

Findings From the Analysis of the American College of Nurse-Midwives' Membership Surveys: 2000–2003

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Findings from the American College of Nurse-Midwives (ACNM) membership data provide descriptive information about selected characteristics of certified nurse-midwives (CNMs), certified midwives (CMs), and students enrolled in ACNM-accredited programs who are members of the organization. This article presents findings from the analysis of membership data for the years 2000 to 2003. Members remain predominantly white and female, with their age averaging in the mid-40s. Similarly, student demographics reflect little change from those reported in prior years. Students are primarily white, female, and in the mid-30s. Proportionately, there has been little increase in the diversity of members. The proportion of CNMs/CMs with a bachelor's degree continues to rise, as does the proportion of CNMs/CMs holding doctoral degrees. The majority of CNMs/CMs identified a broad domain of clinical midwifery practice as their primary responsibility in their primary employment, and hospitals remain the largest employer of responding midwives. The salaries of employed midwives appear to be increasing, although the modal salary (\$60,000 to \$69,000) is unchanged from prior years. The profile of the membership has remained fairly constant, with small changes in the trend over time noted for age, employment patterns, and attendance at birth sites for the 4 years analyzed. *J Midwifery Womens Health* 2005;50:8–15
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INTRODUCTION

The American College of Nurse-Midwives (ACNM) conducts annual membership surveys to profile its membership. The survey data provide descriptive information about selected characteristics of those certified nurse-midwives (CNMs), certified midwives (CMs), and students enrolled in ACNM-accredited programs who are members of the organization. These data have been presented in an ongoing series of articles.^{1–3} The purpose of this article is to present findings from the analysis of membership data for the years 2000 to 2003.

MATERIALS AND METHODS

Members receive the annual survey at the time of their membership renewal. New members (including students) receive the survey with their initial application. Life members receive the survey annually in August.

ACNM began a rolling membership renewal process in 1995. Renewal notices are sent throughout the year; therefore, members' renewal dates vary. The denominator for calculation of the survey response rate cannot be determined with accuracy because members may receive as many as 4 renewal notices. For this report, data for the years 2000 to 2003 represent data collected from June 1 of the previous year to May 31 of the current year. For example, data for 2000 represent data collected from June 1, 1999 through May 31, 2000. An exception is the year 2003, which includes data from June 1, 2002, through December 2003. Future reports will be based on analysis of

calendar year data. Since the year 2000, surveys are sent to members with their prior year's information prefilled on the form. Members are requested to document only changes or corrections to this information.

Membership surveys are considered exempt for review by institutional review boards. Respondents are assured confidentiality because personal identifying information is not reported to authors or researchers using the data. Completion and return of the survey are considered evidence of agreement to participate. Surveys are returned directly to the ACNM national office where a staff member enters data into the membership database.

Survey Instrument

The survey instrument consists of 11 categorical questions. A space is provided for further description wherever "other" is selected as the response option. Survey questions focus on demographics, education level, employment, and practice patterns of the membership.

Data Analysis

Data were analyzed by using univariate statistics computed in SPSS 10.0. Each data set was cleaned and recoded, as necessary, prior to analysis.

Reported results correspond only to the number of respondents answering "yes" to any question. In the membership database provided for this analysis, the default for missing data was the "no" response, and recapturing original data was not possible. Therefore, the "no" response option contains both the answer "no" as well as missing data. Some questions ask respondents to "check all that

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Table 1. Demographic Characteristics of ACNM CNM/CM Members, 2000–2003

