### **Status Report**

# **Statewide Strategic Plan for Nursing**

# Prepared for The Honorable Janet Napolitano Governor of Arizona

Prepared by
The Arizona Governor's Task Force on the
Nursing Shortage

January, 2006

### **History:**

The State of Arizona is facing a shortage of registered nurses (RNs) that was reaching a crisis of critical proportion. In 2001, in recognition of this crisis, Governor Hull appointed the Governor's Task Force on the Nursing Shortage. In 2002, under the leadership and administration of Governor Janet Napolitano, the Task Force was charged with the development of a statewide strategic plan targeting the multiple and complex factors involved with the shortage of RNs. This plan was completed in 2005, and members of the task force continued to work until objectives from the plan were completed or well on a path of completion. This report is a summary of outcomes of the work plan developed by the Task Force.

### **Accomplishments:**

The supply of registered nurses has increased in both the United States and Arizona. The U. S. Department of Health and Human Services recently released a preliminary report from the 2004 National Sample Survey of Registered Nurses which indicated that Arizona has improved its ranking to 45th from 48th in the United States for employed RNs per 100,000 population. Only California, Nevada, Texas, Idaho, and Utah had lower ratios of employed nurses to population. However, the average age of nurses in the US has increased from 45.2 to 46.8 years.

The task force addressed issues contributing to the nursing shortage in Arizona. Most of our accomplishments reflect the development of programs increasing the number of new nurses and retaining nurses currently working in healthcare.

Below is a sample of accomplishments and completed strategies from the statewide strategic plan developed by the Task Force:

• Increased number of applicants for RN licensure

Type of application for RN license	2001	2003	2005
NCLEX-RN (exam)	610	1483	1925
New endorsement (from other state)	803	2628	4129
Total:	1,413	4,111	6,054

Source: Arizona State Board of Nursing

- Significant growth of nursing student enrollment in community colleges and universities. There has also been a growth in the number of approved nursing programs in the State, both public and private. There continues to be a critical shortage of qualified faculty and extremely crowded clinical settings for students.
- Establishment of a program to prepare internationally educated nurses for RN licensure. These nurses reside legally in the U.S. Twenty-five foreign educated, bilingual nurses successfully completed the program at Mesa Community

- College. Six nurses gained RN licensure, 11 are waiting to take the RN licensure exam. The remaining graduates are waiting the credential review necessary to apply for licensure. This program received a three-year grant from HRSA beginning July, 2005. A second cohort is progressing through the program. These nurses are from Mexico, Colombia, Philippines, Bosnia, Poland, and Iran.
- Application to the National Centers for Nursing completed. This will establish a
  virtual Arizona Center for Nursing, supported by multiple stakeholders (AzHHA,
  AzONE, AzNA, Arizona State Board of Nursing, etc.) Membership within this
  national network will provide comparative data, workforce prediction models,
  grant information, and other valuable information. By establishing a virtual
  Center, the cost will be kept at a minimum.
- Funds acquired for nursing research position at the Arizona State Board of Nursing. This position is instrumental in securing and maintaining a central repository of information that can be used to make decisions and recommendations to various stakeholders.
- Legislation passed in 2005 provides \$20 million to the State's universities and community colleges. The signing of SB 1294, the Arizona Partnership for Nursing Education (APNE) targeted funds to increase nursing faculty thereby increasing the number of nursing graduates from state supported higher education programs.
- Diversity grant from HRSA received by AzHHA. The intent is to increase retention and graduation of minority nursing students and to attract more diverse youth into healthcare.
- Educational partnerships developed between industry groups to increase the number of graduating nurses and decrease length of time to graduation.
- Increased number of hospitals providing on-site RN to BSN programs. Efforts to
  increase the percentage of baccalaureate prepared nurses in Arizona include
  streamlined articulation between AAS and BSN degrees; community college
  baccalaureate initiatives; partnerships such as the ASU-Maricopa Community
  Colleges Alliance, the Healing Community (NAU and rural community colleges),
  and others.
- Establishment of Tier I and II of the Arizona Healthcare Leadership Academy.
- Establishment of a pilot program to evaluate the use of certified medication technicians in long term care settings.
- ASU College of Nursing's Center for Advancement of Evidence-Based Practice
  coordinated the establishment of the Arizona Consortium for the Advancement of
  Evidence-based Practice (AZCAEP), representing over 50 hospitals/healthcare
  agencies throughout Arizona. The mission of AZCAEP is to improve healthcare
  quality, patient outcomes and increase nurse satisfaction through evidence-based
  practice (EBP).
- Conducted preliminary survey addressing variables impacting nursing care delivery in acute care and correctional settings. Chief nursing officers completed the questionnaire with results received from metropolitan and correctional settings only. A summary of the study findings is included as Appendix B.

