2008 Colorado Registered Nurse Workforce Survey

Survey Findings

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Introduction

In 2008, the Colorado Health Institute (CHI) conducted a survey of Colorado's licensed registered nurses (RNs) to increase policymakers' understanding of the education, training and practice issues that currently characterize the RN workforce in Colorado. A survey instrument was developed based on input from nurse educators and clinicians in focus groups, key informant interviews and a larger group forum of nursing leaders. The survey instrument was cognitively tested with 47 nurses working in a variety of practice settings. A literature review of relevant nursing workforce research complemented the survey development process. The objectives of the 2008 RN Workforce Survey were to obtain information about nurses' perceptions of:

- The quality and appropriateness of their basic RN preparation in preparing them for their first clinical position;
- The adequacy of current workplace retention and career advancement incentives;
- Their satisfaction with professional nursing practice;
- Pursuing nurse educator positions; and,
- Future professional plans.

Survey questionnaires were mailed to a stratified random sample of 3,000 Colorado RNs licensed to practice in Colorado as of October 2008. The survey response rate was 51 percent (1,457 returned surveys of the 2,835 mailed). CHI added weights to the survey data to correct for non-response bias based on gender and geography and to ensure that the sample estimates would be representative of the 49,167 actively licensed RNs in Colorado.[1]

NATIONAL PERSPECTIVE ON THE RN WORKFORCE

All states' nurse licensure boards, including the District of Columbia and the U.S. territories, require nursing students to graduate from an approved RN program and to pass the national licensing exam known as the National Council Licensure Examination for Registered Nurses (NCLEX-RN).[2]

Additionally, twenty-three states, including Colorado, currently participate in the Nurse Licensure Compact Agreement that allows a nurse who is licensed and has a permanent residence in one of the participating states to practice in another participating state without obtaining an additional license.[3] All states require periodic licensure renewal which usually includes completion of some number of continuing education credits.[4]

National RN workforce data are collected and published by the federal Health Resources and Services Administration (HRSA) every four years. Additionally, the Bureau of Labor Statistics (BLS) annually provides updated national data about the demographic profile and salaries of the active RN workforce. The most recent RN workforce data published by HRSA in 2004 found that:

- There were approximately 2.5 million licensed RNs in the U.S. thus comprising the largest single health professional occupation; [5]
- More than 41percent of RNs were 50 years of age or older, while only 8 percent were under the age of 30. This is compared to 1980 when one-quarter of RNs were under age 30; [6]
- Only 5.8 percent of the RN workforce was male[7];
- RNs of Hispanic or Latino ethnicity were the most underrepresented racial/ethnic group (1.7%) when compared to their prevalence in the general population (14.1%); [8]

- Approximately 83 percent of licensed RNs were employed as an RN, representing the highest percentage in the workforce since 1980. [9]

Further, the Bureau of Labor Statistics reports that in 2006 (the most recent data available) approximately 21 percent of RNs were working part-time and 7 percent were working in more than one position.[10]

RN education and training

RNs have a choice of educational preparation—a bachelor's degree in nursing, an associate degree in nursing or a diploma in nursing. Graduates from any of these three programs, if accredited, are eligible to apply for an RN license. National RN educational preparation statistics reveal that:
- RNs with a master or doctorate degree increased by 37 percent between 2000 and 2004; [11]
- Approximately 52 percent of all RNs were employed in a health-related job prior to attending their basic nursing education when surveyed in 2004; [12]
- Between 1980 and 2004 the percentage of RNs who graduated from a diploma program dropped from 63 percent to 25 percent; [13] and,
- RNs receiving their initial RN education from an associate degree program increased from 19 percent to 42 percent and those with a baccalaureate or higher degree increased from 17 percent to 31 percent between 1980 and 2004. [14]

Further, among all nursing programs in 2006 the following matriculation options were offered across the country: [15]
- 850 offered an associate degree (ADN)
- 709 offered a bachelor of science in nursing degree (BSN)
- 629 offered an RN to BSN
- 448 offered a master of science degree in nursing (MSN)
- 197 offered an accelerated BSN
- 149 offered an RN to MSN
- 108 offered a doctoral degree in nursing
- 70 offered a nursing diploma
- 58 offered an accelerated BSN to doctoral degree

Financial support for nursing education is currently offered through a range of innovative programs developed over the past decade. The Nursing Education Loan Repayment Program is a financial incentive program sponsored by the federal government for RNs who work fulltime in a health care facility with a critical shortage of nurses. Under this program, RNs are eligible to have 60 percent of their nursing education loans repaid with an additional 25 percent possible if certain criteria are met.[16] Additionally, the Nurse Scholarship Program provides scholarships to students attending a nursing program in exchange for a payback of at least two years in a health care facility deemed to have a critical shortage of nurses.[17]

Advanced Practice Nurses (APNs) are RNs who have completed a master's degree in nursing and usually additional training to become certified by one of several national certification programs. APNs include nurse practitioners, nurse anesthetists, nurse midwives and clinical nurse specialists. Most states

require APNs to be certified or registered with the state's nurse licensing board. In 2004, only 8 percent of licensed RNs nationwide were certified as an APN. In 2006 among U.S. nursing schools there were:

