REVIEW OF THE PROVIDENCE CERTIFICATE OF NEED APPLICATION FOR NEONATAL INTENSIVE CARE UNIT (NICU)

November 20, 2007

Sarah Palin
Governor

Karleen K. Jackson, Ph.D.
Commissioner

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State of Alaska/DHSS
Division of Public Health
Health Planning & Systems Development Section
Certificate of Need Program

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REVIEW OF THE PROVIDENCE ALASKA MEDICAL CENTER CERTIFICATE OF NEED APPLICATION FOR EXPANSION OF NEONATAL INTENSIVE CARE

PROJECT DESCRIPTION

PAMC proposes adding six bassinets to the Neonatal Intensive Care Unit ("NICU") and renovating a total of 2,408 square feet of space that includes part of the existing unit and 952 square feet of adjacent space currently used for lockers and a conference room. Total NICU space will increase from 12,724 square feet to 13,676 square feet and the total number of bassinets will increase from 38 to 44. The total project cost is estimated to be $1,717,448. If approved, the applicant expects to place the new bassinets in service by February 2008.

The Providence NICU is the only Level III Neonatal Intensive Care Unit in Alaska. Two facilities in Alaska offer Level II NICU services: Alaska Regional Hospital (an eight-bed unit), and Alaska Native Medical Center (an eight-bed unit). As the only Level III NICU in Alaska, PAMC serves newborn patients statewide, including Alaska Natives and the military community. The applicant states that Level III designation means that they provide for all critical medical and surgical care except for some cardiac surgical care and Extra-Corporeal Membrane Oxygenation (ECMO). The highest level designation for an NICU is Level IV, which offers ECMO in addition to the Level III care. There is no level IV service in Alaska. Seattle has the closest Level IV NICU. In 2006, 19 babies were transferred to a Level IV NICU from PAMC.[1]

Common NICU services include respiratory ventilation therapies, hemodynamic and oxygen saturation monitoring, IV therapy, blood administration and pre and post operative care. The most frequent conditions/diagnoses served by the NICU include:

- Premature newborns with conditions such as chronic lung disease, retinopathy, pneumothorax, necrotizing enterocolitis, intraventricular hemorrhage, sepsis, anemia, nutritional deficits, and growth restrictions;
- Congenital anomalies and conditions requiring surgical interventions;
- Term or near term newborns with transitional distress, respiratory problems, hypoglycemia, birth trauma, or other conditions that put them at medical risk; and
- Infants with major congenital anomalies or metabolic conditions requiring acute care.

About 40% of the NICU babies and high risk mothers who deliver at Providence are transferred in to PAMC from other hospitals, and 49% of patients come from outside the Anchorage service area.[2, 3] In 2006, PAMC transferred 76 NICU patients to other facilities due to lack of capacity.[4]

[1] PAMC CON application for NICU Expansion. Page 19.
[2] Ibid. Page 17.
[3] Ibid. Page 18.
[4] Lisa Wolf. Email with attachment Narrative. Sept. 18, 2007.

REVIEW STANDARDS

General Review Standards Applicable to All CON Applications

General Review Standard #1- Documented Need ***The applicant documents need for the project by the population served, or to be served, including, but not limited to, the needs of rural populations in areas having distinct or unique geographic, socioeconomic, cultural, transportation, and other barriers to care.***

The PAMC NICU experienced high census for the first 5 months of 2007 averaging over 100% for the total period, including 55 days over 100% occupancy, and a peak occupancy of 124%. The CON standard occupancy for ICUs is 65%. The census has continued to grow and overcrowding is not just an infrequent spike. A temporary annex for six additional bassinets is used for the overflow. NICU patients stay about a month in the hospital, which is longer than most other patient units. This lack of turnover increases the number of bassinets needed and hence the relatively low 65% occupancy rate standard. Trends that increase the need for more bassinets include:

- An increase in the number of women of child-bearing age;
- An increase in the number of births;
- An increase in the number of high-risk deliveries due to more older women giving birth;
- The number of C-sections is increasing;
- An increase in low birth weight babies;
- An increase in multiple births;
- Longer lengths of stay due to better survival rates of low birth weight babies; and
- Risk factors such as high rates of smoking, substance abuse, and physical abuse.

