

CPETS: CALIFORNIA PERINATAL TRANSPORT SYSTEMS

What's New in The Neonatal Transport Data Program, 2020

Presented by:

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- Ron Cohen, MD,
 - Medical Director: Northern California Perinatal Transport System

CONFLICTS OF INTEREST

- We have no conflicts of interest to disclose.
- We will not be making any recommendations on medications, devices or equipment in this lecture.

OBJECTIVES

Following the lecture, discussion and questions and answers, the participant will be able to:

- Identify basic dataset contents;
- Describe changes to data collection for 2020;
- Discuss the opportunities for quality improvement in Therapeutic Hypothermia Use; and
- Implement facility plan for maintaining bed availability website.

CALIFORNIA PERINATAL TRANSPORT SYSTEM

Legislatively mandated by AB 4439 in 1976, required by California Perinatal Quality Care Collaborative (CPQCC), California Children's Services (CCS) and California Department of Public Health(CDPH), managed by Regional Perinatal Programs of California (RPPC).

- Bed Availability and Direct Referral Information
- Neonatal Data System
 - Collection and Entry
 - Standardized Reports
 - Transports In
 - Transports Out
 - Tools and Support Materials
- Maternal Transport Data System Development

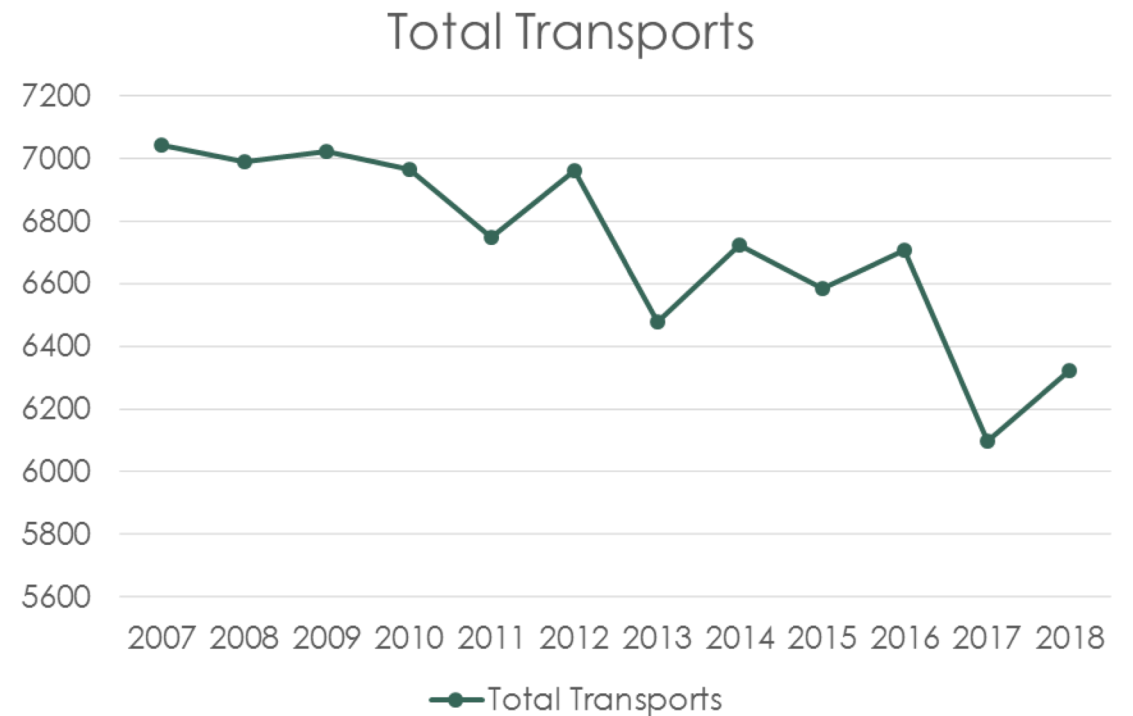


CALIFORNIA ACUTE NEONATAL TRANSPORT ACTIVITY, 2019



QUALITY CALIFORNIA NEONATAL TRANSPORT DATA

Year	Total Transports	Unknowns	Number of Entries per Record
2018	6,323	1.3	1.2
2017	6,097	1.2	1.3
2016	6,710	1.3	1.7
2015	6,584	1.4	1.9
2014	6,724	2.5	1.9
2013	6,477	1.6	1.9
2012	6,961	1.4	2.3
2011	6,750	1.6	2.7
2010	6,965	1.9	3.3
2009	7,025	2.1	3.6
2008	6,989	2.6	35
2007	7,045	4.9	4.0