Characteristic	2000	2001	2002	2003
Number of CNMs/CMs responding	6075	6234	6233	6345
Age (y)				
Mean (SD)	46.52 (8.6)	46.87 (8.8)	47.18 (9.1)	47.44 (9.3)
Range	24–92	25–94	24–94	24–92
Valid responses n (%)	5811 (95.7)	6006 (96.3)	6051 (97.1)	6132 (96.6)
Gender n (%)				
Female	5795 (95.4)	5998 (96.2)	6023 (96.6)	6087 (95.9)
Male	44 (0.7)	45 (0.7)	40 (0.6)	41 (0.6)
Missing/unknown*	236 (3.9)	191 (3.1)	170 (2.7)	217 (3.4)
Race/ethnicity [†] n (%)				
American Indian/Intuit	19 (0.3)	21 (0.3)	22 (0.4)	34 (0.5)
Asian/Pacific Islander	59 (1.0)	60 (1.0)	62 (1.0)	78 (1.2)
Black/African American	224 (3.7)	229 (3.7)	199 (3.2)	229 (3.6)
Caucasian/Euro-American	5303 (87.3)	5313 (85.2)	4524 (72.6)	5637 (88.8)
Hispanic/Latina	105 (1.7)	104 (1.7)	103 (1.7)	109 (1.7)
Other	35 (0.6)	37 (0.6)	32 (0.5)	11 (0.2)
Missing/unknown*	330 (5.4)	470 (7.5)	191 (3.1)	258 (4.1)
Highest academic degree n (%)				
Diploma	300 (4.9)	295 (4.7)	268 (4.3)	279 (4.4)
Associate	305 (5.0)	290 (4.7)	279 (4.5)	289 (4.6)
Bachelor's	1031 (17.0)	1015 (16.3)	992 (15.9)	1755 (27.7)
Master's	3924 (64.6)	4128 (66.2)	4237 (68.0)	3413 (53.8)
Doctorate	248 (4.1)	265 (4.3)	270 (4.3)	285 (4.5)
Missing/Unknown*	267 (4.4)	241 (3.9)	187 (3.0)	324 (5.1)

*Includes invalid as well as “no” response.

[†]Multiple responses possible for 2001–2003.

apply.” Where multiple responses are possible, the total percentage may exceed 100%.

RESULTS

Demographics

CNMs/CMs responding to member surveys during 2000 to 2003 were predominantly female, 47 years of age, and Caucasian/Euro-American; most held graduate degrees in nursing and had been certified (on average) for 12 years (Table 1). These characteristics vary little from those reported as typical in 1995 to 1999.³

There were 18 CM members in 2003. This figure represents less than one half (48.6%) of the 37 CMs who were certified by the ACNM Certification Council, Inc. (ACC) over the period 1997 through 2003 (personal correspondence, John Mirone, Executive Director, ACNM Certification Council, Inc., February 2004).

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The proportion of CNM/CM respondents who identified themselves as midwives of color changed little over time, although total numbers increased. In 1999, a total of 422 (7.2%) CNM/CM respondents indicated they were midwives of color.³ In 2003, the total number rose to 446, but the percentage (7.0%) remains very similar to 1999 findings.³ Member numbers have increased in every reported ethnic group, but proportionately, ethnic diversity among ACNM members demonstrates little change (Table 1).

Gender also demonstrates little change over time; the membership remains predominantly female. Only 41 (0.6%) of the responding CNM/CM members in 2003 indicated they were male, representing a slight decrease from the number of males reported in 1999³ (Table 1).

The percentage of CNMs/CMs reporting their highest university credential as a bachelor's degree varied during 2000 to 2003. In 2000, only 17% of responding CNMs/CMs identified a bachelor's degree as their highest degree. This is slightly lower than that reported in 1999 (18.0%).³ The proportion of CNMs/CMs indicating a bachelor's degree as their highest degree decreased to 16.3% in 2001, and to 15.9% in 2002, but rose to 27.7% in 2003 (Table 1).

The percentage of CNMs/CMs reporting a master's degree as their highest degree decreased from 67.8% in 1999³ to 64.6% in 2000. This proportion rose during 2001 and 2002 to 66.2% and 68.0%, respectively, but then declined in 2003 to 53.8%.

The percentage of CNMs/CMs indicating their highest

Table 2. Disciplines Other Than Nursing in Which ACNM Members Hold Master's or Doctoral Degrees (includes student members)

