

## Outreach Consultation And Education Agreements

### Introduction

A regionally coordinated, geographically based system of perinatal services focusing on levels of hospital-based perinatal care has been shown to be effective and to result in improved outcomes for women and their newborns.

Critical to the appropriate use of a regional referral program is a program to educate the public and users about its capabilities. Receiving centers should participate in efforts to educate the public about the kinds of services available and their accessibility.

Outreach consultation and education should reinforce cooperation between all individuals involved in the interhospital care of perinatal patients, as follows: (*AAP/ACOG Guidelines for Perinatal Care, 5<sup>th</sup> Edition*)

- Receiving hospitals should provide all referring hospitals with information about their clinical capabilities and should ensure that providers know about the specialized resources that are available through the perinatal care network.
- Primary care providers should be informed as changes occur in indications for consultation and referral of high-risk perinatal patients and for stabilization of their conditions.
- Each receiving hospital should provide continuing education and information to referring providers and staff about current treatment modalities for high-risk situations.

Effective outreach programs will improve the care capabilities of referring hospitals and may allow for some patients to either be retained, or if transferred, to be return-transferred earlier in their course.

### California Children's Services (CCS) Outreach Education Requirements

CCS requires all CCS-approved NICUs to enter into Regional Cooperation Agreements (RCAs) with appropriate level facilities, in order to guarantee that appropriate outreach consultation and education occurs. (*California Children's Services Manual of Procedures, Chapters 3.25.1, 3.25.2, 3.25.3, Issued 1/1/99*)

### Outreach Consultation and Education Agreements

(Note: The following outline includes the desirable components of an Outreach Consultation and Education Agreement. The provision of every single one of these components is not always possible, given the current constraints in resources experienced by many CCS Approved Regional NICUs. Those components absolutely necessary to meet the intent of the CCS Standards for Regional Cooperation Agreements are **bolded**.)

### Developing the Agreement

1. Site Assessment and Analysis (See Supplemental Materials, Attachment A for sample site assessment documents):
  - Collection of Pre-Assessment Data (See Supplemental Materials, Attachment A-4 for a sample Pre-Assessment Data Collection Tool)

- Chart and Case Review (See Supplemental Materials, Attachment A-5 for a sample list of appropriate cases to be reviewed as part of an initial site assessment)
  - Policy and Procedure Review
  - Site Visit/Tour of Physical Space
  - Staff Interviews and Needs Assessment: (See Supplemental Materials, Attachment A-9 for a sample interview tool to be used with Affiliate Hospital staff during an initial site visit)
    - a. Medical staff
    - b. Nursing staff
    - c. Ancillary department staff (respiratory therapy, physical therapy, occupational therapy, nutritional services, radiology, pharmacy, laboratory, social services, etc.)
    - d. Administration (hospital and department)
  - Summary of Findings and Recommendations (See Supplemental Materials, Attachment A-10 for a sample site visit report provided to new Affiliate Hospitals after completion of their initial site visit and analysis)
2. Joint Identification of Desired and Required Contract Components:
- Consultation Components:
    - a. **Development of guidelines for perinatal/neonatal consultation, referral and/or transport (See Attachment A in this section for sample guidelines for maternal/fetal and neonatal consultation, referral and/or transport for hospitals providing basic perinatal care, intermediate-level neonatal intensive care, and community-level neonatal intensive care)**
    - b. Provision of transport follow-up and communication
    - c. Provision of twenty-four hour telephone, multidisciplinary consultation for assistance with patient management and/or transport
    - d. Provision of physician peer review as appropriate
    - e. **Provision for nursing and support service personnel consultation**
    - f. **Provision of professional consultation regarding development, review and revision of perinatal/neonatal standards, protocols, policies and procedures**
    - g. Provision of annual review of unit operations and staffing patterns
    - h. Provision of professional consultation regarding attaining and maintaining CCS-approval as an Intermediate or Community NICU
    - i. Provision for sub-specialty consultation (See Attachment B in this section for a sample addendum that may be added to an outreach consultation and education agreement to provide an Affiliate Hospital with appropriate sub-specialty consultation).
    - j. **Provision of annual review of perinatal/neonatal patient data**
    - k. Provision of annual formal evaluation of contract services
  - Education Components:
    - a. **Provision of Medical inservice education and accompanying continuing medical education (CME) credits. Topics are jointly selected by the Regional consultant(s) and the Affiliate Hospital staff and may include, but not be limited to:**