This standard has been met. The applicant has documented the need for the project.

General Review Standard #2 – Relationship to Applicable Plans: ***The applicant demonstrates that the project, including the applicant's long-range development plans, augments and integrates with relevant community, regional, state, and federal health planning, and incorporates or reflects evidence-based planning and service delivery. A demonstration under this standard should show that the applicant has checked with the department regarding any relevant state plan, with appropriate federal agencies for relevant federal plans, and with appropriate communities regarding community or regional plans.***

There are no local, regional, state, or federal plans that apply to this service, therefore this standard cannot be applied. The applicant did not discuss whether this project was a part of their long-range development plans. This standard is considered met since there are no plans to integrate with.

General Review Standard #3 – Stakeholder Participation: ***The applicant demonstrates evidence of stakeholder participation in planning for the project and in the design and execution of services.***

The NICU expansion project was discussed with the following stakeholder groups: the self-governance committees that meet regularly on the unit, monthly physicians' and nurses' meetings, monthly meeting with the Family Action Council that involves interested families, quarterly meetings with the Children's Hospital Advisory Committee, and quarterly Children's Hospital open public forums. This standard has been met.

General Review Standard #4 – Alternatives Considered: ***The applicant demonstrates that they have assessed alternative methods of providing the proposed services and demonstrates that the proposed services are the most suitable approach.***

The applicant describes six different alternatives considered while developing this project and at least two measures were tried that were shown to be insufficient. Alternatives considered included:

1) Do nothing: This was not chosen because it would not solve continuing overcrowding, would lead to transport of more babies, which is disruptive and increases the risks.
2) Transfer lower level care ICU babies to other local hospitals that have Level II NICUs to make room for Level III admissions. This is currently being tried but it has not reduced the overcrowding. The two Level II NICUs have 16 bassinets, (8 at Alaska Regional Hospital and 8 at Alaska Native Medical Center) in routine use.
3) Convert postpartum rooms to accommodate 6 NICU bassinets: This has been done, but is unsatisfactory because the space does not meet all the NICU national standards and lost maternity beds had to be regained by converting medical/surgical beds to maternity use.
4) Expand into Cancer Therapy Center vacated space: Cancer Therapy is moving in January 2008. Although the square footage is adequate, this option was not chosen because the infrastructure is not suited for clinical intensive care and would need outfitting with medical gasses, airflow, and other environmental controls that are cost prohibitive. It would also be separate from the main NICU by a public corridor and fire path creating safety concerns.
5) Convert an adjacent conference room and staff locker space to 6 permanent NICU bassinets: This option was chosen because it was the right size for 6 bassinets and was adjacent to the NICU.
6) Construction of an NICU larger than 6 bassinets to meet future demand: This is still under consideration, but was not chosen in order to solve an existing problem rather than wait for several years that are required to design and build a new mother/baby tower. In addition, the applicant states that the Alaska Native Medical Center is considering development of 4 additional Level II NICU bassinets which will help mitigate the overcrowding.

This standard is met. The applicant demonstrated consideration of sufficient alternatives.

General Review Standard #5 – Impact on the Existing System ***The applicant briefly describes the anticipated impact on existing health care systems within the project's service area that serve the target population in the service area, and the anticipated impact on the statewide health care system.***

This standard has been met. The applicant presented its impact information from the perspective of PAMC as the only Level III NICU in Alaska, and that this is a unique, statewide service. In 2006, 40% of the babies and high risk mothers who delivered at PAMC were transferred in from other facilities. The department agrees with the applicant that this is a statewide service. Although the PAMC NICU provides Level II NICU care, and Level III NICU patients receive Level II care when they are well enough, this project was not considered comparable to the other two Level II NICUs in the state – Alaska Regional Hospital (8 bassinets) and Alaska Native Medical Center (8 bassinets), because Level II NICUs cannot serve the Level III patients and refer them to PAMC.