CALIFORNIA ACUTE TRANSPORT ACTIVITY BY FACILITY, 2018

- Total Acute Transports 6,323
- 136 member facilities
- 100 facilities reporting acute transports
- Average 63
- Transport Volume
 - 30 facilities with ≤ 10 acute transports/year,

ACUTE NEONATAL TRANSPORTS IN (PRIMARY AND SECONDARY)*, 2018 (COLUMN #/%)

	CPQCC Network Total	CPQCC Regional NICUs	CPQCC Community NICUs	CPQCC Intermediate / Others	Region: Orange Coast	Facility (Primary Level)
All Birth Weights	6,700	4,586	2,048	66	241	51
≤ 500 grams	13 / 0.2%	13 / 0.3%	0	0	0	1/0.2%
501-750 grams	171 / 2.6%	137 / 3.0%	34 / 1.7%	0	5 / 2.1%	3/0.6%
751 – 1,000 grams	193 / 2.9%	144 / 3.1%	48 / 2.3%	1 / 0.2%	4 / 1.7%	2/0.4%
1,001-1,500 grams	450 / 6.7%	289 / 6.3%	155 / 7.6%	6 / 9%	11 / 4.5%	4/0.8%
1,501-2,500 grams	1,628 / 24.3%	995 / 21.7%	597 / 29.2%	36 / 55%	38 / 15.8%	12/23.5%
> 2,500 grams	4,245 / 63.4%	3,008 / 65.6%	1,214 / 59.3%	23 / 35%	183 / 75.9%	28/54.9%

DESTINATION OF **FIRST** ACUTE TRANSPORT BY LEVEL OF CARE

Destination of First Transport, 2018

Receiving Hospital Type	Number (%) Transported In* <small>rounded independently</small>
Non-CCS ICNN	5/0.8%
Intermediate NICU	26/0.4%
Community NICU	1698/28.2%
Regional NICU	4294/71.3%
Total	6023 (100%)

VLBW INFANTS MAKE UP ONLY 12% OF ACUTE TRANSPORTS

Acute Neonatal Transports (Primary and Secondary)*, by Birthweight Category, California, 2018

VLBW (<1,500 grams)	827
LBW (\geq 1,500 grams to 2,499 grams)	1,628
Appropriate Birth Weight (\geq 2,500 grams)	4,245



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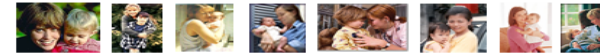


PERINATAL.ORG

- Daily hospital updates of Neonatal and High Risk Maternity Beds
- Quarterly reports from Regional CPeTS on Update Compliance
- Quarterly and as needed updates of Contact Information



California Perinatal Transport System



[Add New Hospital](#) | [Remove Hospital](#) | [Update Bed Availability](#)

View Bed Availability - Northern California

To obtain more detailed information about each provider, including contacts and phone numbers, [click](#) on the name of that center in the first column.

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Hospital:
 * Admin - Kaiser Hospitals ▾
 Password:

REGIONAL Centers		Beds Available			
Hospital	City	Neonatal	ECMO	High Risk Maternity	Last Update
Anderson Lucchetti Women's & Children's	Sacramento	2	open	open	9/3/2019 7:05:03 AM
California Pacific Medical Center	San Francisco	1	n/a	open	9/3/2019 1:36:24 AM
Children's Hospital Oakland	Oakland	5 or more	open	n/a	9/3/2019 3:00:15 AM
Kaiser Oakland	Oakland	2	n/a	open	8/29/2017 3:00:31 PM
Lucile Packard Childrens Stanford	Palo Alto	5 or more	open	open	9/3/2019 4:53:44 AM
Santa Clara Valley Medical Center	San Jose	5 or more	n/a	n/a	9/3/2019 12:06:05 AM
UC Davis Medical Center	Sacramento	5 or more	open	open	9/1/2019 8:17:50 AM
UCSF Medical Center-Benioff Children's Hospital	San Francisco	5 or more	open	open	9/3/2019 4:13:29 AM
Valley Children's Hospital	Madera	2	open	n/a	9/3/2019 5:30:54 AM