While these accomplishments are notable, the nursing shortage is far from over and additional strategies must be urgently undertaken to prevent a healthcare crisis in the next decade. Several new factors have come into play. These new factors include:

- Arizona's rapid growth
- aging baby boomer population
- increases in acute care beds
- other healthcare workforce shortages
- high levels of dissatisfaction with the nursing profession and the work environment, leading to high turnover and vacancy rates.

The effect of these factors combined with issues previously considered by the Task Force, lead to the following future recommendations.

#### **Recommendations:**

The nursing shortage is far from over. The work of this Task Force would not be complete without recommendations for the future. These recommendations build on programs in progress and other identified needs. The following represents future strategies and programs:

- Work with federal legislators to secure federal match for APNE Demonstration Project (SB1294).
- Expansion of the preliminary study on the variables impacting nursing care delivery to include long term care, out patient and ambulatory care and home health. Future studies need to address other nursing employment environments.
- Fund a multi-site study through AzCAEP to test the effects of placing advance
  practice nurses as EBP mentors in healthcare settings on nurse satisfaction, EBP
  beliefs, implementation, and nurse retention. This study would support the
  findings that EBP has improved healthcare quality as well as patient outcomes,
  and could serve as a key strategy for increasing nurse satisfaction and decreasing
  turnover.
- On-going financial support for the Arizona Center for Nursing
- Monitor and evaluate results from the Med-Tech Pilot Study

State wide nursing leadership is committed to implementing and monitoring these recommendations. Future state and federal legislation would address the funding recommendations.

#### **Appendices:**

**Strategic Map for Nursing Status Report Preliminary Study Results** 

# Appendix A

# Strategic Map for Nursing Status Report January, 2006

	Strategic Map for Nursing						
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006			
uo	Identify the number of nurses and nursing assistants needed in various practice settings by geographical location, educational preparation and ethnicity.	Report on number of nurses and nursing assistants needed geographically, and by educational preparation, by December 2004.	Rose Conner, Kathy Malloch, Peggy Mullen, Fran Roberts, Marla Weston, Lynn Maschner	~ Have identified issues in the availability and consistency of data.  ~ Considering a comprehensive data repository. Research position at Arizona State Board of Nursing funded, will continue this work.  CLOSED			
Attracting People to the Profession	Implement centralized information for students on waiting lists to access information on openings in schools through ASBN website.	Available nursing education openings routinely listed on website by August 2004.	Joey Ridenour	~ Discussions for the development of a public access web based table that includes the following data elements:  1. School name  2. Cohort start date  3. # students applied  4. # students qualified  5. # students admitted  6. If hospital based program  ~ Need to develop mechanism to identify duplicate applicants.  Research position at Arizona  State Board of Nursing funded, will continue this work.  CLOSED			
	Design strategy for retaining people on waiting list.	Issue reviewed briefly at Oct. 05 meeting. Outcomes and date information will be provided once responsible party determined.	Not assigned – pending response from group.	At the Oct. 05, 2005 update session this issue was decided to have its own activity block as it will require resources to address.			

	Strategic Map for Nursing						
Theme	Activity	Activity Expected Outcome/Date		Update / Status January 2006			
	Determine, through a longitudinal study, if people on waiting lists remain interested in pursing a career in nursing or have changed career paths.	Plan developed to counsel individuals currently on education program waiting lists.	Pat Harris, Joey Ridenour, Jean Stengel	~ Developing a plan that will communicate what school programs currently have student openings so student options are available. Data will ideally be linked to above referenced web based table.  Research Position at Arizona State Board of Nursing will collect data on duplicate applications to establish an accurate number of students waiting.  ONGOING—Educational programs to work on retention of waiting students.			
	Identify strategies for attracting a more diverse population and more bilingual individuals to nursing.	Marketing campaign developed and implemented for attracting diverse populations and bilingual individuals to nursing by 2006.	Adda Alexander	~ Through the AzHHA HRSA grant, a 2 day conference on diversity training was held for instructors so minority student nurses will be retained.    ~ Acquiring list of media contacts for minority based media    ~ Launched nurse story telling project featuring minority nurses    Recruitment of students has been successful, diversity efforts continue.  CLOSED			
	Continue to monitor number of individuals entering programs and number on waiting lists.	Annual report to nursing community by December 2004.	Joey Ridenour	~ Continue to monitor and part of routine reporting process.  CLOSED			