PAMC states that the two Level II NICUs in Anchorage have also experienced overcrowding. This was corroborated by the fact that at least one facility (ARH) has contingency plans for an overflow room in case utilization increases over capacity. This project may help reduce temporary overcrowding at A the Alaska Native Medical Center and Alaska Regional Hospital by reducing the number of Level II babies transferred from PAMC. Since PAMC has a Level III NICU the Level II NICUs should be impacted minimally.

General Review Standard #6 – Access: ***The applicant demonstrates that the project's location is accessible to patients and clients, their immediate and extended families and community members, and to ancillary services. This includes the relocation of existing services or facilities.***

This service is a part of the PAMC hospital so that it is easily accessible to newborns and high-risk mothers. The applicant states that 42% of the state population is in Anchorage, and that the location in the center of Anchorage is within a half-hour's drive for most local residents and patients arriving from the airport. PAMC is also served by the public transit system.

This standard is met. The applicant adequately demonstrated accessibility of this project.

Review Standards Specific to Intensive Care

ICU Specific Review Standard #1: ***An application will not be approved if bed need standards are exceeded. (using the CON review methodology developed by the Department)***

PAMC is seeking fewer bassinets than the maximum number that could be approved through the CON methodology. The CON methodology projects that 48 bassinets will be needed by 2012. Currently the Level III NICU capacity in Alaska is 38 bassinets at PAMC. Subtracting the existing capacity from the gross need in 2012 gives a net need of 10 Level III NICU bassinets. This project is only requesting 6 Level III NICU bassinets, therefore, they meet this standard. PAMC reports that 40% of the patients who use its Level III unit are transfers from other hospitals. Because PAMC is a Level III NICU, infants may move from Level II to III status and back as their medical condition and needs change. Level II facilities are not able to meet the needs of babies who need the higher level care during a specific episode because it would require transport out of the hospital to a Level III NICU.

ICU Specific Review Standard #2: ***An applicant serving patients from a community with a population of 10,000 or less demonstrates that the transport of patients to or from those areas for medical care or services will be facilitated, directly or through coordinated efforts with other organizations.***

PAMC has a neonatal transport team that works with Life Guard air ambulance to transport babies that need critical care throughout the state. A neonatal nurse practitioner travels with the baby. PAMC also has a perinatal transport team that can transport the mother before the baby is delivered. This standard is met.

NICU DETERMINATION OF NEED METHODOLOGY

Although there is no specific bed methodology for NICUs, the CON program does have an ICU bed methodology (for this project the terms bed and basinet are used interchangeably). Since Neonatal Intensive Care Units (NICUs) provide Intensive Care, the ICU methodology was used to determine the need for additional bassinets. The total NICU bassinet capacity in Alaska in 2007 is as follows:

PAMC	38	(Level III NICU)
ARH	8	(Level II NICU)
ANMC	8	(Level II NICU)
Total	54	

The figures above are the normally staffed NICU bassinets. In case of overcrowding, facilities have contingency plans to care for additional patients. Alaska Regional Hospital has indicated that it has an additional 6-8 bassinets that can be used to increase capacity in their Level II NICU when added in an overflow room in a time of increased census.[5]

For the purpose of this review, the Level III NICU at PAMC is being considered separate from the Level II NICUs, because the Level II NICUs are not equivalent to Level III NICU. Although PAMC provides Level II NICU services, and babies receiving Level III NICU services eventually progress to Level II care, the Level II NICUs do not have the flexibility of providing the higher levels of care within the facility and routinely transfer babies to the PAMC Level III NICU.
The Level III NICU bassinet need for Alaska is based on an average use rate for the three calendar years of 2004 to 2006, which is 1.0057 days per baby born in Alaska. The estimated number of births in Alaska in 2012 (the five-year planning horizon) is 11,225 births, using the middle series. The projected total number of bassinets needed in 2012, using these figures with a 65% occupancy rate and rounding up, is 48 NICU bassinets. Since the current capacity is 38 bassinets, there is a need for 10 additional Level III NICU bassinets to serve the state of Alaska. Since PAMC is only requesting 6 Level III NICU bassinets, the project meets the goals of the CON methodology and the bassinets should be approved.

