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# 2007-08 COLORADO LICENSED PRACTICAL NURSE WORKFORCE SURVEY

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## *Findings*

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## Introduction

The Colorado Health Institute (CHI) conducted a survey of licensed practical nurses (LPN) in 2007-08 to increase the body of knowledge regarding the LPN workforce in Colorado and to provide a baseline for future study. From task force discussions, key informant interviews and an extensive literature review, a number of LPN workforce policy questions and issues emerged that informed the survey process:

- What is the optimum role of LPN in today's health care delivery system?
- How prepared are LPNs for their first nursing position?
- Is there a relationship between previous nursing experience and performance as an LPN and resulting career perceptions?
- What factors affect LPN retention in the health care workforce?
- What are LPNs' perceptions of their work environment, including job satisfaction?

The LPN workforce survey instrument was cognitively tested both individually and in focus groups. LPNs participating in the survey testing process worked in long-term care, acute care and out-patient clinic settings in both rural and urban areas.

Limited workforce studies specific to the LPN workforce either nationally or in Colorado existed when this survey was conducted. The most comprehensive study available was carried out by the federal Health Resources and Services Administration and published in 2004. The Colorado Department of Regulatory Agencies (DORA) provides limited data on the LPN workforce based on information LPNs provide during the professional licensure process. To CHI's knowledge, this workforce survey is the first to be conducted of LPNs employed in Colorado.

### NATIONAL PERSPECTIVE ON THE LPN WORKFORCE

Approximately 749,000 LPNs were employed in the United States in 2006. Work settings included hospitals (26%), nursing homes (26%), physician offices/clinics (12%) and other settings (36%) such as community care facilities, nursing agencies, residential care facilities and government agencies. Approximately 19 percent of these LPNs were employed part time.<sup>1</sup>

Over the past 20 years, the percentage of LPNs working in hospitals has steadily decreased, declining from 54 percent in 1984 to 24 percent in 2005.<sup>2</sup> Hospital informants offer a mixed report about the scope of practice of LPNs in acute care settings, reporting that the scope is often too narrow for the acuity of patients while at the same time recognizing that LPNs are an asset to the nursing team.<sup>3</sup>

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<sup>1</sup> Bureau of Labor Statistics, U.S. Department of Labor. *Occupational Outlook Handbook, 2008-09 Edition*, "Licensed practical and licensed vocational nurses." Available at <http://www.bls.gov/oco/ocos102.htm>.

<sup>2</sup> Lafer, G., and H. Moss (2007). *The LPN: A Practical Way to Alleviate the Nursing Shortage*. Labor Education and Research Center, University of Oregon, for the United Nurses of America. Available at: <http://www.afscme.org/docs/LPN-Rep.pdf>. Also, Spector, N. (2005). *Practical Nurse Scope of Practice White Paper*. National Council of State Boards of Nursing. Available at: [https://www.ncsbn.org/Final\\_11\\_05\\_Practical\\_Nurse\\_Scope\\_Practice\\_White\\_Paper.pdf](https://www.ncsbn.org/Final_11_05_Practical_Nurse_Scope_Practice_White_Paper.pdf).

<sup>3</sup> Spector, N. (2005). *Practical Nurse Scope of Practice White Paper*. National Council of State Boards of Nursing. Available at: [https://www.ncsbn.org/Final\\_11\\_05\\_Practical\\_Nurse\\_Scope\\_Practice\\_White\\_Paper.pdf](https://www.ncsbn.org/Final_11_05_Practical_Nurse_Scope_Practice_White_Paper.pdf).

In spite of declining demand for LPNs in acute care settings, the employment of LPNs is projected to grow due to the aging of both the workforce and the population. The largest job growth is projected for nursing care facilities and home health care agencies.<sup>4</sup>

State boards of nursing regulate LPN practice, and although most states have similar practice statutes, some states are more restrictive in the LPN scope of practice. The American Nurses Association differentiates registered nurses (RNs) from LPNs by RNs' ability to *diagnose and treat* human responses to actual or potential health problems—*assessment* therefore is a key boundary between RN practice and that of LPNs and nurse assistants.<sup>5</sup>

Table 1. Comparison of LPN and RN workforce, U.S., 2005<sup>6</sup>

Characteristic	LPN	RN
Mean age	43 yrs	43 yrs
Male	4.4%	8.1%
White	69.1%	77.3%
African American	20.3%	10.1%
Hispanic	5.4%	3.8%
Native American	0.6%	0.5%
Asian	3.5%	7.5%
U.S. Born	89.7%	86.5%
Married	54.6%	68.8%

