Methods used to elicit survey participation included fliers handed out at select freelance sessions held at the AMWA Medical Writing & Communication Conference (October 5-8, 2016, Denver, Colorado) and multiple announcements posted on the AMWA *Engage* forum, the author's LinkedIn profile, several LinkedIn professional groups (AMWA, Professional Medical/Scientific Writers, EMWA, AMWA-Delaware Valley Conference), and via Twitter. Several AMWA chapters encouraged survey participation by including an announcement regarding the survey in an email to their chapter membership. Two freelance medical writer colleagues promoted the survey by sharing the link in their monthly newsletter and business Facebook page.

Data Handling and Statistical Analysis

The day after the survey closed, I exported survey data from SurveyGizmo as raw data in Excel format and as SurveyGizmo-generated Excel, Adobe .pdf, and PowerPoint reports summarizing results of each question. To generate word cloud graphs, I copied the responses from the raw data Excel report into a Word document, then edited them to apply more uniform

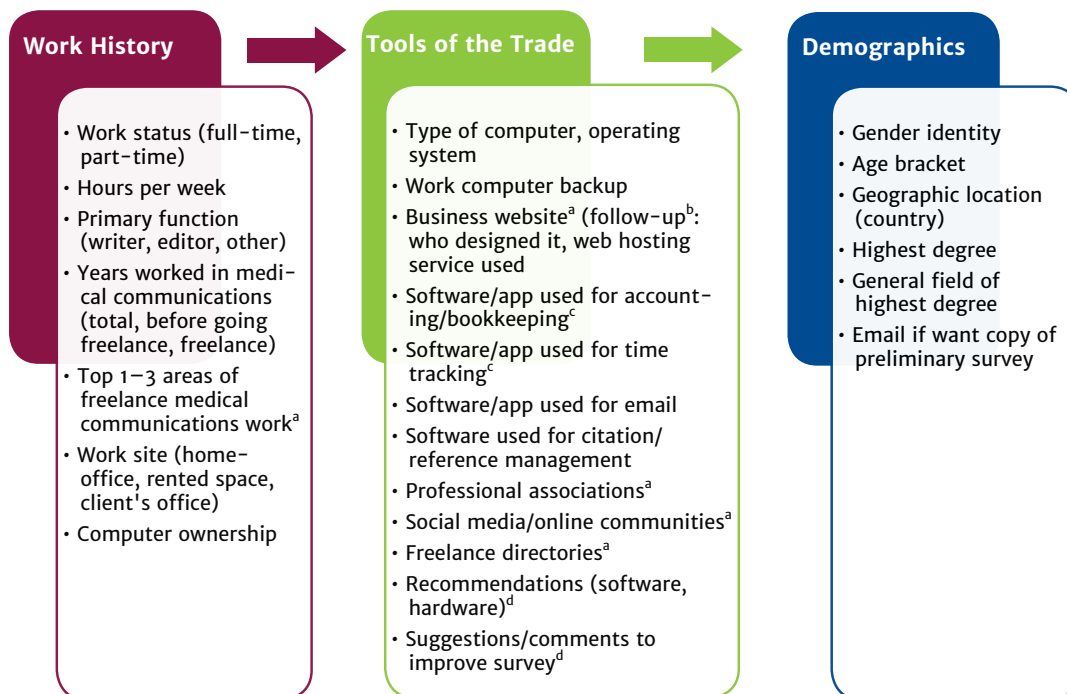


Figure 1. Survey structure. ^aMultiple answers allowed. ^bParticipants who answered that they did have a business website were asked 2 follow-up questions about it. ^cParticipants who said that they used a spreadsheet were asked 1 follow-up question about it. ^dOpen-ended questions.

terminology and to eliminate outlier responses (eg, “none,” “I don’t know”). Then, I copied and pasted the edited comments into an online word cloud-generator app (www.jasondavies.com/wordcloud) and produced the figures using the “Spiral Rectangular” and “One word per line” options.

