

## Summary of Key Points and Options

*Needs Assessment and Analysis of Potential Strategies for a Pharmacy Educational Program for Alaska*  
(A report prepared by Dr. Arthur Nelson, February 2010)

### *Report Preparation*

In the spring of 2009, the University of Alaska engaged Dr. Arthur Nelson, a nationally recognized pharmacy consultant and Dean of the School of Pharmacy at Texas Tech University, to conduct an analysis of pharmacy education options for Alaska. A committee of deans and other university leaders was convened to review the related scope of work and participate in the consulting process. The committee will provide recommendations to the University of Alaska Vice President for Academic Affairs through the Associate Vice President for Health, Karen Perdue.

Dr. Nelson traveled to Alaska twice to carry out on-site assessment activities. Visits were made to six healthcare institutions and discussions held with pharmacists' association members, faculty, university leaders, and other interested parties.

The ensuing report prepared by Dr. Nelson provides a comprehensive analysis of the status of and prospects for pharmacy education in Alaska in two main areas:

- Pre-pharmacy Education
- Pharmacy Education Options
  - Institutional partnerships for pharmacy education
    1. Host established distance pharmacy program
    2. Engage an out-of-state pharmacy school system in a robust, interactive partnership, with satellite sites in Alaska
    3. Participate in a multi-state health professional consortium with an integral Alaska hub
  - In-state school
    4. Develop an Alaska pharmacy school

### *General Background*

Demand There has been a strong expressed need for additional clinical pharmacists in Alaska for a number of years. A 2007 vacancy survey (conducted by the Alaska Center for Rural Health, Alaska's AHEC) found 98 estimated vacancies statewide for these health care professionals (a 23.7% vacancy rate). In the past two years this need has dissipated somewhat. There were 50 more licensees in the state (a 12% increase) in 2009 than in 2007, a total of 471 individuals. And the 2009 vacancy survey found only 37 estimated vacancies statewide. Study respondents included 36 pharmacies/pharmacy chains, 22 hospitals/nursing homes, and 29 tribal health organizations (92% of all such organizations), along with a variety of other health care organizations. Respondents represented 415 of the 471 pharmacist licensees (88%). The overall 2009 vacancy rate of 8.6% masked an urban/rural difference of 5.0% (urban 7.4%, rural 12.4%).

Anecdotally, during Dr. Nelson's visits to Alaska in 2009, the six hospitals visited in four communities across the state reported that all or nearly all of their pharmacist positions were filled. It should be noted that these hospitals were relatively large and located in more urban communities. While the specific reasons for this improvement in the pharmacist supply in the state are not known, it is expected that the national recession and expansion of pharmacy education elsewhere in the country have resulted in improved recruitment to Alaska.

What number of pharmacists Alaska actually does need, rather than demand in terms of position vacancies, is difficult to determine. In 2000 the per capita number of pharmacists in the state (51 per 100,000 residents) was lower than the national average of 71 per 100,000 (just 72% of the average); it is not clear whether this national average is a benchmark to aspire to. Dr. Nelson reported that more recently the Alaska rate was 75% of the national rate with 51 pharmacists/100,000 residents and 68 pharmacists/100,000 residents respectively. The Department of Labor reports a fairly high percentage of out-of-state residents holding licenses in the state and increased pharmacist retirements are anticipated in the future.

Dr. Nelson makes the point that clinical pharmacists are not currently being used to their full extent in the provision of patient care generally, and that a number of trends in health status and workforce in the country and state suggest there will be more pharmacists needed for expanded roles in the future. He assumes that these trends will result in expanded roles for pharmacists rather than other system changes, and that advancing technologies will not decrease demand. He projects a coming need for 500-550 pharmacists in Alaska; with 37 vacancies and the gap between the current 471 licensees and this goal resulting in a total need for 66 to 116 additional pharmacists over time.

Accreditation If a school is to be developed, Dr. Nelson has provided a thorough review of accreditation requirements and considerations. He indicated that the accrediting body requires the first-professional PharmD degree be developed first, with research doctorates and other program components developed after accreditation is achieved if desired.

Location To maximize access to pharmacy education in the state it would be preferable to have pharmacy education sites in at least Fairbanks and Anchorage, and possibly Juneau, whatever mechanism for delivery of pharmacy education is employed. It may fall to Anchorage to host partnerships for clinical pharmacy because of proximity to significant numbers of clinical rotations and other health professions programs. Approximately 65-75% of student contact time is experiential (simulations, labs, clerkships) that requires face-to-face interactions with an instructor, practicing pharmacists and/or patients.