SOURCE: U.S. Census Bureau, 2005 Current Population Survey

In 2006, Colorado ranked 46<sup>th</sup> among states in the per-capita employment of LPNs with 138 per 100,000 population compared to the national rate of 241 per 100,000.<sup>7</sup>

The median annual income of LPNs nationally in 2008 was \$40,110.<sup>8</sup> LPNs tend to earn more with experience, but at some point the salary ranges become compressed. Also, LPN earnings vary by employment sector, with the highest earnings reported by LPNs working in employment services such as temporary positions and home health care agencies.

<sup>4</sup> Bureau of Labor Statistics.

<sup>5</sup> National Center for Health Workforce Analysis, Health Resources and Services Administration, U.S. Department of Health and Human Services (2004). *Supply, Demand and Use of Licensed Practical Nurses*, Chapter 3: "Scope of practice and practice acts." Available at: [http://bhpr.hrsa.gov/healthworkforce/reports/lpn/LPN1\\_5.htm#c3](http://bhpr.hrsa.gov/healthworkforce/reports/lpn/LPN1_5.htm#c3).

<sup>6</sup> Seago J., et al. (2006). "Can the use of LPNs alleviate the nursing shortage?" *American Journal of Nursing*, 106(7):40-49, 2006. Available at: [http://www.nursingcenter.com/prodev/ce\\_article.asp?tid=650968](http://www.nursingcenter.com/prodev/ce_article.asp?tid=650968).

<sup>7</sup> National Center for Health Workforce Analysis, Health Resources and Services Administration, U.S. Department of Health and Human Services. *The Colorado Health Workforce: Highlights from the Health Workforce Profile*. Available at: <http://bhpr.hrsa.gov/healthworkforce/reports/statesummaries/colorado.htm>.

<sup>8</sup> Bureau of Labor Statistics, U.S. Department of Labor (2007). Occupational employment and wages, May 2008, Licensed practical and licensed vocational nurses. Available at: <http://www.bls.gov/oes/current/oes292061.htm>.

Table 2. LPN earnings, U.S., 2008

Employment services	\$44,860
Nursing care facilities	\$41,660
Home health care agencies	\$41,410
General medical/surgical facilities	\$39,340
Physician offices	\$39,940

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor (2007). Occupational employment and wages, May 2008

### COLORADO PERSPECTIVE ON THE LPN WORKFORCE

The scope of practice for an LPN in Colorado is defined in the Colorado Nurse Practice Act “as that which is taught in schools of practical nursing in Colorado at this time.”<sup>9</sup> Colorado currently has 26 LPN programs<sup>10</sup> including one baccalaureate and two associate degree nursing programs with a practical nursing exit option. The 9-11 month curriculum trains LPNs to care for patients with “predictable outcomes” and perform nursing skills “with a high degree of technical expertise.” LPNs are taught to identify abnormal functions and changes in a patient's condition and to report their findings to a physician or registered nurse to do a full assessment.<sup>11</sup>

The Colorado Department of Regulatory Agencies (DORA) reports that Colorado had 8,576 active licensed LPNs in FY2008.<sup>12</sup> In 2008 the average earnings of Colorado’s LPN workforce were \$40,870, with a mean hourly rate of \$19.65.<sup>13</sup>

### Colorado LPN workforce initiatives

The Colorado Center for Nursing Excellence has been involved in a number of initiatives to enhance LPN training and facilitate their transition from LPN to RN licensure.<sup>14</sup>

- The Central Colorado Area Health Education Center (AHEC) offers an online refresher course for LPN/LVNs who desire to re-activate their license.<sup>15</sup>

<sup>9</sup> Colorado Department of Regulatory Agencies (DORA), Board of Nursing (2009). “Scope of practice for the licensed practical nurse.” Available at <http://www.dora.state.co.us/NURSING/scope/scope.htm>.

<sup>10</sup> DORA, Board of Nursing (2009). “Approved practical nursing programs.” Available at: <http://www.dora.state.co.us/NURSING/education/LPNprograms.pdf>.