Statistical analyses comprised descriptive statistics (ie, percentages) for each survey question. Some responses to open-ended (“Other”) questions were manually grouped and/or allocated into wider categories to simplify analysis.

RESULTS

Demographics Data and Work History

Of the 381 people who started the survey, 324 (85%) answered all 9 questions in the first part of the survey, 307 (81%) answered the last mandatory single-response question in the second part of the survey, and 300 (79%) completed all 34 questions. Review of IP addresses found no indication of potential duplicate entries by the same user.¹⁰

Table 1 summarizes the demographic characteristics of the 300 participants who completed the entire survey. Participants were primarily from the United States (70%). Most were women (85%) and most (61%) were 40 to 59 years old. Table 2 summarizes participants’ work history. A slim majority (52%) of participants were full-time freelancers, 62% worked an average of 21 or more hours per week, and 67% selected “writer” as their primary function. Most (54%) survey responders had worked ≥6 years as freelance medical communicators. The most commonly reported (≥20%) areas of freelance medical communication work were scientific publications (60%), continuing education for healthcare professionals (39%), regulatory documents (23%), patient education materials (22%), and promotional materials (21%) (Figure 2).

Office Characteristics

The vast majority of 324 survey responders reported that they owned their business computer (97%) and worked >50% of their billable time in a home office (95%). A few participants primarily worked in rented office space (2%), a client’s office (2%), or in other locations (0.9%) including owned office space ($n = 2$) and a coffee shop ($n = 1$).

Table 3 summarizes data regarding survey participants’ office practices. Most reported using a laptop (63%) to perform >50% of their freelance medical communications work; 70% identified Microsoft Windows and 30% Apple OS as the operating system of their business computer. The majority of survey participants used an external hard drive (65%) and/or an online/cloud-based service (52%) to back up their work computer. The other systems mentioned by participants who selected “Other” as their response (7%) included flash drives, USB keys/sticks, and multiple computers. A small propor-

Table 1. Participant Demographics

Characteristic	N (%)
Responders (n = 381)	
Complete	300 (79)
Partial	81 (21)
Gender identity (n = 300)	
Woman	254 (85)
Man	46 (15)
Age, years (n = 300)	
20–29	7 (2)
30–39	45 (15)
40–49	90 (30)
50–59	92 (31)
≥60	66 (22)
Geographic location (n = 294)	
United States	207 (70)
United Kingdom	34 (12)
Canada	22 (7)
Germany	5 (2)
India	5 (2)
Other ^a	26 (9)
Highest degree (n = 300)	
Associate	1 (0.3)
Bachelor	79 (26)
Master	73 (24)
Advanced	139 (46)
Other	16 (5)
Professional associations (multiple responses allowed)	
American Medical Writers Association	217 (72)
European Medical Writers Association	33 (11)
International Society for Medical Publication Professionals	18 (6)
Drug Information Association	20 (7)
National Association of Science Writers	17 (6)
Regulatory Affairs Professionals Society	8 (3)
Other	88 (29)
None	50 (17)

^aOther countries include: 2 participants each from Australia, France, Iran, Japan, Mexico, New Zealand; 1 participant each from Brazil, Greece, Israel, Italy, Malaysia, Netherland, Portugal, Taiwan, Trinidad and Tobago.