	Strategic Map for Nursing						
Theme	Activity	Activity Expected Outcome/Date		Update / Status January 2006			
urses	Monitor and collaborate on fundraising and plan development for Nursing Education Program and Expansion Plan.	Plan developed to identify \$111 million over the next five years for increasing educational capacity.	Fran Roberts, Marjorie Isenberg	~ SB 1294 funded bringing \$20 million for education staff (not for capital expenses). AzHHA will continue their efforts and try to get matching Federal funding. Capacity increasing as forecasted. ~Group to meet to develop additional strategies  CLOSED			
Educating More Nurses	Address the faculty shortage and the non-competitive salary structure of nursing faculty to meet current and future faculty demands.	Develop a plan for attracting nurses to faculty positions including (1) outline for adjusting salaries to meet market demands and (2) prediction of number of faculty needed based on growing demand and retirement projections.	Marjorie Isenberg, Pat Harris, Fran Roberts, Judy Sellers	~ SB 1294 funded \$20 million for salary impacts with faculty – both to acquire new staff and make salary ranges competitive and attractive.   ~ Predictive model being explored.  Nurse Researcher position at the Arizona State Board of Nursing Researcher will include faculty needs in predictive model under development.  ONGOING—Analysis of issue will be done through the Center for Nursing.			

		Strategic Ma	p for Nursing	
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006
	Explore strategies for increasing alternatives for educating more nurses while maintaining current standards.	Strategies identified for increasing alternatives for educating more nurses while maintaining current standards.	Pat Harris, Jayne Wilkins, Fran Roberts, Marty Enriquez, Richard Patze	~ A significant number of collaborative, creative and innovative programs have been developed through partnerships with hospitals. Workgroup continues to catalog these efforts.     ~ All four Universities have developed fast track programs for 2 <sup>nd</sup> degree RNs. Three of the four have been implemented.  CLOSED
	Implement program to assist foreign educated nurses to successfully complete NCLEX.	Program graduates first class by August 2005.	Bertha Sepulveda	~ Graduated first cohort in August 2005. Inquiries for this program have been received from around the world. First cohort has provided great feedback and "lessons learned" for following cohorts to assure success and satisfaction. The second cohort began in August, 2005.  CLOSED
	Evaluate the merits of baccalaureate nursing education through the state's community colleges.	Nursing community recommendation for increasing baccalaureate nursing education in Arizona.	Marla Weston, Kathy Malloch	~ Day of Dialogue occurred in Nov. 2004.    ~ Legislative efforts initiated on 2005 and will continue in 2006.  CLOSED

	Strategic Map for Nursing						
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006			
	Explore HRSA, WIA (workforce investment act) and other funding for enhancing preceptor development.	Apply for a grant that enhances recruitment and retention of nurses.	Mardy Taylor, Adda Alexander, Marty Enriquez, Rose Conner	~ AzHHA HRSA grant will have an option next year for a three-year extension. If granted, will contain preceptor component.  CLOSED			
	Clarify and enhance the work of preceptors. Enhance support in the work environment to orient and mentor students, new graduates, new employees traveling nurses, and programs to transition experienced nurses to new settings.	Create and disseminate template for model orientation, precepting, residency and mentoring programs.	Sandy Hughes	~ Arizona Healthcare Human Resources Association (AHHRA) is collecting data and program information from various existing programs across the nation. (DONE) ~ Will be conducting evaluation process of data obtained and making recommendations. (DONE)  CLOSED. Promising Practices will be posted on the internet at a web site to be determined.			