<sup>11</sup> DORA. “Scope of practice.” For more information on nursing education programs in Colorado, see DORA, Division of Registrations, Board of Nursing. “Chapter II-Rules and Regulations for Approval of Nursing Education Programs.” Board Rule II, § 3.13 C.5.a. Available at: <http://www.dora.state.co.us/nursing/rules/ChapterII.pdf>.

<sup>12</sup> DORA, Office of Policy, Research and Regulatory Reform (2008). *2008 Sunset Review: Colorado Board of Nursing*. Available at: <http://www.dora.state.co.us/opr/archive/2008Nursing.pdf>.

<sup>13</sup> Bureau of Labor Statistics, U.S. Department of Labor (2008). Occupational employment statistics, May 2008, State Occupational Employment and Wage Estimates, Colorado. Available at: [http://www.bls.gov/oes/2008/may/oes\\_co.htm#b29-0000](http://www.bls.gov/oes/2008/may/oes_co.htm#b29-0000).

<sup>14</sup> Colorado Center for Nursing Excellence (2008). Colorado nursing workforce development programs data. Retrieved November 15, 2008, from: <http://www.coloradonursingcenter.org/CurrentProjects/CurrentProjectsPrograms.html>.

<sup>15</sup> Central Colorado Area Health Education Center (AHEC). Retrieved November 1, 2008, from <http://www.centralcoahec.org/lpnrefresher.htm>.

- Mesa State College received funding from the Colorado Department of Labor and Employment to enable LPNs to earn an associate degree in nursing. Currently, Mesa State has the only program in Colorado that encourages students to obtain an entry-level certificate, enter the workforce and then return to get an associate of applied science degree in nursing within three years without reapplying.<sup>16</sup>
- An LPN nursing skills lab at the Pickens Technical School and Community College of Aurora helps increase LPN competencies and provide a health career Web site for staff and employers. The project is funded by the Colorado Department of Labor and Employment.<sup>17</sup>
- Kaiser Permanente and the Colorado Department of Labor and Employment have developed a program to assist 19 medical assistants in becoming LPNs at the Community College of Denver.<sup>18</sup>

## Findings from the 2007-08 Colorado LPN Workforce Survey

### METHODS

On November 24, 2007, the Colorado Health Institute (CHI) sent 2,500 cover letters and survey questionnaires to a stratified random sample of individuals who held an active license to practice as a licensed practical nurse (LPN) in Colorado. This sample was selected from LPNs who had a Colorado contact address (N=9,719) in their licensure file maintained by the Colorado Department of Regulatory Agencies. Accounting for undeliverable mail, out-of-state addresses and/or deceased persons, the number of LPNs presumed to have received the form was 2,393. CHI received survey responses from 1,002 LPNs, or about 42 percent of those who were mailed a survey form.

All male LPNs with a rural Colorado address were surveyed to ensure an adequate rural sample for analytical purposes. A random sample was taken of the remaining LPNs. CHI then added “weights” to the survey data to reduce any bias created by the design of the sample and to bring the sample back to the total population of licensed LPNs. The percentages and numbers used in this report are therefore reflective of the entire population of licensed Colorado LPNs, not just the survey respondents.

[For more information on the methods used in conducting this survey and analyzing the findings, please see <http://www.coloradohealthinstitute.org/Documents/workforce/2007LPNCodebook.pdf>.]

### DEMOGRAPHIC PROFILE AND EMPLOYMENT SETTINGS

In 2007, Colorado LPNs were predominately female, white and working in an urban setting. The majority was 40 years of age or older (77%) and most likely to be employed in a long-term care setting.

<sup>16</sup> Mesa State College Nursing Education Career Ladder. Retrieved March 31, 2009, from <http://www.mesastate.edu/healthsciences/ladder.html>.

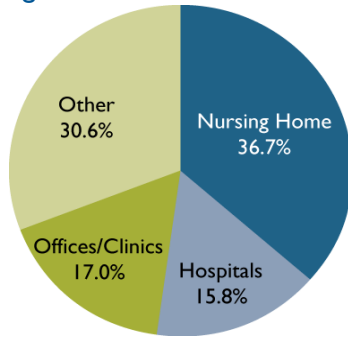
<sup>17</sup> Colorado Center for Nursing Excellence.

<sup>18</sup> Colorado Center for Nursing Excellence.