- i. **Medical education lectures**
    - ii. **Electronic Fetal Monitoring (EFM) strip reviews**
    - iii. **Case presentation and discussion**
    - iv. **Technical skill development**
  - b. **Provision of Nursing inservice education and accompanying continuing education units (CEU). Topics are jointly selected by the Regional consultant(s) and the Affiliate Hospital staff and may include, but not be limited to:**
    - i. **Nursing education lectures**
    - ii. **Electronic Fetal Monitoring (EFM) strip reviews**
    - iii. **Case presentation and discussion**
    - iv. **Technical skill development**

(See Attachment C in this section for sample list of potential neonatal, obstetrical and pediatric nursing education topics that may be used to meet the Affiliate Hospitals identified educational needs as part of an outreach consultation and education agreement)
  - c. **Provision of Ancillary Services inservice education and accompanying CEUs, as available. Topics are jointly selected by the Regional consultant(s) and the Affiliate Hospital staff and may include, but not be limited to:**
    - i. **Patient care-related education lectures**
    - ii. **Case presentation and discussion**
    - iii. **Technical skill development**
  - d. Provision of multidisciplinary Perinatal Morbidity and Mortality (PM&M) conferences (See Attachment D in this section for suggested guidelines for PM&M case selection. See sample PM&M recording forms to be used by CCS Approved Regional NICU staff to document the PM&M proceedings and recommendations, and a sample PM&M case write-up, to serve as documentation of the case review, discussion and recommendations)
  - e. Provision of multidisciplinary newborn resuscitation and stabilization training and skill validation (e.g., NRP, STABLE)
  - f. Provision of medical, nursing, and support services preceptorships for skills development on-site in CCS Approved Regional NICU's perinatal/neonatal units (See Supplemental Materials, Attachment B for a sample preceptorship packet that may be used to coordinate a visiting Affiliate Hospital staff person's experience on site at the CCS Approved Regional NICU)
  - g. Provision of advance notice of scheduled inservice and education conferences provided by the CCS Approved Regional NICU (See Attachment E in this section for a sample outreach education schedule set up for an Affiliate Hospital, to be provided by CCS Approved Regional NICU staff, on-site at the Affiliate Hospital)
- 3. **Joint Contract Development: (Collaboration between CCS Approved Regional NICU and Affiliate Hospital)**
  - **Specific contract components may include, but not be limited to, the following:**
    - a. Identification of services to be provided to the Affiliate Hospital by CCS Approved Regional NICU, including a curriculum of courses

- b. Identification of responsibilities of the Affiliate Hospital
- c. Articulation of any special contract provisions (e.g., High Risk Infant Follow-Up)
- d. Articulation of compensation requirements of Affiliate Hospital, including fee schedule, scheduling policy and cancellation policy
- e. Articulation of steps to insure HIPAA compliance
- f. Terms of the contract

# SAMPLE

## SECTION 5 – ATTACHMENT A ATTACHMENT A-1

### **Guidelines for Maternal-Fetal and Neonatal Consultation, Referral and/or Transport For Hospitals Providing Basic Perinatal Care**

The following conditions of pregnancy and the newborn infant require specialized care and may require specialty consultation and/or patient transfer. Multiple factors may need to be taken into consideration including, but not limited to, probability of imminent delivery, time required to transport mother, maternal or fetal condition likely to deteriorate in transit, and weather or other environmental conditions which may impact safe and efficient transport of the patient.

Consultation is encouraged with both Maternal-Fetal Medicine and Neonatal Medicine Sub-specialists. Regional Perinatal Consultation and/or Transport to appropriate level of care are available twenty-four hours a day and seven days a week by calling \_\_\_\_\_. If the specialist consultant and the primary physician decide that the patient requires transfer to another facility, arrangements can be made through the same number.