	2000 n (%)	2001 n (%)	2002 n (%)	2003 n (%)
Master's degree categories*				
Anthropology	8 (0.1)	6 (0.1)	6 (0.1)	5 (0.1)
Business	20 (0.3)	19 (0.3)	22 (0.4)	16 (0.3)
Counseling/psychology	23 (0.4)	23 (0.4)	24 (0.4)	20 (0.3)
Education	38 (0.6)	40 (0.6)	36 (0.6)	33 (0.5)
Health-related	35 (0.6)	41 (0.7)	36 (0.6)	29 (0.5)
Midwifery	13 (0.2)	29 (0.5)	28 (0.4)	36 (0.6)
Public Health	274 (4.5)	279 (4.5)	275 (4.4)	263 (4.1)
Science	205 (3.4)	204 (3.3)	200 (3.2)	169 (2.7)
Sociology	5 (0.1)	7 (0.1)	8 (0.1)	7 (0.1)
Other†	67 (1.1)	72 (1.2)	67 (1.1)	40 (0.6)
Doctoral degree categories				
Anthropology	5 (0.1)	4 (0.1)	3 (0.1)	4 (0.1)
Business	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)
Education	20 (0.3)	20 (0.3)	19 (0.3)	18 (0.3)
Health-related	4 (0.1)	4 (0.1)	4 (0.1)	6 (0.1)
Law	13 (0.2)	17 (0.3)	16 (0.2)	16 (0.2)
Medicine	3 (0.1)	3 (0.1)	3 (0.1)	3 (0.1)
Public Health	24 (0.4)	25 (0.4)	24 (0.3)	27 (0.4)
Science	4 (0.1)	2 (0.1)	3 (0.1)	2 (0.1)
Sociology	5 (0.1)	4 (0.1)	4 (0.1)	5 (0.1)
Other	31 (0.5)	34 (0.5)	31 (0.5)	39 (0.6)‡

*Multiple responses possible for all years.

†Only named categories within "Other" used.

‡"Other" was recoded for 2003 to remove errors.

degree was a doctoral degree in nursing or another discipline varied only slightly from 2000 (4.1%) to 2003 (4.5%) (Table 1). These proportions have changed little since 1999 when it was reported that 4.3% of CNM/CM members held doctoral degrees as their highest degree.³ Doctoral degrees included in this analysis are doctor of philosophy (PhD), doctor of public health (DrPH), doctor of nursing science (DNS and DNSc), nursing practice doctorate (ND), doctor of education (EdD), medical doctor (MD), and juris doctorate (JD) designations.

Disciplines other than nursing in which respondents held a graduate degree are numerous, although public health is the most popular choice for both master's and doctoral degrees (Table 2). Members responding to the item about earned education degrees also had the option of writing in the field in which the advanced degree was held. For purposes of analysis, these answers were grouped by categories under a broader, comprehensive classification. For example, respondents indicating that their degrees were from physician assistant programs or in health administration or health sciences were regrouped into the broader classification of "health-related" degrees. The proportion of members that hold either a master's or doctoral degree increased from 68.7% in 2000 to 72.3% in 2002 but then decreased to 58.3% in 2003 (Figure 1).

The demographic profile of student members varies only slightly from that reported for CNMs/CMs. Student nurse-midwife (SNM)/student midwife (SM) responses to member surveys during 2000 to 2003 indicate that the typical

midwifery student is female, Caucasian/Euro-American, and on average is 36 years old. The predominant degree held by students is a bachelor's degree in nursing (BSN) (Table 3).

Certification, Employment, and Practice Patterns

Information about the number of years that CNMs/CMs have been ACNM/ACC-certified provides a context for analyzing employment and practice patterns. In 2000, CNM/CM respondents reported an average of 12.3 years of

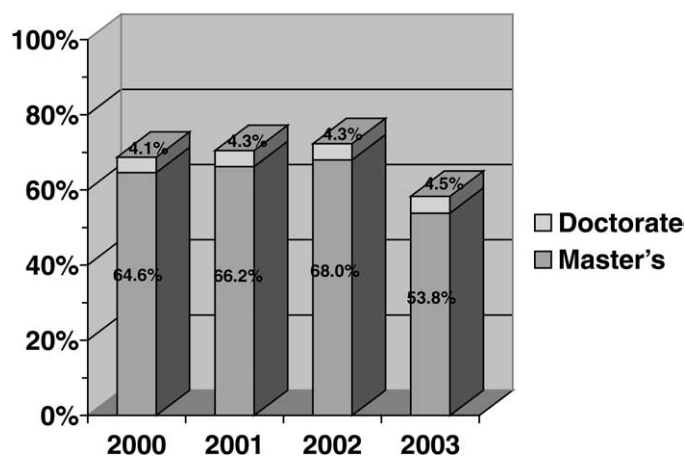


Figure 1. Percentage of master's and doctoral degrees held by ACNM CNM/CM member respondents (multiple responses not possible).