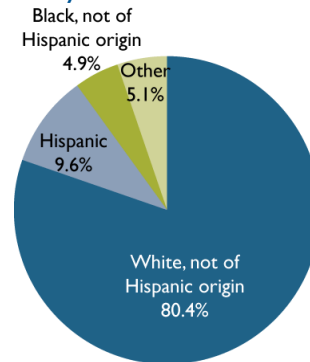
Table 3: Profile of Colorado LPNs, 2007-08

Female 90.6% (N=8,453)	Male 9.4% (N=877)	Mean age 48
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Work setting of licensed LPNs, 2007-08



Race and ethnicity of licensed LPNs, 2007-08



SOURCE: 2007-08 Colorado Licensed Practical Nurse Workforce Survey

The majority of licensees (72%) was working as an LPN at the time of the survey and worked on a full-time basis, averaging 37 hours per week. Approximately 85 percent reported earnings between \$15 and \$20 per hour, which was consistent with the U.S. Bureau of Labor Statistics reported mean wages of \$19 in 2008.

In the United States and Colorado, more medical care is currently provided in outpatient settings than in hospitals. In general, the sickest and most complex patients are admitted to hospitals where higher skill levels, education and a broader scope of nursing practice are required. The 2007-08 LPN survey findings reveal that 28 percent fewer LPNs were working in hospitals at the time of the survey as opposed to the first job they held after graduation.

Table 4. Place of LPN employment compared to first employer after graduation, 2007-08

Type of employer	First employer (N=9,157)	Current employer (N=6,285)
Nursing Home	35.6%	36.7%
Hospital	43.9%	15.8%
Rehabilitation facility	1.6%	2.7%
Home health agency	1.9%	5.2%
Behavioral health facility	1.8%	3.7%
Public health/Community health	0.5%	1.2%
Clinic or physician office	7.5%	17.0%
School-based health center	0.2%	0.5%
Did not work as LPN after training	0.7%	-
I have never worked as an LPN	0.7%	--



Type of employer	First employer (N=9,157)	Current employer (N=6,285)
Correctional facility	0.0%	3.3%
Assisted living facility	0.0%	3.0%
Nursing agency	0.0%	2.6%
Other	5.6%	8.3%

Shaded cells highlight significant differences between first and current employers.

SOURCE: 2007-08 Colorado LPN Workforce Survey

LPNs who were *not* working in a clinical position in 2007-08 (N=2,940) provided the following reasons:

- Working in an administrative/other health care-related position (39%);
- Voluntarily unemployed and not actively seeking employment (11%);
- Voluntarily unemployed due to family responsibilities (10%); and,
- Unemployed and actively looking for clinical LPN position (7%).

Approximately 16 percent (1,009) of LPNs reported having a second employer. Of LPNs with a second employer, the factors that were important in this decision included:

- 64% didn't earn enough at their primary place of employment;
- 50% wanted more challenging work;
- 33% didn't get health insurance at their primary place of employment; and,
- 32% didn't have enough hours at their primary place of employment.

### EDUCATIONAL PURSUITS

Few LPNs were pursuing further education and most had no plans to do so. Specifically:

- Only 4.6% were enrolled in another type of educational program;
- 15% were currently enrolled in an RN education program; and,
- 62.9% reported that they did not plan to pursue an RN degree.

Table 5. Characteristics of LPNs enrolled and not enrolled in an RN program, 2007

LPN characteristics	Enrolled in RN program (N=934)	Not enrolled in RN Program (N=5,294)
<b>Primary Employer</b>		
Nursing home	37.7%	37.4%
Hospital	34.4%	1.3%
Clinic or Physician office	9.7%	18.9%
Other	18.2%	31.4%
<b>Current Age</b>		
20-39	51.2%	22.5%
40-49	34.7%	25.4%

LPN characteristics	Enrolled in RN program (N=934)	Not enrolled in RN Program (N=5,294)
50-59	1.1%	36.6%
60 or older	0.0%	15.6%
<b>Hourly Wage</b>		
Up to \$15	12.4%	5.8%
\$15-<\$20	59.8%	44.0%
\$20-\$25	23.8%	41.9%
More than \$25	4.0%	8.3%

SOURCE: 2007-08 Colorado Licensed LPN Workforce Survey

The Colorado LPNs enrolled in an RN program in 2007-08 had the following profile:

- 38% worked in a nursing home and 34% in a hospital setting;
- All but one were between the ages of 20 and 49; and,
- The vast majority earned less than \$20 an hour.

The most common reasons cited for *not* pursuing additional education were:

- Could not afford the cost (62%);
- Other time commitments took priority (55%); and,
- Satisfied with current work and did not need additional education or training (44%).