#### **I. Maternal Conditions**

##### **A. Obstetric Complications:**

1. Premature rupture of the membranes at less than 36 weeks gestation or less than 2500 Grams expected birth weight.
2. Premature labor at less than 36 weeks gestation or less than 2500 Grams expected birth weight.
3. Any condition creating the probability of birth less than 36 weeks gestation or less than 2500 Grams birth weight, such as :
  - Preeclampsia or other hypertensive condition
  - Multiple gestation
  - Third trimester bleeding
  - Rh sensitization
  - Premature dilatation of the cervix

##### **B. Medical Complications**

1. Infections in which the degree or nature of maternal illness may result in premature birth and/or serious maternal complications, such as:
  - Hepatitis
  - Pyelonephritis
  - Influenza
  - Pneumonia
  - Other febrile or hypermetabolic conditions
2. Organic heart disease, functional class II to IV.
3. Poorly controlled diabetes mellitus or gestational diabetes.
4. Thyrotoxicosis.
5. Renal disease.
6. Drug overdose and/or maternal chemical dependency.

# SAMPLE

## SECTION 5 – ATTACHMENT A

### C. Surgical Complications

1. Trauma requiring intensive care or surgical correction, or where the injury may result in the onset of premature labor.
2. Acute abdominal emergencies.
3. Any other surgical or potential surgical conditions requiring intensive care or emergency surgical intervention.

## II. Fetal Conditions

- A. Anomalies that may require surgery in the newborn period.
- B. Rh disease with or without hydrops.

## III. Neonatal Conditions

- A. Gestational age less than 34 weeks or weight less than 2000 Grams.
- B. Respiratory distress requiring assisted ventilation or supplemental oxygen for greater than four hours.
- C. Neonatal seizures.
- D. Congenital malformations requiring special diagnostic or surgical care.
- E. Sequelae of resuscitation persisting beyond 2 hours of age.
- F. Cardiac disorders.
- G. Infection requiring parenteral antibiotic treatment.
- H. Significant early onset jaundice requiring or with the potential to require transfusion.

These guidelines have been reviewed by the Regional Perinatal Center and are considered consistent with the level of care provided at a hospital providing basic perinatal services and with the current AAP/ACOG Guidelines for Perinatal Care. They are intended as reference documents only and require discussion, review and approval within the usual hospital and medical staff structure.

# SAMPLE

## SECTION 5 – ATTACHMENT A ATTACHMENT A-2

### **Guidelines for Maternal-Fetal and Neonatal Consultation, Referral and/or Transport For Hospitals with Intermediate Neonatal Intensive Care Units**

The following conditions usually require consideration for transport to a High-Risk Perinatal Center with a Regional or Community NICU. Multiple factors may need to be taken into consideration including, but not limited to, probability of imminent delivery, time required to transport mother, maternal or fetal condition likely to deteriorate in transit, and weather or other environmental conditions which may impact safe and efficient transport of the patient. Consultation is encouraged with both Maternal-Fetal Medicine and Neonatal Medicine Sub-specialists. Regional Perinatal Consultation and/or Transport to appropriate level of care are available twenty-four hours a day and seven days a week by calling \_\_\_\_\_ If the specialist consultant and the primary physician decide that the patient requires transfer to another facility, arrangements can be made through the same number.