[5] Terry Wossman, Maternal and Infant Program Director, phone conversation with Alice Rarig, Nov. 15, 2007.

Use rates are trending upward with survival of very low birth weight babies (<1500 gm) and extremely low birth weight babies (<500 gm) is improving. It is the Level III NICU which is most likely to serve the extremely low birth weight babies.

Table #1: NICU Utilization in the State of Alaska 2004-2006 and Projections to 2012

	UR=NICU days per live birth: 2004-6 based on actual use			1.0057		
Year	Projected Number of Births	Projected Level III NICU days	Average Daily Census (ADC)	Projected need at 65% Target Occupancy	Baseline Capacity (2007)	Additional Bassinets that can be Approved
		=Col B * UR (1.0057)	=Col C /365	= Col D /.65		= Col E - Col F
2007	10,437	10496	28.757	44.24	38	6.2
2008	10,640	10700	29.316	45.10	38	7.1
2009	10,775	10836	29.688	45.67	38	7.7
2010	10,920	10982	30.087	46.29	38	8.3
2011	11,082	11145	30.534	46.97	38	9.0
2012	11,225	11289	30.928	47.58	38	9.6

*AKDOL projection series uses fertility rate of 73.2 per 1,000 women of childbearing age.

Note: PAMC has the only Level III NICU in Alaska and therefore serves the entire state.

PAMC's NICU patients are 22% Alaska Native while 25% of babies the last three years have been Alaska Natives so PAMC is seeing a considerable share of the Alaska Native infants who might need such services. The patient origin information further confirms that statewide distribution of patients.

PUBLIC COMMENT SUMMARY

A written public comment period was held from September 27 to October 31, 2007. A public meeting was held in Anchorage on October 25, 2007, from 5:00 to 6:30 PM at the Frontier Building, Room 880, 3601 "C" Street. Seven people attended including the court reporter and meeting facilitator, and five individuals representing the applicant. No comments were provided at the meeting, although the applicants provided a very detailed description of the project. Seven letters were received in support of the project and none against it.

FINANCIAL FEASIBILITY AND COST TO MEDICAID

This project will be financed through accumulated revenues. PAMC is a facility that is financially strong and should have no problem financing the project since during the five-year period from

2001 to 2005 their total net operating income was $108.3 million for the Anchorage facility. The project is financially feasible.

The applicant states that 55% of the NICU patients are paid for through Medicaid and that the project will cost Medicaid approximately $750,753 in 2012. The Office of Rate Review states that since the cost of the project is less than $5 million, the capital cost of the project won't be added on to the facility per diem rate until the Medicaid rate calculation is recalculated in FY 2012. However, increasing the number of bassinets will impact Medicaid utilization of the NICU and the cost to Medicaid as soon as it is built. The Office of Rate Review estimates that the six additional NICU bassinets will increase the number of patient days to 1,426 days and that 55.67% or 794 NICU patient days would be reimbursed by Medicaid annually from 2009 to 2012.[6] The Office of Rate Review projects that the annual cost to Medicaid will vary from $1,407,630 in 2008 to $1,693,324 in 2012 as follows:

	2008*	2009	2010	2011	2012
Capital	$112,534	$122,764	$122,764	$122,764	$122,764
Operating Expense	$637,342	$726,329	$758,888	$758,888	$758,888
Total Additional Expense	$749,876	$849,093	$881,652	$881,652	$881,652
Tot. Facility Medicaid Use	17.89%	17.89%	17.89%	17.89%	17.89%
Medicaid Share of Add. Exp	$134,153	$151,903	$157,728	$157,728	$157,728
Est. Inc. in Medicaid Pat Days	728	794	794	794	794
Est. Medicaid Per Diem Rate**	$1,934	$1,934	$1,934	$1,934	$1,934
Impact on Medicaid Program	$1,407,630	$1,535,596	$1,535,596	$1,535,596	$1,693,324

*11 months in 2008 ** Using FY 2007 Note: Capital Costs are added on in 2012.