- 342 master's and post-master's nurse practitioner training programs;
- 230 clinical nurse specialist training programs;
- 106 nurse anesthetists training programs; and,
- 39 nurse midwife training programs. [18]

Nursing faculty shortages: A blocked pipeline

A significant obstacle to increasing the number of RNs in the workforce involves nurse faculty shortages, particularly for BSN and MSN trained nurses. In addition, insufficient numbers of clinical training sites for nursing students adds to this blockage. The American Association of Colleges of Nursing's report, *2007-08 Enrollment and Graduation in Baccalaureate and Graduate Programs in Nursing,* states that U.S. nursing schools turned away 49,948 qualified applicants to BSN and graduate nursing programs in 2008 due to an insufficient number of faculty, clinical training sites, classroom space and clinical preceptors as well as budgetary constraints. Almost two-thirds of nursing schools responding to the 2008 survey cited faculty shortages as a primary reason for not accepting qualified applicants into their nursing programs. [19]

Factors related to the nurse faculty shortage include:

- In 2006, the average age of nursing faculty in BSN and graduate degree programs was 51.5 years and the projected rate of retirement exceeded the projected rate of replacement. [20]
- An important factor that influences the shortage of nursing faculty is that "nursing is one of the few professions in which new graduates are not directed to pursue graduate education immediately, but rather are encouraged to obtain clinical experience before considering a faculty position." (Stevenson, p. 24) [21]
- Studies report that half of the nation's 32,000 nurse faculty expects to retire within the next 10 years and 21percent expect to retire within the next five years (Kaufman, 2007). [22]
- In 2006, approximately 35 percent of all budgeted, full-time nursing faculty positions were reported as vacant. [23]
- The 2005 American Association of University Professors survey of faculty compensation reported the following average salaries in BSN programs in 2004–05: full professor $74,408, associate professor $57,468 and assistant professor $47,834. [24] As will be reported later in this report, RNs in clinical practice with commensurate levels of experience generally earn significantly more than if they were working in an academic setting.

RNs in the workforce

The current recession that has characterized the U.S. economy since the fall of 2008 appears to be easing the nursing shortage in some regions of the country. Factors most often cited in this stabilization of the nursing workforce include: [25]

- Retired nurses are returning to work
- Nurses are delaying their retirement
- Some nurses previously working part-time are taking fulltime positions
- Nurses are working extra shifts to supplement their household income

In 2006, the primary employers of RNs nationally included: [26]

- Hospitals (59%)
- Physician offices (8%)
- Home health care agencies (5%)
- Skilled nursing facilities (5%)
- Nurse employment agencies (4%)
- Outpatient facilities (3%)
- All other including government agencies, education, social service agencies, etc. (16%)

In May 2006 the median annual earnings of RNs was $57,280. The highest 10 percent earned more than $83,440, while the lowest 10 percent earned less than $40,250.

Table 1. Median RN earnings by work setting, U.S., 2006

Employment services (nurse registries)	$64,260
General medical and surgical hospitals	$58,550
Home health care services	$54,190
Offices of physicians	$53,800
Nursing care facilities	$52,490

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, 2008-09.

THE RN WORKFORCE: A COLORADO PERSPECTIVE

Overview

The number of licensed RNs in Colorado in 2008 was approximately 47,100. [27] Colorado is one of 23 states that are currently participating in the Nurse Licensure Compact. [28] Because the board of nursing does not have a way to identify how many nurses are licensed in other states and working in Colorado, it is not possible to have a precise estimate of the number of RNs that are actually working in Colorado at any point in time.

The Colorado Center for Nursing Excellence (CCNE), a nonprofit organization that focuses on developing Colorado's nursing workforce, has developed a number of initiatives to support and expand RN educational programs, leadership development and employment opportunities. The CCNE is currently coordinating the following initiatives that are focused on strengthening the nursing workforce in Colorado: [29]

- A HRSA-sponsored project to provide frontline nurses with the additional skills needed to lead and manage staff nurses;
- The Nursing Faculty Recruitment and Retention Program which includes a loan forgiveness program for faculty and a series of educational courses on nurse faculty skills development;
- The Colorado Nursing Student Clinical Placement Program which partners with more than 75 clinical sites to coordinate 145,000 clinical hours annually; and,
- The Senate Bill 08-188 Staff Nurse Pilot Project which called for the design of a pilot program to identify ways staff nurses can participate in patient care decision-making in hospital settings.

Colorado RN education and training
In 2009, the Colorado Board of Nursing (BoN) reports that 24 ADN Programs and 11 BSN Programs are providing basic RN preparation in Colorado. [30] The Colorado BoN requires all programs to submit an annual report which includes information about the clinical placements used by nursing programs. The most recent report published by the BoN (2007) provides the following curriculum information about Colorado's ADN and BSN programs: [31]

- The most difficult clinical placements to secure in both ADN and BSN programs are pediatrics, psychiatry and obstetrical care
- 35 percent of ADN and 30 percent of BSN programs use simulation training methods for clinical competency training.