Table 2. Participant Work History

Characteristic	N (%)
Work status as a freelancer (n = 324)	
Full time	170 (52)
Part time	154 (48)
Average hours per week worked as a freelance medical communicator (n = 324)	
<15	74 (23)
16-20	48 (15)
21-30	85 (26)
31-40	77 (24)
>41	40 (12)
Primary function (>50% billable hours per week) (n = 323)	
Writer	216 (67)
Editor	85 (26)
Other	22 (7)
Total years worked in medical communications, as an employee and as a freelance (n = 323)	
<1	16 (5)
1-2	26 (8)
3-5	35 (11)
6-10	53 (16)
11-15	51 (16)
16+	142 (44)
Total years employed as a medical communicator before going freelance (n = 322)	
None	105 (33)
<1	7 (2)
1-2	31 (10)
3-5	53 (16)
6-10	60 (19)
11-15	36 (11)
16+	30 (9)
Total years worked as a freelance medical communicator (n = 323)	
<1	37 (11)
1-2	48 (15)
3-5	64 (20)
6-10	71 (22)
11-15	37 (11)
16+	66 (20)

Table 3. Participant Business Practices

Characteristic	N (%)
Type of computer used for most (>50%) freelance medical communication work (n = 307)	
Laptop	193 (63)
Desktop	111 (36)
Tablet	3 (1)
Backup for work computer (multiple answers allowed)	
External hard-drive	201 (65)
Online/cloud-based service	161 (52)
Other	21 (7)
No back-up	19 (6)
Having a business website (n = 307)	
Yes	161 (52)
No	146 (48)
Who designed the business website (n = 160)	
I designed it myself	87 (54)
I paid someone to design it	57 (36)
A relative/friend designed it at no charge	16 (10)
Online freelance directories used to promote business (multiple answers allowed)	
AMWA Freelance Directory	116 (38)
EMWA Freelancer Directory	16 (5)
None	143 (47)
Other ^a (fill in the blank)	61 (20)
Social media and online communities used for freelance medical communication business (multiple answers allowed)	
LinkedIn	252 (82)
AMWA Engage	150 (49)
Twitter	80 (26)
Facebook	40 (13)
None	29 (9)
Other (fill in the blank)	8 (3)

^aAnswers written in by ≥5 participants included Editorial Freelancers Association (n = 12), Medcomms Workbook and/or Networking (n = 11), Board of Editors in the Life Sciences (n = 8), and Copyediting-L (n = 5). AMWA, American Medical Writers Association; EMWA, European Medical Writers Association.

tion of participants (6%) reported no backup. Among the 161 responders who used an online/cloud-based service to back-up their work computer, the top 3 options were Dropbox (29%), Carbonite (19%), and Google Drive (15%) (Figure 3).

Communications and Marketing

Of the 52% of participants who had a business website, 54% reported having designed it themselves, and 36% had paid someone to design it for them (Table 3). Among respond-

ers with business websites, the most commonly used website hosting services were GoDaddy (15%), Bluehost (10%), Wix (8%), and SquareSpace (6%) (Figure 4). Many responders (35%) used other services.

The most commonly reported software/apps used for business email were Gmail (53%), Outlook (50%), and Apple Mail (12%) (Figure 5). The top 3 social media and online communities used by participants for their freelance medical communication business were LinkedIn (82%), AMWA *Engage* (49%),

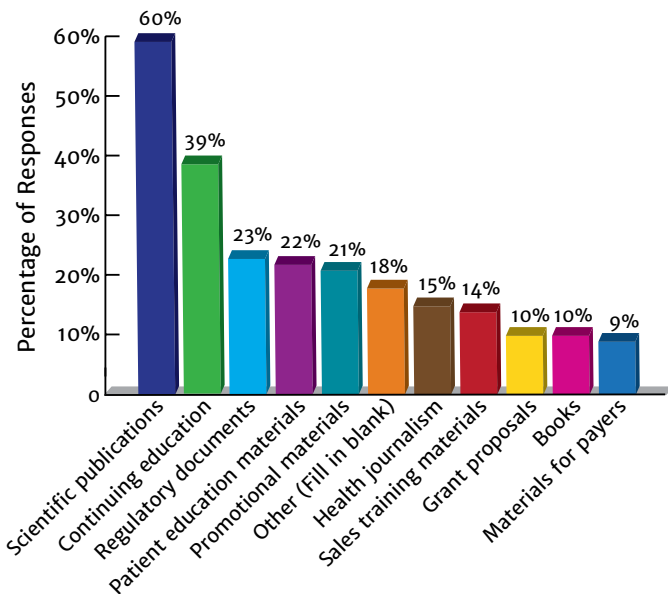


Figure 2. Participants' top 1 to 3 areas of freelance medical communications work (maximum 3 answers allowed).

