



# EDUCATION NEWS

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## Salaries, Recruitment, and Retention for CRNA Faculty – Part 1

*The nature of differences in salaries between academic faculty and Certified Registered Nurse Anesthetists (CRNAs) working in clinical positions using recently collected data are explored. The differences in median salaries among program directors, assistant program directors, academic faculty, and clinical faculty are large. Furthermore, survey results imply that the most impor-*

*tant barrier to recruiting teaching faculty is salary differentials. Part 1 of this 2-part column discusses salaries, recruitment, and retention of CRNA faculty; Part 2, to be published in the June 2008 issue, will focus on clinical faculty contributions to the education of CRNAs.*

**Keywords:** CRNA faculty, recruitment, salaries.

Nurse Anesthesia programs compete with clinical sites to employ Certified Registered Nurse Anesthetist (CRNA) faculty. This competition will become more critical as CRNA teaching programs expand to meet the need for more CRNAs and as present CRNA faculty retire. Interviews with program directors reveal a common belief that one challenge to recruitment and retention is the salary differential between academic faculty and CRNAs working in clinical positions, some of whom also serve as clinical faculty. In this column, the nature of these differences is explored.

A comparison of clinical and academic salaries, which is based on 2 surveys that contrast salaries of clinical faculty with those holding academic faculty positions, is presented. Throughout this column, "academic faculty" is defined as CRNAs whose main job description involves teaching nurse anesthesia students in an academic environment, while clinical faculty is defined as CRNAs who supervise

nurse anesthesia students in clinical settings and who may or may not be employees of colleges or universities. The first survey, the 2006 Survey of Program Directors and Faculty, was completed by program directors in the fall of 2006 with a response rate of 75% (77/102). Program directors also were asked to invite faculty associated with their program to complete the survey. The responses provided self-report salary data that included clinical faculty regardless of whether they were compensated for faculty responsibilities. In the second survey, the 2007 Survey of Program Directors, completed in early 2007 with a response rate of 75% (79/105), program directors answered questions about the salaries of faculty employed by their program. This survey provided salary data both collected through self-report and provided by program directors. CRNAs with no connection to a teaching program were not included in either survey.

Table 1 shows descriptive statistics from the first survey. Salaries are

contrasted among different types of positions in relation to clinical faculty. The difference in *median* salaries for program directors is +\$9,000, -\$11,000 for assistant program directors, and -\$1,000 for academic faculty, each relative to clinical faculty. Differences in *average* salaries are more pronounced for assistant program directors ( $P = .016$ ) and academic faculty ( $P = .009$ ), each relative to clinical faculty.

Table 2 describes the salaries of program directors, assistant program directors, academic faculty, and clinical faculty from the second survey regarding faculty employed by programs. The difference in *median* salaries for program directors is +\$7,500, -\$2,500 for assistant program directors, and -\$12,500 for academic faculty, each relative to clinical faculty. Differences in means across different positions are similar to differences in medians across different positions. (Differences between program directors and assistant program directors, program directors and academic faculty, and

	No. observations	Mean	Median	SD
Program director	55	146,990	150,000	26,987
Assistant program director	24	133,520	130,000	3,154
Academic faculty	19	133,473	140,000	24,462
Clinical faculty	20	152,275	141,000	32,466