RECOMMENDATION:

This project meets the goals of the CON methodology and has demonstrated the need for additional capacity. Therefore, it is recommended that this PAMC project be approved as requested to spend a total of $1,717,448 to expand and remodel the NICU and add 6 bassinets with an approved completion date of June 2008.

[6] Jack Nielson, Executive Director, Office of Rate Review. Memorandum. October 9, 2007. (Also in Appendix A)

APPENDIX A

REVIEW STANDARDS & METHODOLOGY ICU

(SOURCE: DECEMBER 9, 2005 ALASKA CERTIFICATE OF NEED REVIEW STANDARDS AND METHODOLOGIES, P. 37-38 available at http://www.hss.state.ak.us/publicnotice/PDF/133.pdf)

II. Acute Care Hospital Services: Review Standards and Methodology

Review Standards

After determining whether an applicant has met the general review standards in Section I of this document, the department will apply the following service-specific standards in its evaluation of an application for a certificate of need that involves the addition, renovation, replacement, or relocation of acute care hospital beds:

1. Beds for acute care hospital services for the state or service area will be within the limits calculated using the methodology below. An application will not be approved if bed need standards are exceeded.

2. An applicant serving patients from a community with a population of 10,000 or less demonstrates that the transport of patients to or from those areas for medical care or services will be facilitated, directly or through coordinated efforts with other organizations.

Review Methodology

The department will use the following formula to determine the need for acute care hospital services:

►**STEP ONE:** Determine the projected inpatient caseload for the population to be served using the formula:

$$C = (P_s \times UR_s) \times SAS$$

C (caseload) = the number of inpatient days of hospital care required by the service area population in the fifth year from the project implementation date. Both total inpatient caseload and service specific caseload projections will be used if the application is for a specific service (e.g. general medical/surgical, intensive care, pediatrics, acute rehabilitation or obstetrical).

P_s (projected state population) = the official state population cohort projection appropriate to the inpatient service proposed in the fifth year following implementation of the project.

UR (use rate) = the current utilization rate (the average annual number of inpatient days of hospital care used during the preceding three years divided by the population).

SAS (service area share) = the proposed service area's current share of the population to be served, as of the most recent geographic population estimates. If there is public information about service area population changes expected over the planning horizon, such as a military base closing, or a major economic project such as a new mine, the service area share estimate may be modified with explanation to reflect the expected change.

[2] *For a small facility that does not have specialized units, the general medical-surgical occupancy rates apply.*

[3] *Includes birthing rooms, labor beds, delivery beds, and LDRP beds*

►**STEP TWO:** Determine the projected average daily inpatient census for the service using the formula:

ADC = C / SA

ADC (average daily census) = average number of inpatients in the proposed hospital service on any given day
C (caseload) = the number of inpatient days of hospital care for the service required by the population to be served in the fifth year from the project implementation date
SA (service availability) = defined as 365 days

►**STEP THREE:** Determine the projected number of hospital beds needed for the service by using the formula:

PBN = ADC / TO

The projected number of hospital beds needed (PBN) = Service average daily census (ADC) divided by the service target occupancy (TO) factor:
PBN (projected bed need) = Total number of hospital beds needed for service area
ADC (average daily census) = average number of inpatients in the proposed hospital service on any given day
TO (target occupancy) = Service target occupancy rate for hospital beds, defined as:[2]