CCNE has worked to expand clinical placements since 2006 and currently is assisting programs in securing approximately 15 percent of all nursing student clinical placements in the state. [32] In an effort to increase clinical faculty capacity, the center is using grant funds to develop models such as the University of Colorado's Clinical Scholar program, an educational/clinical practice partnership in which a practicing expert nurse employed in a clinical setting also holds a clinical appointment in the School of Nursing. The model provides continuity within the curriculum for obstetrics, pediatrics, medical-surgical nursing, community health nursing and nurse leadership and management. [33]

The University of Colorado Denver (UCD), College of Nursing, was the first school in the Rocky Mountain region to offer a Doctor of Nursing Practice (DNP) degree. Established in 2005, this advanced degree program provides a practice-focused doctorate that prepares graduates for clinical leadership roles as well as nurse faculty positions.[34]

UCD also offers a Clinical Educator Certificate Program consisting of three classes. These classes are open to degree-seeking students in any nursing graduate degree program as well as BSN or MSN prepared nurses not seeking an advanced degree. The certificate program is offered through the university's Office of Professional Development and Extended Studies. [35]

Mesa State College offers a unique program for students who are interested in progressing through various levels of nursing licensure. The Mesa State program is the only one in Colorado that encourages students to obtain an entry-level license, enter the workforce and then return for further nursing education. [36]

Overall, the pass rate of Colorado's RN graduates taking the national licensing exam (NCLEX)[37] in 2008 was higher than the national average of 70 percent for all candidates taking the exam. [38] Only one Colorado RN program reported a pass rate of less than 70 percent for its 2008 graduates.

Colorado's nurse faculty shortage
The 2004 Colorado Nursing Faculty Supply and Demand Study conducted by the Colorado Health Institute with funding from CCNE reported that Colorado's four-year nursing schools had 15 percent fewer faculty members than needed and that two-year nursing schools had a 25 percent shortage. [39]

In 2006, the Colorado State Legislature passed two bills to address the nurse faculty shortage. The Nursing Teacher Loan Forgiveness Program (SB136) which provides up to $20,000 in loan forgiveness for students pursuing a master's or doctoral degree in exchange for a five-year faculty commitment to a Colorado nursing program. The second program, the Nursing Faculty Fellowship Program (HB1269), was created to assist nursing schools recruit faculty by providing up to $10,000 a year for three years for nursing fellowship payments to help fill faculty vacancies. [40] Finally, CCNE initiated a new program in 2008, the Nursing Faculty Recruitment and Retention Program, which offers loan forgiveness to RNs that complete a series of educational courses on nursing faculty skills development. [41]

2008 COLORADO RN WORKFORCE SURVEY FINDINGS

Profile of Colorado RNs in 2008
- 92.8% were female
- 61.8% were 45 years or older
- 92.7% were White
- 86.2% resided in an urban area
- 83.3% were employed as an RN requiring an active license
- 57.5% were earning $50,000 or more per year
- 17.9 years was the average number of years working as an RN

Select characteristics of the RN workforce

The demographic characteristics of Colorado's RN workforce in 2008 did not mirror Colorado's population in the gender and race/ethnicity distribution of the profession. This is particularly stark with regard to Hispanic nurses who comprised only 3 percent of the nursing workforce while 20 percent of Colorado's population was Hispanic. Similarly, less than one percent of Colorado RNs were Black compared to 4 percent of Colorado's population.

Table 2. Gender and race/ethnicity characteristics of Colorado RNs compared to the 2008 Colorado population

Demographic characteristic	Colorado RNs	2008 Colorado population
Female	92.8%	49.6%
Male	7.2%	50.4%
White, non-Hispanic	92.7%	71.1%
Hispanic	3.4%	19.9%
Asian	1.6%	2.7%
Multi-racial/multi-ethnic	0.9%	1.9%
Native American	0.7%	0.1%
Pacific Islander	0.4%	0.1%
Black	0.3%	4.2%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q34-37 and U.S. Census Bureau.

Thirty-two percent of RNs in Colorado were 55 years of age or older as compared to 17 percent in the state's overall workforce and twice as many RNs were 65 years and older (~8%) compared to the state's overall workforce (~4%).

Table 3. Age profile and practice location of Colorado's licensed RNs

Characteristic	Colorado RNs (N=48,566)	2008 Coloradans in the workforce (ages 19 and older) [42]
34 years or younger	17.9%	35.8%
35-44 years	20.3%	23.2%
45-54 years	29.3%	23.7%
55-64 years	24.8%	13.7%
65 years or older	7.7%	3.5%
Urban	86.2%	NA
Rural	13.8%	NA

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q34-37 and U.S. Census

Colorado RNs in the workforce

Approximately 83 percent of Colorado RNs were employed in a position requiring an active RN license. The majority (61%) were working in an acute care facility. The focus of RNs primary nursing position was dominated by specialty care (33%) followed by general acute care (30%).