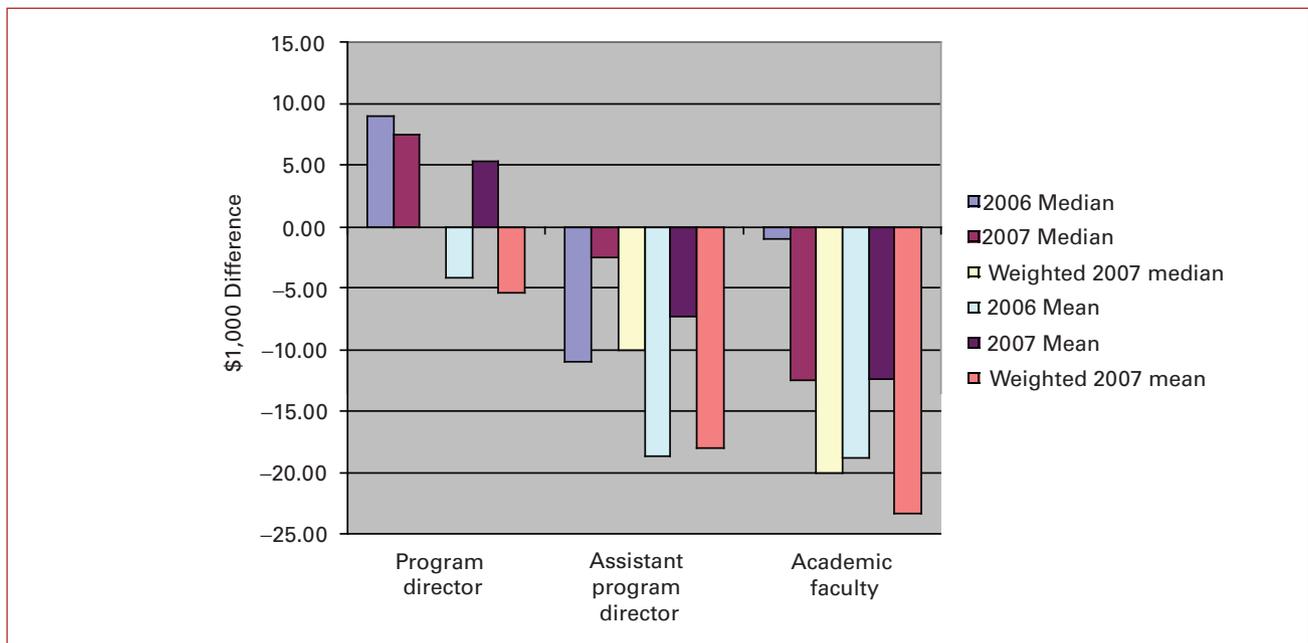
**Table 1.** Self-Report 2005 Total Income for CRNA Faculty by Position Title\*

\* Reported in \$.

	No. observations	Mean	Median	SD	Weighted mean	Weighted median
Program director	66	140,366	140,000	22,991	140,366	140,000
Assistant program director	64	127,737	130,000	19,167	127,737	130,000
Academic faculty	51	122,671	120,000	18,208	122,444	120,000
Clinical faculty	34	135,059	132,500	16,675	145,764	140,000

**Table 2.** Average Salaries by Position Title for CRNA Faculty Employed by Academic Programs\*

\* 2007 data (reported in \$).



**Figure 1.** Difference in Means and Medians Relative to Clinical Faculty

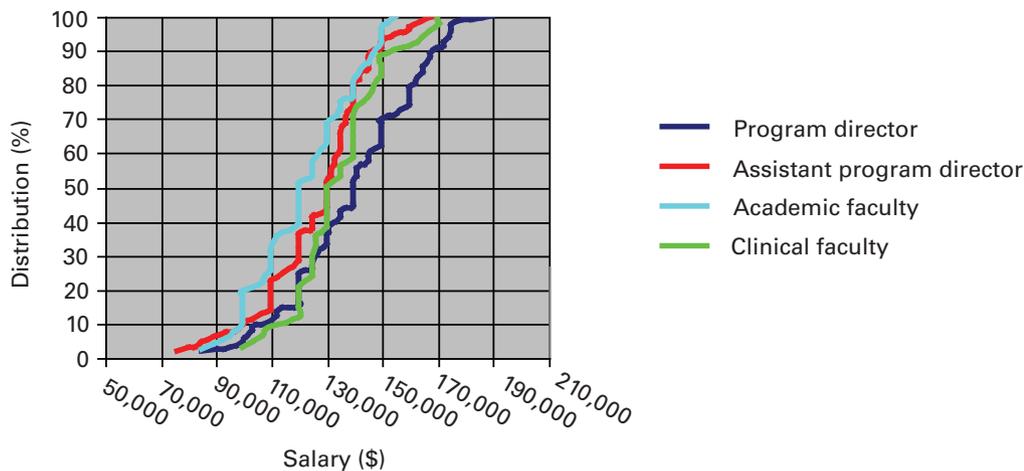
academic faculty and clinical faculty are statistically significant at  $P < .05\%$ . Other differences are not statistically significant.)