If offered the opportunity, most LPNs (89% of those currently working) indicated they would be interested in on-the-job training in a variety of clinical areas including wound care, geriatrics, Alzheimer's disease and other dementias. In 2005, the Centers for Medicare and Medicaid Services (CMS) modified its guidelines for pressure sore care in long-term care facilities and these new guidelines are now reflected in Colorado's facility survey process. The interest in wound care training is likely related to these guidelines.

**Table 6. Training interests of LPNs who were interested in further training, 2007-08**

Training interests	Percent* (N=5,658)
Wound care	75.3%
Alzheimer's disease and/or other types of mental disorders	66.7%
Geriatrics	64.5%
Developmental disabilities and other cognitive disorders	57.3%
Spinal cord injuries	54.8%
Pediatric long-term care	46.5%

Percentages exceed 100% as respondents could check more than one interest.

SOURCE: 2007-08 Colorado LPN Workforce Survey

## RETENTION AND RECRUITMENT

The Colorado LPN survey asked about workplace incentives LPNs were currently receiving or had received at their place of employment and their level of importance.

Table 7. Top workplace incentives received and ranking of importance, 2007-08

Workplace incentives	Percent (N = 6,225)
Flexible work schedule	49.9%
Tuition reimbursement	21.9%
Signing bonus	9.9%
Student loan forgiveness	1.9%
Ranked of high importance (4-5) on a 5-point scale	Percent (N = 6,225)
Flexible work schedule	89.9%
Tuition reimbursement	72.0%
Signing bonus	61.9%
Student loan forgiveness	56.0%

SOURCE: 2007-08 Colorado LPN Workforce Survey

The majority of LPNs earned between \$15 and \$25 per hour with little disparity between work settings.

Table 8. LPN wages earned by employment setting, 2007-08

Employment setting	Nursing home (N=2,428)	Hospital (N=1,022)	Clinic/physician office (N=1,086)	Other* (N=1,853)
Up to \$15/hr	2.2%	13.8%	18.4%	4.9%
\$15.01-\$20/hr	32.7%	47.0%	57.6%	49.2%
\$20.01-\$25/hr	53.4%	38.8%	20.0%	36.8%
More than \$25/hr	11.7%	0.4%	4.0%	9.1%

\*Other included corrections, assisted-living facilities, behavioral health.

SOURCE: 2007-08 Colorado LPN Workforce Survey

Of Colorado LPNs who were *not* employed in a clinical position in 2007 (28%), the top three reasons provided were wages, stress and lack of respect.

**Table 9. Highest importance\* reasons for not working in a clinical position, 2007-08**

Reason	Percent (N = 1,950)
Wages insufficient given the workload and responsibility	57.1%
Too much stress on the job	55.9%
Did not feel respected in the work performed	53.3%
Insufficient benefits (e.g. sick leave, health insurance)	43.0%
Hours too long	40.7%
Workplace safety issues	34.9%
Inconvenient hours	33.4%
Family responsibilities interfere with work	27.4%
Retired from active workforce	25.2%
No LPN positions available	25.2%
Work not professionally challenging	24.5%
Pursuing more education	23.4%
Health issues	22.7%

\*Percentage of LPNs who rated these reasons a 4 or 5 with 5 indicating “most important.”

SOURCE: 2007-08 Colorado LPN Workforce Survey

## FUTURE PLANS

One-fourth of Colorado LPNs reported that they planned to leave their primary employer within the next 12 months. Characteristics of those who planned to leave and those who intended to stay were quite similar with two exceptions: work setting and age.

**Table 10: Comparison of LPNs’ employment plans within next 12 months, 2007-08**

Characteristic	Plan to stay with primary employer for next 12 months (N=4,731)	Plan to leave primary employer within next 12 months (N=1,494)
<b>Primary Employer</b>		
Nursing home	33.5%	50.2%
Hospital	18.1%	8.2%
Clinic or physician office	19.0%	28.3%
Other	29.4%	13.3%

Characteristic	Plan to stay with primary employer for next 12 months (N=4,731)	Plan to leave primary employer within next 12 months (N=1,494)
<b>Gender</b>		
Female	90.0%	87.1%
Male	10.0%	12.9%
<b>Race/ethnicity</b>		
White, not Hispanic origin	78.6%	86.4%
Hispanic	10.8%	6.0%
Black, not Hispanic origin	5.3%	2.4%
Other	5.3%	5.3%
<b>Age</b>		
20-39 yrs	21.5%	42.1%
40-49 yrs	27.6%	24.7%
50-59 yrs	38.1%	19.5%
60 yrs or older	12.8%	13.8%