Table 3. Demographic Characteristics of SNMs/SMs, 2000–2003

Characteristic	2000	2001	2002	2003
Number of students responding	728	811	697	579
Age (y)				
Mean (SD)	36.75 (8.4)	36.5 (8.6)	37.11 (8.4)	34.88 (8.8)
Range	23–61	22–60	23–58	23–58
Valid responses n (%)	452 (62.1)	520 (64.1)	445 (63.8)	301 (52.0)
Gender n (%)				
Female	462 (63.5)	518 (63.9)	435 (62.4)	302 (52.2)
Male	3 (0.4)	3 (0.4)	1 (0.1)	1 (0.2)
Missing/unknown*	263 (36.1)	290 (35.8)	261 (37.4)	276 (47.7)
Race/ethnicity n (%)†				
American Indian/Intuit	6 (0.8)	3 (0.4)	6 (0.9)	4 (0.7)
Asian/Pacific Islander	6 (0.8)	4 (0.5)	9 (1.3)	9 (1.6)
Black/African American	24 (3.3)	10 (1.2)	26 (3.7)	30 (5.2)
Caucasian/Euro-American	393 (54.0)	207 (25.5)	381 (54.7)	253 (43.7)
Hispanic/Latina	12 (1.6)	5 (0.6)	13 (1.9)	10 (1.7)
Other	6 (0.8)	5 (0.6)	3 (0.4)	1 (0.2)
Missing/unknown*	281 (38.6)	577 (71.1)	238 (34.1)	272 (47.0)
Highest academic degree n (%)				
Diploma	4 (0.5)	8 (1.0)	7 (1.0)	3 (0.5)
Associate	7 (1.0)	10 (1.2)	14 (2.0)	9 (1.6)
Bachelor's	337 (46.3)	411 (50.7)	343 (49.2)	279 (48.2)
Master's	85 (11.7)	94 (11.6)	91 (13.1)	10 (1.7)
Doctorate	5 (0.7)	8 (1.0)	8 (1.1)	5 (0.9)
Missing/Unknown*	290 (39.8)	280 (34.5)	234 (33.6)	273 (47.2)

*Includes missing and “no” response.

†Multiple responses possible 2001–2003.

certification. This average declined slightly to 11.6 years in 2001 and remained stable for both 2002 and for 2003 (11.8 average number of years certified for both years). This 4-year trend represents a slight decrease in the average number of years certified from 12.1 years reported in 1999.³

The majority of CNMs/CMs responding to surveys during 2000 to 2003 indicated they were employed either full- or part-time, with most reporting they were employed full-time (Figure 2). The member surveys during these

years did not provide precise definitions for either full-time or part-time employment; therefore, it is not possible to correlate hours worked with salary earned. The total percentage of CNMs/CMs indicating they worked full-time in their primary employment decreased from 65.5% in 2000 to 57.7% in 2003. The percentage of CNMs/CMs reporting they were employed part-time in their primary employment during these years also decreased from 17.1% in 2000 to 16% in 2003.

Unemployed and retired CNM/CM responses were combined into 1 group in the membership database and represented 2.9% of CNMs/CMs responding in 2000; 2.6% in 2001; 2.7% in 2002; and 3.1% in 2003 (Figure 2). The size of this group has remained fairly constant, with the variation hovering around 0.5%.

CNMs/CMs continue to identify hospitals as their largest primary employer; however, this percentage declined from a reported 30% in 1991¹ to 27.2% in 2003. Physician offices (defined as IPA, PPO, or Solo Physician group) continue to be the second largest employer of CNMs/CMs, although in 2002, physician groups were indicated slightly more often (29.4%) as the primary employer than were hospitals (28.4%). However, these proportions did not hold for 2003, when 27.2% of CNMs/CMs indicated hospitals as their primary employer and 24.9% indicated physician groups as their primary employer. State and local governments employed the lowest proportion of midwives (Table 4).

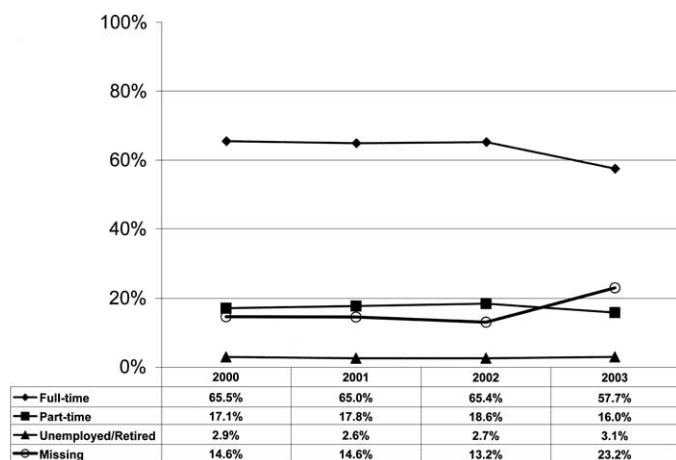


Figure 2. Employment patterns of CNM/CM member respondents, 2000–2003.