In the 2007 survey, the program directors answered questions about average salaries for the assistant program director, academic faculty, and clinical faculty employed by their programs, possibly explaining the smaller standard deviations reported

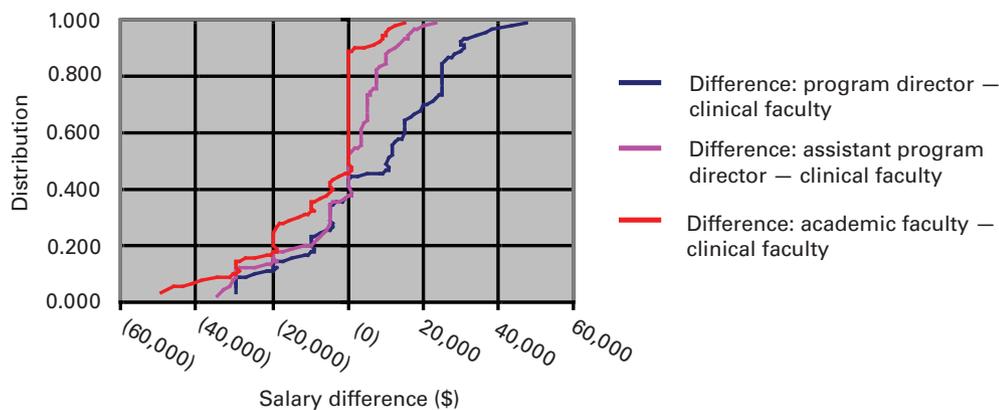
in the 2007 survey; however, it does not explain other differences.

Each answer in the 2007 survey was weighted for academic and clinical faculty to parallel a sample similar in structure to the 2006 survey. (The 2007 survey responses about clinical faculty apply only to those employed by the program. This may bias reported clinical faculty salaries downward, providing a

conservative estimate of the gap in salaries between clinical faculty and academic faculty. However, the 2006 survey is also not representative because of the clustering implicit in the sampling procedure.) For academic faculty, the reported weighted means and weighted medians (shown in Table 2) are similar to the unweighted means and medians; however, for clinical faculty, the



**Figure 2.** Distribution of Salaries



**Figure 3.** Distribution of Difference Between Teaching and Clinical Salaries

weighted means and medians increase significantly.

Figure 1 compares salaries of program directors, assistant program directors, academic faculty, and clinical faculty using both means and medians for 2006, 2007, and weighted 2007. Most of the measures show a large negative difference for both assistant program directors and academic faculty relative to clinical faculty. Figure 2 shows the distribution of salaries for each of these 4 types of positions from the 2007 (unweighted) survey. The vertical height of a curve represents the proportion of people corresponding to a curve with salaries below that level. For example, the height of the