Table 4. Practice setting of licensed Colorado RNs

Practice setting	Percent (N=39,503)
Acute care facility	61.4%
Community-based practice setting	18.5%
Nursing home/extended care facility	9.1%
Non-clinical setting	7.5%
Other	3.4%

NOTE: "Other" responses individually represented less than 1%.
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q18

Table 5. Focus of primary nursing position of licensed Colorado RNs

Focus of nursing practice	Percent (N=37,881)
Specialty care	32.9%
General acute	29.8%
Administrator	15.7%
Ambulatory care	10.7%
Emergency/urgent care	5.8%
Other	5.1%

NOTE: "Other" categories individually represented less than 0.5% or were not easily categorized
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q19

RNs were asked to describe the orientation experience they received in their first clinical position after completing their basic RN training. The ratings varied considerably on a scale of 1-5 where one represented *strongly disagree* and 5 *strongly agree*. It is of interest to note that less than half reported they *agreed* or *strong agreed* with any of the statements with the exception of the length of time spent in the orientation.

Table 6. First post-RN training employer orientation

Orientation experience (N=47,575)	Strongly disagree				Strongly agree	
	1	2	3	4	5	N/A
The orientation included both classroom and clinical instruction	25.6%	11.9%	12.5%	15.0%	29.7%	5.4%
The program only included clinical instruction	27.9%	14.0%	12.7%	15.3%	22.9%	7.3%
The orientation was individualized to my needs	13.7%	12.9%	22.9%	25.0%	22.4%	3.0%
I had a consistent preceptor throughout my orientation	19.7%	12.6%	16.7%	18.2%	27.9%	4.9%
The length of time I spent in new employee orientation was appropriate to the job	11.5%	11.9%	15.5%	26.1%	32.9%	2.1%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q12

Table 7 displays RNs' assessments of the time spent in various nursing tasks in a typical week. One-fifth reported that they spent too little time in direct patient care, while 54 percent reporting spending too much time documenting the patient care they provided.

Table 7. Rating of time spent performing various nursing tasks in a typical week

Nursing functions (N=39,249)	Too little time				Too much time	
	1	2	3	4	5	N/A
Direct patient care, including hands-on care, patient /family teaching and discharge planning	6.6%	13.3%	49.4%	16.7%	4.0%	10.0%
Notes/documentation related to patient care	2.3%	3.2%	32.3%	30.0%	24.1%	8.0%
Locating supplies and equipment related to patient care	3.9%	8.2%	41.3%	19.5%	9.8%	17.4%
Transporting patients	9.0%	11.4%	33.5%	5.9%	1.8%	38.4%
Patient-related telephone calls (prescriptions, lab results, referrals)	5.6%	9.4%	47.1%	16.7%	7.9%	13.4%
Facility meetings/activities related to quality improvement or patient safety	8.5%	14.3%	47.0%	12.4%	6.3%	11.5%
Shift changes and other hand-off functions	5.5%	7.2%	43.7%	7.6%	3.9%	32.1%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q22

When asked to rate their level of agreement with statements about their primary nursing position, RNs reported favorably about the quality of care at their primary nursing position as well as their relationships with physicians with whom they worked and their work schedules. The majority (71%) felt valued and encouraged to participate in patient care decision-making (68%). In addition, approximately half of RNs agreed that salary and benefits and staffing levels were appropriate in their primary nursing position. Less than one-third agreed that too much time was spent on administrative tasks.

Table 8. Assessment of primary nursing position

Assessment of primary nursing position	Percent reporting agreement (4-5) (N=39,955)
The quality of care is high at current work setting	79.6%
I have a positive relationship with the physicians	76.7%
The work hours are appropriate for my lifestyle	75.7%
The worksite emphasizes clinical excellence	72.7%
The supervisor/manager is supportive of me	71.2%
RNs are valued by my current employer	71.1%
RNs are encouraged to participate in decisions	68.5%
I received an appropriate orientation when hired	63.3%
Career development opportunities exist	56.0%
Cultural competency training prepared me well for population served	50.7%
Salary and benefits reflect training and experience	49.2%
Documentation is manageable and appropriate	49.1%
Staffing levels are appropriate	47.8%
Workload involves too much time on administrative tasks	30.9%

NOTE: Rating scale: 1=strongly disagree and 5=strongly agree
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q23

Colorado RNs reported working an average of 35 hours per week at their primary nursing position with 23 of these hours spent providing direct patient care. Approximately two-thirds reported working 33 hours or more per week.

Table 9. Number of hours worked in primary position in a typical work week

Number of hours	Percent (N=40,106)
Less than 8 hours per week	2.4%
9-16 hours per week	5.1%
17-24 hours per week	14.7%
25-32 hours per week	11.4%
33-40 hours per week	51.1%
More than 40 hours per week	15.3%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q20

More than half reported annual earnings in 2007 of more than $50,000 from their primary nursing position, while 18 percent earning more than $75,000 annually.