	Strategic Map for Nursing						
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006			
	Establish practices for transitioning new graduates into competent RNs.	Evaluate pilot residency program and incorporate into model precepting/residency program.  Evaluate a national pilot residency program and a change in hours worked from 12 hour down to 8 hour shifts.	Sandy Hughes, Marjorie Isenberg, Marty Enriquez	~ University Medical Center (UMC) participated in National pilot program. ~ Program results shared at the Arizona Nurses Association convention in September 2005.  CLOSED			
	Identify excellent preceptors as future faculty.	Delineate criteria for selecting preceptors as future faculty and disseminate to clinical professors.	Linda Hunt, Fran Roberts, Lynn Maschner	~ UMC developing a program that could be shared. St. Joseph's Medical Center has also developed a model. ~ Information gathered regarding three unique programs for new grad mentoring / preceptorships. Costs and resources vary between programs. This information will be posted on the AzONE, AzNA and AzHHA websites.			

	Strategic Map for Nursing						
Theme	Activity	Activity Expected Outcome/Date		Update / Status January 2006			
	Focus on improving the work environment in three areas where most nurses work: hospitals, long-term care, home health, hospice.	Share best practices on creating a positive work environment from different employment settings. Develop materials to help health care organizations implement desirable nursing practice environments (repository of information)	Jayne Wilkins, Adda Alexander, Peggy McMacken, Peggy Mullan, Judy Sellers	~ Individual organizations collecting best practice data ~ Workgroup to meet to review data and collate work. Intend to compile for distribution. HCI workgroup on Best Practices/Promising Practices established. Results will be posted on web.			
	Promote educational session by AzNA on "what it means to be a professional nurse."	Increase presentations to clinical nurses, emphasizing the important contributions of nursing's voice and expertise.	Marty Enriquez, Marla Weston	~ Continued education provided through Arizona Nurses Association and Professional Advocacy ~ Program results shared at the Arizona Organization of Nurse Executives September 2005.  CLOSED			
Improving the Work Environment	Establish reward mechanisms for best practice facilities, including AzNA recognition and nomination by clinical nurses.	Expand existing award program to increase participation in nominations and recognitions.	Marla Weston	~ Awards given by the Arizona Nurse Association.  CLOSED			

	Strategic Map for Nursing						
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006			
	Establish an Arizona Center for Nursing as a venue for data collection on nursing to serve as a centralized repository of information on nursing and to provide resources for assisting nurses to navigate regulatory agencies.	process and reports for reliable data about the need for nursing including projections for practice and education.  Weston, Kathy been approve start the procent HCI will file Workforce Conational network once accepted organizations established in all stakehold Arizona State Researcher p will be hired		~ Arizona Board of Nursing taking the lead on this and has been approved for one FTE to start the process. HCI will file to become a Workforce Center within national network of centers. Once accepted, an organizational structure will be established in cooperation with all stakeholders. Arizona State Board of Nursing Researcher position funded and will be hired.  CLOSED			
	Continue to monitor activities in other states related to initiatives.	Communicate information to Arizona nurses	Marla Weston	~ Arizona Nurses Association continues to monitor and distribute information to the nurse membership via their electronic newsletters every other week.			
	Promote leadership education for clinical nursing supervisors.	Modify program based upon pilot and expand to statewide implementation by December 2004.	University of Arizona College of Nursing and Business, Marla Weston	~ Arizona Nurses Association continues to provide training through the Arizona Healthcare Leadership Academy program. ~ Six programs completed and additional offerings are scheduled.  CLOSED			

Strategic Map for Nursing						
Theme	Activity	Expected Outcome/Date	Responsible Party	Update / Status January 2006		
	Evaluate data collected on barriers to foreign educated nurse licensure.  Implement medication	Data evaluated at the end of the first cohort completing the program by August 2005.  Implemented by August 2005.	Bertha Sepulveda Peggy Mullen	~ First cohort graduated in August 2005. Second cohort admitted August 2005.  CLOSED  ~ Curriculum, criteria for facilities and program protocols		
technic pilot stu	technician pilot study.			are developed.  ~ Seeking funding sources  ~ Six Long Term Care facilities are involved and supporting the program.  Arizona State Board of Nursing will conduct research on Certified Medication Technician and patient safety and report to Legislature outcomes of the study in 2007.		
Removing Regulatory Barriers	Continue to monitor for other regulatory barriers.	Barriers identified on ongoing basis.	Joey Ridenour	~ Monitor as needed  CLOSED		

## Appendix B

### **Preliminary Study Results**

# Findings from Survey of Hospitals and Correctional Facilities in Arizona

February, 2006

### Status Report: Major Findings from a Recent Survey of Hospitals and Correctional Facilities in Arizona February 7, 2006

### **Survey of the current state:**

In order to present the current status of nursing across Arizona and potential factors influencing the shortage, a survey was developed and disseminated to chief nursing officers (CNOs) of 84 hospitals across the state in December of 2005. Forty surveys were returned (i.e., a response rate of 47.6%).