Table 4. Primary Employers of ACNM CNM/CMs, 2000–2003

	2000 n (%)	2001 n (%)	2002 n (%)	2003 n (%)
Primary Employer				
Hospital/Medical Center	1828 (30.1)	1774 (28.5)	1768 (28.4)	1726 (27.2)
Health Maintenance Organization (HMO)	307 (5.1)	270 (4.3)	234 (3.8)	N/A*
Educational Institution	435 (7.2)	458 (7.3)	479 (7.7)	437 (6.9)
Federal Government/Military	189 (3.1)	203 (3.3)	182 (2.9)	164 (2.6)
IPA/PPO/Solo Physician Group	1627 (26.8)	1720 (27.6)	1835 (29.4)	1582 (24.9)
IPA/PPO/Solo Midwifery Group	331 (5.4)	390 (6.3)	431 (6.9)	394 (6.2)
State/Local Government	81 (1.3)	93 (1.5)	100 (1.6)	N/A*
Community Health Center	237 (3.9)	287 (4.6)	306 (4.9)	299 (4.7)
Other non-profit agency	138 (2.3)	150 (2.4)	176 (2.8)	153 (2.4)

*In 2003, categories of "HMO" and "State and local government" were discontinued and recoded into the category "Other."

IPA/PPO = Independent Practice Association/Preferred Provider Organization.

Midwifery-Related Income

CNMs/CMs were asked to identify their salary range for all midwifery-related income; thus, equating salary to full- or part-time work or to types of responsibility is not possible, nor is it possible to identify an average salary. Although there has been no change in the modal salary since 1999,¹ there has been a trend of decreasing proportions in the \$50,000 to \$59,000 and \$60,000 to \$69,000 ranges, and increasing proportions in the \$70,000 to \$79,000 and higher salary ranges. During 2000 to 2003, the largest proportion of CNM/CM respondents indicated that their midwifery-related salary was in the range of \$60,000 to \$69,000, which was the modal salary range identified in 1999.³ These responses may not reflect the total income of a midwife because respondents were asked to identify only midwifery-related income. The salary ranges reported by CNMs/CMs are shown in Table 5.

Work-Related Responsibilities

The majority of CNM/CM respondents identified a broad scope of clinical midwifery practice as their primary responsibility in primary employment during 2000 to 2003 (newborn and primary care were not specified in the surveys) (Table 6). The second largest category of identified primary responsibilities in primary employment was

antepartal and gynecologic care (without the intrapartal component) and the proportion of responses ranged from 5.4% in 2000 to 6.2% in 2003. The third largest category is midwifery education and administration, 4.4% and 3.6%, respectively, in 2003 (Table 6). Research is cited least often as a primary responsibility, with only 0.8% responses in 2003. These responses show only subtle changes from those reported in 1999.³

Member CNMs/CMs were also asked to indicate all other responsibilities in their primary or secondary employment. Multiple responses were possible; thus, the total number of responses does not sum to 100%. The modal response indicates that midwifery education was the most frequent additional responsibility in either primary or secondary employment in 2003 (17.5%). Ten percent of CNMs/CMs in 2003 indicated that the broad scope of midwifery practice was another responsibility. This was only slightly higher than administration (9.3%) (Table 6).

Birth Sites

The majority of 2000 to 2003 CNM/CM respondents indicated that attending births was a responsibility in either their primary or secondary employment and that the hospital was the site where births were attended most often (Table 7). Birth centers were identified as the second most

Table 5. Reported Salary Ranges of Midwifery-Related Income, 2000–2003.