COMMUNITY Centers		Beds Available			
Hospital	City	Neonatal	ECMO	High Risk Maternity	Last Update
Alta Bates Summit Medical Center	Berkeley	5 or more	n/a	open	9/3/2019 1:40:27 AM
Asante Rogue Regional Medical Center	Medford, OR 97504	5 or more	n/a	open	8/30/2019 6:17:14 PM
Community Regional Medical Center	Fresno	1	n/a	open	9/3/2019 12:21:31 AM
DignityHealth /St. Joseph's Medical Center	Stockton 95204	5 or more	n/a	open	9/2/2019 2:49:44 PM
Doctor's Medical Center	Modesto	4	n/a	open	9/2/2019 7:54:43 AM
Dominican-Santa Cruz Hospital	Santa Cruz	5 or more	n/a	open	9/3/2019 1:21:28 AM
El Camino Hospital	Mountain View	5 or more	n/a	open	8/29/2019 9:41:59 AM
Good Samaritan Hospital of Santa Clara Valley	San Jose, 95124	5 or more	n/a	open	9/3/2019 6:03:11 AM
John Muir Medical Center	Walnut Creek	1	n/a	open	8/30/2019 7:50:07 AM

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Direct Referral and Contact Information.

Updated quarterly and as needed by hospitals. Accessed by clicking on facility name in main listing.



California Perinatal Transport System



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Hospital:
* Admin - Kaiser Hospitals ▾
Password:

Anderson Lucchetti Women's & Children's

Last updated on 3/13/2019 8:58:10 AM

Hospital: Anderson Lucchetti Women's & Children's

City: Sacramento

Type: REGIONAL

Address1: 2825 Capitol Avenue

Address2: Sacramento, CA 95816

Main NICU telephone/Fax: 916/ 887-0780 fax 916/ 887-0786

Main L&D telephone: 916/ 887-0650

NICU Transport Coordinator

Name: Patty Duncan Phone: 916/ 887-0859 Email: DuncanP@sutterhealth.org

OB Transport

Name: William Gilbert Phone: 916/ 887-0107 Email: GilbertW@sutterhealth.org

NICU Medical Director

Name: Gustavo Sosa Phone: 916/ 887-0104 Email: HaydenN@sutterhealth.org

NICU Nurse Manager

Name: Christi Walsh Phone: 916/ 887-0857 Email: WalshCG@sutterhealth.org

OB Medical Director

Name: Laurie Gregg Phone: Email: GreggL@sutterhealth.org

L&D Nurse Manager

Name: Kristi Svej-Stranberg Phone: 916/ 887-0685 Email: SvejStK@sutterhealth.org

Data Contact

Name: Amy Johnson Phone: 916/ 887-4562 Email: JohnsoA@sutterhealth.org

Misc. Info (Web url, other contacts, etc.)

Neonatal Transport referrals, call 916/ 877-0780; Maternal Transport referrals, call 916/ 877-0650; Peds Transport referrals, call 916/ 877-0360

[Back to Northern California Bed Information](#)



California Perinatal Transport System



All materials and support documents accessible at perinatal.org website

Hospital and Local EMS Contact Information now available.

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Hospital:

* Admin - Kaiser Hospitals ▼

Password:

Login

Neonatal Transport Data System

CPeTS Transport paper forms are no longer available from the Regional Offices. Please [download](#) and copy the forms as needed from this [website](#)

2019 Materials

[2019 Neonatal Transport Form](#)(PDF)
[2019 Neonatal Transport Form](#)(Word)
[2019 Neonatal Transport Form Color Coded](#)(PDF)
[2019 Neonatal Transport Form Color Coded](#)(Word)
[2019 CPeTS Manual of Definitions](#)(PDF)
[2019 CPeTS Manual of Definitions](#)(Word)
[2019 CPeTS Data Request Form](#)(PDF)
[2019 CPeTS Data Request Form](#)(Word)

Hospital/EMS Contact List

[Hospital and Local EMS Contact Information Download](#) (PDF)
[Hospital and Local EMS Contact Information Download](#) (Excel)