Table 10. 2007 annual earnings from primary nursing position

Earnings	Percent (N=38,844)
$15,000 or less	5.0%
$15,001 to $25,000	3.7%
$25,001 to $35,000	6.8%
$35,001 to $50,000	24.6%
$50,001 to $75,000	39.9%
$75,001 to $100,000	13.5%
$100,001 to $150,000	2.9%
More than $150,000	1.2%
Not working	2.2%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q24

Reported earnings tended to be higher in acute care settings with the exception of RNs employed in community-based or non-clinical settings who earned more than $75,000 in 2007. Earnings by work setting (Table 11) provide an instructive benchmark for both part-time and fulltime RNs, although the majority reported working more than 33 hours per week at their primary nursing position. It is also noteworthy that almost half of employed RNs in Colorado (48%) reported being the primary wage earner in their family.

Table 11. Annual earnings from primary nursing position in 2007 by work setting

Earnings from primary nursing position	Acute care setting (N=24,301)	Skilled nursing setting (N=3,615)	Non-clinical setting (N=2,979)	Community-based setting (N=7,299)
$15,000 or less	2.1%	8.6%	12.6%	8.7%
$15,001 - $25,000	2.1%	8.6%	4.1%	6.2%
$25,001 - $35,000	6.0%	9.7%	8.9%	6.3%
$35,001 - $50,000	28.1%	21.8%	16.2%	22.2%
$50,001 - $75,000	43.5%	34.6%	37.7%	36.5%
$75,001 - $100,000	13.4%	14.2%	15.2%	16.9%
$100,001 - $150,000	3.0%	2.7%	5.3%	2.4%
More than $150,000	1.8%	0	0	0.7%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, created table (Q18, Q24)

Alternatively, Table 12 presents RN salaries based on their highest level of education achieved.

Table 12. Annual earnings from primary nursing position in 2007 by highest degree earned

Earnings from primary nursing position*	Diploma (N=2,268)	Associate degree (N=8,704)	Bachelors degree (N=15,972)	Masters degree (N=5,723)	Doctorate degree (N=597)
$15,000 or less	1.7%	0.7%	1.4%	2.1%	0.0%
$15,001 to $25,000	2.1%	5.0%	2.3%	0.3%	0.0%
$25,001 to $35,000	19.4%	3.7%	8.1%	3.6%	0.0%
$35,001 to $50,000	18.0%	31.5%	26.1%	18.9%	9.8%
$50,001 to $75,000	43.6%	44.4%	44.4%	31.9%	56.6%
$75,001 to $100,000	13.9%	11.4%	12.9%	26.6%	19.3%
$100,001 to $150,000	1.1%	1.6%	2.0%	8.1%	7.8%
More than $150,000	0.1%	0.3%	0.2%	7.0%	6.6%
Not working	0.0%	1.4%	2.7%	1.6%	0.0%

*Earnings from RNs working 30 hours or more per week in primary nursing position
SOURCE: CHI 2008 Colorado RN Workforce Survey, Q7, Q20, Q24

Table 13. Annual earnings from primary nursing position by basic RN training and additional education, 2007 earnings

Earnings from primary nursing position	No additional degree after basic RN education (N=28,481)	Additional degree earned after basic RN education (N=16,102)
$15,000 or less	5.6%	4.6%
$15,001 to $25,000	3.9%	2.6%
$25,001 to $35,000	7.7%	4.9%
$35,001 to $50,000	28.4%	18.7%
$50,001 to $75,000	41.6%	34.3%
$75,001 to $100,000	8.8%	22.7%
$100,001 to $150,000	1.1%	6.7%
More than $150,000	0.0%	3.9%
Not working	2.9%	1.5%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, created table (Q7, Q24)

RNs were asked about their professional career plans over the next two years by rating their level of agreement with the following statements.

Table 14. Professional career plans over next two years

Career plan (N=39,537)	Percent rating agreed (4 or 5)
Plan to remain with my current employer	74.0%
Plan to advance within my organization	28.1%
Plan to obtain an advanced degree	27.8%
Plan to become an advanced practice nurse	12.0%
Plan to retire	9.7%
Plan to become a nurse administrator	6.8%
Plan on becoming a faculty member in a nursing program	6.5%
Plan to become a traveling nurse	5.1%
Plan to transition to a community practice nurse	5.0%

NOTE: *Rating scale: 1=strongly disagree and 5=strongly agree
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q28

When asked specifically about their interest in becoming a nurse faculty member, 17 percent said they had an interest, whereas 56 percent reported having no interest and 24 percent were undecided. Of the RNs who answered "yes" or "undecided," the following incentives were ranked as important to pursuing this interest.