#### **I. Maternal Conditions**

##### **A. Obstetric Complications:**

1. Premature rupture of the membranes unresponsive to therapy at less than weeks gestation or estimated fetal weight by ultrasound criteria of less than 1500 grams.
2. Premature labor unresponsive to therapy at less than 33 weeks gestation or less than 1500 grams.
3. Any condition in which the probability of delivery of an infant less than 33 weeks gestation is increased, such as:
  - Severe preeclampsia or other severe hypertensive disease
  - Multiple gestation with PROM or PTL
  - IUGR with evidence of chronic fetal disease
  - Third trimester bleeding
  - Rh isoimmunization
  - Evidence of incompetent cervix

##### **B. Maternal Medical Complications At Any Gestation Less Than Term:**

1. Infections in which the degree or nature of maternal illness may very likely result in premature birth, such as hepatitis, pyelonephritis, influenza, and pneumonia
2. Severe organic heart disease
3. Poorly controlled diabetes mellitus
4. Thyrotoxicosis
5. Renal disease with deteriorating function or increasing hypertension
6. Drug overdose
7. Other severe maternal illness

# SAMPLE

## SECTION 5 – ATTACHMENT A

### C. Maternal Surgical Complications:

1. Trauma requiring intensive care or surgical correction
2. Acute abdominal emergencies at less than 33 weeks gestation
3. Any other surgical conditions requiring intensive care or emergency surgical intervention.

## II. Fetal Conditions

- A. Anomalies that may require surgery in the newborn period.

## III. Neonatal Conditions

- A. Infants requiring or anticipated to require assisted ventilation for greater than four hours
- B. Infants requiring constant medical assessment and/or multiple sub-specialty Consultation not available on-site
- C. Infants requiring complex diagnostic procedures not available on-site
- D. Infants requiring prolonged 1:1 nursing care
- E. Infants with a surgical problem requiring continued hospitalization and/or immediate surgical consultation or intervention
- F. Infants requiring multi-system support
- G. Any infant with major system failure following delivery, such as shock, seizures, renal insufficiency, and/or bleeding disorders
- H. Infants who require greater nursing or medical care than that available on-site

These guidelines have been reviewed by the Regional Perinatal Center and are considered consistent with the level of care provided at a hospital providing Intermediate NICU services and with the current AAP/ACOG Guidelines for Perinatal Care. They are intended as reference documents only and require discussion, review and approval within the usual hospital and medical staff structure.

# SAMPLE

## SECTION 5 – ATTACHMENT A ATTACHMENT A-3

### **Guidelines for Maternal-Fetal and Neonatal Consultation, Referral and/or Transport For Hospitals with Community Neonatal Intensive Care Units**

The following conditions place the perinatal patient at very high risk and usually require consideration for transport to a High Risk Perinatal Center with a Regional NICU. Multiple factors may need to be taken into consideration including, but not limited to, probability of imminent delivery, time required to transport mother, maternal or fetal condition likely to deteriorate in transit, and weather or other environmental conditions which may impact safe and efficient transport of the patient. Consultation is encouraged with both Maternal-Fetal Medicine and Neonatal Medicine Sub-specialists. Regional Perinatal Consultation and/or Transport to appropriate level of care are available twenty-four hours a day and seven days a week by calling \_\_\_\_\_ . If the specialist consultant and the attending physician decide that the patient requires transfer to another facility, arrangements can be made through the same number.

#### **A. Obstetrical Complications**

1. Known complex fetal anomaly, including but not limited to cardiac anomalies often requiring timely surgical intervention, and other conditions, which may require pediatric surgical intervention such as CDH, bowel obstruction, neural tube defect, and abdominal wall defect.
2. Premature labor unresponsive to therapy at less than 27 weeks of gestation or estimated fetal weight less than 900 gm.
3. Any condition in which the probability of delivery of an infant less than 27 weeks gestation is increased, such as:
  - Severe pre-eclampsia or other severe hypertensive disease unresponsive to therapy.
  - Multiple gestation with PROM or PTL
  - IUGR with evidence of chronic fetal distress
  - Maternal trauma
  - Rh isoimmunization
  - Evidence of incompetent cervix

#### **B. Neonatal Conditions**

1. Major congenital anomalies or other conditions, such as NEC and bowel obstruction requiring pediatric surgery and/or other sub-specialty evaluation for surgical intervention for those units that do not have CCS approval for neonatal surgery.
2. Infants with cardiac conditions requiring catheterization, prostaglandin therapy and/or immediate neonatal cardiac surgery.
3. Infants requiring sub-specialty evaluation and/or multiple sub-specialty management not available on-site.
4. Premature infants in very high mortality weight groups (i.e., less than 750 gm) or less than 27 weeks gestation.