Thirty-one of the 38 CNOs (86.9%) who responded to the question regarding their age reported that they were 41 years of age and above, with the greatest number of individuals (n=19) ranging in age from 41 to 50 years.

Thirty-one of 39 (79.5%) of the CNOs who completed the question regarding education reported that they had a master's degree, with 6 reporting a baccalaureate degree, and 2 reporting a doctorate as their highest level of education.

### **Results from this survey indicate the following findings:**

### Status of Hospitals

Variable	Mean	Number of Responses	Standard Deviation	Minimum	Maximum
Current RN vacancy rate, as a %**	15.8	35	13.6	0	50
Current RN turnover rate, as a %	14.9	39	7.6	.5	32.6
Number of budgeted patient beds	209	38	193	0	776
Number of patient beds unfilled due to the lack of RNs	11.3	27	23.6	0	112
Percent of budgeted beds that are unfilled	8.0	27	14.4	0	50
Percent of RN direct care staff that is baccalaureate prepared	37.6	31	19.9	.5	100

Percent that RN salaries have	23.1	32	19.9	0	100
increased since 2001					
Bonuses for new hires	\$4,214	7	\$2,270	\$1,000	\$8,000

\*\*The average national RN vacancy rate is currently estimated at 13%, with 14% of hospitals nationwide reporting RN vacancy rates higher than 20%. In this survey, 28% (10 of 35) of the responding hospitals reported RN vacancy rates higher than 20% (retrieved from <a href="www.aacn.org/\_882565100000a416nsf/">www.aacn.org/\_8825651000000a416nsf/</a> on January 25, 2006) and 9 of 39 hospitals (23%) reported RN turnover rates higher than 20%.

Nineteen of 38 responding hospitals stated that they offered bonuses for new hires.

Two of the hospitals reported that they have achieved magnet status, with 15 hospitals reporting that they are planning a magnet application.

Eighteen of 39 responding hospitals reported that they sent staff to the AZ Healthcare Leadership Academy in the last 2 years. Feedback provided on the academy was very positive. Sending staff to the Leadership Academy was correlated with having established RN staff ratios (r = .31).

Twenty-five of 38 responding hospitals reported that they had established RN staffing ratios. The most common responses were a ratio of 5-6:1 for medical surgical units; and 1-2:1 for critical care units or emergency departments.

### Status of Correctional Facilities

In addition to the 40 hospitals that returned completed questionnaires, two correctional facilities responded to the survey. Results from their responses are as follows.

Variable	Mean	Number	Standard		
		of	Deviation	Minimum	Maximum
		Responses			
Current RN	35.0	2	7.07	30.0	40.0
vacancy rate,					
as a %**					
Current RN	31.5	2	12.02	23.0	40.0
turnover rate,					
as a %					
Number of	5102.5	2	6296.11	205	10,000
budgeted patient					
beds					
Number of patient	0	1		0	0
beds unfilled due					

to the lack of RNs					
Percent of	0	1		0	0
budgeted beds that are unfilled					
Percent of RN	31.5	2	26.16	13.0	50.0
direct care staff					
that is					
baccalaureate					
prepared					
Percent that RN	2.4	2	3.32	0	4.7
salaries have					
increased since					
2001					
Bonuses for new	0	2		0	0
hires					

### Status of Rural Hospitals

Four of the hospitals were identified as being in rural areas. A summary of their responses is presented in the following table.

Variable	Mean	Number	Standard	N/C	D.C.
		of Responses	Deviation	Minimum	Maximum
Current RN	4.4	3	5.30	0	10.3
vacancy rate, as a %**					
Current RN	10.8	3	5.19	6.0	16.3
turnover rate, as a %					
Number of	101.0	3	142.12	14	265
budgeted patient beds					
Number of patient	13.3	3	23.1	0	40
beds unfilled due to the lack of RNs					
Percent of	5.0	3	8.71	0	15.1
budgeted beds that					
are unfilled Percent of RN	24.3	4	22.49	3.0	50.0
direct care staff					
that is					
baccalaureate					
prepared					
Percent that RN	48.7	3	44.5	21.0	100.0
salaries have					

increased since 2001			
Bonuses for new hires	0		

### **Findings Regarding Evidence-Based Practice:**

Twenty of 37 hospitals (54%) responding stated that EBP is currently written in the philosophy of their institutions.