Salary Range	2000 n (%)	2001 n (%)	2002 n (%)	2003 n (%)
<\$30,000	455 (7.5)	475 (7.6)	478 (7.7)	398 (6.3)
\$30,000–39,000	317 (5.2)	328 (5.3)	316 (5.1)	297 (4.7)
\$40,000–49,000	450 (7.4)	468 (7.5)	416 (6.7)	373 (5.9)
\$50,000–59,000	1022 (16.8)	962 (15.4)	858 (13.8)	721 (11.4)
\$60,000–69,000	1343 (22.1)	1446 (23.2)	1433 (23.0)	1298 (20.5)
\$70,000–79,000	864 (14.2)	934 (15.0)	1040 (16.7)	1113 (17.5)
\$80,000–89,000	297 (4.9)	330 (5.3)	433 (6.9)	504 (7.9)
≥\$90,000	233 (3.8)	255 (4.1)	318 (5.1)	392 (6.2)
No midwifery income	753 (12.4)	722 (11.6)	604 (9.7)	556 (8.8)

Table 6. Primary Responsibility in Primary and/or Secondary Employment of CNMs/CMs, 2000–2003

	2000 n (%)	2001 n (%)	2002 n (%)	2003 n (%)
Primary employment domain of practice				
AP/IP/GYN	3822 (62.9)	4003 (64.2)	4088 (65.6)	4021 (63.4)
AP/GYN	330 (5.4)	355 (5.7)	363 (5.8)	393 (6.2)
AP	72 (1.2)	79 (1.3)	80 (1.3)	77 (1.2)
IP	117 (1.9)	116 (1.9)	115 (1.8)	127 (2.0)
GYN	148 (2.4)	169 (2.7)	193 (3.1)	203 (3.2)
Midwifery education	245 (4.0)	277 (4.4)	292 (4.7)	282 (4.4)
Administration	224 (3.7)	223 (3.6)	224 (3.6)	231 (3.6)
Research	63 (1.0)	59 (0.9)	53 (0.9)	49 (0.8)
Secondary employment domain of practice				
AP/IP/GYN	412 (6.8)	503 (8.1)	581 (9.3)	632 (10.0)
AP/GYN	125 (2.1)	144 (2.3)	169 (2.7)	161 (2.5)
AP	77 (1.3)	79 (1.3)	96 (1.5)	89 (1.4)
IP	101 (1.7)	111 (1.8)	118 (1.9)	122 (1.9)
GYN	134 (2.2)	141 (2.3)	147 (2.4)	157 (2.5)
Midwifery education	1017 (16.7)	1067 (17.1)	1091 (17.5)	1109 (17.5)
Administration	584 (9.6)	630 (10.1)	608 (9.8)	591 (9.3)
Research	220 (3.6)	237 (3.8)	243 (3.9)	2332 (3.7)

AP = antepartum; IP = intrapartum; GYN = gynecology.

common site, although the trend of attending births in birth centers appears to continue to decline. Eleven percent of 1995 CNM/CM respondents indicated they attended births at birth centers,³ whereas in 2003, only 6.4% indicated they attended births in birth centers. The site where CNMs/CMs indicated they attended births least often was the home (3.7% in 2003) (Table 7).

Licensure Data

CNMs/CMs indicated several pathways to authorization for practice of the profession. The categories of active licenses CNM/CM members reported they held include registered nurse (RN), CM, CNM, and nurse practitioner (NP). Midwifery practice authorization was reported in all 50 states plus American Samoa, Canada, Guam, Puerto Rico, and the Virgin Islands. CMs reported holding some type of license in 4 states: Nevada, New York, Ohio, and Pennsylvania.

DISCUSSION

The findings presented in this article pertain only to the population of CNMs/CMs and student midwives who are members of ACNM and, therefore, the results cannot be generalized. Member data are self-reported with no validation of data at the time of data entry; thus, distinct limitations to the interpretation of these findings must be considered.

Members of ACNM are primarily CNMs; thus, the findings of this analysis reflect demographic characteristics that are more descriptive of CNMs than CMs. However, for profiling characteristics of its members, the findings are relevant because the number of certified midwife ACNM members is small. A significant observation is that the typical ACNM member's demographics have experienced little change from those reported for the years 1995 to 1999.³ Members remain predominantly white and female with their age averaging in the mid-40s. These demographic

Table 7. Numbers of CNMs/CMs Attending Births, Location, and Number of Sites Where Births Are Attended, 2000–2003

	2000 n (%)	2001 n (%)	2002 n (%)	2003 n (%)
Attend births*	4312 (70.98)	4482 (71.9)	4558 (73.13)	4546 (71.65)
Birth sites [†]				
Hospital	4110 (67.7)	4276 (68.6)	4366 (70.0)	4368 (68.8)
Birth center	395 (6.5)	417 (6.7)	417 (6.7)	407 (6.4)
Home	212 (3.5)	240 (3.8)	240 (3.9)	232 (3.7)
Number of sites attending births				
0	1763 (29.0)	1752 (28.1)	1675 (26.9)	1799 (28.4)
1	3936 (64.8)	4074 (65.4)	4136 (66.4)	4133 (65.1)
2	347 (5.7)	365 (5.9)	379 (6.1)	365 (5.8)
3	29 (0.5)	43 (0.7)	43 (0.7)	48 (0.8)

*Only "Yes" responses reported.