HOSPITAL AND LOCAL EMS CONTACT INFORMATION

Facility Contact Information

Hospital Community Memorial Hospital of
San Buenaventura
City Ventura
Type COMMUNITY
Address1 147 North Brent Street Ventura,
CA
Address2 Ventura, CA 93003-2854
Main NICU telephone/Fax 805-652-5620
Main L&D telephone

NICU Transport Coordinator

OB Transport

NICU Medical Director

John Van Houten 805 652-5620

NICU Nurse Manager

Deborah J Hill 805 667-2821

OB Medical Director

Local EMS Contact Information

County VENTURA
Director Daniel Shepherd, MD
Address 2220 E. Gonzalez Rd., Ste. 130
City, State, ZIP Oxnard, CA 93036
Phone (805) 981-5304
Email daniel.shepherd@ventura.org
Fax

John_vanhouten@pediatrix.com

djhill@cmhhospital.org



MATERIALS AND RESOURCES



RESOURCES

- Perinatal.org
- CPQCC.org
- Southern California CPeTS: 714 921-9755
 - Lisa Bollman: Lisa@perinatalnetwork.org
 - Kevin Van Otterloo: Kevin@perinatalnetwork.org
- Northern California CPeTS: 650 736-2210
 - Rebecca Robinson: rrobinso@stanford.edu
 - Leona Dang-Kilduff: leonad@Stanford.edu
 - Ron Cohen: RSCohen@Stanford.edu

CHANGES IN CPETS DATA COLLECTION FOR 2020

CORE CPETS ACUTE INTER-FACILITY NEONATAL TRANSPORT FORM – 2020 PLEASE PRINT CLEARLY

PATIENT DIAGNOSIS Special Situations: <input type="checkbox"/> None <input type="checkbox"/> Delivery Attendance <input type="checkbox"/> Transport by Sending Facility <input type="checkbox"/> Transport from ER <input type="checkbox"/> Safe Surv.			
C.1 Transport type <input type="checkbox"/> Delivery <input type="checkbox"/> Emergent <input type="checkbox"/> Urgent <input type="checkbox"/> Scheduled		C.2. Indication <input type="checkbox"/> Medical <input type="checkbox"/> Surgical <input type="checkbox"/> Bed Availability/Insurance	
CRITICAL BACKGROUND INFORMATION			
C.3 Birth weight _____ grams	C.4 Gestational Age _____ weeks _____ days	C.5 <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Undetermined <input type="checkbox"/> Unknown	
C.6 Prenatally Diagnosed Congenital Anomalies <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Describe: _____		C.7 Maternal Date of Birth _____ <input type="checkbox"/> Unknown	
C.8a. Antenatal Steroids <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A		C.8b. Antenatal Magnesium Sulfate <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
TIME SEQUENCE		Date	Time
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery			
C.11 Infant Birth			
C.12 Maternal/fetal transport not done due to: <input type="checkbox"/> Advanced Labor <input type="checkbox"/> Bleeding <input type="checkbox"/> Mother Medically Unstable <input type="checkbox"/> Non-Reassuring Fetal Status <input type="checkbox"/> Not Considered <input type="checkbox"/> Unk			
C.9/13 Surfactant (first dose) <input type="checkbox"/> Delivery Room <input type="checkbox"/> Nursery <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
C.14 Referral			
C.15 Acceptance			
C.16 Transport Team Departure from Transport Team Office/NICU for Sending Hospital			
C.17 Arrival of Team at Sending Hospital/Patient Bedside			
C.18 Initial Transport Team Evaluation			
C.19 Arrival at Receiving NICU			
INFANT CONDITION		REFERRAL PROCESS	
Modified TRIPS Score: to be recorded on referral, within 15 minutes of arrival at sending hospital and admit to NICU.		C.30 Sending Hospital Name	
		Previous CPQCC ID#	
		Sending Hospital Nursing Contact Information Name/Telephone	
	Referral	Initial Transport	NICU Admit
C.20 Responsiveness \odot			
C.21 Temperature C°			
C.21.a. Too low to register	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
C.21.b. Was the infant cooled?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
C.21.c. Method of cooling +			
C.22 Heart Rate			
C.23 Respiratory Rate			
C.24 Oxygen Saturation			
C.25 Respiratory Status *			
C.26 Inspired Oxygen Concentration			
C.27 Respiratory Support \odot			
C.28 Blood Pressure	Systolic / Diastolic Mean		
Too low to register	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
C.29 Pressors	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Additional Information for CPQCC Admit and Discharge Form Only			
Birth Head Circumference _____ cm Labor Type <input type="checkbox"/> Spontaneous <input type="checkbox"/> Induced <input type="checkbox"/> Unknown Rupture of Membranes > 18 hours <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Delivery Mode <input type="checkbox"/> Spontaneous Vaginal <input type="checkbox"/> Operative Vaginal <input type="checkbox"/> Cesarean <input type="checkbox"/> Unknown			
Delayed Cord Clamping <input type="checkbox"/> Yes <input type="checkbox"/> 30-60 sec <input type="checkbox"/> 61-120 sec <input type="checkbox"/> >120 sec <input type="checkbox"/> No <input type="checkbox"/> Maternal Bleeding <input type="checkbox"/> Neonatal Causes <input type="checkbox"/> Other <input type="checkbox"/> Unknown			
Breathing before Clamped <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Cord milking performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
Death <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Prior to Team Arrival <input type="checkbox"/> Prior to Departure from Sending Hospital <input type="checkbox"/> Prior to Arrival at Receiving NICU			
\odot Responsiveness: 0=Death 1=None, Seizure, Muscle Relaxant 2=Lethargic, no cry 3=Vigorously withdraws, cry +Method of cooling: Passive, Selective Head, Whole Body, Other, Unknown *Respiratory Status: 1=Ventilator 2= Severe (apnea, gasping) 3=Other 9= Unknown Respiratory Rate: High Frequency Ventilation = 400 \odot Respiratory Support: 0 = None, 1 = Hood/Nasal Cannula, Flowby , 2 = Nasal Continuous Positive Airway Pressure, 3 = Nasal Ventilation (NIPPV / NIMV) 4 = Oral/Nasal Endotracheal Tube 9= Unknown			