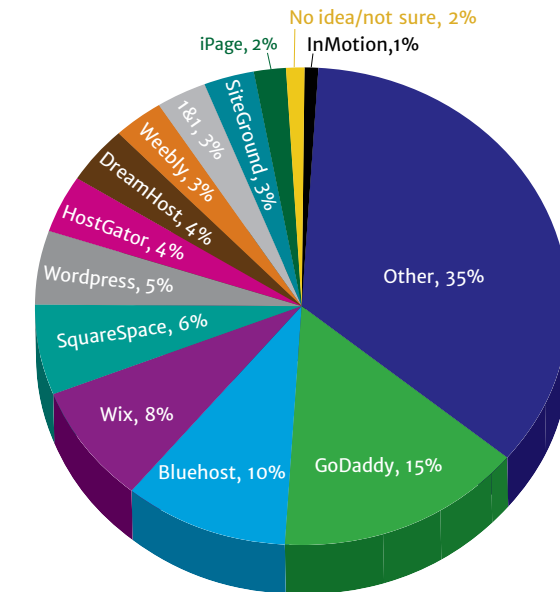


Figure 4. Web hosting service used for business site (1 answer allowed).

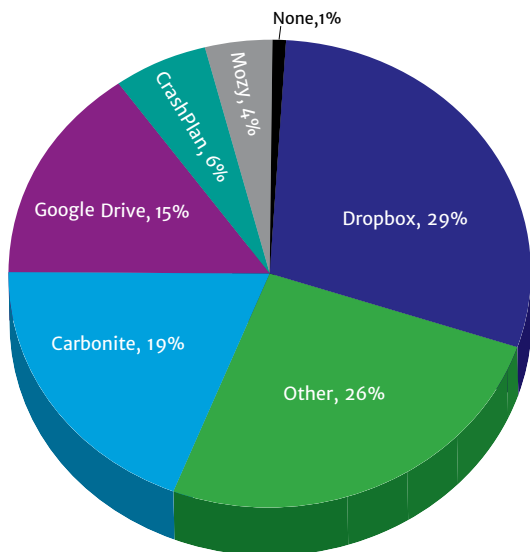


Figure 3. Online/cloud-based service used to back up work computer (1 answer allowed).

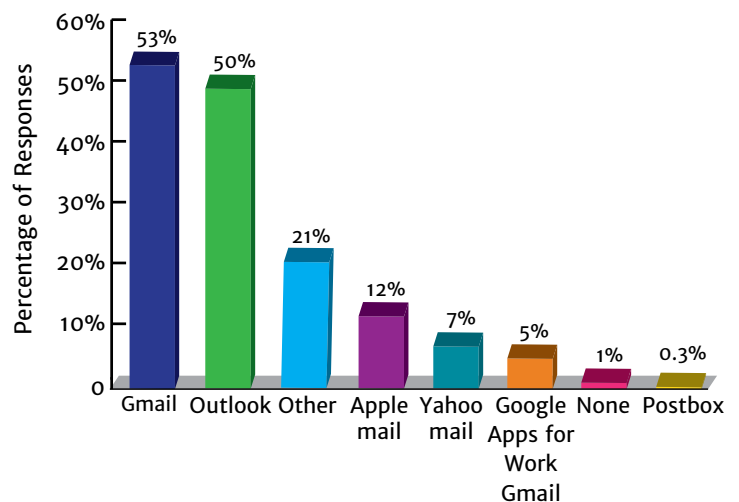


Figure 5. Software/apps used for email (multiple answers allowed).

and Twitter (26%); 9% of responders did not use social media or online communities for their business (Table 3).

