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University/Industry Nursing Education Task Force
PARTICIPANT LIST

Industry Representatives

Co-Chair: Laraine Derr, President/CEO, Alaska State Hospital and Nursing Home Association

Pat Fradley, MSN, RN, Chief Nursing Officer, Alaska Regional Hospital

Lorrie Mortensen, RN, Assistant Administrator, Patient Care, Ketchikan General Hospital

Dennis Murray, BA, Administrator, Heritage Place, Banner Health System

Mary Ann Schaffer, RN, Chair, ASHNHA Workforce Development Committee and Patient Care Administrator, Yukon-Kuskokwim Health Corporation

Midge Stafford, PhD, RN, Chief Nurse Executive and Associate Administrator, Providence Alaska Medical Center

Liz Woodyard, RN-C, MEd, Assistant Administrator for Performance Improvement, Education and Outreach, Denali Center/Fairbanks Memorial Hospital

Staff: Carol Hughes, BS, MEd, Workforce Development Coordinator, ASHNHA

Judy Nyman, RN, Workforce Development Coordinator, ASHNHA

University Representatives

Co-Chair: Brian Saylor, PhD, MPH, Associate Vice Provost, Health Affairs and Research, University of Alaska Anchorage

Blanche Brunk, BSN, MPH, Director, Vocational Programs, College of Rural Alaska, University of Alaska Fairbanks

Linda Curda, BSN, CNM, MPH, Associate Professor, College of Rural Alaska, Kuskokwim, University of Alaska Fairbanks

Tina DeLapp, EdD, RN, Director, University of Alaska Anchorage School of Nursing

Kathie Etulain, EdD, Assistant Director, University of Alaska Southeast - Sitka

Jan Gehler, EdD, Dean, Community and Technical College, University of Alaska Anchorage

Mary Lou Madden, ME, MA, PhD, Dean of Faculty, University of Alaska Southeast - Juneau

Karen Perdue, Associate Vice President, University of Alaska

Jackie Pflaum, DNSe, RN-C, Chair, Baccalaureate and Graduate Programs, University of Alaska Anchorage School of Nursing

Karen Schmitt, PhD, Dean of Career Education, University of Alaska Southeast

Lynn Towner, RN, BSN, MS, Program Coordinator, Practical Nursing Education, University of Alaska Anchorage School of Nursing

Facilitator and Report Author: Jan Harris, BSN, MSHA, CHE
Executive Summary

In the first quarter of 2002, a task force was convened to examine nursing education programs in Alaska and what could be done on the supply side to reduce a serious statewide nursing shortage. Its participants included representatives of several campuses of the University of Alaska system and of member facilities of the Alaska State Hospital and Nursing Home Association.

The task force envisioned the Key Quality Characteristics of excellent Alaskan nursing education, as follows:

- Viable collaborative partnerships abound between the healthcare industry, postsecondary and K-12 institutions, and communities of Alaska.
- Ongoing shared responsibility and accountability, and productive communication, occurs regularly between the partners.
- Nursing curricula meet high standards of excellence, and are appropriate and culturally relevant, competency-based and values-driven.
- Diverse, suitable clinical sites are utilized by nursing students in Alaska, and are developed and supported through collaborative relationships.
- There is statewide access to high quality nursing education programs.
- Nursing education programs are supportive and considerate of students’ needs while maintaining academic standards.
- Programs permit nursing students to progress through levels of their career-related education with minimal redundancy, cost, and inconvenience.

As the task force deliberated, it became apparent that the overriding goal should be to double the number of new graduate registered nurses prepared in Alaska each year. The task force selected a target date of 2006 to accomplish this goal of increasing graduates from the current level of about 110 to 220 per year.

The task force summarized their discussions and agreements in the following list of Key Findings:

- Alaska needs to double (from 110-220) the number of new graduate registered nurses by 2006.
  - The existing nursing education programs at the University of Alaska Anchorage School of Nursing are strong and should be expanded.
- Expansion should include innovative and flexible nursing education options, emphasizing distance delivery and the use of suitable dispersed clinical sites.
  - Programs should be designed to allow students to progress from one level of education to another with minimal disruption and duplication, and to qualify to take examinations for interim credentials.

In order to reach the goal, the University of Alaska, the health care industry, and other partners, will need to collaborate and contribute resources to double nursing education capacity.
• New and expanded financial assistance and incentives for students will have to be sought.
  • Addressing other related workplace issues, while they require attention, will not adequately meet the statewide need for more nurses.

As task force deliberations continued, many interrelated strategies emerged that would together potentially achieve the stated goal. These strategies are grouped under the following headings and detailed in the body of this report:

• Mobilize Resources
  • Refine Program Delivery
  • Work on Clinical Sites Issues
  • Enhance Partnerships

Besides the ability of the strategies to significantly reduce the nursing shortage in Alaska, the communication and collaboration involved in their implementation should produce a more integrated system highly responsive to statewide needs. The resulting nursing education process would meet the quality criteria listed above.
Introduction

Nursing staff form the largest single component of the health care workforce. They are responsible for managing, organizing, and providing most of the daily care for patients in many health care settings. The shortage of these essential providers is crippling the delivery of health services in hospitals, clinics and other facilities throughout the world. We face a similar crisis in the United States and here in Alaska.

Alaskan healthcare facilities are currently experiencing a critical shortage of registered nurses. A dramatic increase in the numbers of new graduate nurses is required in both the short and long term. This calls for immediate and decisive action to double the capacity of Alaska’s nursing education programs. There is a waiting list of qualified applicants for the University of Alaska’s Bachelor of Science in Nursing (BSN) program, and many potential nursing students reside throughout the state.

The health care industry is expending great effort to recruit registered nurses and retain them in the workforce, in the face of limited resources and workplace challenges. In Alaska there is only a small pool of registered, non-working nurses that could be approached, and nurses residing in other states are already in high demand there. Industry is willing to partner with the University of Alaska to significantly increase the number of new graduates.

This report synthesizes the deliberations of a task force made up of health care providers and educators in describing the extent and causes of the nursing shortage in Alaska, and developing recommended strategies to resolve the shortage.

The Nursing Shortage

The National Nursing Shortage

The current shortage of registered professional nurses (RNIs) in the United States is well-documented. It is estimated that there were 126,000 registered nurse vacancies nationwide in 2000. By 2010 it is expected that there will be an additional 561,000 nurses needed, an increase of 26%. Most countries in the world are experiencing a nursing shortage.

This lack of critical personnel is already causing a crisis in care across the country. It is particularly acute in certain specialty areas and is geographically uneven. The situation is expected to deteriorate dramatically after 2007, as many in the present nursing workforce near retirement age.

The costs of addressing the shortage are seriously impacting the healthcare industry. It is estimated that about $81 million per year is being expended nationally in sign-on bonuses, and an additional $71 million in use of agency/traveling nurses to temporarily
fill vacancies. Other recruitment and retention efforts are costing millions of dollars more.