# SAMPLE

## SECTION 5 – ATTACHMENT A

5. Any infant with respiratory failure unresponsive to routine mechanical ventilation and pharmacological support, such as candidates for ECMO, high frequency ventilation, or NO.
6. Any infant with organ system failure unresponsive to intervention, such as congestive heart failure and metabolic disturbances.

These guidelines have been reviewed by the Regional Perinatal Center and are considered consistent with the level of care provided at a hospital providing Community NICU services and with the current AAP/ACOG Guidelines for Perinatal Care. They are intended as reference documents only and require discussion, review and approval within the usual hospital and medical staff structure.

# SAMPLE ADDENDUM

## SECTION 5 - ATTACHMENT B-1

### Pediatric Multidisciplinary Consultation

The following multidisciplinary consultants are available through the perinatal outreach program and it's affiliated CCS Approved Regional NICU to the patients and physicians of XX Hospital, 24 hours/day and 7 days/week:

- Cardiothoracic Surgery
- Child Psychiatry
- Genetics
- Neurosurgery
- Nursing Services
- Nutritional Services (Registered Dietician)
- Occupational Therapy
- Ophthalmology
- Ophthalmology/Surgery
- Orthopedics
- Pathology
- Pediatric Allergy/Pulmonary
- Pediatric Anesthesia
- Pediatric Cardiology
- Pediatric Endocrinology
- Pediatric Gastroenterology
- Pediatric General Surgery
- Pediatric Hematology/Oncology
- Pediatric Infectious Disease
- Pediatric Kidney Transplant Surgery
- Pediatric Livery Transplant Surgery
- Pediatric Nephrology
- Pediatric Neurology
- Physical Therapy
- Plastic Surgery
- Radiology
- Social Services
- Urology

Multidisciplinary consultation may be obtained after consultation with the NICU Medical Director or designee by calling \_\_\_\_\_  
(Number)

# SAMPLE

## SECTION 5 - ATTACHMENT C-1

### Perinatal Outreach Program

#### Nursing Education Topics

Shown below is a general list of courses the Perinatal Outreach Program offers throughout the region. Topics not listed may be requested. Classes are customized in length, content and time of day offered to meet the needs of the requesting facility. The range in length for some of the classes shown reflects this flexibility. The availability of classes is subject to instructor, time and geographic constraints.

<u>Course Title</u>	<u>Approximate Length (CE Hours)</u>
<b>Obstetrics</b>	
Antepartum Testing	2-3
Basic Fetal Monitoring	7
Breastfeeding	3
Childbirth Education Training of Trainers	8
Induction/Augmentation	3
OB Anesthesia/Analgesia: Introduction	2
OB Emergencies	3-7
Perinatal Grief	2-3
Perinatal Legal Climate	3
Physiological Changes During Pregnancy	3
Postpartum Complications	3
Postpartum Nursing Care	3
Pregnancy-Induced Hypertension	3
Preterm Labor	3
Domestic Violence in Pregnancy	
<b>Neonatal</b>	
Hematologic Disorders of the Neonate	3.5
Neonatal Infections	3
Neonatal Cardiology	4
Neonatal Nursing: Theory & Practice (All the components can be separate)	20
Neonatal Pharmacology	3
Neonatal Problems of Fluid/Electrolytes/Acid-Base Balance	3
Neonatal X-Ray Interpretation	2.5
Neurologically Suspect Infant	3
Nutritional Support of the Neonate	3
Pain Management in the Neonate	3
Pulmonary Disorders of the Neonate	4-6
Surgical Neonate	3
Ventilatory Support of the Neonate	4
Advance Technology Update: ECMO, NO – Overviews	4
STABLE	7.5
Neonatal Resuscitation Instructor Course	4-8

(Note: Physician education topics and case reviews upon request)

# SAMPLE

## SECTION 5 – ATTACHMENT D

### D-1

## Perinatal Morbidity and Mortality Reviews Suggested Guidelines for Case Selection

Retrieve patient medical records for each case selected. Both maternal and newborn records should be pulled for review, and fetal monitoring strips should be made available.

