

# FINDINGS FROM THE 2007 AMWA SALARY SURVEY

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The American Medical Writers Association (AMWA) conducted 5 salary surveys between 1989 and 2007.<sup>1-4</sup> With each new survey, AMWA used previous experience to make improvements. For example, questions were added to provide more information as requested by AMWA members, such as the new questions on freelance writing and editing in the 2007 survey. At the same time, valuable questions were retained to allow comparisons of results across surveys.

This report has been redesigned to provide an overview in a format that will be useful to AMWA members, employers, and others interested in medical communication. Important data are conveyed in a series of tables and a figure, intended for use without the text. The first table has been expanded to summarize the most important information from the 2007 survey and to facilitate comparison of this information with data from previous surveys. Whenever possible, we rigorously edited the text for brevity. The text now conveys qualitative details that complement tabular and other less important data, such as findings based on a limited number of responses; it also includes survey methods and a very brief discussion of the findings. Additional details can be found in the slides available in the members-only section of the AMWA Web site ([www.amwa.org](http://www.amwa.org)).

## METHODS

A committee of AMWA members (see Acknowledgment) met to make revisions and additions to the 2004 survey.<sup>4</sup> The final version of the questionnaire was amended and approved by the Executive Committee. In addition to requesting salary data (to the nearest \$1,000), the questionnaire elicited information about variables believed to affect income, including sex, age, educational level, field of highest academic degree, geographic location (AMWA chapter and regional affiliation established by the 1994 survey<sup>3</sup>), work status (full-time or part-time; employee or freelance), primary employer, employment level, years of experience in the field of medical communication, and satisfaction with work and salary.

To obtain precise responses, we specified the following definitions for employment and income:

- Employed by a company, institution, or individual: You are employed part-time or full-time by a company, institution, or individual; either hourly, salaried, or by contract. The employer pays Social Security taxes and deducts state and federal taxes from your pay.
- Freelance work: You do work for hire by a company or individual (client). You pay all of your own Social Security taxes, and state and federal taxes are not deducted from the pay you receive from your client.

- Full-time employment: You work 32 or more hours per week.
- Part-time employment: You work less than 32 hours per week.
- Total income: For employees working for a company, institution, or individual, the total income before taxes are deducted.
- Gross income: For freelance work, the total amount of money collected from clients.
- Net income: For freelance work, the amount of income after deduction of expenses (such as insurance, subcontracting, and equipment) but before deduction of taxes and retirement contributions.

Distribution of the questionnaire and tabulation of the results were performed with SurveyMonkey software (SurveyMonkey.com LLC, Portland, OR). Approximately 1 month before the survey was conducted, the questionnaire was described in the *AMWA Journal*<sup>5</sup> and in an e-mail message sent to all of AMWA's approximately 5,370 members. A second e-mail was sent when the survey was opened, and a reminder e-mail was sent 10 days later. Both of these latter messages contained an introduction that provided the reasons for conducting a new survey, instructions for completing the questionnaire, and a link to the Web site where the electronic questionnaire could be found. The survey was open to AMWA members between April 18



and May 12, 2007; respondents were asked to report their salaries for calendar year 2006. Responses were required for every question; however, if a respondent exited the survey instrument before answering all questions, the remaining responses were left blank. Therefore, the number of responses differed for each item.

The software allowed conversion of the data tables to a relational database structure. A statistician was consulted for data sorting and analysis; SAS software (SAS Institute, Cary, NC) was used to obtain descriptive statistics for different factors and groups. A regression analysis with interaction was performed to determine factors predictive of salary for respondents who worked full-time for a company. The variables considered in the regression were educational level, sex, age, years of experience in medical communication, and primary employer in 1 of 3 groups (group 1, pharmaceutical or biotechnology company; group 2, medical device, communication, or advertising company; group 3, all other employers). A Pearson correlation coefficient was used to correlate mean hours worked per week with income and satisfaction of work with pay.

## RESULTS

### Demographic factors describing respondents

Eighty-three percent of the respondents to the 2007 survey were women (Table 1), nearly identical to the percentage of women in AMWA's overall membership. The mean age of respondents was  $46.8 \pm 11.5$  years for men and  $45.1 \pm 10.3$  years for women. Respondents had an average of  $10.5 \pm 8.3$  years of experience in medical communication.

Most respondents (97%) had a bachelor's degree or higher and were fairly evenly divided by educational level (Table 2). Approximately half had earned their highest degree in science (39.7%) or health care, including pharmacy (4.8%), medicine (4.1%), public health (3.3%), or nursing (1.8%).