**Factors Contributing to the Shortage**

Reasons for the shortage are complex. Some contributing factors are as follows:

- there are expanding, often more appealing, career options available for young and working people today
- a drop in numbers of nursing school graduates in the past two decades has resulted in an aging nurse workforce, with an average age of about 44 years
- pay scales for nurses have remained relatively flat in recent years
- recruitment and retention bonuses and benefits programs, as well as overall salary enhancements, are offered by many providers, but are limited by the current reimbursement environment
- workplace conditions (fast pace, long hours, shift work, insufficient nursing and support staff, very sick patients who are discharged early, excessive paperwork, safety concerns) have tended to drive practicing nurses into exhaustion and out of the profession
- changing patterns of hospitalization and illness have created a demand for increasingly specialized nurses adept with rapidly advancing technology and medical knowledge, as well as for more nurses generally

Nursing school faculty are also in very short supply. Nationally the average age for faculty exceeds 50 years, and there is not a well-developed career path for nursing educators at the masters and doctoral levels.¹

The Alaskan health care industry is in the throes of an escalating nursing shortage. Always dependent on importing nurses from outside the state, Alaska’s providers are in direct competition for this scarce resource with larger systems in other states. Until 2000, nursing salaries in Alaska were flat for several years, contributing to a lack of incentive for nurses to migrate to the state.

![Mean Salaries of Alaskan Nurses 1996-2000](image)

According to Alaskan nursing administrators, temporary agency nurses from the continental United States – sometimes called “travelers” – are often reluctant to come to the state, particularly after the terrorist attacks on September 11, 2001. The demand and benefits for their services elsewhere in the country are high, and they are able to avoid excessive air travel and Alaska’s difficult weather and living conditions.

Similar to the experience of other schools in the country, it has proven difficult to recruit faculty to the University of Alaska’s School of Nursing. This has limited the capacity of the school to expand its student population.

The current situation in Alaska is deteriorating:

- During the period 1992-1998, the number of registered nurses working in Alaskan hospitals (in full time equivalents) increased 5%.
  During the same timeframe, the number of inpatient days increased 51%.
  This resulted in a 30% decline in the ratio of RNs to inpatient days, compared to a national increase of 26% in this ratio.\(^1\)

The number of Alaskan nurses per 100,000 residents fell by 20% between 1996 and 2000 (compared to a national decrease of 10%).\(^2\)

\(^1\)HRSA, Bureau of Health Professions. *HRSA State Health Workforce Profiles – Alaska*, December 2000, p.29.
• The age distribution of Alaskan nurses is even more striking than in the nation as a whole, with a higher peak in the 41-50 year age group, and lower percentages at the younger ages.
• Most of the nearly 7,000 registered nurses in the state in 2000 were working either full or part-time, with fewer than 1,000 out of the workforce.1

A survey conducted in January 2001 by staff at the Alaska State Hospital and Nursing Home Association revealed about 400 nursing vacancies in health care facilities in the state at the time. Overall the vacancies in 2001 represented 11% of nursing positions in hospitals and long term care settings. Because only about half of nurses work in such facilities in Alaska, this under-represents the shortage experienced by the industry as a whole. There was considerable geographic variation found, with higher percentages of vacancies in certain regions of the state -- Southeast at 15%, and the Southwest and North at 22%.2

The State Department of Labor projects a greatly increased demand for nurses in Alaska, along with a high rate of separation due to retirement, resulting in an additional 220 annual openings each year through 2008. This represents an overall growth rate of about 40% industry-wide over the decade ending that year. The projected need for licensed practical nurses (LPNs) is 30 per year and for Nursing Assistants 49 per year. 3

The number of projected openings is calculated using an economic forecasting model, the Micro Matrix System. This is a joint state-federal methodology that incorporates data derived from annual employment numbers by industry, past history, intermittent occupational staffing surveys, and industry-specific economic indicators. The model includes occupation-specific adjustments for changing technologies, expected rates of separation (due to aging, retirement and death), and other change factors. It does not consider vacancies due to turnover of personnel in existing positions, but is rather a predictor of demand for additional positions and personnel. The projection is updated on a regular basis. The projection of 220 annual openings for Alaska’s registered nurses includes 155 due to industry growth and 65 from separations.

Some of the increasing demand for nurses is the result of the aging of the American population. Alaska is experiencing a significant escalation of its senior population, at a rate predicted at 250% over the next two decades. In the past many retirees left the state, but that trend has reversed and many adult children are bringing their elderly parents to the state to better care for them. This has already begun to put a strain on health care and other systems. It will require the health care industry to respond to a population, which

1 Ibid., p. 11.
change factors that will drive up demand in the industry, and is reflected in the forecasting model described above.

**Previous Efforts Toward Resolution of the Shortage in Alaska**

For the past three years, the Alaska health care industry has been involved in assessment of workforce needs. It has engaged in discussions and collaborative projects with the University of Alaska to try to ensure that the state eventually become as self-sustaining as feasible in the production of graduate health professionals in a variety of fields. Not only will this fulfill existing and future workforce needs in Alaskan facilities and offices, but it will help establish a more stable workforce, less inclined to leave the state after a short tour of duty.

Rural facilities are particularly interested in ensuring that nursing education be readily accessed by potential students, and delivered as close to their home communities as possible, so they will be more likely to enter and complete the program and stay to practice in rural locations. Industry has made substantial contributions in time, effort, and funds to improving the workforce picture, and has made an ongoing commitment to support health professional educational programs in a variety of ways, including providing clinical sites for students, tuition support and adjunct faculty.

University of Alaska campuses have responded to this need with a number of productive initiatives, including commissioning a comprehensive study of the allied health workforce, and working to focus resources to address apparent deficiencies and needs. This study did not include nursing because the foundation-funded Alaska Colleagues In Caring project is currently accumulating both supply and demand data on nursing occupations in the state.

The University of Alaska Anchorage (UAA) School of Nursing has undertaken a number of innovative measures to address the shortage. This has included:

- increasing its use of web-based coursework
  - adding a distance-delivery component to its associates degree program
  - providing location flexibility for RN-to-bachelors degree and masters level students
  - establishing a distance-delivered practical nursing (PN) program
  - seeking to expand the use of the summer semester.

**Nursing Education Programs**

**Registered Nurse Preparation**

Graduates from either associates degree or bachelors degree nursing education programs sit for the same national licensing examinations that result in the designation Registered Nurse (RN). The nursing curriculum in associates degree programs takes a minimum of
two academic years to accomplish. Bachelors programs are planned to take a minimum of four years, if a student has not had previous educational preparation in nursing. Along with their nursing courses, the students must simultaneously meet the institution’s requirements for completion of the associates or bachelors degree. This results in associates degree programs taking at least three years to complete for essentially full-time students. The bachelors level programs typically take five years or more.

This is a departure from the past when students were generally able to complete nursing programs, including all pre- and co-requisites, in two or four years. Due to rapidly proliferating curriculum content, this is no longer the case.