Accounting/Bookkeeping and Time Tracking

Of 307 responders to the question about which software or apps they used for accounting/bookkeeping, most used spreadsheets (42%) or nothing (20%) (Figure 6). The accounting/bookkeeping software or apps identified by ≥ 5 participants were QuickBooks Online (12%), Quicken Home & Business (8%), QuickBooks software (5%), FreshBooks (2%), and Wave (2%). Of 129 responders who identified spreadsheets as their accounting/software system, 96% used Microsoft Excel, 3% Google Sheets, and 1% Apple Numbers.

Of 307 responders, 40% did not use any software or app for time tracking and 32% used a spreadsheet (Figure 7). The time tracking software or apps identified by ≥ 5 participants were Toggl (6%), Trax-Time (4%), FreshBooks (2%), and Harvest (2%).

Other Tools

Of 307 responders, 42% did not use any citation/reference management software (Figure 8). Endnote (47%), Reference Manager (8%), Mendeley (6%), and Zotero (5%) were the most commonly identified citation/reference management software programs.

Word cloud graphs in Figure 9 show responses to 2 open-ended questions that asked participants which single essential software/app (panel A) and hardware/specialized device (panel B) they would recommend to their fellow freelance medical communicators. In these graphs, the size and weight of the font reflects its frequency; thus, more frequently used words are displayed in a larger and bolder font than less frequently used words. Among 225 answers, the most commonly suggested software/app were Microsoft Office/Word ($n = 58$), Adobe Acrobat ($n = 20$), the Microsoft Word proofreading software add-in PerfectIt ($n = 18$), and EndNote ($n = 17$). Among 203 answers, the most commonly suggested hardware or specialized device were a large screen and/or multiple monitors ($n = 53$), a laptop ($n = 28$), an external hard drive for backup ($n = 26$), and a digital recorder or other audio recorder ($n = 13$).

DISCUSSION

As previously mentioned, the information gathered by this survey has not been included in past medical communicator surveys conducted by AMWA^{1,2} and EMWA.³ Neither does the current published literature⁴⁻⁸ on the practice of running a freelance medical communicator business include updated and systematically gathered data on the specific tools used by these professionals. Thus, the 2016 Freelance Medical Communicators Tools of the Trade Survey pro-

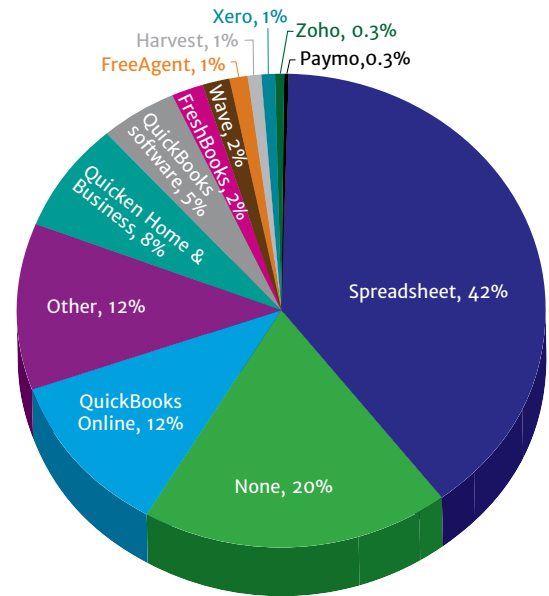


Figure 6. Software/app used for accounting/bookkeeping (1 answer allowed).