SOURCE: 2007-08 Colorado LPN Workforce Survey

LPNs planning to leave their current employer within the next year ranked the following reasons of high importance (4-5) on a five-point scale:

Table 11. Reasons LPNs report planning to leave their employer in next 12 months,\* 2007-08

Reasons for planning to leave employer in next 12 months	Percent (N = 1,494)
Too much stress on the job	70.1%
The wages are insufficient given the workload and responsibility	69.2%
I do not feel respected in the work I do as an LPN	66.2%
Insufficient benefits (e.g. sick leave, health insurance)	52.0%
I am pursuing more education	46.4%
Workplace safety issues	46.1%
I do not feel the work is professionally challenging	41.5%
The hours are inconvenient	32.6%
The hours are too long	29.9%
My health does not allow me to work	16.2%

Reasons for planning to leave employer in next 12 months	Percent (N = 1,494)
I am retiring from the active workforce	15.8%
I have family responsibilities that interfere with my ability to work as an LPN	11.3%

\*Percentage of LPNs who rated these reasons a 4 or 5 with 5 indicating “most important.”

SOURCE: 2007-08 Colorado LPN Workforce Survey

### HEALTH INSURANCE COVERAGE

Approximately 60 percent of LPNs working at the time of the survey reported having health insurance coverage through their primary employer. Of the 40 percent that did not have coverage, 69 percent (1,690) were offered it and declined.

Table 12. Reasons given by Colorado LPNs who were offered but declined health insurance coverage,\* 2007-08

Reasons	% (N=1,527)
Coverage from a spouse or other family member	66.9%
Coverage offered was too expensive	62.9%
Did not need health insurance at the time	25.9%
Health insurance coverage not a high priority	29.0%
Coverage that was offered did not meet my health care needs	29.0%

NOTE: \*Percentage of LPNs who rated these factors a 4 or 5 with 5 indicating “very important.”

SOURCE: 2007-08 Colorado LPN Workforce Survey

Table 13. Characteristics of LPNs who did and did not have health insurance through primary place of employment, 2007-08

Characteristic	Lacks health insurance (N=2,520)	Has health insurance (N=3,765)
<b>Primary employer</b>		
Nursing home	46.1%	32.6%
Hospital	9.4%	19.0%
Clinic or physician office	16.7%	17.4%
Other	27.8%	31.0%
<b>Primary employer location</b>		
Urban	70.7%	82.8%
Rural	29.3%	17.2%
<b>Race/ethnicity</b>		
White, not Hispanic origin	79.5%	81.2%

Characteristic	Lacks health insurance (N=2,520)	Has health insurance (N=3,765)
Hispanic	8.6%	9.8%
Black, not Hispanic origin	5.3%	4.5%
Other	6.6%	4.5%
<b>Age</b>		
20-39 yrs	30.9%	23.4%
40-49 yrs	31.3%	22.7%
50-59 yrs	25.4%	40.1%
60 yrs or older	12.4%	13.8%

SOURCE: 2007-08 Colorado LPN Workforce Survey

### LEVEL OF PREPAREDNESS FOR CLINICAL WORK

The survey provides a snapshot of LPNs' self-assessed educational preparation. Both classroom and clinical experiences were described and reveal significant relationships between level of readiness and the following factors:

- LPN training program
- Type of school where program was offered, e.g., college, vocational/technical school, military
- Year of graduation
- Place of instruction (clinical or classroom)
- Location of training program (rural or urban)
- Prior health care experience

#### Rating of classroom and clinical instruction

LPNs rated their classroom and clinical instruction using a five-point scale in which 1 represented "inadequate" and 5 "most adequate." The components of the educational experience measured were:

- Care for the elderly
- Care for persons with dementia and other mental impairments
- Care for persons with physical disabilities
- Care for persons with behavioral health problems
- Administration of medications
- Patient care fundamentals, such as bathing, personal care, transferring and inserting catheters
- Decision-making within the LPN scope of practice
- Leadership/management skills
- Problem-solving skills

