

White Paper

State Policy Initiatives to Expand Public Nursing Education Capacity

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Scope of Problem

Nursing Shortage

Hospitals and other healthcare facilities need nurses for the care of individuals and their families in illness and for the promotion of health. In March, 2004, the Agency for Healthcare Research and Quality reported an average nurse vacancy rate of 13% across the country. This same report predicts that by the year 2020 the vacancy rate will jump to 29 %. The projected demand for nurses needed by 2020 is 750,000 more than the production under the current system (Stanton, M.W. & Rutherford, M.K., 2004). While many variables impact these numbers, it is important to look at the relationship between the output of nursing programs and employment of the graduates. Educational institutions must insure a steady source of individuals committed to the nursing profession.

Although the United States has experienced prior nursing shortages, the current short fall is expected to be more pervasive. Changing patterns of care delivery, different career expectations, greater demand for higher wages, increased technology and an aging population contribute to the growing problem. Buerhaus (2004) found that even with the development of private sector initiatives and an increase in nursing employment due to spousal unemployment there was only a marginal increase in the nursing workforce. The greatest growth in the RN population was from foreign nurses and older nurses returning to work in the healthcare setting.

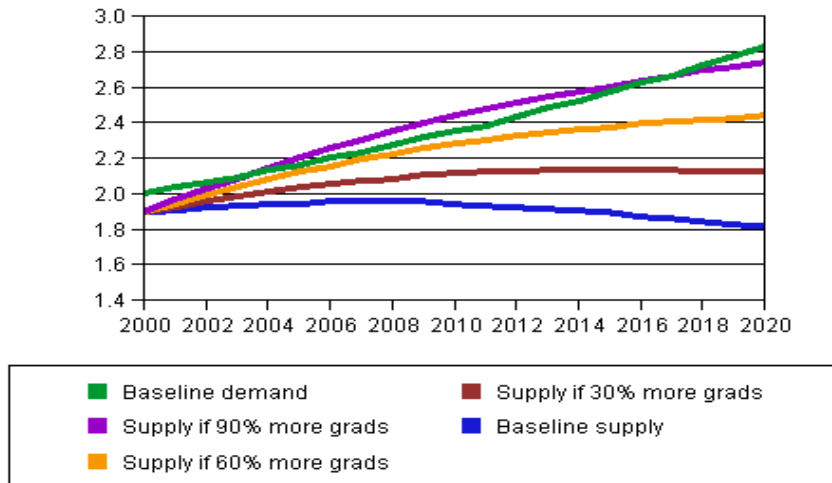
In order to provide more nurses you need to increase the supply. Attract more people to the career choice of nursing. Johnson and Johnson's "Campaign for Nurse's Future" brought positive attention to the career of nursing. But it is not enough to create a

pipeline without assuring there are sufficient resources to meet the demand. Public institutions with nursing programs in many states support the greatest number of nursing students who will graduate and assume critical roles in the profession. Clarke (2005) states that “Initiatives at all levels (local, state, and federal) that increase and protect the supply of nurses. . . . will be necessary to deal with the nurse work force crisis.” (p. 18).

Supply of Nurses

Education of nurses takes between two to five years based on the type of preparation. Admission to nursing program is competitive with many school turning away qualified applicants. Those that are admitted may change majors and some don't graduate. Not all of the students that do graduate pass the national licensure examination. All of these factors contribute to a decrease of the pipeline into nursing. This is expected to worsen by the year 2020 as shown in Figure 1.

Figure 1. FTE Supply Implications of Changes in Projected Number of New Graduate
From U.S. Nursing Programs



(U.S. Department of Health and Human Service, NSSRN, NDS/NSM projections, 2004)

The growing demand for nurses, without solutions (See Figure 2) and insufficient supply will have a severe impact on the health of the nation. A decrease in the workforce may lead to inadequate health care for patients if specific strategies are not in place. Data support that patient outcomes worsen when the ratio of nurses to patients decreases.

These problems drive up the cost of health care. Pneumonia, as an example, acquired by patients in the healthcare system, costs hospitals approximately \$22,390 to \$28,505 to treat. According to Cho (2003) if you increase registered nurse hours by even a small increment you can decrease patient complications, their stay in the hospital and as a result the hospital saves money.