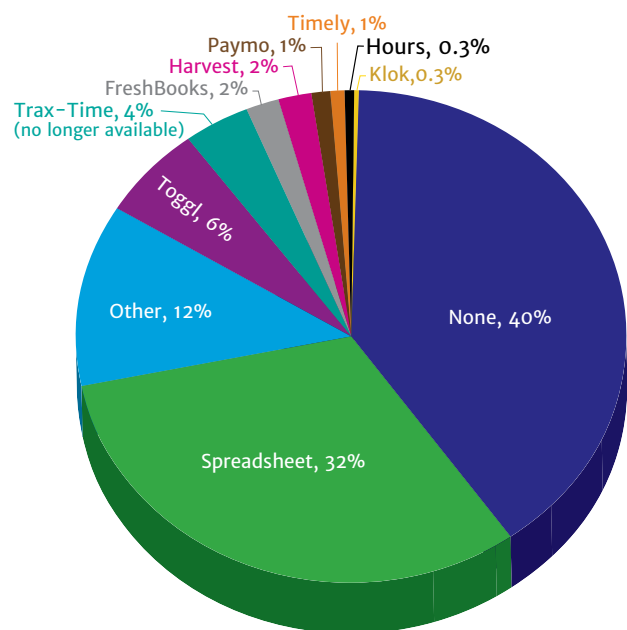


Figure 7. Software/app used for time tracking (1 answer allowed).

vides the first systematically acquired snapshot of freelance medical communicator business-related practices.

The Tools of the Trade survey completers ($N = 300$) included 217 AMWA members (72% of the participant pool) and 33 EMWA members (11%). The 2015 AMWA salary survey reported that 451 freelancers participated in that survey.¹ AMWA had publicized the 2015 salary survey by direct email and postcards to their membership list, which are methods not

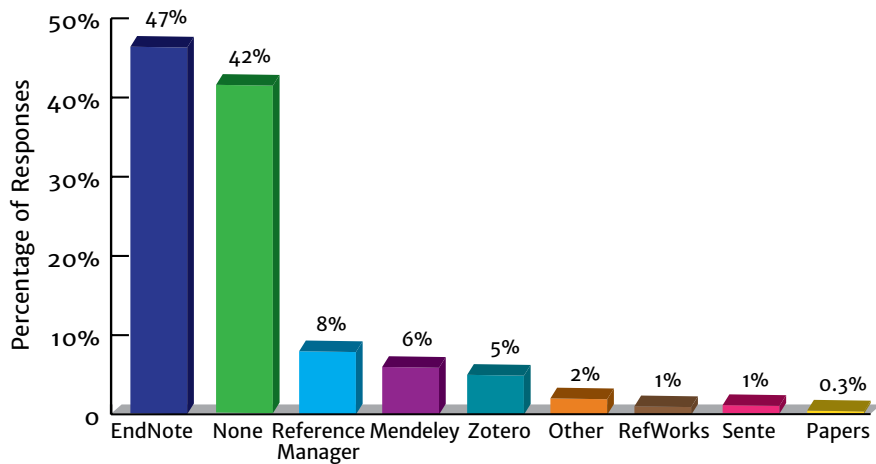


Figure 8. Citation/reference management software (multiple answers allowed).

accessible to non-AMWA-sponsored research projects such as the current survey. As AMWA does not have firm data on how many of its members are freelancers, I used the published literature to derive data to generate an estimate. A report on the 2016 AMWA membership survey¹¹ noted that of 1074 responders, 42% reported being freelance/self-employed. This report also said that the AMWA membership comprises approximately 4100 members. With the assumption that the response rate of freelancers to the salary survey was in proportion to their membership, an estimated 1722 AMWA members are freelancers. Thus, the 217 AMWA members who participated in the present survey might represent 13% of the estimated total AMWA freelance population. A report on the 2016 EMWA member survey¹² stated that membership comprises approximately 1000 people and found that of 286 responders, 37% were freelance. Again, with the assumption that the freelance response rate was in proportion to their membership, approximately 370 EMWA members are freelance. Thus, the 33 EMWA members who participated in the present survey might represent 9% of the estimated total EMWA freelance population.

Because these are estimates only, it is not possible to ascertain whether the Tools of the Trade survey participants were representative of the overall AMWA and EMWA freelance populations.