**Table 1.** Comparison of Data Obtained by AMWA Surveys Conducted in 1989, 1994, 2002, 2004, and 2007

Parameter	Year of Survey*				
	1989	1994	2002	2004	2007
Number of AMWA members	~2,700	~3,900	~4,800	~4,800	~5,400
Respondents (%)	886 (33)	1,822 (47)	1,320 (39)	1,811 (38)	1,704 (32)
Sex of respondents					
Men (%)	251 (28)	(~25)	242 (18)	298 (17)	281 (17)
Women (%)	635 (72)	(~75)	1,069 (82)	1,476 (83)	1,383 (83)
Years in the field (%)					
<2	10	10	6	13	14
2-5	21	28	31	22	20
6-10	29	25	22	25	28
>10	40	38	41	40	38
Median full-time salary (US \$)	36,000	45,000	64,000	70,000	76,000
Mean full-time salary (US \$)	38,887	49,967	67,351	74,016	82,232
Men	46,865	N/A	78,733	84,259	93,677
Women	36,135	N/A	64,556	71,775	79,609
Excess of men's over women's income (%)	30	27	18	17	18
Inflation rate over period since last survey (%)	N/A	20.5	20.2	4.1	9.3
Gain over inflation (%)	N/A	8.5	14.6	5.8	1.8
Hourly rate for full-time freelances (US \$)					
Mean	N/A	50	74	72	90
Mode	N/A	20-29	100	100	100

\*Year of survey refers to the year in which the survey was conducted, not to the year in which income was earned. For example, the 2007 survey refers to income earned in 2006. N/A = not applicable or not available.

Approximately one-fourth had earned their highest degree in the humanities, including liberal arts (11.4%), journalism (4.9%), communication (3.8%), technical writing (3.2%), or medical writing (1.0%). Approximately one-third of the respondents belonged to the Delaware Valley (14.4%), New York (10.1%), or New England (9.5%) chapter, a distribution consistent with the overall AMWA membership and with the concentration of pharmaceutical companies in the northeastern region of the United States.

### Respondents who worked full-time for a company or an individual

Two-thirds of 1,704 respondents (1,107) reported that they worked full-

time for a company or organization; women worked a mean of  $43.2 \pm 6.5$  hours per week and men a mean of  $43.6 \pm 5.6$ . The most common benefits received were health insurance (96%) and retirement savings plans (91%).

The mean salary of respondents who were full-time employees was \$82,232 (range, \$21,000 to \$450,000). Income reflected educational level and was highest for respondents with an advanced degree (Table 2); however, mean income was consistently higher for men than for women, even when their educational levels were similar. Mean income was higher for respondents employed by biotechnology and pharmaceutical companies than respondents employed by other types

of companies, for those who primarily wrote than those who primarily edited, and for those who held senior-level or supervisory positions. Interestingly, respondents who reported being senior-level employees may not have had more advanced educational degrees (Table 3). Nearly half of the respondents who reported being an entry-level employee (43%) had an advanced degree, but 90% of the respondents with an advanced degree had less than 5 years of experience in medical communication.

The highest mean income by region was reported by respondents from the West Coast (including Western Canada) and the Northeast (including Eastern Canada; range of means, \$84,000 to \$91,000), followed by those from the Midwest and South (range of means, \$72,000 to \$78,000). The lowest mean income was reported by respondents from the Mountain region (range of means, \$61,000 to \$66,000).

AMWA certificate and company size also affected income. The mean income of respondents without an AMWA certificate (\$79,917) was statistically significantly lower than that of respondents with a core certificate (\$85,432) or an advanced certificate (\$99,897; certificate versus no certificate,  $p < 0.01$ ). The mean income was \$75,972 for respondents in a company with fewer than 50 employees and \$87,061 for those in a company with more than 500 employees, a difference of approximately \$11,000.

Regression analysis with interaction included only the 1,059 respondents who provided complete data for each of the variables considered in the model. Because of the high correlation between age and years of experience, years of experience was used in the model. Otherwise, each factor

**Table 2.** Income Data for Full-time Employees Based on Educational Level, Sex, Years of Experience, Primary Employer, and Employment Level