Figure 2. Projected U.S. FTE RN Supply, Demand, and Shortages

	2000	2005	2010	2015	2020
Supply	1,890,700	1,942,500	1,941,200	1,866,100	1,808,000
Demand	2,001,500	2,161,300	2,347,000	2,569,800	2,824,900
Shortage	110,800	218,800	405,800	683,700	1,016,900
Supply/Demand	94%	90%	83%	73%	64%
Demand Shortfall	6%	10%	17%	27%	36%

(HRSA, 2004)

Financial Considerations

One key issue is financial resources. Budget cuts worsen the nursing shortage by decreasing support for nursing students who cannot afford a college education. According to a fact sheet from Senator Edward Kennedy's office, 82% of applicants for the federal Nurse Education Loan Repayment Program were turned away and almost 100 % were denied funding for the federal Nursing Scholarship Program (E. Kennedy, personal communication, June 8, 2006). Legislators need to realize the significance of what it means when funding for support of nursing education is decreased or eliminated. In order to enlist the support of policy makers, data which clearly demonstrates the need for sustained and sufficient level of funding for the education of nurses is needed.

State Policy

Politicians may lack significant understanding of higher education. Education is not always considered an essential service as compared to highways, prisons and other competing interests. Financial allocations for the state's public institutions, called formula funding, started in the 1950's but are individualized to each state. Many states have less than 65% state support and rely on contributions from the private sector (Horns & Turner, 2006). One model depicting sources of funding for higher education shows the following distribution: 6.6% from local taxes, 29.0% from net tuition and 64.4% from state support (Coulter, 2003).

Nursing Education similar to other health sciences presents unique problems when making determinations for formula funding which differs from arts and science programs. States have typical set allocations. Texas, as an example, is allocated resources according to the following formula: "semester credit hours X program/level weight X a rate set by the legislature (Horns & Turner, 2006 p. 223). Nursing programs include clinical learning, laboratory hours plus theory. The nursing major includes many clinical courses. Clinical programs drive up cost because they are challenged by Nursing State Board regulations regarding small student to clinical faculty ratio. "More definitive data are needed to inform decision makers on the relationship between what nursing education is (theory, laboratory, clinical) and what do formula funding models fund (Horns, 2006, p. 224)".

Faculty Shortages

Another critical factor which creates problems for increasing capacity is insufficient nursing faculty. The nursing faculty is aging. Clinical facilities provide higher salaries with which the academic environment cannot compete. The faculty shortage significantly impacts the shortage. “For instance, a national survey indicates that 33,000 qualified applications to nursing programs were turned down, and 76.1 percent of the surveyed schools indicated that shortage of faculty was the main factor limiting admissions (Yordy, 2006, p.3)”. Legislative activity to increase the pool of current and future faculty is paramount in finding solutions to the problem. In 2006, the American Association of Collegiate Nursing conducted a survey of faculty vacancies. States reported a faculty vacancy rate of sixty six point six percent.

Options for Expanding the RN Nursing Workforce

Options exist for easing the shortage. But these efforts to date have focused on recruiting older nurses back into the profession and attracting foreign workers. While these measures increase the number of registered nurses they may only serve as stop gaps and are not the necessary long term solution. They also create other issues. In order to import foreign nurses, as an example, it requires changes in immigration laws by the legislature to expand the H1-C category for visas (Kimball & O’Neil, 2002).

Purpose of the Project

The purpose of the project was to conduct key informant interviews with ten nationally recognized leaders in nursing education, practice, and policy to identify state strategies to increase publicly funded nursing education capacity.

Methods

The ten informants responded by telephone to a series of questions. (Appendix) They named five ‘exemplar’ states engaged in “best practice” initiatives aimed at capacity building. The five states were: California, Texas, Oregon, Maryland, and Florida. Other states were cited but these five gathered the most attention for their innovative strategies including: partnerships, legislative activity, nursing workforce centers, new curricula designs, transparency in evaluation data, incentives and strong nursing leadership. A snapshot cross state analyses was conducted with emphasis on these variables.

Findings

Partnerships

The key informants agreed that partnerships between key stakeholders and nursing organizations were a critical component in the states leading the way in efforts aimed at increasing capacity. A leader from Texas stated there needed to be greater partnerships between hospitals and schools of education. She stated that these types of partnerships are a force in putting pressure on legislators for change. Another individual spoke of strong

relationships between state governments and universities. It also helps having key leader in government who are nurses. They are more apt to foster collaborations.