Table 14: Schools or programs where LPNs received their LPN diplomas, 2007-08

School	Percent attended (N=9,202)
Emily Griffith	9.8%
Concorde Career Institute	4.8%
Front Range Community College	4.8%
Pueblo Community College	4.5%
Pickens Technical College	3.8%
Northeastern Junior College	3.2%
U.S. Army	2.7%
Delta Montrose Vo-Tech	2.6%
Pikes Peak Community College	2.5%
Trinidad State Junior College	2.4%
Community College of Denver	2.2%
Otero Junior College	2.2%
Other (less than 2% attended the program/school)	54.6% (5,026)

SOURCE: 2007-08 Colorado LPN Workforce Survey

Table 15. Percent of LPNs by graduation year who rated their preparation positively, 2007-08\*

Year	Percent attending (N=8,851)
1950-69	85.5%
1970-79	77.6%
1980-89	79.8%
1990-99	67.0%
2000-07	63.9%
OVERALL	72.8%

\*Percentage of LPNs who rated their clinical and classroom preparation a 4 or 5 with 5 indicating "most adequate."  
SOURCE: 2007-08 Colorado LPN Workforce Survey

Linking the level of preparation to the year of graduation provides an interesting comparison and insight into possible curriculum changes that have occurred over time. The downward trend in perceptions of preparedness for first LPN position was significant and would require additional scrutiny to determine causation.



## PREVIOUS NURSING WORK EXPERIENCE

Approximately 60 percent of LPNs had prior health care experience before becoming an LPN. Of those, 89 percent were nurse assistants, the remaining were either medical assistants or emergency medical assistants.

Interestingly, LPNs with prior experience did not rate their level of preparation for their first position significantly different than those without prior health care experience.

## SUMMARY OF 2007-08 COLORADO LPN WORKFORCE SURVEY FINDINGS

- Rural and urban distinctions were not evident in the survey findings
- A greater percentage of Colorado's LPNs worked in a long-term care setting in 2007-08 (36%) than LPNs nationally (26%).
- The number of LPNs enrolled in an RN program was 15% and little data exist to compare regionally or nationally.
- The number of LPNs pursuing any additional education (4.6%) was quite low, although half indicated interest. This finding suggests an opportunity for employers and educators to collaborate in increasing the skills of the LPN workforce with possible positive impacts on the quality of patient care, job satisfaction and subsequent job retention.
- The key findings of LPNs' rating of their educational preparation were:
  - No significant differences were found between LPN programs located in rural versus urban areas;
  - Significant differences were noted between individual programs;
  - The U.S. Army programs had the highest ratings;
  - Of the 12 Colorado LPN programs identified, one in three was rated adequate/most adequate less than 60% of the time; and
  - LPNs felt least prepared for practice in caring for people with dementia, physical disabilities and behavioral health problems; and in developing leadership and management skills.
- The level of preparedness reported by LPNs for their first position offers insight for employers and educators:
  - With regard to curriculum content, LPNs gave the lowest ratings to areas critical for practice in long-term care settings including assisting people with mental impairments, physical disabilities and behavioral health problems.
  - LPNs reported declining levels of preparation over time, with LPNs graduating between 1950 and 1969 rating their overall preparation (86%) higher than those who graduated in the past 17 years (64-67%).
- LPNs employed in settings other than a hospital were typically placed in leadership roles as a care team leader or charge nurse, meaning management skills are important to being successful on the job.

# Workforce Options for Licensed Practical Nurses

## EDUCATION AND TRAINING

- An opportunity exists for employers and educators to develop continuing education programs for LPNs. The LPN workforce survey findings indicate LPNs are interested in continuing education but actual participation is low. The specific areas of both interest and need determined through research and survey findings are:
  - Caring for persons with dementia
  - Caring for persons with physical disabilities
  - Caring for persons with behavioral health problems
  - Development of leadership and management skills
  - Caring for persons at risk for wounds or who have developed wounds
- The 2007 Colorado LPN Workforce Survey identified specific information about LPNs' satisfaction with their level of preparedness for their first LPN position. This information links specific areas of learning with the Colorado LPN program attended, and should be reviewed and evaluated by educators [available upon request].