Grouping	n	Salary (US \$)				
		Mean	25th quartile	50th quartile	75th quartile	90th quartile
<b>Education level</b>						
<b>Associate's and below</b>						
Men	2	71,500	69,000	71,500	74,000	74,000
Women	13	68,769	50,000	64,000	70,000	99,000
<b>Bachelor's</b>						
Men	53	90,640	57,000	80,000	102,000	141,000
Women	322	73,522	52,000	70,000	90,000	110,000
<b>Master's</b>						
Men	60	86,240	57,000	81,950	100,000	134,000
Women	300	77,339	57,000	74,000	92,000	110,000
<b>Advanced</b>						
Men	83	101,872	73,000	90,000	112,000	158,000
Women	226	91,797	68,000	85,500	110,000	136,500
<b>Years of experience in medical communications</b>						
<2	172	62,030	46,000	60,000	77,500	90,000
2-5	253	71,184	52,000	65,000	88,000	105,000
6-10	313	86,348	66,000	80,000	100,000	121,000
11-15	135	91,773	68,000	88,000	106,000	135,000
16-20	86	103,705	72,000	91,000	123,000	165,000
>20	108	99,335	72,000	90,500	114,500	158,000
<b>Primary employer</b>						
Biotechnology company	102	102,297	78,000	94,500	116,000	145,000
Pharmaceutical company	286	97,807	77,532	93,000	110,000	140,000
Medical device company	35	85,451	63,000	86,000	106,000	123,000
Communications/advertising	95	83,338	60,000	70,000	95,000	135,000
Clinical research organization	87	76,620	55,000	72,600	88,000	120,000
Medical education company	96	77,088	60,000	75,000	95,000	105,000
Web/medical company	10	73,500	45,000	76,000	99,000	107,500
Government	22	71,014	51,000	75,600	90,000	100,000
Other	63	76,295	53,000	73,000	97,000	135,000
Association/professional society	36	68,574	51,590	64,000	85,500	105,000
Health care organization	66	65,637	52,000	63,000	75,000	97,000
Research/education organization	46	63,433	50,000	61,000	75,000	93,000
University or medical school	85	64,438	52,000	60,000	72,000	90,000
Publishing, including journalism	38	58,692	45,000	55,500	72,000	80,000
<b>Employment level</b>						
Entry	76	60,167	56,500	59,000	74,500	90,000
Mid-level, non-supervisory	425	69,340	52,000	65,000	83,000	100,000
Mid-level, supervision	167	90,275	65,500	90,000	109,000	130,000
Senior level, no management	236	85,950	70,000	84,000	100,000	115,000
Senior level, management	148	116,208	79,000	105,000	140,250	185,000



significantly affected income ( $R^2 = 0.5210$ ;  $p < 0.001$  for each factor); the model explained 52% of the variance in income. The dominant factors having a positive effect on income were being employed by a biotechnology or pharmaceutical company, having an advanced educational degree, and being a man. A predictive algorithm based on the regression model can be used to determine a mean salary based on the factors included in the analysis (Figure 1).

### Respondents who worked as freelance medical communicators

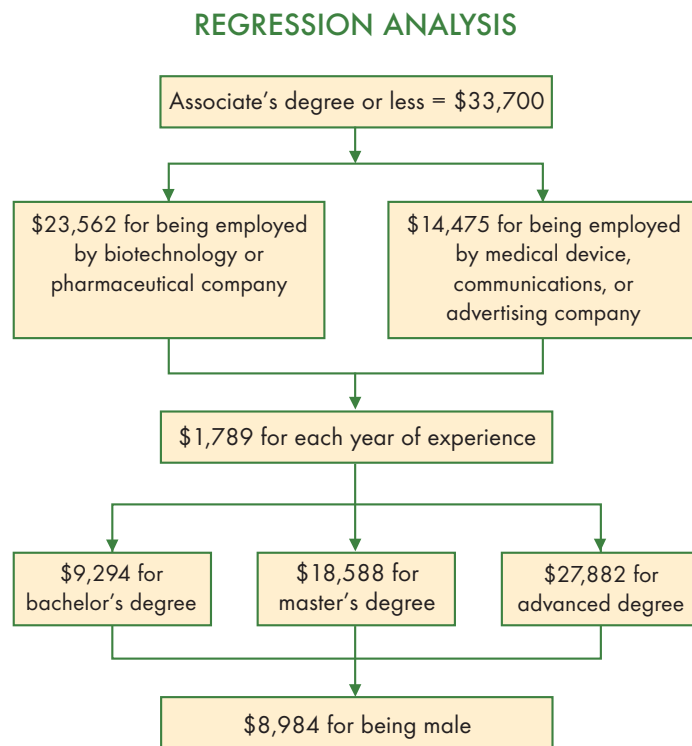
One-third of 1,704 respondents (568) reported that they worked as freelance medical communicators and 36% (206) reported that they worked full-time; this percentage is lower than the percentage of respondents who reported working full-time freelance in 2004 (46%).<sup>4</sup> Women worked a mean of  $44.0 \pm 9.4$  hours per week and men, a mean of  $42.8 \pm 7.0$  hours per week. Freelancers had a mean of 12.9 years of experience in medical communication, which differs substantially from the mean of 9.2 years for respondents employed by a company. Freelance respondents reported that they billed by the hour (64%); by the job (25%); by the unit of work (7%); and in other ways, usually a combination of hourly and by-the-job rates (4.5%). Respondents billed for revisions mostly by the hour (55%) or as included in a job fee (30%).