While practical nurse programs do not prepare registered nurses, those working as licensed practical nurses (LPNs) may decide at some point in their careers to advance their education and become RNs by enrolling in college in either an associates or bachelors degree nursing program. Thus the practical nurse programs, besides providing employees at that level, also provide a stream of potential students for future registered nurse preparation.

Alaskan facilities have tended to have a low demand for practical nurses compared to those in other states. Alaskan nursing administrators have generally preferred to hire registered nurses, with their full scope of practice, rather than practical nurses who legally have a more limited range of skills to offer.

**University of Alaska Anchorage (UAA)**

The University’s School of Nursing in Anchorage provides several levels of nursing education – practical nursing, associate of applied science, bachelor and master of science -- as well as bridge programs for licensed practical nurses to become registered nurses through the associates degree program, and RNs with associates degrees to obtain their bachelors degrees.

A vocational practical nursing program is a recent addition. In its first quarter, it is being distance-delivered to a rural location (Bethel) as well as provided to Anchorage students in the same distance-delivered format. A vocational program for practical nursing focuses on hands-on clinical skills, with limited academic requirements. There are few pre- and co-requisite courses.

UAA has an established associates degree nursing program in Anchorage, which is currently being provided in a distance-delivered format to two additional locations (Fairbanks and Kodiak). It is expected that the program will be offered in other locations in the future on a rotating basis. Industry representatives and university faculty at other campuses indicated that the initial schedule for rotation was too limited, and have suggested that Fairbanks and Juneau may be large enough to have ongoing annual programs, with smaller sites being included on a less frequent rotation.
Students typically take at least three years to complete this associates degree program, one for pre- and some co-requisites, and two for the nursing curriculum. At the completion of the associates degree program, a student may sit for the national registered nurse licensing examination (NCLEX-RN). The overall pass rate for the UAA School of Nursing’s associates degree program over the past fourteen years has been 95%, over the established national benchmark of 85%.

As mentioned above, the UAA School of Nursing also has a Bachelor of Science in Nursing program, as well as Master of Science programs, and provides bridging programs between the various educational levels. It tends to have a backlog of qualified candidates for the bachelors program, with accepted students typically waiting one to two semesters to enter. Approximately 59% of at least minimally qualified applicants for the associates degree program are rejected, many due to the school’s limited enrollment capacity. It has been successful in recent years in increasing its population of Alaska Native nursing students through the RRANN (Recruitment and Retention of Alaska Native Nurses) program, which provides these students support in completing their education.

**Weber State University (WSU)**

Weber State University, based in Ogden, Utah, was invited to provide its nursing education programs in several locations in Alaska over the last decade.

At first WSU offered just an academic practical nurse program in several communities. This is somewhat different from the UAA vocational practical nurse program in that it has significant academic pre- and co-requisites. Both types of practical nurse programs prepare students to sit for the practical nurse licensing examination (NCLEX-PN).

Recently, Weber State began providing an associates degree nursing program in Alaska, using a fully distance-delivered, on-line format for its didactic component. Clinical instruction is provided either by local adjunct faculty, or delivered by Utah faculty who travel to Alaska to oversee clinical intensives. The WSU program requires academic pre- and co-requisite courses similar to the UAA associates degree program, with the additional requirement that entering students already be Certified Nursing Assistants (CNAs), giving them an underpinning of fundamental nursing skills.

This Weber State program is designed to provide articulation between levels. Its students are enabled to sit for the licensed practical nurse examination after completing the first year of their associates degree nursing curriculum, which is virtually the same as the academic practical nurse program. Once the second year of the associates degree program is complete, graduates may take the registered nurse licensing examination. The overall pass rate on national exams for all levels and locations of the WSU program is 90% on the first try. Their associates degree program is also expected to take approximately three years to accomplish, taking into consideration the pre- and co-requisites and the two-year nursing coursework.
The Weber State approach is much appreciated by those who have participated in its program, and is mostly lauded for its distance-delivered and flexible nature, its industry-responsiveness and student support. Some students benefit from the ability to sit for the LPN exam after the first year. They can then work as LPNs while continuing in the program, or can stop out for a time if necessary and still have a salable credential.

Directors of Nursing at WSU’s clinical sites in Alaska are pleased with the knowledge level of the graduates, and that most have remained in their home communities. Weber State initially came to Alaska at the invitation of the University of Alaska Southeast to provide their model of education primarily to the southeast island communities of the state, whose prospective nurses are often unwilling or unable to attend school in Anchorage. It does not anticipate remaining in the state in the long term. WSU has responded to the interest of and invitation from Alaskans, and would reduce its presence if the university system in Alaska offered a similar alternative.

The Challenge

The school of nursing of the University of Alaska Anchorage planned to enroll more than 40 associates degree students each year (including 24 in the distance-delivered component every other year), and about 60 to the bachelors program, or a few more than 100 students per year. The Weber State program would potentially admit another 24 enrollees every two years, at least through 2003. With minimal net attrition, the annual projection of graduate numbers, given stable output at this level, would average about 110 nurses annually.

This figure, compared with the anticipated annual openings of 220, is woefully inadequate to meet the projected nursing workforce needs of the state, much less contribute to reducing current vacancy rates. An accelerating loss of nurses through retirement, as well as increasing demand, is anticipated. Thus production of graduate nurses will have to double to just keep up with projected demand. This provides a significant opportunity for the University to partner with industry to provide innovative programs responsive to statewide need.

The practical nurse program at UAA anticipates graduating about 28 students annually, including from at least one distance site. Weber State would add about 24 practical nurse graduates every other year to that number, at least through 2004, when their presence in the state will be reevaluated based on whether Alaska sites continue to request their program and their Board of Regents approves continuation. The Alaska Vocational Technical Center (AVTEC) Anchorage location has proposed to the Board of Nursing to begin offering an LPN program later this year, admitting 20 students each year. So beginning in 2003 and continuing at least through 2004, there will be an average of 56 graduates of practical nursing programs in Alaska. It is expected that a number of these graduates will immediately continue on into registered nurse preparation programs. Nevertheless, this level of output should satisfy the industry’s need for practical nurses, and should help offset the need for registered nurses to a limited extent until the supply of professional nurses catches up with demand.
The Task Force

To explore the University of Alaska’s role in mitigating the nursing shortage in Alaskan facilities, a task force of twenty members gathered in January 2002, convened at the request of the Chancellor of the University of Alaska Anchorage. Eight represented the industry perspective, including staff and the Workforce Development Committee of the Alaska State Hospital and Nursing Home Association. The other twelve members represented several campuses and health careers programs in the University of Alaska system. The latter group included members from statewide administration; the University of Alaska Anchorage School of Nursing, Community and Technical College, and Provost’s Office; the University of Alaska Southeast campuses in Juneau and Sitka; and the College of Rural Alaska, with representatives from the University of Alaska Fairbanks and Kuskokwim Campus.

The task force has worked within a short timeframe on an important charge: to develop a description of the role of the University of Alaska in helping the Alaska health care industry address the current and projected demand for facility-based nursing staff. This task force represents hospitals and nursing homes in the state, so issues and needs related to physician offices and clinics, and other venues where nurses are hired, are not included in this work. In Alaska, about half of nurses work in facilities.