Thirteen of 38 hospitals (34%) responding stated that they have one or more advanced practice nurses who function as EBP mentors.

Twenty-six of 36 hospitals (72.2%) responding reported that the staff nurses consistently implement EBP ranging from "not at all" to "somewhat." The other 10 hospitals reported that their nurses implemented EBP "moderately so" to "very much so."

Eighteen of 32 CNOs (56.3%) reported that they believed "moderately so" or "very much so" that staff nurses who implement EBP have higher job satisfaction.

Thirty one of 35 CNOs (77.5%) reported that they believed that EBP improves patient outcomes moderately so or very much so.

Sixteen of 36 CNOs (44.4%) reported that there are specific criteria regarding EBP on nurses' performance evaluations.

Thirty-three of 39 CNOs reported that they measure staff nurse satisfaction. The most commonly reported measures were the NDNQI and employee satisfaction surveys.

### **Other Important Findings**

Age of the CNOs was significantly correlated with the current RN turnover rate at -.32 in that CNOs who were older reported less turnover. In addition, the older the CNO, the fewer percentage of baccalaureate prepared nurses were in their system (r = .386).

Education of the CNOs was negatively correlated with RN vacancy rate at -.517 in that higher educated CNOs reported less turnover.

Nurses who reported stronger beliefs that their nurses were consistently implementing EBP reported that they believed that staff nurses who implemented EBP had higher job satisfaction (r = .693).

Hospitals who had EBP written as a philosophy in their institution were more likely to have established RN staffing ratios (r = .33) and have specific criteria related to EBP on performance evaluations/clinical ladder system for staff nurses (.67).

Although not statistically significant due to limited statistical power of the small sample size, hospitals who had one or more advanced practice nurses functioning in the role of an EBP mentor (n=12) had a lower RN vacancy rate (12.3%) than those who did not not have advance practice nurses in this role (n=21) (RN vacancy rate = 18.2%). This resulted in a small to medium positive effect (.42) for having advanced practice nurses functioning as EBP mentors in the system.

There were significant positive correlations between planning for magnet status and number of budgeted patient beds (r = .521) (i.e., the larger number of budgeted beds, the more likely the hospital was to plan for magnet status); as well as having established RN staffing ratios (r = .51).

### **Recommendations from these survey findings:**

Although funding to prepare new nurses and faculty is critical, there also must be funding to develop and evaluate new models of healthcare delivery and healthy work environments that result in greater work satisfaction in practicing nurses as there are high levels of turnover and dissatisfaction within the nursing profession. The cost to the healthcare system to replace one medical-surgical nurse is estimated at \$46,000. The Nurse Reinvestment Act (NRA, PL 107-205) corroborates that nurse dissatisfaction contributes to the nursing shortage, and that retention could be increased and patient outcomes improved by nurse involvement in evidence-based clinical decision-making. Therefore, having advanced practice nurses as EBP mentors in hospitals to advance evidence-based practice with nurses may be one key strategy for creating satisfying work environments for them as well as improving the quality of healthcare and patient outcomes throughout our state.

We recommend a multi-site study through the Arizona Consortium for Advancement of Evidence-Based Practice (AZCAEP) to test the effects of placing advanced practice nurses as EBP mentors in various types of hospitals throughout AZ on nurse satisfaction, EBP beliefs and implementation, job satisfaction, career intentions (i.e., intent to leave), nurse turnover and vacancy rates. Positive outcomes from this study could lead to an effective solution to reduce the high vacancy and turnover rates in nursing and improve the quality of healthcare delivery in AZ and the nation.

Intensive efforts to recruit and retain nurses in correctional facilities also must be undertaken as the vacancy and turnover rates are substantially higher than in hospitals across Arizona. Nurses in these facilities also have experienced substantially less percentage of increase in their salaries since 2001 compared to hospital nurses. Most likely, nurses in other positions within the public sector (such as state agencies, public health clinics and hospitals) may have the same issues, and a more comprehensive study needs to be conducted to make a broader comparison among all types of employers.