**The following cases should be reviewed for QI activities:**

#### **Maternal**

Intrauterine fetal death > 20 weeks gestation  
Major operative procedure other than C section  
Maternal admission to ICU  
Maternal death  
Maternal transport  
Preterm labor/Delivery < 34 weeks  
Major medical complications of delivery

#### **Neonatal**

Neonatal death  
Apgar <4 at 10 minutes  
Transport (Transferred out)  
Transport (Received)  
Seizures  
Preterm infant < 34 weeks  
Significant birth injury  
Assisted ventilation/CPAP > 4 hours  
Meningitis

**In addition, patients with the following conditions can be considered for review:**

#### **Maternal**

Cesarean for non-reassuring fetal status  
Cesarean for dystocia  
Cesarean: Other Primary  
Cesarean: Repeat  
Hemorrhage, Intrapartum  
Hemorrhage, Postpartum requiring transfusion  
Hypertension/Preeclampsia/Eclampsia  
Diabetes: Glucose intolerance of pregnancy  
Diabetes: Insulin dependent  
Midforceps/Vacuum extraction  
Substance abuse  
Premature rupture of membranes < 36 weeks  
Prolonged rupture of membranes > 24 hours at term  
Vaginal birth after cesarean

#### **Neonatal**

Apgar < 6 at five minutes or ten minutes  
Jaundice requiring exchange transfusion  
Major congenital anomalies  
Meconium aspiration syndrome  
Neonatal sepsis  
Neonatal withdrawal  
Oxygen administration > 4 hours  
Polycythemia/Anemia  
Small for gestational age  
Large for gestational age  
Nosocomial infection  
Transplacental infection  
Recurring hypoglycemia  
Macrosomia with birth injury

*Adapted from Regional Perinatal Programs of California, 1997*

# SAMPLE

## SECTION 5 – ATTACHMENT D

### D-2

## Perinatal Morbidity and Mortality Conference (PM&M Recording Form)

Hospital:

PM&M Date:

Maternal Medical Record #:

Infant(s) Medical Record #:

Primary Diagnosis:

Prenatal History:

Medical History:

Intrapartum Factors:  
(Include EFM Strip)

Patient Management Summary:

OB/CNM:

Nursing:

Anesthesia:

Pediatrics:

# SAMPLE

## SECTION 5 – ATTACHMENT D

Neonatology:  
**D-2: Perinatal Morbidity and Mortality Conference; Sample PM&M Recording Form (Cont.)**

Potential Issues to be Addressed:

Problem Solving Methods:

Learning/Teaching Opportunities:

Outcomes:

Mother Transported to \_\_\_\_\_ ? (circle) YES NO

If yes, Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Transport Date: \_\_\_\_\_

Outcome:

Baby Transported to \_\_\_\_\_ ? (circle) YES NO

If yes, Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Transport Date: \_\_\_\_\_

Outcome:

# SAMPLE

## SECTION 5 – ATTACHMENT D

### D-3

## Perinatal Morbidity and Mortality Conference; PM&M Summary/Case Report

**Hospital:**

**Date:**

**MCCPOP Consultants:** \_\_\_\_\_, MD – Maternal/Fetal Medicine  
\_\_\_\_\_, MD – Neonatology

**Maternal Medical Record #:** XXXXXX

**Infant Medical Record #:** XXXXXX

**Primary Diagnosis:**

24-year-old, G1/P0, B+ blood type, rubella immune, MSAFP - WNL. Prenatal course unremarkable. Developed cramping and spotting at 29 weeks gestation. Admitted to L&D and found to have bulging membranes with a breech presentation.

**Patient Management Summary:**

Patient received betamethasone X 2 doses. Placed on magnesium sulfate tocolysis. Received clindamicin for GBS prophylaxis, re: preterm labor. Patient broke through tocolysis three days after completion of betamethasone course; labor progressed and fetus flipped to vertex position. Progressed to complete; NSVD of a 1364 gram, male infant with Apgars of 8/8.