One product of the task force was planned to be a comprehensive document laying out data about supply and demand, identifying issues and barriers, and discussing models, options, and strategies. It is expected that this document will be used to inform university, industry, and legislative leaders about the scope of the problem and its potential solutions.

Key Quality Characteristics - Educating Alaska’s Nurses

At its first meeting, the task force examined available data and information concerning the nursing shortage in Alaska. It identified additional data needs, as well as major issues and barriers to increasing the output of nursing education programs in the state.

At the second meeting, members came to consensus on a vision of key quality characteristics they would like to see exemplified by Alaskan nursing education. These essential characteristics were and will be used to inform deliberations concerning models and options discussed. Selected strategies should embody the following:

- Viable collaborative partnerships abound between the healthcare industry, postsecondary and K-12 institutions, and communities of Alaska. Ongoing shared responsibility and accountability, and productive communication, occurs regularly between the partners.
• Nursing curricula meet high standards of excellence, and are appropriate and culturally relevant, competency-based and values-driven.
• Diverse, suitable clinical sites are utilized by nursing students in Alaska, and are developed and supported through collaborative relationships.
• There is statewide access to high quality nursing education programs.
• Nursing education programs are supportive and considerate of students’ needs while maintaining academic standards.
• Programs permit nursing students to progress through levels of their career-related education with minimal redundancy, cost, and inconvenience.

Curricular Models

The second meeting of the task force also included a discussion of several curricular models of interest to participants, with attention to pros and cons of each. There has been contention between industry and university leaders about the nursing education model that would best address the nursing shortage. The industry feels that the articulated, distance-delivered model exemplified by Weber State should be an option for Alaskans, most particularly for students who live outside of the Anchorage area.

Distance Delivery

Distance delivery has been a viable methodology for higher education in Alaska for many years, and the ability of students to avail themselves of educational opportunities without leaving their home communities is essential for many. Online or other technology-assisted delivery of didactic coursework is becoming much more common in nursing education programs nationwide. To work most effectively, distance delivery of academic courses should be augmented by a mentor at the local site. The clinical component of nursing curricula will also require an on-site instructor and, for smaller sites, may include clinical intensives in a larger community.

Most students in the University of Alaska system are “non-traditional” in that they tend to be older than the typical 18-year-old college freshman, and have work and family obligations. Many students have language and cultural barriers to academic success, and may lack confidence. Taking the students at the level they are, where they are, and sequentially building knowledge, skills and confidence, utilizing teaching techniques that match their learning styles, maximizes development of their intrinsic high potential. The Community Health Aide Program in Alaska has been exemplary in utilizing such an approach.

Program Articulation/Interim Credentials

The planned smooth transition from one level of nursing education to the next level (practical nurse to associates degree, for example) is termed articulation. Ensuring that levels of nursing education articulate with each other saves students time, frustration, and money. If programs are not articulated, content from an earlier level is repeated and extra semesters are needed to bridge levels. Sometimes extensive testing is required to receive
advanced placement. Such barriers can discourage individuals from advancing their careers. With care, concepts missing from lower level content can be built into the next articulated level. Many states have been involved in creating articulated models where students graduating from various practical nurse and associates degree programs (often offered at community and junior colleges) can be given advanced standing in the nursing curriculum at the next educational level.

Articulated models do not make admission to the next level automatic – students must still meet admission requirements – but once they are admitted their previous education is acknowledged. In some systems, lower division credits are held “in escrow” until the students prove they can handle upper division coursework.

Some articulated models include barriers to entry and continuation, such as being a Certified Nursing Assistant, having to pass rigorous pre-requisites prior to entry, or requiring passing the practical nurse licensing examination before progressing to the second year of an associates degree program. In considering nursing curricular models for Alaska, each such barrier should be evaluated to ensure that it does not unnecessarily restrict the flow of students into nursing careers. For instance, after completing certain required nursing coursework, it is helpful for students to be able to sit for the CNA or LPN examinations so they can augment their incomes during the rest of their RN preparation, but making it a requirement may be unnecessary or restrictive for those who do not care to do so.

Industry leaders feel the UAA bachelors and masters level programs are of high quality and should not be much changed. However, some feel the UAA associates degree program should be designed to provide an opportunity for students to take the LPN exam partway through the curriculum, like that of Weber State. They believe the associates degree program should better articulate with LPN programs (both at UAA and elsewhere), as well as with the UAA bachelors program, and be made available in many communities statewide using distance education methodologies. Others do not feel the option of taking the LPN exam midway is important; that students in their communities are really seeking to be RNs, and the current UAA associates degree distance-delivered model is preferable.

The faculty of the UAA practical nursing program plans to develop a special summer transition option for students who successfully complete the first year of the associates degree nursing program and who, for personal reasons, find it necessary to “stop out” of the program for a period of time to work as an LPN, or who need to work part-time while they are attending school. The transition option will enable those students to complete the learning experiences necessary to qualify them to sit for the national licensing exam for practical nurses and for employment as licensed practical nurses. In essence, this will create a “1+1” educational trajectory for those students who require or desire such an option.

Some industry representatives feel the Weber State model, with its high level of academic requirements prior to entering the practical nursing year and subsequent advancement
into the last associates degree year, is preferable and appropriate for their region of the state. But there are a number of rural sites in the state that would prefer initial access to a more vocational, hands-on, practical nurse program, such as UAA is currently offering. In order to better articulate with the associates degree program, the academic pre-requisite coursework, along with a transition course, would follow the vocational practical nurse curriculum. Subsequently the students would advance into the second nursing year of the associates degree curriculum. In either case, it is preferred that the practical nurse program graduates transition into the associates degree program without unnecessary repetition of nursing skills and knowledge.

In all of these models, the associates degree program would take about three years to complete. A schematic depiction of the UAA and Weber State models is found in Appendix A.

**Clinical Sites**

A critical limiting factor in expanding the numbers and dispersion of nursing students in Alaska has been the availability of sufficient suitable clinical sites. While facilities and communities in Alaska are able to provide a variety of learning experiences for student nurses, most locations are quite small with certain clinical experiences in limited supply. Because graduate nurses, once licensed, are able to exercise the license anywhere in the country, it is important that they be involved in at least enough patient care as students to be safe as graduates in most settings. While often basic nursing skills can be learned at a small facility, students may have to travel to a larger site for clinical intensives in certain specialties, such as inpatient psychiatry and pediatrics.

The numbers and types of patients found on a nursing unit will dictate how many students can be safely assigned there without undue disruption to patients and staff. It will be imperative to maximize use of both traditional and unusual clinical sites if the number of nursing students in the state is to significantly increase. The burden will continue to fall most heavily on larger facilities, particularly those in the Anchorage area where clinical intensives for distance delivery students will most likely be located along with clinical rotations for larger numbers of Anchorage-based students.