The partnerships differed across the five states. Some of the states focused more on financial linkages to fund programs or new initiatives. Florida, as an example, collaborated with the Tent Health Corporation and the Palm Healthcare Foundation to establish a new nursing program. The Florida Blue Cross and Blue Shield Insurance Companies presented financial gifts to two schools who addressed nursing education issues (Statewide Strategic Plan for Nursing Workforce in Florida, 2004). Oregon created an alliance between the Oregon State Board of Nursing and the Office of Rural Health to identify 'critical' shortage areas and provide loan forgiveness to nurses who agreed to work in these areas (When, Not If, A Report on Oregon's Registered Nurse Workforce, 2005).

Nursing leadership in Texas spawned partnership initiatives which the key informants experts label as a prime example of 'best practice' efforts. In 1998, with the first realization that the nation was facing a crisis in nursing, the Texas Nurses Association (TNA) led the way in developing strategies to combat the impending shortage. Recognizing that partnerships held the key, the TNA collaborated with The Texas Nurses Foundation (TNF), the Texas Hospital Foundation (THA), The Texas Institute for Health Policy Research and The Greater Houston Partnership. Research was necessary to document the impact of the shortage and the community business partnerships helped fund the type of substantiation needed to push for legislation activity (Green, 2004).

Legislative Activity

All of the key informants agreed that the ‘best practice’ states engaged in legislation aimed to increase funds for nursing education. Texas, Oregon, Florida and Maryland supported bills and passed into law language that identified a crisis or emergency in the nursing workforce. Subsequent bills in all states earmarked funds and resources for the education of students and faculty. Each state used different approaches in the funding of these grants according to the key informants.

The Nursing Shortage Act of 2001 passed in Texas took advantage of tobacco settlement funds and reallocated the money to Nursing Innovation Grants focused on recruitment and retention (Green, 2004). From 1986 forward, the Florida legislation approved a budget that includes the Education Enhancement ‘lottery’ trust fund. These grants labeled ‘SUCCEED’ are distributed yearly to community colleges and nursing programs for new program development and capacity building (SUCCEED Florida – Education Grant Program Recipients, 2004).

Other legislative bills focused on the Boards of Nursing. In the 2002 Nursing Shortage Solution Act, Florida eliminated some of the periodic surveys the Board of Nursing does for programs already approved (Florida Board of Nursing, 2002). This strategic policy fostered the breaking down of barriers which hindered increasing the supply of nurses. As part of the Senate Bill 511 passed in Maryland, the Maryland Higher Education Commission and the Board of Nursing collaborated to study the demand for new programs, increase the supply, and provide a new funding mechanism in support of faculty (SB 511, Chap. 487, 2005). The Oregon State Board of Nursing in consultation

with the Office of Rural Health under the aegis of Senate Bill 331, passed in 2001, identified underserved or rural areas in need of nurses. Nurses who agreed to work in these areas received loan forgiveness for their education (Nursing Education in Five States, 2003).

Clearly a key factor in solving the nursing shortage is finding funding through the government to support nursing education. Texas and Florida used innovation by reallocating money. California relied on federal workforce investment money plus general money to provide loans and scholarships to:

- RN's working in underserved areas in California
- Financial assistance to students seeking Master's and Doctor degrees who committed to teaching

In addition, the legislature allocated workforce money to expand capacity in community colleges and the supply of nursing faculty. The 2005 Bill 73 established the general funds to the Board of Regents. This was a one time expenditure for equipment, supplies and curriculum development for entry level master's program (Nursing Education in Five States, 2005).

Funding solutions holds promise. However, the key informants agreed that throwing money at the problem is not the answer. There is a need for sustainable funding specifically designated for programs which is transparent. Outcome data has to demonstrate that the funding did what it was intended to do – increase capacity. They selected these states because mechanisms for evaluation were in place.

Workforce Centers

The consensus by many of the key informants was the leverage provided by nursing workforce centers. Nursing Centers or Nursing Workforce Initiatives provide collaborative forces capable of strong initiatives said one informant. She went on to say that the Texas Workforce Board worked with hospitals and nursing institutions on a loan program. The hospital loaned 65 clinicians to areas schools to teach in 13 academic institutions. This allowed for the increase in students plus provided dialogue between schools and practice settings.

Several informants spoke of California's Workforce Initiative, established in 2000, to explore, promote and advance reform within the health care workforce system. The Governor funded a Nurse Workforce Initiative to increase the supply of nurses but included the caveat that the University of California at San Francisco and Los Angeles would provide evaluation data.