The current survey findings indicate that the participating freelancers tend to work on laptops (63%) powered by Microsoft Windows (70%) and backed up with an external hard-drive (65%) and/or an online/cloud service (52%). The most commonly used online/cloud-based backup services were Dropbox (29%), Carbonite (19%), and Google Drive (15%). The 6% of participants who reported not using a backup for their work computer risk losing their work on a daily basis to cyber-attacks and computer malfunctions. Among the slight majority of survey responders (52%) who had a business website, 54% had designed it themselves. GoDaddy (15%) and Bluehost (10%) were the most commonly used website hosting services. Gmail (53%) and Outlook (50%) were the most popular software/apps used for business email.

LinkedIn (82%) and AMWA *Engage* (49%) were the 2 most popular social media/online communities used by participants for their freelance businesses. Because I used both of these platforms to advertise the survey, the survey recruitment methods might have artificially enriched the participant pool with LinkedIn and/or AMWA *Engage* users. However, evidence from another survey corroborates LinkedIn's popularity with freelancers: a 2017 survey of freelance marketing practices found that 95% of 239 participants selected LinkedIn as 1 of the top 3 social networks they used for business.⁶ Unfortunately, the self-published report of this survey did not describe how participants were recruited to complete the survey, so it is not possible to evaluate its potential bias.



Figure 9. Word clouds of edited responses to questions asking for (A) 1 essential software app and (B) 1 essential hardware or specialized device to recommend to fellow freelance medical communicators.

Many participants had low-tech approaches to some business-related tasks. For accounting/bookkeeping, 42% percent used spreadsheets and 20% did not use any software/app. For time tracking, 32% used spreadsheets and 40% did not use any software or app. Also, 42% did not use any citation/reference management software. When asked about the one essential tool they would recommend to colleagues, the most popular responses were Microsoft Word, Adobe Acrobat, and PerfectIt for the software app category, and multiple and/or large monitors, a laptop, and an external backup hard drive for the device category.

This survey had a solid completion rate: of 381 people who started the survey, 79% completed all the questions. The main survey limitations are reliance on self-reporting and selection bias. In using the information from this survey, one should keep in mind that the survey asked participants to report what technology they used for various business-related activities, without asking them to rate whether they liked the technology they were using. Only the 2 open-ended questions asked participants to make recommendations. This survey report is not intended to be a purchasing guide, and people should do independent research, consult with colleagues, and use their own judgment when deciding how to set up their office and which tools to buy.

The survey results suggest that many freelancers do not use much technology to help them run their business. The survey did not investigate personal motivations behind these business practices. Through informal communications, it seems that some people prefer paper-based systems or simple electronic spreadsheets; some are not comfortable using new software or apps; some don't trust cloud-based applications; and some are not aware of the availability of time-saving, often low-cost tools. As freelancers, we have to be computer-savvy enough to efficiently write and edit our projects, communicate with our clients, and market ourselves. While we don't have to be on the cutting edge of technology to do our job well, we also should not lag too far behind. My approach is to strive for the middle and, when affordable and convenient, take advantage of well-tested technology to help me work more efficiently. Factors to consider in deciding whether to incorporate new tools into one's business practice include desired features, cost, potential for time saving, ease of use, ease of integration into work routines, and system requirements.

Hopefully, the information provided in this report will help both new and established freelancers identify new options and narrow down choices.

In conclusion, The Tools of the Trade survey provides valuable data on the kinds of software, apps, and other devices freelance medical communicators use to handle routine business tasks. Anecdotal evidence indicates that participation in the survey might have prompted some participants to explore incorporating some new tech tools into their business practice. A few participants commented that they found the survey edu-

cational because they had not been familiar with some of the included software or apps. Repeated surveys (perhaps every 2 to 3 years) would provide updated data and allow an assessment of trends. It will be interesting to see if and how the patterns of technology use change over time.

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