Clinical instructors will be needed at each site. In most settings the preferred ratio of instructors to students is 1 to 8. If the student cohort is split between floors, it will fall on the facility’s staff nurses to monitor the students’ work if the instructor is not immediately available. Besides the availability of suitable experience, the physical space of a unit may limit the number of staff and students.

There has been some discussion of available hours for student clinical experiences considering that health care facilities are open and staffed around the clock every day of the year. It is anticipated that some expansion of hours would be feasible with increased faculty, and advanced notification of students. However, use of clinical facilities would be of limited learning value and disturbing to patients after 11PM, when it is expected that patients will be mostly sleeping. Similarly, weekends on some units are of lesser
value, especially for advanced students, because operations, procedures, diagnostic work, and other related patient activities, are rarely carried out on weekends. There are certain experiences for which extending to the night hours and weekends would be of potential benefit, such as labor and delivery and emergency and critical care. Care must be taken to avoid sleep deprivation for faculty and students expected to be in classes during the daytime hours, and to be considerate of the need for at least two consecutive days off per week and for students’ childcare requirements. It is important in the push to increase the numbers of graduate nurses not to discourage students from completing their degrees by requiring onerous scheduling or other unnecessary barriers.

Criteria for Clinical Sites

The variety of clinical experiences required for students is dependent on each course in which they are enrolled.

For both associates and bachelors degree students at the UAA School of Nursing the courses in semesters 1 through 4 have similar clinical requirements. The first semester Fundamentals of Nursing course can make use of skilled nursing facilities to obtain appropriate clinical experiences at the most basic level. In semester two, students have their first course in Medical-Surgical Nursing. At this point students require relatively stable hospital inpatients, needing care that is not too complex. At the beginning of the semester, caring for one patient is sufficient for each student, but by the end of the semester there should be at least two appropriate patients per student.

It is in semester three that students begin their coursework in the common specialties. In Obstetrics, students need to learn to care for mothers and babies, observing in labor and delivery, and providing postpartum and newborn care once the birth has occurred. A short amount of time can be devoted to normal prenatal care, which tends to be repetitive and provides minimal clinical skills development. Women with more complicated pregnancies may provide additional learning, especially if they must be admitted as inpatients. In Pediatrics, it is of value to make use of learning opportunities in the outpatient setting. However, it is still important that students have experience assessing and providing care to sick, hospitalized children. There are few pediatric units in hospitals in the state, so this is more difficult to achieve than other clinical experiences. The site should offer about 1-2 pediatric patients per student.

In the fourth semester it is expected that student nurses will handle more complex patients on the Medical-Surgical units. This would include experience in the emergency room and critical care units. Assignment of 2-3 patients per student is needed.

Students also do their rotation in Psychiatry in the fourth semester. This is another area with few inpatient clinical sites in Alaska. Direct experience with at least one patient per student is sought. Students are also expected to observe group counseling sessions and participate in therapeutic team meetings.
For the bachelors program students only, there is a fifth semester of clinical work. During this last semester these students are assigned to a variety of agencies to obtain community experience, including school and public health nursing. For the last six weeks of the program, bachelors degree students are required to work with staff nurse preceptors who must be at least bachelors-prepared themselves. Preceptors are recruited from facility staffs; about forty per semester are needed. The students work alongside the preceptors for 160 hours, conforming with the preceptors’ hours and locations of work.

**Barriers to Use of Clinical Sites**

Besides sheer numbers of patients and physical space, there have been some other historical barriers to the use of clinical sites by student nurses. Some staff on some units have been negative toward students, making their clinical experience unpleasant and counterproductive. This has led to faculty not approaching those units to take students, eliminating sites that might be of real value for clinical education. In order for the best learning to occur, the environment must be student-friendly at the individual nurse level and on each unit identified as a clinical site.

Nurse managers have been given the prerogative of deciding how many students they will accept each semester. This leads to unpredictability in the number of available clinical placements. If the faculty and facility together assess each unit and determine a reasonable ongoing number of students that can be provided appropriate learning experiences there, it will be possible to better plan assignments and accommodate additional students.

In order for students to take advantage of every available clinical experience, and have opportunities to perform rather than observe care, facilities will need to commit to allow staff nurses to monitor student actions whenever possible. This acknowledges that a clinical instructor with eight students scattered potentially over several floors of a facility cannot be with each one continuously. Additionally, it is important for facilities to encourage staff nurses to serve as preceptors for advanced students in their final period of schooling.

There has been some reluctance to have students’ assigned clinical hours be different than the shifts of staff nurses. However, twelve-hour shifts are not reasonable for students who also have academic obligations during the week. With the high level of anxiety that students experience in unfamiliar learning settings and situations, their ability to concentrate and learn is diminished over extended timeframes. This is particularly true for beginning students. Also, by allowing students to come and leave mid-shift, say from 7AM-2PM and 3PM-11PM, more students can be accommodated on any one unit.

The School of Nursing and health care facilities must develop close and collaborative working relationships in order for these and other barriers to be overcome.

**Strategies**
At its third and final meeting, the task force reviewed documentation of their previous deliberations and related research, and identified recommended strategies for further consideration by university and industry leaders. These strategies were developed with reference to the key quality characteristics documented above.

**Key Findings**

The task force summarized their findings in a series of key points, with accompanying explanatory narrative, as follows:

- **Alaska needs to double (from 110-220) the number of new graduate registered nurses by 2006.**

Alaska is experiencing a nursing workforce crisis, mirroring the critical shortage being experienced across the nation and worldwide. There are about 400 nursing vacancies in facilities statewide, with more than 200 additional openings projected across the industry each year. In some regions of the state more than one-fifth of positions are vacant. Current nursing education programs in the state graduate about 110 nurses per year from associates and bachelors degree programs. Graduates from both types of programs are eligible to sit for the national registered nurse licensure examinations. Unlike in the past, associates degree programs today typically take a minimum of three years to complete and bachelors programs about five years.

All levels of nursing education should be supported to expand, improve, and link with other levels. Clearing the backlog of qualified students and doubling capacity by providing another like-sized nursing education component that is distance-delivered and flexible, and primarily at the associate degree level, would result in the greatest impact on the nursing shortage in the shortest timeframe. This is a bodacious goal, akin to the “man on the moon” mission, and requires great energy, creativity, and commitment to accomplish.

- **The existing nursing education programs at the University of Alaska Anchorage School of Nursing are strong and should be expanded.**

The University’s School of Nursing is nationally recognized as a high quality nursing school. Glowing accreditation reports document their success. The School of Nursing expects to graduate approximately 100 students from its registered nurse preparation programs annually, including about 40 with an associates degree and 60 with a bachelors degree. It will graduate additional students from the licensed practical nurse program (about 20) and masters level specialties (10).

There are more qualified applicants for the nursing programs than can be admitted due to limited enrollment capacity. Acceleration of their entrance into the nursing curriculum would boost graduate numbers in the short term. There are many potential nursing students throughout the state. This supports continuation of the existing programs and strongly argues for their expansion. A nationwide shortage of nursing
faculty will limit the ability to expand. Undertaking a review of current faculty salaries and benefits is recommended.