## ASPECTS OF THE WORKPLACE

- LPNs indicated that a supportive and respectful work environment was an important factor in job retention and satisfaction. Options for consideration to both improve and maintain such a work environment for LPNs include:
  - Sponsored workshops on topics of interest to LPNs such as care delivery; enhancements, use of new care products and improving medication administration methods; and,
  - Increase education and training regarding leadership and time management to improve the LPN approach to their work.
- The use of multidisciplinary care teams should be considered for further development. The LPN role could be optimized in the care team, leading to improved care delivery, a decrease in the need for as many registered nurses (RNs) and increased job satisfaction for LPNs.
- Employers should evaluate the LPN and RN scope of practice on a regular basis to determine if LPNs are being more constrained in their practice roles than required. This step could result in an expansion of the role or an increased awareness of LPN responsibilities.
- LPNs should be encouraged to seek additional training and certification in intravenous medication administration, wound care and other clinical areas as available. This improvement can be accomplished through on-site courses, employer reimbursement and increased compensation for additional certifications and would add to LPNs' ability to provide more comprehensive care to their patients.
- Employers of LPNs should compare the workforce survey and research findings with their internal survey results, employee feedback and their own observations. Of particular interest to employers may be the transition of certified nurse aides to the LPN role and strategies to foster this development and thus add to their LPN workforce.
- Employers of LPNs should strive for cultural competency in recruitment and retention strategies. The ethnicity of the LPN workforce in Colorado is predominately White (80%), which is representative of the state's ethnic composition (82%). An opportunity may exist,

however, for outreach to other racial and ethnic groups to join the LPN workforce through focused strategies.

### DATA-DRIVEN WORKFORCE ANALYSIS

This LPN workforce survey project adds to a limited body of knowledge about LPNs in Colorado and forms a basis for future comparisons that monitor trends, identifies issues and challenges myths or assumptions that have been made about LPNs. Additional surveys and studies of this workforce would be important to recognize important changes as they evolve and to modify or develop strategies as appropriate.

### PROFESSIONAL DEVELOPMENT AND RECOGNITION OF LPNS

LPNs represent 15 percent of Colorado’s nursing workforce as indicated below while experiencing a slight decline in numbers between 2003-04 and 2005-06. This decline should be monitored closely as the projected demand for long-term care nursing staff in the state and the nation is growing. The Bureau of Labor Statistics (BLS) has projected a 14 percent increase in demand for LPNs nationally from 2000-16.<sup>19</sup> According to estimates developed by the U.S. Department of Health and Human Services’ Office of the Assistant Secretary for Planning and Evaluation, the demand for direct care workers in long-term care settings, which includes LPNs, will become even greater as the baby boomers reach age 85 beginning in 2030.

Table 16: Total number of Colorado nurse licensees, 2003-07<sup>20</sup>

Year	Total number of active licensed nurses	Number of active RNs	Number of active LPNs
2006	53,480	43,805	9,675
2007	54,235	45,507	8,728
2008	56,950	47,100	9,850
2009	57,481	48,905	8,576

SOURCE: Colorado Department of Regulatory Agencies, Division of Registration

Recruitment and retention strategies for the LPN workforce often take a “backseat” to those used to promote the recruitment of RNs. A key issue in the nursing workforce is to critically examine the LPN role both now and in the future in Colorado and subsequently increase the visibility of LPN training and workforce deployment through public education and policy development. To this point, only a small number of LPNs (15%) responding to the survey were currently enrolled in an RN program. This finding is consistent with national trends which describe the barriers to LPN career ladders to RN licensure as:<sup>21</sup>

- Initial salary decreases experienced once LPNs advance to RN status;

<sup>19</sup> Bureau of Labor Statistics, U.S. Department of Labor. *Occupational Outlook Handbook, 2008-09 Edition*, “Licensed practical and licensed vocational nurses.” Available at <http://www.bls.gov/oco/ocos102.htm>.

<sup>20</sup> DORA, Office of Policy, Research and Regulatory Reform (2008). *2008 Sunset Review: Colorado Board of Nursing*. Available at <http://www.dora.state.co.us/opr/archive/2008Nursing.pdf>.

<sup>21</sup> Seago, J.

- The cost of pursuing an RN education—tuition, child care, loss of work while pursuing education and related costs such as travel and supplies; and,
- The wait times experienced to enroll in an RN program.

The advancement of LPNs to RNs may be encouraged through increasing scholarships that provide funds for both tuition and related education costs such as child care.

The initial salary decreases experienced when an LPN advances to RN status is less dramatic for LPNs who have been in the workforce for a shorter period of time. It may be effective to target the newer LPNs for recruitment into RN programs by contacting them during their LPN education.