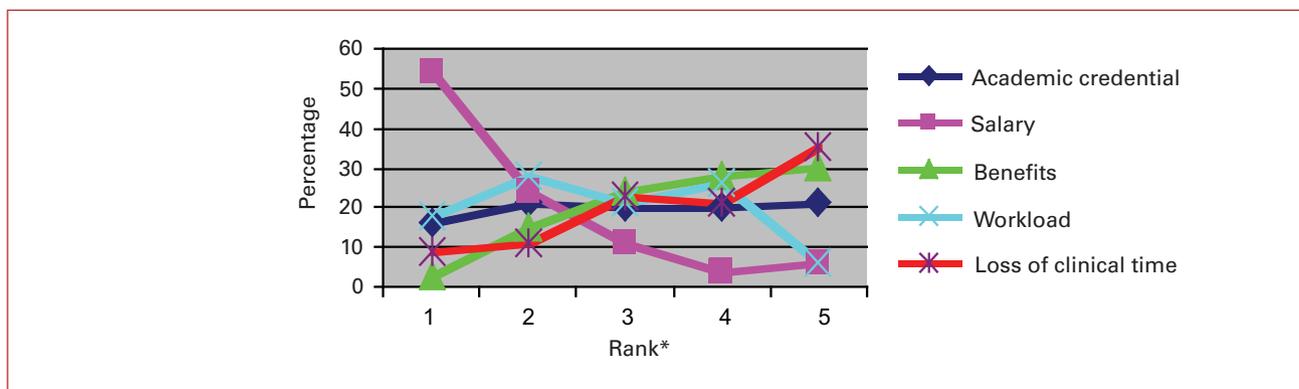
program director curve at \$130,000 is 34.8%, implying that 34.8% (23/66) of program directors earn less than \$130,000. Figure 2 shows the following:

- The high range of program director salaries is significantly higher than the high range for clinical faculty (eg, 30% [20/66] of program directors earn more than \$150,000, while 14.7% [5/34] of clinical faculty earn more than \$150,000;  $P = .014$  for difference).
- The low range of program director salaries is similar to the low range for clinical faculty.
- Assistant program directors are consistently paid less than clinical faculty. The average difference is

only \$2,500 in programs that have both assistant program directors and clinical faculty ( $P = .407$ ), but it is \$7,300 overall programs ( $P = .060$ ).

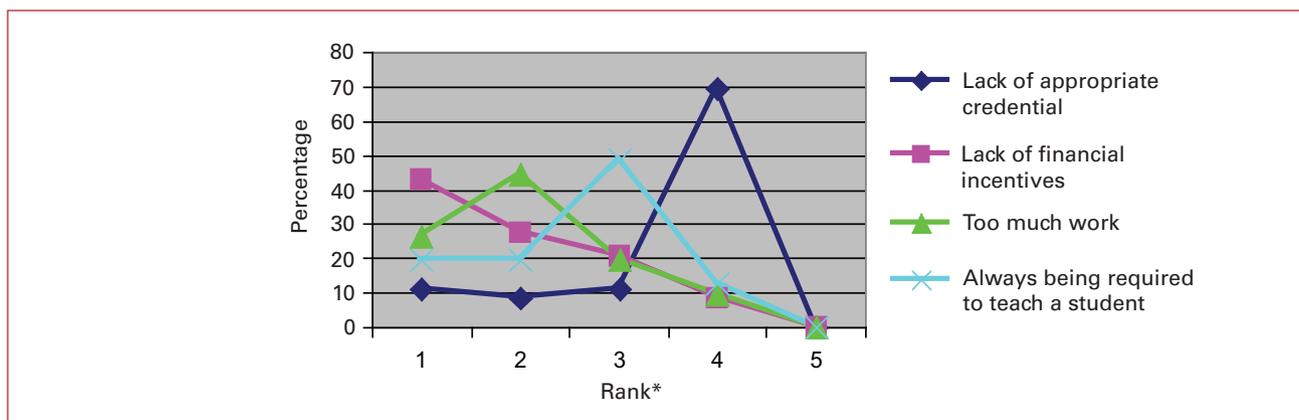
Academic faculty are paid significantly less than clinical faculty (eg, the average difference is about \$12,400 ( $P = .001$ ), and 88.2% (30/34) of clinical faculty earn at least \$120,000, while 60.8% (31/51) of academic faculty earn at least \$120,000 ( $P = .004$  for difference).

Figure 3 shows the distribution of the difference in salaries among different types of positions in the same program. For example, in about 10.7% (3/28) of programs, academic faculty members are paid more than clinical faculty, and, in 42.9%



**Figure 4.** Rank Order of Barriers to Recruitment of Teaching Faculty

\* 1, most important; 5, least important.



**Figure 5.** Rank Order of Barriers to Recruitment of Clinical Faculty

\* 1, most important; 5, least important.