While it is critically important to expand the supply of new generalist nurses, there is an accompanying need to augment the development of nurse specialists in areas of severe shortage, with both intensive programs for working nurses and advanced practice degree opportunities. Critical care nursing is one such area.

- Expansion should include innovative and flexible nursing education options, emphasizing distance delivery and the use of suitable dispersed clinical sites.

Distance-delivered educational methodology and technology is quickly expanding, and Alaska is ideally situated to take an aggressive approach in adopting these advances. The University’s School of Nursing has implemented innovative changes to increase the numbers of graduates at each level, yet substantially more is needed. Flexible and distance-delivered programs can increase access to nursing education for both traditional and non-traditional students. An out-of-state university has successfully offered distance-delivered practical nurse and associates degree nursing programs in Southeast Alaska over the past decade. While didactic coursework can successfully be distance-delivered, developing clinical skills requires appropriate hands-on experiential learning.

Statewide distance delivery should result in more graduate nurses in rural areas. This is important because the geographic dispersion of nurses is uneven, and rural areas of the state have a higher percentage of vacant positions. Innovative use of clinical sites statewide would expand educational capacity.

- Programs should be designed to allow students to progress from one level of education to another with minimal disruption and duplication, and to qualify to take examinations for interim credentials.

The planned smooth transition from one level of nursing education to the next level is called articulation. Poor articulation in nursing education increases frustration, cost, time, and inconvenience for those wishing to upgrade their skills and credentials. Such barriers can discourage individuals from advancing their careers. Creating better program articulation does not mean a reduction in program or admission standards.

Also, a curriculum which enables nursing students to take Certified Nursing Assistant and Licensed Practical Nurse certification examinations during a registered nurse preparation program provides incentive and assistance for students who must work to support themselves during their schooling. This is especially true for those who must “stop out” of school for periods of time due to financial and family responsibilities, and would benefit from holding a salable credential.

The University’s associates degree nursing students can already sit for the nursing assistant certification examination during the first year of their program. The School
of Nursing plans to develop a summer transition option in its practical nurse program for students who have successfully completed the first year of the associates degree nursing program and who, for personal reasons, find it necessary or desirable to obtain the Licensed Practical Nurse credential. The transition option will enable those students to complete the learning experiences necessary to qualify them to sit for the national licensing examination and for employment as practical nurses. In essence, this will create a “1+1” educational trajectory for those students who require or desire such an option.

- **In order to reach the goal, the University of Alaska, the health care industry, and other partners, will need to collaborate and contribute resources to double nursing education capacity.**

There is great value in continued dialogue and partnership between the University and the health care industry, and relevant other partners. Sharing responsibility for policy-making, planning, and implementation will enable Alaska to address critical workforce needs statewide.

The partners will need to commit to prioritize, align, and leverage current and potential financial and human resources in order to expand nursing education capacity. Efforts will be made to increase the pool of adequately prepared, qualified applicants. Creative and immediate strategic measures should be taken to successfully execute this joint mission and reach the goal of doubling the number of nursing school graduates by 2006.

- **New and expanded financial assistance and incentives for students will have to be sought.**

Financial support for nursing students is an essential component of an educational expansion plan, as financial barriers are significant for many prospective applicants. Funding should be identified through partnerships with the Alaska Post-Secondary Commission, the health care industry, Alaskan Native corporations, and current and pending federal loan initiatives.

- **Addressing other related workplace issues, while they require attention, will not adequately meet the statewide need for more nurses.**

The nursing shortage is the result of a complex of factors, including:

- An aging nurse workforce
- Higher demand for nurses throughout the health care industry
- Expanded career options, both for beginning students and working nurses
- Workplace stresses such as long hours, sicker patients, fast pace, physical demands, safety concerns, shift work, and inadequate staffing
  - Stagnant salaries that contributed to fewer entering and remaining in the field
Limited availability of nursing faculty, both nationally and in Alaska

There are approximately 900 registered nurses in Alaska who are not currently in the nursing workforce. Even if some could be drawn back into nursing through workplace incentives, this pool is too small to address the escalating shortage. Many would be unable to re-enter hospital nursing due to childcare and physical issues.

Recommended Strategies

From the task force’s determination and discussion of Key Findings, certain strategies emerged.

- **Mobilize Resources**
  
  - Seek funding to expand faculty, space, and other resources of the UAA School of Nursing.
  
  - Admit the waiting list to the bachelors program as soon as feasible.
  
  - Develop financial assistance/incentives for students through partnerships with the Alaska Post-Secondary Commission, the health care industry, Alaskan Native corporations, and current and pending federal loan initiatives.
  
  - Study and adjust nursing faculty salaries and provide other recruitment incentives.

- **Refine Program Delivery**

  - Increase the number of bachelors degree students by adding a third cohort to begin in the summer semester and increasing each cohort size to forty students.
  
  - Increase outreach sites on a regular and ongoing schedule. An initial proposed plan for associates degree program sites is found in the table below. Other sites will be developed when cohorts are identified and clinical opportunities permit. The practical nurse program will also be provided at additional sites.

**Proposed Outreach Schedule – UAA School of Nursing AAS Program**

<table>
<thead>
<tr>
<th>Site</th>
<th>Start Frequency</th>
<th>Cohort Size</th>
<th>Enroll Date 1&lt;sup&gt;st&lt;/sup&gt; Cohort</th>
<th>Start Date Next Cohort</th>
<th>Completion Next Cohort</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>January 2004</td>
<td></td>
</tr>
<tr>
<td>Kodiak</td>
<td>Every three years</td>
<td>8</td>
<td>2001</td>
<td>September 2002</td>
<td>2004</td>
</tr>
<tr>
<td>Juneau</td>
<td>Every two years</td>
<td>10</td>
<td>2003</td>
<td>January 2004</td>
<td>2006</td>
</tr>
<tr>
<td>Bethel</td>
<td>Every three years</td>
<td>6</td>
<td>2003</td>
<td>January 2004</td>
<td>2006</td>
</tr>
<tr>
<td>Kenai</td>
<td>Every three years</td>
<td>6</td>
<td>2004</td>
<td>January 2005</td>
<td>2007</td>
</tr>
<tr>
<td>Ketchikan</td>
<td>Every three years</td>
<td>6</td>
<td>2004</td>
<td>January 2005</td>
<td>2007</td>
</tr>
<tr>
<td>Sitka</td>
<td>Every three years</td>
<td>6</td>
<td>2004</td>
<td>January 2005</td>
<td>2007</td>
</tr>
</tbody>
</table>

Add one additional cohort of associates degree students in Anchorage beginning in 2004. This addition could strain existing clinical sites and may not prove to be feasible; this strategy will be further assessed by the partners as the expansion is implemented.
• Add an optional summer session to the associates degree program between the two clinical years, at the end of which students will be eligible to take the licensed practical nurse examination, creating a “1+1” curriculum option.
  • Expand and improve the distance delivery methodologies utilized by nursing school faculty.