Infant required intubation in the delivery room. Received Survanta for RDS; received dopamine for hypotension. Received 2 courses (6 doses) of indomethacin for patent ductus, without resolution. Chest X-ray continued to deteriorate. Although initial work-up showed no infection, continued antibiotics because infant was not showing improvement. Eventually ET aspirate revealed candida albican. Infant transferred to CCS Approved Regional NICU.

At CCS Approved Regional NICU, infant noted to have a loud murmur. PDA persisted for 3 weeks, then closed. Infant required Lasix during this time. Infant placed on amphotericin for candida lung infection; stopped 3 days later. Infant developed pneumotosis - NEC (not perforated), which eventually resolved and infant was started on feedings. Head ultrasound at referring hospital was normal; at CCS Approved Regional NICU, ultrasound revealed Grade 1 bleed.

Infant advanced to full feeds. Infant has chronic lung disease and will probably have to go home on oxygen. Getting reflux work-up. Has had 2 ECHOs showing that PDA is now closed.

# SAMPLE

## SECTION 5 – ATTACHMENT D

### **Discussion/Recommendations:**

#### **Maternal**

1. This patient had cramping on and off for 6 weeks prior to admission. There was likely a large cervical component to her PTL (i.e., probable incompetent cervix).
2. Patient management appropriate.
3. Recommendation for future pregnancies - screen for cervical length and bacterial vaginosis. Fetal fibronectin test would probably not have been useful in this case.
4. May want to consider cervical cerclage in next pregnancy, prior to 23 weeks gestation. We never do cerclages after 24 weeks.
5. There is probably no gender difference in the efficacy of betamethasone.

#### **Infant**

1. Candida albican infection is uncommon. May want to consider the possibility of an underlying immune disorder; while infant is too young for work-up now, he should probably be followed-up for this after discharge.
2. This infant received 2 courses of indomethacin for PDA. This is probably the maximum amount of drug infant should receive. If this hadn't worked, he would have needed a surgical procedure to correct PDA.
3. It is unclear whether this infant's NEC was caused by the indomethacin; we know there is an increased risk of perforation, which fortunately did not happen in this case.
4. While survival at 29 weeks has improved to 95% in recent years, we need to remember that 28 - 32 week infants can still get very ill, as in this case.

# SAMPLE

## SECTION 5 – ATTACHMENT E-1

### Perinatal Outreach Program/Contract Hospital Perinatal Education Schedule

<b>DATE</b>	<b>TIME</b>	<b>PROGRAM</b>
2/14/05	1130-1230 1230-1400	EFM Strip Review Perinatal Morbidity & Mortality Conference
3/29/05	1245-1445	EDAP Conference - Emergency/Peds
5/12/05	0800-1500	OB Nursing Workshop: Advanced Fetal Monitoring
5/16/05	1130-1230 1230-1400	EFM Strip Review Perinatal Morbidity & Mortality Conference
5/31/05	1245-1445	EDAP Conference - Emergency/Peds
6/6/05	0800-1500	OB Nursing Workshop: High Risk OB
6/27/05	0800-1200	Neonatal Nursing Workshop: Fluids & Electrolytes and Pharmacology
8/30/05	1245-1445	EDAP Conference - Emergency/Peds
9/12/05	0800-1500	OB Nursing Workshop: Advanced Fetal Monitoring
9/19/05	1130-1230 1230-1400	EFM Strip Review Perinatal Morbidity & Mortality Conference
9/29/05	0900-1200	Neonatal Nursing Workshop: PICC Lines
10/25/05	1245-1445	EDAP Conference - Emergency/Peds
11/8/05	0800-1500	OB Nursing Workshop: High Risk OB
11/16/05	0900-1200	Neonatal Nursing Workshop: Developmental Care
12/5/05	1130-1230 1230-1400	EFM Strip Review Perinatal Morbidity & Mortality Conference

## **Joint Education and Training of Perinatal Health Professionals**

### **I. Standard**

California Children's Services Standards require that the CCS Approved Regional NICU, in conjunction with the contracting hospital (i.e., CCS-Community and Intermediate NICUs), develop and implement a plan for the joint education and training of all perinatal health professionals.