[†]Multiple responses possible.

ics mirror those reported by the American Academy of Nurse Practitioners (AANP) in 2003 for nurse practitioners (NPs); the average nurse practitioner is female (95%) and 47 years old.⁴

The number of CNMs/CMs with a bachelor's degree continues to increase, as does the number of CNM/CM members obtaining doctoral degrees. With the exception of the year 2003, the percentage of CNMs/CMs indicating a master's degree as their highest degree increased almost 4%, from 64.4% in 2000 to 68.0% in 2002. The decrease in the number of master's prepared CNMs/CMs reported in 2003 may reflect a smaller number of SNMs/SMs during the prior year (2002), thus accounting for fewer graduates of midwifery programs offered at the graduate level; or the percentage may have been reduced by the number of CNMs/CMs with master's degrees who went on to earn doctoral degrees, thus shifting their response to doctoral degree as the highest degree held (Figure 1).

The percentage of CNMs/CMs reporting they held a doctoral degree increased in each of the 4 years of this report and, in fact, rose to 4.5% in 2003 (Figure 1). However, the reported figure of 247 doctorally prepared CNMs/CMs recorded in the membership database in 2003 probably underreports the actual number of CNMs/CMs who hold doctorates. Combining information recorded in the database with other names culled from a variety of sources, the ACNM Division of Research (DOR) has independently compiled a larger list of doctorally prepared CNMs/CMs, a substantial proportion of whom have been verified as holding doctoral degrees. Therefore, it is likely that more CNMs/CMs hold doctoral degrees than what is recorded in the 2003 database. The uncertainty of the actual number of CNMs/CMs (including nonmembers) who hold doctoral degrees suggests the need for a national survey focusing on education levels of CNMs/CMs.

By comparison, findings from the analysis of the 2003 AANP member survey revealed that 85.8% of NP respondents indicated a master's degree as their highest degree, and 4.6% indicated a doctoral degree as their highest degree (n = 5036).⁵ An important distinction to make when comparing the findings from each of these reports is that currently the minimum requirement for entry into practice as a CNM/CM is the baccalaureate degree, whereas many advanced practice specialties require a minimum of a master's degree. For example, family nurse practitioner (FNP) programs are only offered at the master's level because a master's degree is required for eligibility for the certification examination. This may account for the higher percentage of NPs with master's degrees. Currently, the ACNM Division of Accreditation requires that ACNM-accredited midwifery programs be based at the baccalaureate or postbaccalaureate level.

The proportions of CNMs/CMs with doctoral degrees are very similar to the proportions of doctorally prepared NPs. This may indicate that midwives are highly self-motivated

to continue formal learning even though it is not a requirement of the discipline.

The total number of CNMs/CMs ever certified (including retroactive certification) is 10,160 as of April 2004 (personal correspondence, John Mirone, Executive Director, ACNM Certification Council, Inc., April 2004). Therefore, the 2003 membership data of 6345 CNMs/CMs represents 62% of those ever eligible. However, because the figure of 10,160 total CNMs/CMs ever certified includes persons who are deceased, the percentage who are members is underreported.

The majority of CNMs/CMs identified full-scope clinical midwifery practice as their primary responsibility in their primary employment; yet, the total percentage of CNMs/CMs reporting that they worked full- or part-time in their primary employment decreased. This finding is compatible with the finding that fewer midwives identified hospitals as their primary employer. Although hospitals remain the primary employer of responding CNMs/CMs, the data suggest that fewer midwives may be working in the clinical field of midwifery. This could be due to an aging workforce (the average age of CNMs/CMs increased from 43 in 1991¹ to 47 in 2003), unavailability of affordable professional liability insurance, restraint of trade issues, or a declining interest in the clinical practice of midwifery. However, the finding that fewer CNMs/CMs indicate they are working full- or part-time in the field of midwifery may also mean that more CNMs/CMs are working in other fields. The survey did not inquire about the number of part-time jobs that respondents held or about employment outside of midwifery. A practice-focused survey of ACNM members would be useful to understand the meaning of these findings.