DEMOGRAPHICS

CORE CPETS ACUTE INTER-FACILITY NEONATAL TRANSPORT FORM – 2020 PLEASE PRINT CLEARLY

PATIENT DIAGNOSIS			Special Situations: <input type="checkbox"/> None <input type="checkbox"/> Delivery Attendance <input type="checkbox"/> Transport by Sending Facility <input type="checkbox"/> Transport from ER <input type="checkbox"/> Safe Surr.		
C.1 Transport type <input type="checkbox"/> Delivery <input type="checkbox"/> Emergent <input type="checkbox"/> Urgent <input type="checkbox"/> Scheduled		C.2. Indication <input type="checkbox"/> Medical <input type="checkbox"/> Surgical <input type="checkbox"/> Bed Availability/Insurance			
CRITICAL BACKGROUND INFORMATION					
C.3 Birth weight	grams	C.4 Gestational Age	weeks	days	C.5 <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Undetermined <input type="checkbox"/> Unknown
C.6 Prenatally Diagnosed Congenital Anomalies <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Describe:			C.7 Maternal Date of Birth <input type="checkbox"/> Unknown		
C.8a. Antenatal Steroids <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A		C.8b. Antenatal Magnesium Sulfate <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
TIME SEQUENCE			Date	Time	
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery					
C.11 Infant Birth					
C.12 Maternal/fetal transport not done due to: <input type="checkbox"/> Advanced Labor <input type="checkbox"/> Bleeding <input type="checkbox"/> Mother Medically Unstable <input type="checkbox"/> Non-Reassuring Fetal Status <input type="checkbox"/> Not Considered <input type="checkbox"/> Unk					
C.9/13 Surfactant (first dose)		<input type="checkbox"/> Delivery Room <input type="checkbox"/> Nursery <input type="checkbox"/> N/A <input type="checkbox"/> Unknown			
C.14 Referral					
C.15 Acceptance					
C.16 Transport Team Departure from Transport Team Office/NICU for Sending Hospital					
C.17 Arrival of Team at Sending Hospital/Patient Bedside					
C.18 Initial Transport Team Evaluation					
C.19 Arrival at Receiving NICU					

C. 5. Infant Sex [SEX]

CHANGE

Added the option to select “**Undetermined**”.