General medical-surgical beds:
Hospitals with more than 100 licensed beds: 75%
Hospitals with 50 to 100 licensed beds: 65%
Hospitals with fewer than 50 licensed beds: 50%

Intensive care beds:
Hospitals with 100 or more licensed beds: 65%
Hospitals with fewer than 100 licensed beds: 50%

Pediatric beds:
Hospitals with 100 or more licensed beds: 65%
Hospitals with fewer than 100 licensed beds: 50%

Acute rehab beds:
Hospitals with 100 or more licensed beds: 80%
Hospitals with fewer than 100 licensed beds: 65%

Obstetrical beds:[3]
Hospitals with 100 or more licensed beds: 65%
Hospitals with fewer than 100 licensed beds: 50%

APPENDIX B
OFFICE OF RATE REVIEW - ESTIMATED COST TO MEDICAID

STATE OF ALASKA

SARAH PALIN, GOVERNOR

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DEPT. OF HEALTH AND SOCIAL SERVICES

OFFICE OF RATE REVIEW

MEMORANDUM

Date: October 9, 2007

To: David Pierce, CON Coordinator

From: Jack Nielson, Executive Director

Subject: Certificate of Need Review for Providence Alaska Medical Center Expansion of Neonatal Intensive Care Unit (NICU)

Providence Alaska Medical Center wishes to remodel an area in an existing area to increase their Neonatal Intensive Care beds (bassinets) from 38 to 44. Total cost for the renovation project is expected to be $1,717,448. The estimated completion date for this project is in February, 2008.

Per 7 AAC 43.685(f)(3), granting of immediate additional capital payment add-on amount to a per-day rate through a Certificate of Need (CON) requires that approved capital expenditures for the project be at least $5,000,000. Since the submitted application for this project does not meet this criterion, an add-on would not be applied to the facility's Medicaid inpatient per-diem rate. The facility is due to be rebased using the facility's FY 2006 Medicare cost report. As such, expenses for this project likely will not be included in the facility's Medicaid rate calculation until the FY 2012 rate year. Increasing the number of beds will impact Medicaid utilization of the NICU.

By using the methodology in 7 AAC 43.685(f)(3), the Department will adjust base year occupancy statistics to reflect 80% of the base year occupancy for the additional beds. Using 80% of the current 81.37% occupancy rate, the additional 6 beds are estimated to increase NICU patient days by 1,426. Data from 2006 has Medicaid utilization in the NICU at 55.67%. This is estimated to increase Medicaid NICU patient days by 794 per year. The annual impact on the program through increased utilization and expense will vary from $1,407,630 in 2008 to $1,693,324 in 2012 when the project's capital costs are considered in the calculation of the Medicaid payment rate.

	2008 (11 months)	2009	2010	2011	2012
Capital	$ 112,534	$ 122,764	$ 122,764	$ 122,764	$ 122,764
Operating Expense	637,342	726,329	758,888	758,888	758,888
Total Additional Expense	749,876	849,093	881,652	881,652	881,652
Total Facility Medicaid Utilization	17.89%	17.89%	17.89%	17.89%	17.89%
Medicaid Share of Additional Expense	$ 134,153	$ 151,903	$ 157,728	$ 157,728	$ 157,728
Estimated Increase in Medicaid Patient Days	728	794	794	794	794
Estimated Medicaid Rate – (Using FY 2007)	$ 1,934	$ 1,934	$ 1,934	$ 1,934	$ 1,934
	1,407,630	1,535,596	1,535,596	1,535,596	1,535,596
Impact to Medicaid Program	$ 1,407,630	$ 1,535,596	$ 1,535,596	$ 1,535,596	$ 1,693,324

* Capital costs would not be included in the Medicaid rate as an add-on because the project does not meet the $5,000,000 minimum as set out in 7 AAC 43.685(f)(3). All costs would be included in Medicaid rates beginning FY2012.

Should you have any questions please contact me at 344-2447 or Neal Kutchins at 334-2467.