The Florida Center for Nursing was established by the legislature in 2001 to address supply and demand issues. In March of 2005, a summit was convened to evaluate the goals and initiatives created by the Center and provide a report back to the legislature (Florida Center for Nursing, 2004). Similar to Florida, Oregon created a Center of Nursing for the purpose of supply and demand RN evaluation (Oregon's Nursing Workforce Oregon Center for Nursing, 2005). Maryland's Workforce Project sought to shape policy through identification of the causes, extent and impact of the nursing shortage (Maryland's Nursing Shortage: A Workforce Crisis, 2003). The Texas Center for Nursing has served as a resource for data and research regarding nursing in the state

and published many articles relating to supply and demand (The Supply and Demand for Registered Nurses and Nurse Graduates in Texas, 2006).

. Efforts to increase capacity in the publicly funded institutions cannot be done without clear data to support what works. Key informants stated this unequivocally. But you cannot have this type of data without money. Funding for the Centers or Workforce Initiatives primarily comes from legislation. This is not the only source because, in many cases, it wouldn't generate sufficient funding for the type of evaluation data required. Other funding sources included private partnerships and voluntary fees added to license renewal.

Education Strategies

Since many of the key informants held leadership positions in academia, they had good examples of what was needed to increase capacity within educational institutions. Bridge programs, acceleration of education, educational laddering, dual degrees, and distance learning were all cited as integral to growing populations of nurses. Two key variables were seen as critical – money and leadership.

California mentioned as one of the 'exemplar' states is clearly a good example. As a result of federal and state funding California distance education allows students in rural areas in Southwestern Joaquin Valley to earn their RN degree through collaboration between the Bakersfield College Nursing Program, Porterville College and West Hills College. Students are allowed to remain in their home towns as they earn their degree. In 2002, the California legislation passed a law which encouraged community colleges and

university systems to standardize all nursing education to facilitate easy movement and upward mobility. The University system is looking at how this improves articulation within the system (Nursing Education in Five States, 2005).

Oregon's education community actively supports innovative educational strategies to increase capacity. Similar to California emphasis is placed on distance learning and collaborations between community colleges and baccalaureate programs. The Oregon consortium redesigned how nursing education is delivered by having baccalaureate education given at the community college level. Students again did not need to leave their home towns for their education. The Oregon system in addition to supporting the need for common curricula has also embraced clinical simulation technology (Oregon's Report on Nursing workforce, 2005).

Distance learning is a paramount factor in states with large rural populations. Texas developed a program to increase the number of faculty in rural shortage areas by using online technology. Through collaboration with workforce boards and community coalition they also increased the recruitment and retention of disadvantaged and rural students into nursing. Another key innovation was the financial assistance provided to disadvantaged groups to complete a master's degree and become nursing faculty. Included in this strategy was mentoring for the faculty role (Green, 2005).

Florida's SUCCEED program is also designed to increase faculty through innovative education strategies. One example is the collaboration between Broward Community College, Nova Southeastern University and Barry University. This project is designed to create a pipeline for new nursing faculty. Faculty with a B.S. in Nursing

enter an online accelerated master's program. Mentoring is also included as part of the project. The idea is creation of a seamless acceleration program to increase faculty and hence increase capacity.

All of the previous programs were financed mainly through some government incentive. In Maryland, private partnerships sponsored grants to expand nursing enrollments and increase nursing faculty. Harford Community College was awarded a grant to establish a 15 month accelerated associate degree program. Coppin State University partnered with Maryland General Hospital, Kernan Hospital and Union Hospital to provide a Master's Program for hospital based nurse within their own facilities(Maryland Nursing Program Capacity Study, 2006).

The 'best practice' strategies in California, Texas, Oregon, Florida, and Maryland were initiated to increase capacity in publicly funded institutions. In Table 1 it is clear that between the years 2000 to 2004 there continued to be a decrease in the number of nurses, by degree, employed in the states. These worsening numbers are indicative of the long range strategies required. Although as of 2007, these states report an increase in the number of students they are still turning away students. All of the key informants agreed sustained mechanisms and policy strategies are required at all levels to offset the nursing crisis.