The majority of CNMs/CMs responded that attending births was a responsibility in either their primary or secondary employment. The number of CNM-attended births was recently reported for 3 of the years included in this analysis. In 2000, CNMs attended 7.3% of all live births and 9.6% of all vaginal births. These numbers rose to 7.6% and 10.0%, respectively, for 2001.⁶ The proportion of vaginal births attended by CNMs exceeded 10% in 2002.⁷

The hospital continues to be the primary site for attending births. Kovner and Burkhardt³ suggested that the decreasing trend of birth attendance in birth centers observed in the 1995 to 1999 data may have been due to a revision on the data collection form; however, this trend continues to be observed in the 2000 to 2003 data. In 1995, 11.1% of respondents indicated that they attended births in a birth center and by 1999, the number decreased to 8.2%.³ The percentage of midwives indicating that they attended births in birth centers declined to a low of 6.4% in 2003. It would be useful to know if fewer birth centers were operating during these years and/or if fewer midwives were employed by birth centers. It may also be that fewer midwives who are employed by or who attend births in birth centers are

members of ACNM. The National Association of Childbearing Centers (NACC) is the nation's most comprehensive resource on birth centers,⁸ and, as such, many birth center midwives may belong to NACC and not to ACNM, resulting in an underreporting of CNMs/CMs who attend births in birth centers. In addition, as Kovner and Burkhardt³ point out, there are varying definitions of a birth center. To some, the name implies a free-standing birth center, whereas to others it means a birth center in a hospital. Without a clear-cut definition, it is not possible to clearly interpret the meaning of the observed decline.

CNMs/CMs reported a range of midwifery-related income from less than \$30,000 through greater than \$90,000 annually. It is not possible to correlate these figures with full- or part-time work because the survey instrument offers no definition for full- or part-time work status. However, it would appear that the salaries of midwives are on the increase. Although the modal salary (\$60,000 to \$69,000) is unchanged from prior years, more CNMs/CMs indicated salaries in the \$70,000 range and higher. Similarly, salary ranges reported for NPs ranged from \$30,000 to \$165,000, with an average salary of \$69,203 reported in 2003.⁹ ACNM recently surveyed its members regarding their compensation and benefits. Data from this survey are currently being analyzed, and the findings will provide a more robust description of the salaries and benefits earned by ACNM members.

Student profiles during 2000 to 2003 vary only slightly from student demographic characteristics reported for 1995 to 1999.³ Reasons for these variations may be due to fluctuation in the numbers of students responding to the surveys during 2000 to 2003 and the amount of missing data and invalid responses documented in the database. For example, it appears that the number of Caucasian/Euro-American students decreased significantly in 2001; however, this variable had an unusually high number of invalid responses (71.1%), making it impossible to interpret the meaning of this finding.

Student members of ACNM are about 10 to 12 years younger than their CNM/CM counterparts. The lower average age in 2003 may be due to the larger number of invalid responses identified in the database. The younger average age of SNMs/SMs and the fact that, as expected, most students do not have master's or doctoral degrees, are the only different demographic characteristics reported by SNMs/SMs and CNM/CMs.

The number of male student members declined from 3 in 2000 to only 1 in 2003. The number of reported male SNMs/SMs is historically quite low as is the reported number of male CNMs/CMs.¹⁻³ A qualitative study using focused interviews might provide insight as to why these numbers remain low.

The ethnicity of student members reflects similar findings as those identified for CNM/CM respondents.

Although ethnic diversity has increased in absolute numbers, proportionately, there has been little increase in the diversity of members. The Department of Health and Human Services, Division of Nursing has established increasing racial diversity as one of its grant program priorities, and several nurse-midwifery programs have received funding under this mechanism to promote their individual diversity objectives.

ACNM has recently added a senior staff research position to the national office staff. Several new research studies are planned or in progress. Additional studies are needed, which focus on particular variables such as practice patterns and difficulties, reimbursement, educational patterns, diversity, and member recruitment strategies. A study that collects data from both ACNM members and nonmembers will provide a more comprehensive profile of CNMs/CMs and student midwives in the nation and, thus, greater insight into the practice and profession of midwifery. Further analysis of the membership database will explore associations among variables such as age, employer type, and salary range.

In conclusion, the findings of the 2000 to 2003 ACNM membership survey provide insight into the characteristics of its members. These findings are useful on many levels, including education, practice, policy, and health care.

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