Table 15. Incentives considered important for pursuing a nurse faculty position

Incentive	Percent ranking important (N=15,937)
Flexibility to balance studies and work	95.1%
Tuition assistance through their employer	86.4%
More scholarship opportunities	81.8%
Loan forgiveness program	75.5%
Accelerated degree program	71.1%
Credit transfers from other academic programs	69.4%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q33

All RNs were asked to identify barriers to pursuing a nurse faculty position, regardless of their level of interest in doing so.

Table 16. Barriers to pursuing a nurse faculty position

Barrier	Percent (N=34,043)
Lack of financial incentives to pursue more education	71.5%
Time to obtain additional education	70.6%
Loss of income while in school	68.4%
Lack of tuition assistance	53.6%
Lack of information about how to pursue a faculty position	46.7%
Have no interest	36.2%
Live in rural area without access to programs	12.1%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q33

Approximately 13 percent of RNs reported that they planned to leave their nursing position within the next 12 months and described reasons for their decision to do so. Insufficient wages, too much stress on the job and lack of respect for RNs were the factors most frequently chosen.

Table 17. Top 5 factors for decision to leave current nursing position in the next 12 months

Factor	Percent of RNs rating 4 or 5 (N=5,017)
Insufficient wages given workload and responsibilities	45.2%
Too much stress on the job	42.1%
Lack of respect for RNs	40.6%
Insufficient fringe benefits	33.1%
Work is not professionally challenging	24.4%

NOTE: Rating scale: 1=strongly disagree and 5=strongly agree
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q30

RNs not employed in a position that required an active RN license at the time of the survey (N= 8,155) were asked to rate the factors that may have contributed to their decision not to be in clinical practice, the five factors that most RNs agreed with are listed in Table 17. Of this group, 57 percent were age 55 or older.

Table 18. Contributing factors for not working in a position requiring a RN license in 2008

Factor	Percent rating 4 or 5 (N=8,155)
Insufficient wages given the workload and responsibilities	43.9%
Too much stress on the job	41.8%
Inconvenient hours	40.6%
Retired	37.1%
Have a job that does not require an active RN license	33.4%

NOTE: Rating scale: 1=strongly disagree and 5=strongly agree
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q15

Table 19. Select RN characteristics by work setting

Category	Acute care (N=24,301)	Nursing home/extended care facility (N=3,615)	Non-clinical setting (N=2979)	Community-based practice setting (N=7,299)
Age				
34 years or younger	26.8%	13.8%	9.9%	10.7%
35 - 44 years	24.1%	17.5%	15.1%	22.1%
45 - 54 years	29.7%	26.0%	35.8%	30.0%
55 - 64 years	18.1%	32.9%	31.9%	33.0%
65 years or older	1.4%	9.8%	7.3%	4.2%%
Basic RN preparation				
Diploma	11.7%	18.9%	15.4%	15.4%
Associate degree	32.6%	48.9%	39.5%	31.9%
BSN	54.3%	31.0%	45.0%	50.3%
MSN	0.7%	0.7%	0%	0.8%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Educational preparation of Colorado RNs

Table 20. Basic RN training program, Colorado licensed RNs

Program	Percent (N= 48,809)
Diploma	16.2%
Associate degree	33.8%
Baccalaureate degree	48.8%
Master's degree	0.5%
Doctorate	0.7%

SOURCE: 2008 Colorado RN Workforce, Survey, Colorado Health Institute, Q2

The educational preparation of students entering an RN program has changed over the years in two noteworthy ways. Since 1973, RNs have had more educational preparation prior to starting their basic

RN program and the percent of RNs with a baccalaureate degree prior to starting their RN program has steadily increased over time.

Table 21. Prior educational attainment before entering RN program by year of completion of RN training

Prior education	1946-73 (N=9,381)	1974-82 (N=8,652)	1983-92 (N=10,535)	1993-2001 (N=9,833)	2002-08 (N=10,573)
High school diploma	81.5%	64.0%	50.1%	40.6%	31.8%
Associate degree	3.3%	8.7%	13.3%	13.9%	10.7%
Baccalaureate degree	12.6%	19.5%	23.5%	28.8%	44.3%
Master's degree	1.5%	4.9%	5.3%	3.6%	2.7%
Doctorate degree	0.4%	0.0%	0.0%	0.0%	1.1%
LPN program	0.7%	3.0%	7.6%	9.3%	8.1%
CNA program	0.05	0.0%	0.1%	3.7%	1.4%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Table 22. Additional degrees obtained since becoming RN

Degree	Percent (N=16,102)
BSN	16.3%
MSN	14.1%
Master's degree in another field	6.6%
Baccalaureate degree in another field	5.3%
Associate degree	2.3%
Doctorate degree in nursing	1.3%
Doctorate degree in another field	0.6%

NOTE: Respondents may have completed multiple degrees.
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q7

Ninety-six percent of RNs reported that they were not pursuing additional education at the time of the survey and noted the following reasons.