• **Work on Clinical Sites Issues**
  • Utilize some additional available hours for student clinical experiences, where appropriate and feasible.
  • Explore alternate and dispersed clinical sites.
  • Identify and eliminate barriers within clinical settings that limit the effective utilization of available and potential learning opportunities.
  • Stagger start dates for cohorts in and out of Anchorage to ease pressure on clinical sites and produce graduates three times per year.

• **Enhance Partnerships**
  • Maintain a forum for collaborative communication between industry and university representatives to monitor progress on the goal and adjust strategies as needed.
  • Develop incentives for clinical preceptors and adjunct faculty employed by health care facilities.
  • Market nursing education programs statewide, and potentially out of state.
  • Work with K-12 institutions to develop health careers core and mentoring programs.
  • Collaborate with all campuses to prepare qualified nursing school applicants.
    • Address continuing education needs for nurse specialties.

**Projected Results**

It is anticipated that by combining these strategic activities, a significant increase in the number of new graduate nurses could be accomplished by the end of the 2006 academic year. The following table provides a projection of annual changes in the number of graduates from the University of Alaska School of Nursing, utilizing the strategies described above. This includes a minimal attrition rate. While the numbers do not quite reach the target of 220, they do more than double the baseline year of 2001. It is expected that enrollments in the distance delivery component will be somewhat higher in subsequent years, and future collaborative strategic adjustments would be made as needed.

It should be noted that the last strategy to be implemented would be the additional Anchorage-based associates degree cohort. There
### UAA School of Nursing -- Projections of Nurse Graduates

#### UAA Registered Nurse Projections

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td><strong>Anchorage - UAA</strong></td>
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<tr>
<td>Baseline Program</td>
<td>52</td>
<td>58</td>
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<td>Larger Cohorts</td>
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<td>16</td>
<td>16</td>
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<td>37</td>
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<tr>
<td><strong>Total Bachelors Degree</strong></td>
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<td>58</td>
<td>66</td>
<td>111</td>
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<td>111</td>
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<td>29</td>
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<td>Anchorage Cohort</td>
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<td>Fairbanks – TVCC</td>
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<tr>
<td>Southeast – UAS</td>
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<tr>
<td>Bethel</td>
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<td>9</td>
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<tr>
<td><strong>Total Associates Degree</strong></td>
<td>28</td>
<td>50</td>
<td>29</td>
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<td>50</td>
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<td><strong>Total UAA RN Prepared Graduates</strong></td>
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<td>87</td>
<td>116</td>
<td>161</td>
<td>194</td>
<td>195</td>
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<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
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<tbody>
<tr>
<td><strong>UAA Practical Nurse Projections</strong></td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Anchorage – UAA</td>
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<td>13</td>
<td>16</td>
<td>16</td>
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<td>Bethel</td>
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<td>0</td>
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<td>12</td>
<td>12</td>
<td>12</td>
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<tr>
<td><strong>Total UAA Practical Nurse Graduates</strong></td>
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<td>20</td>
<td>38</td>
<td>28</td>
<td>28</td>
<td>28</td>
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</tbody>
</table>

In addition to the projections provided in the table above, there would be about 24 registered nurse graduates of the Weber State program in Alaska every other year, at least through 2005. On alternate years, Weber State would produce 24 practical nurse graduates. The AVTEC program would contribute about 20 practical nursing graduates per year beginning in 2003. Total graduates from all programs in Alaska are projected as follows:

#### Projections -- Total Alaskan Graduate Nurses

<table>
<thead>
<tr>
<th>Program</th>
<th>School</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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</thead>
<tbody>
<tr>
<td>Registered Nurse Prep</td>
<td>UAA</td>
<td>108</td>
<td>87</td>
<td>116</td>
<td>161</td>
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<td>195</td>
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<tr>
<td></td>
<td>Weber State</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Total RN Prep</strong></td>
<td></td>
<td>108</td>
<td>111</td>
<td>116</td>
<td>185</td>
<td>194</td>
<td>195</td>
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</tbody>
</table>
Cost Implications

Cost Elements

Initial budget estimates have been developed for implementation of the expansion plan through 2007. There are many components of cost to be considered. These include the need for additional faculty and support staff at the School of Nursing, increased space, and other educational and administrative resources and technologies, both in Anchorage and at remote sites. There will be costs associated with the distance program borne by non-Anchorage campuses, as well as infrastructure support of the entire effort.

Marketing, and programs to prepare prospective students academically to apply to the nursing programs, will enter into the overall cost picture. Also, industry will provide clinical preceptors and mentors, release time for staff serving as adjunct faculty, perhaps student housing, some clinical supplies and equipment, and learning space, with associated budget implications.

As a way to attract and enable students to attend nursing programs, financial assistance and incentives will need to be developed through partnerships with the Alaska Post-Secondary Commission, the health care industry, Native corporations, and current and pending federal loan initiatives. Funds will also be needed to assist students who must travel or relocate to obtain required clinical experiences.

Budget Summary

<table>
<thead>
<tr>
<th>Practical Nurse</th>
<th>UAA</th>
<th>Weber State</th>
<th>AVTEC</th>
<th>Total PN</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>20</td>
<td>38</td>
<td>24</td>
<td>44</td>
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<tr>
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<tr>
<td></td>
<td>20</td>
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<td>?</td>
<td>48</td>
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<td></td>
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<tr>
<td></td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>48</td>
</tr>
</tbody>
</table>
Using a 3% annual inflation rate, and including the salary equity adjustment and one-time purchase of equipment and materials for the School of Nursing in Anchorage and at distance education sites, budget requirements are projected as follows (in millions):

### Budget Projections – UAA School of Nursing Program Expansion

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td>Baseline</td>
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<td>$3.7</td>
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<td>$3.9</td>
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<tr>
<td>Expansion</td>
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<td>$0.9</td>
<td>$1.9</td>
<td>$2.3</td>
<td>$2.3</td>
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<tr>
<td><strong>Totals</strong></td>
<td>$2.7</td>
<td>$3.9</td>
<td>$5.5</td>
<td>$6.0</td>
<td>$6.1</td>
<td>$6.2</td>
</tr>
</tbody>
</table>

One-time costs to expand the Anchorage and distance programs would include the following:

### One-Time Costs -- UAA School of Nursing Program Expansion

<table>
<thead>
<tr>
<th>Sites</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchorage</td>
<td>$113,000</td>
<td>$44,400</td>
<td>--</td>
<td>--</td>
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<tr>
<td>Distance</td>
<td>--</td>
<td>$75,000</td>
<td>$220,000</td>
<td>$75,000</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$113,000</td>
<td>$119,400</td>
<td>$220,000</td>
<td>$75,000</td>
</tr>
</tbody>
</table>

In developing budgets for each expansion component, it was noted that the cost of implementing the associates degree program at sites outside of Anchorage was quite high. The didactic component can be delivered to remote sites without undue cost by faculty based mostly in Anchorage, though there would be some travel by faculty to the distance sites for student support and assistance. However, the clinical component of the nursing curriculum will require that clinical instructors are hired at each remote location, and learning materials and equipment purchased for each site.