Ideally there would be substantial activity established in other communities as well. A fully distance delivered option for the didactic portion of the curriculum could extend professional education to many other areas of the state. It is anticipated that pre-requisite and basic science courses would be offered by all three main campuses, in a coordinated fashion.

If at some point a stand-alone Alaska pharmacy school was developed, one campus would have to be designated as the headquarters for the school for accreditation purposes. Dr. Nelson indicated that either UAF or UAA could serve as this headquarters with certain caveats:

Pharmacy education has evolved to include clinical experiences during all of the four years of education. However, it is the fourth year that is most clinically intensive. Dr. Nelson has determined that all students will have to spend most or all of their fourth year in Anchorage in order to accomplish the required clinical rotations. There could be multiple arrangements that would make this feasible, including UAA offering the degree or a consortium in which the degree is offered by UAF and delivered in Anchorage in conjunction with UAA (as is done with the PhD program in Psychology). A similar program is the WWAMI medical program; the medical degree from the University of Washington is offered in collaboration with local universities in several states.

Any of these approaches would require considerable and sustained planning in the University system, including changes in academic policy at the Board of Regents and with the accrediting body for the institutions. UAA and UAS do not offer doctoral degrees at this time. Because of the expense and significance of the undertaking, this plan would need to be vetted in advance by the leadership of the universities, as well as the President of the university system and its Board of Regents.

In recent years most advanced practice professions in health care have moved to a clinical doctorate requirement, or are rapidly approaching that preparation level, for initial licensure. Examples are: MD (Doctor of Medicine), DO (Doctor of Osteopathy), DDS (Doctor of Dental Science), PharmD (Doctor of Pharmacy), DPT (Doctor of Physical Therapy), OTD (Doctor of Occupational Therapy), DNP (Doctor of Nursing Practice). To provide for the education of these critical health professionals in Alaska, the University of Alaska must either provide these programs itself or foster educational partnerships to bring external programs to Alaska. Current offerings include medicine and occupational therapy in partnership with external institutions.

Clinical doctorates (also known as entry-level, practice, first-professional, or applied doctoral degrees) are distinct from research doctorates (usually PhDs) in that they comprise advanced education in a clinical/technical field, focused on practice. Most do not presently require a bachelor's degree for admission, though that is evolving.

If related research degrees were offered (e.g. Pharmacology PhD), close collaboration between UAF and UAA would be important. Dr. Nelson did share that pharmaceutical companies are no longer direct-funding research in pharmacy schools to any extent, with the exception of major established research institutions. There are opportunities through other competitive funding streams to obtain support for research in pharmaceutical science, primarily from the National Institutes for Health (NIH).

#### *Pre-pharmacy education*

Dr. Nelson considered coursework presently available at the three University of Alaska universities and their fit with requirements for application to several pharmacy schools, primarily in the western United

States. Generally, the pre-requisite courses are in place with the exception of upper-level anatomy and physiology courses that are missing from the suite of courses offered at all three campuses.

Work on the development of advising materials for pre-pharmacy students has commenced. Improvements in advising and in course offerings are anticipated.

#### *Institutional partnerships for pharmacy education*

As indicated above, there are several types of potential partnerships with out-of-state institutions that would provide pharmacy education within Alaska, including the following:

1. Host established distance pharmacy program: In this option the University of Alaska would coordinate with Creighton University to set aside Alaska seats in their fully distance delivered pharmacy program; and seek to establish a discounted tuition. This could occur while also developing other partnerships.

The main advantage of pursuing this partnership is that the program is already fully functional and would provide flexibility in numbers of students enrolling and in their locations within the state. Implementation would be virtually immediate. There would be almost no initial or ongoing requirements for Alaska resources, with the exception of employing a person in Alaska to coordinate with Creighton. Alaskans would have the benefit of competing for only the available Alaska seats (probably ten in number) rather than applying in a much larger pool. Because there are fewer than ten Alaskans entering pharmacy schools each year, competition would at least initially be expected to be quite minimal. While this is an expensive program, a tuition discount would be sought. Alaska pharmacists/pharmacies would participate as clinical mentors and rotation sites, and have an opportunity to recruit graduates.

The disadvantages of the Creighton program would be limited opportunities for the participation of University of Alaska faculty, especially researchers, as this is not an emphasis of this distance delivered clinically-focused program. It is unlikely that the potential of synergies with other health professions students would be realized. This program is very self-contained and would not contribute to the development of University of Alaska's strength in offering its own advanced programs in the future.