Table 23. Top 4 reasons for not pursuing additional education

Reason	Percent reporting agree or strongly agree (4-5) (N=44,164)
Lack of time	67.9%
Attained the highest level of education desired	52.1%
Cost	49.4%
Not interested in seeking further education	35.7%

NOTE: Rating scale: 1=strongly disagree and 5=strongly agree. Percents add up to more than 100% as respondents could rate all that applied.
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Colorado RNs were asked to rate the quality of the classroom content and clinical instruction in their basic RN training for the following content areas. The highest ratings are those that were ranked a 4 or 5 and the lowest ratings were those ranked 1 or 2. The table represents the percentage of nurses who ranked classroom instruction high as a percent of all nurses and likewise for the low rankings.

Table 24. Rating of classroom instruction and clinical experience in basic RN training

Content area of classroom instruction: Highest rating	Percent (N=48,518)
Administration of medications and treatments	90.6%
Developing patient assessment skills	86.4%
Using critical thinking/problem-solving skills	79.6%
Content area of classroom instruction: Lowest rating	
Caring for persons with disabilities	48.1%
Caring for persons with dementia, mental impairments	51.7%
Caring for persons with behavioral problems	53.0%
Clinical rotation experience: Highest rating	
Clinical rotation in acute care facility	84.1%
Clinical rotation in a psychiatric/behavioral health setting	70.2%
Understanding the RN role on the interdisciplinary care team	68.4%
Clinical rotation experience : Lowest rating	
Clinical rotation in public health agency	44.9%
Clinical rotation in the operating room	45.7%
Clinical simulation using mannequins	40.7%

NOTE: Rating scale: 1=poor, 5=excellent
SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Table 25. Year of graduation from basic RN training

Year	Percent (N=48,974)
1946-73	19.2%
1974-82	17.7%
1983-92	21.5%
1993-2001	20.1%
2002-08	21.6%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Table 26. Number of years since completion of basic RN training

Years	Percent (N=48,974)
5 years or less	19.2%
6 - 15 years	22.4%
16 - 25 years	21.5%
26 - 35 years	19.2%
36 - 45 years	14.0%
46 years or more	3.6 %

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Advanced Practice Nurses (APNs)

Registered nurses with advanced training in most cases must complete a master's degree in nursing and sit for a national accreditation examination in an APN specialty area. In Colorado, RNs must register with the BoN as an APN. The four nationally recognized certificate programs that meet the standards set by the Colorado BoN include:

- Nurse practitioner (NP)
- Certified registered nurse anesthetist (CRNA)
- Certified nurse midwife (CNM)
- Clinical nurse specialist (CNS)

According to the most currently available national survey data (2004), approximately 240,460 registered nurses (8%) of the total RN population were certified as an APN. This number has increased more than 22 percent from 2000 when the number of APNs was estimated at 196,279. [43]

The Colorado BoN defines an APN as a "master's prepared nurse holding a graduate degree in nursing who has completed a graduate or post-graduate program of study in an advanced practice role, in an accredited nursing program and has been recognized and included on the Advanced Practice Registry by the Board." [44] Effective July 1, 2008, applicants for APN status in Colorado must hold a graduate degree in an appropriate specialty area. [45]

Colorado APNs

Of Colorado RNs, approximately 8 percent identified themselves as an APN and were distributed across the following specialty areas:

- 6% were primary care nurse practitioners
- 2% were other nurse practitioners
- 1% were CRNAs
- 1% were women's health nurse practitioners
- Less than 1% were certified nurse midwives

Table 27. Characteristics of RNs with and without APN certification

Characteristic	APN (N=3,714)	Non-APN (N=35,793)
Male	9.8%	6.7%
Is primary wage earner in the family	57.9%	47.5%
Basic nurse education is baccalaureate	68.9%	48.1%
Employed as an RN as of 9/2008	93.6%	82.6%
Self-employed	6.2%	1.6%
Working in an acute care facility	36.7%	64.7%
Working in a community-based practice	49.2%	15.6%
Working in a skilled nursing facility	4.3%	9.7%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute

Table 28. Annual 2007 earnings of APNs from primary nursing position relative to all other RNs

Salary	APNs (N=3,620)	RNs without APN certification (N=35,792)
$15,000 or less	1.0%	5.4%
$15,001 to $25,000	0.3%	4.2%
$25,001 to $35,000	3.2%	7.6%
$35,001 to $50,000	12.2%	26.7%
$50,001 to $75,000	32.0%	40.7%
$75,001 to $100,000	26.7%	11.3%
$100,001 to $150,000	14.3%	1.1%
More than $150,000	7.4%	0.5%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, created table Q11 and Q24

Despite the higher salaries earned by APNs, 20 percent had secondary employment for pay compared to 12 percent of RNs without APN certification. The primary reasons APNs listed for having a second position were:

- To supplement a full-time nursing position (43%)
- Enjoy working in a variety of positions (32%)
- To supplement a part-time nursing position (22%)

A slightly higher percentage of APNs were nurse faculty (6%) than RNs without APN certification (2%). Of the incentives identified by APNs for pursuing a nurse faculty position, the following five rose to the top:

- Flexibility to balance studies and work (88%)
- Tuition assistance through employer (88%)
- Loan forgiveness program (81%)
- More scholarship opportunities (73%)
- Credit transfers from other academic programs (60%)

Assessments of primary nursing position as noted by APNs compared to all other employed RNs are reported in Table 29. The percentages reported are for those APNs rating the statement strongly agree (5) on a scale of 1-5.