For the first time, freelance respondents were asked when they had last given themselves a raise, for what reason they might reduce their rates, and what type of operating expenses they incurred. Approximately half stated that they had given themselves a raise in 2006 (37%) or 2005 (17%). Some common reasons stated for reducing rates were that the respondent believed in or cared for a cause (24%), wanted to expand his or her portfolio (20%), or wanted to provide a get-acquainted rate (18%) or volume discount (17%). Thirty-four percent said

**Table 3.** Percentage of Respondents at Each Educational Level for Each Employment Level<sup>a</sup>

Education Level	Entry	Mid-no supervision	Mid-supervision	Senior-no management	Senior-management
Bachelor's	34	37	32	33	39
Master's	22	34	37	39	28
Advanced	43	26	28	26	32

<sup>a</sup>Some percentages may not add up to 100% because some people had "other" as the educational level.



**Figure 1.** This formula can be used to estimate salary for a full-time employee at a company or organization. Begin at the top of the algorithm with a salary of \$33,700, which represents the salary for a medical writer or editor who has 1 year of experience and has an associate's degree or less. Add the indicated amounts according to type of employer (if applicable), experience, the highest educational degree you have obtained, and sex.

that they never reduced their rates for any reason. The most common operating expenses incurred were health insurance (36%) and licensing (29%).

The mean gross income for freelancers in the 2007 survey was \$119,295 and the mean net income was \$93,306, representing 78% of the gross income. Both net income (Table 4) and gross income (not shown) varied depending

on the job category and were higher for freelance writers than for freelance editors.

The mean gross and net income were also higher for freelancers who had more education (Table 5), and freelancers with an advanced degree charged higher hourly rates for writing and editing than did freelancers with less education (Table 6).



There was a positive correlation between mean hours worked per week and both gross income ( $R^2 = 0.2569$ ;  $p < 0.001$ ) and net income ( $R^2 = 0.180$ ;  $p = 0.012$ ).

### Satisfaction with work and pay

Only 6% of all respondents reported that they were dissatisfied with their work, and only 18% said that they were dissatisfied with their pay, identical to what was reported in 2004. Satisfaction with work and satisfaction with pay correlated significantly and positively ( $R^2 = 0.4373$ ;  $p < 0.001$ ).

## DISCUSSION

The results of the 2007 AMWA Salary Survey confirmed many of the trends seen in previous surveys and added new information. For example, the survey findings confirmed that salary gains continued to outpace inflation, but they peaked at approximately 15% in 2002 and were 2% in 2007. The range of salaries continued to be variable, depending on place of employment, educational level, and sex. These variables, including similarities compared with other female-dominated professions, were addressed in the 2004 survey.<sup>4</sup> Furthermore, obtaining an AMWA core or advanced certificate continued to have a positive impact on income. The regression analysis showed that other factors not included in this analysis continued to be related to salaries because nearly half of the variance in salaries remained unexplained.

The primary limitation of the 2007 survey was the low response rate, which was 32%. On the other hand, we found no evidence that the sample was not representative, because demographic characteristics of the 2007 respondents were generally similar to those of the 2004 respondents and to those of the overall AMWA membership.

We welcome comments and suggestions from AMWA members about the survey and its findings. For more information, we encourage members to view the slide presentation in the

**Table 4.** Net Income by Job Category as Reported by Respondents Who Worked as Full-time Freelances

Job Category	Number of Respondents	Income (US \$)	
		Mean	Median
Any category	196	93,306	87,000
Writing (primarily)	93	110,232	93,000
Writing and editing (equal mixture)	63	75,891	65,000
Research and writing	15	76,620	65,000
Other	11	97,181	58,000
Editing (primarily)	14	46,071	43,000

**Table 5.** Mean Income Based on Educational Level and Sex for Respondents Who Worked as Full-time Freelances

Highest Educational Degree	Income for Women (US \$)		Income for Men (US \$)	
	Gross	Net	Gross	Net
Any degree	115,292	86,508	145,743	115,897
Bachelor's	84,864	66,971	146,198	106,181
Master's	117,384	85,406	143,888	107,444
Advanced	148,253	114,692	146,642	131,143

**Table 6.** Hourly Rates as Reported by Respondents Who Did Any Kind of Freelance Work Based on Highest Educational Degree

Highest Educational Degree	Hourly Rates (US \$)			
	Writing		Editing	
	Full-time	Part-time	Full-time	Part-time
Any degree	97	84	80	64
Bachelor's	85	78	71	62
Master's	98	80	79	64
Advanced	112	96	98	69

members-only section of the AMWA Web site, such as data specific to members employed by pharmaceutical companies and biotechnology companies and expanded algorithms for determining salary based on education, experience, actual job duties, and level of employment. We also encourage AMWA members to look for the next salary survey, to respond to it, and to encourage their co-workers and colleagues to respond.

### Acknowledgment

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