(12/28) of programs, academic and clinical faculty are paid the same. However, in about 46.4% (13/28) of programs, academic faculty are paid less than clinical faculty, and, in 25% (7/28) of programs, the gap is at least \$20,000.

The information on salaries should be considered in relation to the median number of hours worked (from the 2006 survey), with program directors reporting an average of 10 hours more work per week than clinical faculty and academic faculty working 6 hours more per week than clinical faculty ( $P < .001$ ). Using the median salary numbers from Table 1, the differential in numbers of hours imply that program directors earn \$60 per hour, assistant program directors earn \$52 per hour, academic faculty earn \$60.87 per hour, and clinical faculty earn \$70.50 per hour based on a 50-week work

year. If instead we use the weighted median salary numbers from Table 2, the hourly wages are \$56, \$52, \$52.17, and \$70, respectively.

These results demonstrate that, even when salary data are collected by 2 different approaches (self-report from individuals and average salaries from program directors) and with each data set having different limitations, such as (1) the inconsistency of self-reported data and (2) the limit to clinical faculty employed by the program in the program director's report, both sets of data support the statement that program directors have higher salaries than clinical faculty, but assistant program directors and academic faculty have lower salaries than clinical faculty.

Nevertheless, the distribution of the salaries among the different positions provides the greatest explanation of where the differences

occur. This is important to note because it limits the usefulness of comparing central tendency measures of salary when recommending salary scale changes and equity adjustments. In particular, Figure 3 shows that, in low paying environments, program directors, assistant program directors, and academic faculty are all paid approximately the same, while, in high paying environments, program directors are paid well but assistant program directors and academic faculty are not. The finding of significant differences in hours worked requires that workload be factored into salary consideration, and a follow-up analysis looking at the salary per hour worked would be useful in understanding salary compensation for different types of faculty.

Salaries are an important factor in the recruitment and retention of fac-

ulty, and understanding salaries for different positions in the market in relation to characteristics of the positions is important to successful planning in a quite competitive market. Figure 4 shows responses to a survey question about barriers to recruiting teaching faculty. Salary level is ranked the most important barrier to recruiting teaching faculty by about 54% (43/79) of respondents and the second most important barrier by about 24% (19/79) of respondents. The next most important barriers, which greatly lag in importance, are workload and academic credentials. On the other hand, as shown in Figure 5, for clinical faculty, the most important barriers to recruitment are lack of financial incentive (about 43% [31/72] rank it most important) and too much work (about 26% [19/72] rank it most important). In fact, to some degree, program personnel perceive opportunities outside of the program to be better than they actually are, further exacerbating the problem of recruiting faculty. The 2006 survey included the question, "How much do you think you could earn annually if you only were a full-time clinical practitioner?" Based on answers to this

question, for program directors, the median perceived improvement in salary associated with leaving the program is \$20,000; for assistant program directors, \$27,500; and for academic faculty, \$37,500. These findings can be compared to the differences in median salaries reported in Tables 1 and 2. The comparison shows smaller salary differentials than expected.

In many academic fields, faculty can make up for lower salaries by engaging in other remunerative activities. The survey results show that 36% (10/28) of academic faculty are significantly restricted in engaging in outside activities. Eight percent (4/50) of clinical faculty identified any restrictions outside of their clinical site ( $P = .007$ ). Therefore, one possible inexpensive way to mitigate the effects of the salary gap is to reduce outside employment restrictions for academic faculty.

One way to measure the magnitude of the problem of faculty salaries is to look at the distribution of vacancies in CRNA programs across the United States. From data collected in January 2007, it is estimated that 34% (27/79) of programs have at least 1 full-time or part-time vacancy and 30% (24/79) have at least 1 full-time

vacancy. This compares to vacancies for clinical faculty, where 95% (75/79) of programs have no vacancies. Taking the factors studied together, this evidence strongly suggests that there is a significant gap in faculty salaries. If faculty positions are to be filled, it is anticipated that an increase in faculty salaries must occur to meet the demand.

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