### Conclusion

The University/Industry Alaskan Nursing Education Task Force met during the first quarter of 2002 to identify the parameters of the nursing shortage in the state and associated supply side issues and barriers, and to develop strategies to address the shortage. It is clear that a well-planned, organized, and ongoing collaborative effort is required if the identified goal of doubling the number of graduates of Alaska’s registered nurse preparation programs is to be achieved and maintained.

The task force adopted the goal of doubling the number of new nurses from about 110 to 220, to address the existing and increasing demand for registered nurses projected by the State of Alaska. Past conflicts regarding curricular models were discussed and substantially resolved. With attention to the quality of education and the need for ongoing productive relationships, important findings were identified and recommended strategies developed to accomplish the expansion needed in an acceptable timeframe.
The task force was committed to increasing the number of graduates without sacrificing the quality of educational programs. The quality of nursing education in Alaska was addressed in several ways:

- from the perspective of the Key Quality Characteristics listed previously
- in terms of Content (curriculum, coursework, clinical experience, delivery methodology)
- with regard to the educational Customers – students and employers -- on such parameters as responsiveness and flexibility
- and finally considering educational Processes (inputs, throughputs, and outputs)
  – please see the process diagram in Appendix B.

Task force discussions led to the realization that existing curricular models in use by the University of Alaska School of Nursing could be utilized to achieve the expansion needed. Participants recognized the need for some branches of the university system to focus attention and resources on outreach to Alaska’s K-12 institutions and students, and to strengthen their offerings to better and expeditiously prepare students for admission into nursing school. Expanding opportunities for prospective students to accomplish their pre- and co-requisite courses would be part of this effort. Marketing nursing and Alaskan nursing education to students and the public would be a complementary activity.

Only with great energy, creativity, commitment, and collaboration will it be possible to realize the goal of doubling the number of new graduate nurses, and significantly relieve the nursing shortage in Alaska. Sustained focus and interaction will be needed to keep the issues and goal in the forefront through successful implementation of the strategies and maintenance of the gains.
APPENDIX A

Curricular Models
APPENDIX B

Process Diagram
**Academic practical nurse education program** – an educational program to prepare students to successfully pass the national licensing examination for practical nurses (NCLEX-PN) and to be employed to carry out the scope of practice of a practical nurse, which is more limited than that of a registered nurse. This type of practical nurse program includes academic pre- and co-requisite courses (such as Human Anatomy and Physiology, Written Composition, Psychology).

**Articulation** – the sequential fit between educational majors in the same or similar fields that are taught at different academic levels, such as associates degree and bachelors degree. Articulated programs seek to eliminate unnecessary redundancy in course content between the educational levels.

**Associate of Applied Science (AAS) in Nursing** – this is a degree awarded for completion of a lower-division program of study in the field of nursing. In many states it is offered at the community or junior college level. Graduates of associates degree in nursing programs are eligible to sit for the national licensure examination for registered nurses (NCLEX-RN) and upon passing may receive state licensure and practice as a registered nurse. Currently, AAS degrees in nursing usually take three years to accomplish – one for pre- and co-requisites and two for the nursing curriculum.

**Associates degree program** – a postsecondary educational program leading to graduation with an associates degree.

**Bachelor of Science in Nursing (BSN)** – this is a degree awarded for completion of a college or university program of study in the field of nursing. Graduates of BSN programs are eligible to sit for the national licensure examination for registered nurses (NCLEX-RN) and upon passing can receive state licensure and practice as a registered nurse. Currently, BSN degrees take four-to-five years to accomplish due to expanding curricular content and demands on the personal lives of many students.

**Certified Nursing Assistant (CNA)** – an individual who has completed a short training course to perform fundamental nursing care, and who has passed a certification examination.

**Clinical preceptor** – in this context, a registered nurse who is employed at a health care facility and monitors and instructs the clinical practice of a nursing student for a defined period of time at the end of his/her nursing education, generally in a non-compensated volunteer capacity.

**Cohort** – a group of student nurses who enter the nursing education program at the same time and move through the curriculum together.

**Community Health Practitioner/Aide Program** – an Alaskan program to train individuals to work in a physician adjunct role in small rural villages.
Distance delivery – the provision of educational programs in sites remote from the main campus and faculty, usually using technologies such as web-based and other computer instruction, and audio- or videoconferencing, along with packaged materials and a reliance on self-study. Distance delivery of nursing education is feasible for the academic coursework component of basic nursing programs, but on-site clinical instructors must directly observe, monitor and teach students during their clinical learning experiences.

Licensed Practical Nurse (LPN) – a practical nurse who has completed an accredited academic or vocational practical nurse education program, passed the national licensure examination, and become licensed as a practical nurse in one or more states. A practical nurse works under the supervision of a registered nurse, physician, or dentist.

Nurse generalist – a nurse generalist has completed a nursing education program that has prepared him or her to practice as a registered nurse in a variety of settings.

Nurse specialist – a nurse specialist has either additional education in a specialty clinical area or knowledge and skill in the specialty gained through experience.

Nursing assistant – an aide that assists the nursing staff with the provision of basic nursing care. May or may not be certified (see Certified Nursing Assistant).

Practical nurse – a licensed practical nurse (LPN).

Practical nurse (PN) education program – an educational program to prepare students to successfully pass the national licensing examination for practical nurses (NCLEX-PN) and to be employed to carry out the scope of practice of a practical nurse. A PN program is usually one year in length, and may or may not include college-level academic non-nursing courses.

Professional nurse – a term applied to registered nurses (see below).

“One-Plus-One” (“1+1”) – a nursing curriculum model which includes one year of nursing education at the practical nurse level, after which a student is eligible to sit for the national practical nurse examination, and then proceeds into a second year of nursing education at the associates degree level. After completion of a “1+1” program, the graduate is eligible to take the national registered nurse examination. In reality, most of these programs take three years to accomplish – one for pre- and some co-requisite academic courses, one for the LPN year, and the third for the associates degree year.

NCLEX-PN – the national licensure examination for practical nurses. Once individuals pass this exam, they may become licensed in one or more states and be employed there as an LPN.
**NCLEX-RN** – the national licensure examination for registered nurses. Once individuals pass this exam, they may become licensed in one or more states and be employed there as an RN.

**Recruitment and Retention of Alaska Natives in Nursing (RRANN)** – a program at the University of Alaska School of Nursing that recruits Alaska Natives to enter a nursing education program and facilitates their success in completing the program.

**Registered Nurse (RN)** – a professional nurse who has completed an accredited nursing education program, passed the national licensure examination, and become licensed as a registered nurse in one or more states.

**Vocational practical nurse education program** -- an educational program to prepare students to successfully pass the national licensing examination for practical nurses (NCLEX-PN) and to be employed to carry out the scope of practice of a practical nurse. This type of program integrates content from non-nursing disciplines (such as anatomy and physiology, written communication, and psychology) into nursing courses, and has a hands-on focus and limited academic requirements.