### **II. Process**

#### **A. Designation of Appropriate Staff and Determination of Topic Areas**

The CCS Approved Regional NICU identifies appropriate medical and/or nursing representatives, (typically the Chief of Neonatology, Chief of Maternal/Fetal Medicine) and/or their clinical designee, (typically the Neonatal Clinical Nurse Specialist and Perinatal Clinical Nurse Specialist), to meet with the CCS Approved Regional NICU's Outreach Education Coordinator/Manager and representatives from the contracting hospital, (typically the NICU Nurse Manager and/or the Neonatal Clinical Nurse Specialist, Nurse Educator or other lead staff) to jointly develop an education plan for the contracting hospital's perinatal staff.

Appropriate educational activities include, but are not limited to, the following: (See Section 5, Outreach and Education Agreements)

- Lectures
- Skill labs
- Journal clubs
- On-site preceptorships
- Case reviews/discussions
- Self-paced learning modules
- Computer modules
- Neonatal Resuscitation Program (NRP) education/certification
- Continuing education conferences

See following sample education schedule, which would be appropriate perinatal/neonatal education for regional staff to offer to a contracting hospital. There is not a standard list of educational offerings required. Education content and activities should be determined on an individual basis, based on a needs assessment of the contracting hospital and planned in collaboration with that contracting hospital.

#### **B. Review and Approval of Perinatal/Neonatal Education Plan**

The designated representatives at both the CCS Approved Regional NICU and the contracting hospital jointly review the education plan for content, completeness and clinical appropriateness. The reviewer(s) and the contracting hospital representatives jointly discuss any discrepancies or suggestions for changes in educational content/delivery method.

Once approved, the schedule is attached to the RCA and signed off by appropriate personnel. The perinatal/neonatal education plan is jointly reviewed and revised as necessary on an annual basis.

# SAMPLE

**Regional Cooperation Agreement Between Hospital X (CCS Approved Regional NICU)  
and Hospital W (contracting Hospital)  
Perinatal Outreach Education Schedule  
January 1, 2005 – July 25, 2005**

<b>DATE</b>	<b>TIME</b>	<b>TITLE</b>
1/24/05	0800-0930	Perinatal Morbidity and Mortality Conference
1/27/05	1530-1730	Maternity Journal Club
2/23/05	1530-1730	Labor and Delivery Journal Club
2/09/05	1200-1500	Nursery Nursing Workshop: Cardiac Physiology and Assessment
2/14/05	1530-1730	Neonatal Journal Club
2/22/05	1200-1500	Maternity Nursing Workshop: Postpartum Emergencies
4/13/05	0730-0830	EFM Strip Review
3/08/05	0800-1500	OB Potpourri: Pitocin, Amnioinfusion, Vaginal Delivery Nursing Interventions
3/23/05	1530-1730	Maternity Journal Club
4/06/05	1530-1730	Neonatal Journal Club
4/11/05	0900-1200	NICU Nursing Workshop: Nursing Issues Surrounding Death in the NICU
4/28/05	1530-1730	Labor and Delivery Journal Club
4/25/05	0800-0930	Perinatal Morbidity and Mortality Conference
5/09/05	1530-1730	Maternity Journal Club
5/17/05	0800-1200 1300-1700	Advanced EFM Nursing Workshop Advanced EFM Nursing Workshop
6/06/05	1530-1630	EFM Strip Review
5/31/05	1530-1730	Well Baby Nursery Journal Club
6/15/05	1300-1500	Neonatal Journal Club
6/23/05	1530-1730	Labor and Delivery Journal Club
6/29/05	0900-1200	NICU Nursing Workshop: Fluids, Electrolytes and Lab Values
7/21/05	1530-1730	Maternity Journal Club
7/25/05	0800-0930	Perinatal Morbidity and Mortality Conference