Table 1 Employed Nurses by Highest Educational Preparation

State	Diploma	AD	BS	Total
California 2000	14.8%	38.4%	34.9%	87.4%
California 2004	9.7%	35.4%	38.2%	83.3%
Florida 2000	16.4%	45.6%	27.6%	89.6%
Florida 2004	15.2%	41.8%	28.7%	85.7%
Oregon 2000	11.5%	43.6%	34.2%	89.3%
Oregon 2004	11.0%	41.0%	31.6%	83.6%
Maryland 2000	19.9%	29.4%	34.8%	84.1%
Maryland 2004	16.5%	28.6%	36.5%	81.6%
Texas 2000	14.6%	41.6%	36%	92.2
Texas 2004	11.4%	40.3%	35.1%	86.8%

(HRSA, 2000, 2004)

Summary of Key Cross Cutting State Strategies

All of the states engaged in partnerships, a primary factor identified by the key informants. Texas used partnerships to leverage policy at the legislative level. California, Florida, and Oregon collaborated with private funding agents and insurance companies to provide funding for nurses willing to work in rural and underserved areas. These nurses also received the incentive of having their loans for their education forgiven. Maryland and California engaged hospitals and businesses in endeavors to increase enrollments in educational institutions. These examples just scratch the surface of the types of activities practiced in these states.

Legislation was of paramount importance to the individual states. Each of them passed some type of a bill using words such as nursing shortage or crisis. Several bills passed into law provided funds to schools for education. Texas stood out as a leader in their efforts. With their logo “Texas Needs Nurses” and their partnership with many interest groups, they drew the attention of the legislators to the issues in nursing. Key informants emphasized the need for legislators to target funds to the nursing programs. Texas provided the greatest transparency. You could clearly follow grant allocations designated by the legislators to the various schools of nursing and faculty.

The nursing centers or workforce initiatives served as a focal point in the states for the organization of data related to the shortage. In order to create policy, you need to provide evidence of the problem. This occurred in each of the states. Research emanated from the centers. They also established and evaluated set strategic goals geared towards solutions of the shortage.

These states engaged in innovative methods to deliver nursing education to more students. Oregon partnering with the Northwest Health Alliance to set up common curricula that allowed students to remain in their home town community schools and receive a bachelor’s of science in nursing. Likewise California’s collaboration among colleges provided more educational services in a rural area. Florida’s SUCCEED program and Maryland’s sponsored grants facilitated growth in enrollments and an increase in the nursing faculty. Institutions within Texas developed distance learning opportunities for students and similar to the other states also increased opportunities for

clinical learning through simulation.

Policy Amenable Future Strategies

In order for other states to replicate these types of ‘best practice’ strategies a more in depth analysis is required. What factors made these approaches work in these particular states? Certain states have unique characteristics and conditions which might not be applicable to other states. Will states, as an example, which are highly industrialized and urban, find useful the practices, particularly in the area of education that rural states embraced?

Partnerships are key to all states. Nursing Organizations must continue this practice with various groups to create common goals. Working with other health organizations they can analyze data and improve ways to attract nurses into the healthcare system. It is these groups that inform the legislative bodies to support measures to increase capacity. The legislators have a responsibility not only to find innovative ways to finance nursing programs but also require accountability and evaluation data for continued funding. The message is to reward programs that fulfill the nursing education capacity needs and public policy goals.

In order to do this, nursing education has to improve ways to enhance collaboration between education and practice. It has to find innovative methods to change educational practice without losing quality. Since lack of faculty continues as an ongoing problem, educational institutions must engage in sharing faculty across healthcare settings. A

common curriculum offers a challenge to many programs as they strive to distinguish themselves but provides the greatest opportunity for mobility and distance learning.

Over the last few years different educational programs have surfaced to ameliorate the shortage including many fast track programs to get more nurses into the workplace. In addition, the importation of foreign nurses into the workforce continues to occur. Policy analysts must continue to evaluate whether these ‘best practice’ measures actually are solutions or are they creating a new and different set of problems that will impact future generations.

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Appendix

Project: State Policy Initiatives to Expand Publicly Funded Nursing Education Capacity

Key Informant Questions

1. Can you identify 3 or more state university systems that stand out in their approach to increase the capacity of nursing graduates?
2. Why are they unique?
3. Can you name the specific strategies or policies that have helped make them successful?
4. If the strategies or policies that were successful, how many was state mandated?
5. If you were to analyze state policies to promote publicly funded programs what would you look for as 'best practices'? Which states?
6. Is there any particular state policy or policy mechanism you see that should be a major focus in building nursing education capacity?