Table 29. Assessment of primary nursing position, APNs versus all other RNs

Statement regarding primary employment	APNs (N=3,156)	RNs without APN certification (N=35,793)
Documentation is manageable and appropriate*	31.6%	17.7%
RNs are encouraged to participate in decisions*	64.2%	30.9%
I have a good relationship with physicians*	62.0%	40.9%
The quality of care is high at current work setting*	60.6%	45.2%
The worksite emphasizes clinical excellence*	57.9%	39.0%
The supervisor/manager is supportive of me	53.6%	47.2%
The work hours are appropriate for my lifestyle	49.6%	45.3%
RNs are valued by my current employer	45.5%	40.7%
Cultural competency training prepared me well for population served*	40.1%	19.2%
I received an appropriate orientation when hired	39.2%	30.5%
Salary and benefits reflect training and experience*	36.4%	18.5%
Staffing levels are appropriate*	36.0%	19.5%
Career development opportunities exist	31.5%	23.8%
Workload involves too much time on administrative tasks	14.5%	13.3%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q11 and Q23
*Indicates statistically significant difference between APNs and all other RNs

Colorado RNs: Rural versus urban characteristics
Approximately 14 percent of the Colorado RN workforce was employed in a rural area for their primary nursing position in 2008. There were no discernable differences in the demographic characteristics of RNs based on where in the state they were employed. Differences were found in the basic RN training between rural and urban practicing RNs—those practicing in rural areas were significantly more likely to have an associate degree (45%) as their basic RN educational preparation than RNs residing in an urban community (31%). More than half of RNs working in an urban area had a baccalaureate degree, compared to 40 percent of their rural counterparts.

Table 30. Primary nursing position and focus of position, rural versus urban

Practice setting	Rural RNs (N=5,278)	Urban RNs (N=33,234)
Acute care facility*	53.2%	61.6%
Skilled nursing facility*	15.0%	8.2%
Non-clinical Setting	5.4%	7.8%
Community-based practice	23.7%	18.7%
Other	2.6%	3.6%
Primary focus		
General acute care nursing	31.2%	29.2%
Ambulatory care	11.6%	10.6%
Specialty acute care nursing*	24.1%	33.7%
Nurse administrative functions	20.9%	15.1%
ER/Urgent care	8.2%	6.0%
Other	4.1%	5.3%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q17-19
*Indicates statistically significant differences between rural and urban RNs.

No notable differences were found in the perceptions of their work environment between nurses practicing in rural versus urban areas. Overall, RNs working in a rural setting were earning less than their urban counterparts.

Table 31. Earnings from primary nursing position by rural and urban setting

Earnings	Rural (N=5,146)	Urban (N=33,634)
$15,000 or less	6.9%	5.0%
$15,001 to $25,000	4.8%	3.7%
$25,001 to $35,000*	10.7%	6.7%
$35,001 to $50,000*	30.1%	22.9%
$50,001 to $75,000	34.7%	40.3%
$75,001 to $100,000*	8.4%	14.8%
$100,001 to $150,000	2.3%	2.9%
More than $150,000	1.6%	1.4%

SOURCE: 2008 Colorado RN Workforce Survey, Colorado Health Institute, Q17 and 24
*Indicates statistically significant differences between rural and urban RNs.

Nearly 20 percent of RNs working in rural areas reported they had another nursing position for pay vs. 12 percent working in an urban area. More RNs working in rural areas reported taking additional jobs because they enjoyed working in various types of nursing positions (31%) than to supplement their primary nurse position (25%). On the other hand, 38 percent of RNs working in an urban area reported working an extra job to supplement their income.

CONSIDERATIONS OF COLORADO RN SURVEY FINDINGS

- Approximately 13% of RNs report they were planning to leave their nursing position within the next 12 months most frequently reporting wages, stress and lack of respect as the reasons. Focused retention strategies such as nurse recognition programs, salary market surveys with options to correct inequities and the development of interdisciplinary care models that allow nurses to practice at the top of their licensure authority are tested options to pursue.

- RNs have steadily increased the amount of education attained prior to beginning their nursing programs. This may present an opportunity to bridge prior education with current education and accelerate the opportunities for RNs with graduate degrees in other disciplines to become nursing faculty.

- Less than 10% of RNs were Licensed Practical Nurses (LPNs) prior to becoming RNs. This is a lost opportunity for well articulated career ladders to professional nursing. Likewise, tuition reimbursement, flexible scheduling and scholarship opportunities need to be expanded.

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[45] § 12-38-111.5(4) (c), C.R.S. This requirement became effective for new APN applicants starting July 1, 2008. APNs who do not possess graduate degrees but were listed on the registry as of June 30, 2008, may continue to be included on the registry.