2. Engage an out-of-state pharmacy school system in a robust, interactive partnership with satellite sites in Alaska: Dr. Nelson's advice for this option was to solicit a robust partnership with an external university to offer their program in Alaska, using an RFP approach to achieve a true Alaska-designed partnership. Dr. Nelson indicated that there are many pharmacy schools in the country with several campus locations, distance delivering within their own systems, and a well-considered RFP process could identify some willing to offer programming in the State.

This would allow for significant participation by Alaska pharmacists, pharmacies and faculty, strengthening of University of Alaska pharmaceutical research efforts, and other benefits. There

would be a likelihood of setting up program satellite sites at the main UA campuses. A possible feature of this model could be achieving synergies with other health professional students in Alaska, including Anchorage-based students taking much of their first-year class work with WWAMI medical students.

Disadvantages would include that Alaska resources would be needed to exercise this option, though an exact amount would depend on the details of the partnership. Dr. Nelson has provided a generic estimate. An RFP would need to be carefully developed and managed, and the process of identifying and implementing the partnership would likely take some time. The depth of participation of Alaska faculty and institutions would depend on negotiations with the pharmacy school selected. There would continue to be a need for fourth year students to spend much of their time in Anchorage, and the size of local cohorts during the first three years would be contingent on clinical opportunities in each community.

3. Participate in a multi-state health professional consortium with an integral Alaska hub (similar to the current and developing WWAMI medical school model): While this option was given minimal consideration during Dr. Nelson's consultation, factors since have suggested this may be a viable and important option. There is an opportunity developing to work with other western states to form a multi-state educational consortium to offer pharmacy education and possibly other advanced health professions. The University of Alaska would participate as a full member of the consortium. This option would provide benefits similar to those described in the robust partnership option immediately above. Because Alaska would be a full partner in the development of this consortium, it would have a say in the design of the structure and ongoing operations of the model. This option could maximize synergies with other Alaska health professions programs and students. Students would be admitted to a centralized program but obtain most or all of their education in Alaska.

Disadvantages would be that there would be a commitment of Alaska resources required. As with any partnership arrangement, there would need to be favorable terms negotiated with the delivering school of pharmacy to maximize opportunities for Alaskans. Coming in at its inception, however, this consortium approach could provide the best partnership option for Alaska.

4. Develop an Alaska pharmacy school: Dr. Nelson has confirmed that Alaska could develop and academically sustain a stand-alone pharmacy school. He describes the process required to develop a school and achieve accreditation. He has postulated a thirty-person admission cohort that would be the smallest pharmacy school in the nation. Students could take early coursework in Fairbanks or Anchorage (and possibly Juneau), but, as stated above, he indicates the final year of multiple clinical rotations would need to be spent in Anchorage. There are clinical requirements during every academic year, so the available clinical experiences in each community would need to be considered in identifying the number of students in attendance at each site.

Advantages would include that a school could be designed to best fit Alaska's needs for clinical pharmacists and also to encourage the widest participation of current University of Alaska faculty, researchers, and health students, as well as the state's practitioners.

Disadvantages would be that the upfront and ongoing costs of the school would be major. Once established there would be a need to maintain the infrastructure and student numbers over time, with little ability to expand or contract as demand waxes and wanes. Costs for a school suggested by Dr. Nelson would be about \$18.5 million over a 5-year period for operational start-up (with a portion, estimated at \$7.5 million, coming from tuition once students are admitted). There would also be a need for about \$12 million in capital expenditures. At full operation the annual budget for an Alaska pharmacy school is estimated to be just under \$6 million, with about half coming from tuition. At the proposed number of thirty admissions per year, a school would not be self-sustaining and so would require a State investment of nearly \$3 million per year into the future.

There are on average fewer than ten Alaska students per year applying to pharmacy schools in the country. While this number may increase with an in-state option, achieving enrollments of thirty per year may be difficult without importing students from outside the state. State policy makers, including the Board of Regents and the Legislature, have emphasized academic investments to meet state workforce needs and the educational needs of its residents and have not heretofore been enthusiastic about establishing programs requiring non-Alaskans to enroll to fill class rosters.

Dr. Nelson has also advised that securing sufficient faculty is increasingly difficult and salary requirements are high. Whatever option is ultimately chosen for Alaska, contracting for specialty faculty may be necessary.

#### *Review Process*

During February 2010, Dr. Nelson's report will be made available to the University's Pharmacy Education Committee and to the Alaska Pharmacists' Association for distribution to its members. The Pharmacy Education Committee will review the report, take input from key stakeholders including industry, and provide recommendations to the Vice President for Academic Affairs for the University of Alaska on reasonable courses of action.

The University will ultimately decide its course about which options to pursue and the timetable for each. Modifications to the options may occur with further investigation and analysis. In the end, there must be a balance struck between demand, resources, and competing development needs.

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