Updated 2020 CPeTs Definition

C.5 Infant Sex:

Select **Male** or **Female**

Select **Undetermined** when sex is not assigned as male or female by the time of discharge because it has been considered to be undetermined (or “ambiguous”) by the clinical team

Select **Unknown** if the sex cannot be obtained

TIME SEQUENCE

CORE CPETS ACUTE INTER-FACILITY NEONATAL TRANSPORT FORM – 2020 PLEASE PRINT CLEARLY

PATIENT DIAGNOSIS			Special Situations: <input type="checkbox"/> None <input type="checkbox"/> Delivery Attendance <input type="checkbox"/> Transport by Sending Facility <input type="checkbox"/> Transport from ER <input type="checkbox"/> Safe Surv.		
C.1 Transport type <input type="checkbox"/> Delivery <input type="checkbox"/> Emergent <input type="checkbox"/> Urgent <input type="checkbox"/> Scheduled		C.2. Indication <input type="checkbox"/> Medical <input type="checkbox"/> Surgical <input type="checkbox"/> Bed Availability/Insurance			
CRITICAL BACKGROUND INFORMATION					
C.3 Birth weight	grams	C.4 Gestational Age	weeks	days	C.5 <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Undetermined <input type="checkbox"/> Unknown
C.8 Prenatally Diagnosed Congenital Anomalies <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Describe:			C.7 Maternal Date of Birth <input type="checkbox"/> Unknown		
C.8a. Antenatal Steroids <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A		C.8b. Antenatal Magnesium Sulfate <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			
TIME SEQUENCE			Date	Time	
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery					
C.11 Infant Birth					
C.12 Maternal/fetal transport not done due to: <input type="checkbox"/> Advanced Labor <input type="checkbox"/> Bleeding <input type="checkbox"/> Mother Medically Unstable <input type="checkbox"/> Non-Reassuring Fetal Status <input type="checkbox"/> Not Considered <input type="checkbox"/> Unk					
C.9/13 Surfactant (first dose) <input type="checkbox"/> Delivery Room <input type="checkbox"/> Nursery <input type="checkbox"/> N/A <input type="checkbox"/> Unknown					
C.14 Referral					
C.15 Acceptance					
C.16 Transport Team Departure from Transport Team Office/NICU for Sending Hospital					
C.17 Arrival of Team at Sending Hospital/Patient Bedside					
C.18 Initial Transport Team Evaluation					
C.19 Arrival at Receiving NICU					

Item C.12 Maternal/Fetal Transport Consideration [MFTRANSCON]

CHANGE

- Re-numbered Item C.12 Date /Time of Infant Birth to C.11 (replacing previously unused C.11 Date/Time of Antenatal Steroid Administration)
- Replaced Item C.12 with Maternal and Fetal Transport Consideration

2020 Updated CPeTS Definition

Fill in this item only if the following conditions are met:

- Referring facility is a primary care or intermediate NICU

AND

- (C.1) Transport Type is:
 - Requested Delivery Room Attendance
 - Emergent
 - Urgent

AND one of the following is true:

- Anticipated birthweight < 1,500 grams
 - Gestational age < 32 weeks
 - Prenatally diagnosed congenital anomalies found
- (C.10) Maternal Admission is \geq 24 hours before (C.11) Infant Birth

AND

If the above conditions are met, select the reason why maternal/fetal transport did not occur:

Select **Advanced Labor (Dilation)** if the mother was not transported due to advanced labor (cervical dilation).

Select **Bleeding** if the mother was not transported because of maternal bleeding.

Select **Mother Medically Unstable** if the mother was not transported because she was medically unstable.

Select **Fetal Distress** if the mother was not transported because of distress detected in the fetus.

Select **Not Considered** if maternal/fetal transport was not considered.

Select **Unknown** if the reason for not transporting the mother is not known or cannot be obtained.

Select **Not Applicable** if the conditions above are not met.

INFANT CONDITIONS/TRIPS

INFANT CONDITION				REFERRAL PROCESS	
Modified TRIPS Score: to be recorded on referral, within 15 minutes of arrival at sending hospital and admit to NICU.				C.30 Sending Hospital Name	
				Previous CPQCC ID#	
				Sending Hospital Nursing Contact Information Name/Telephone	
	Referral	Initial Transport	NICU Admit		
C.20 Responsiveness				C.31a Previously Transported? <input type="checkbox"/> Yes <input type="checkbox"/> No	
C.21 Temperature C°				C.31b From:	
C.21.a. Too low to register	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	C.32 Birth Hospital Name	
C.21.b. Was the infant cooled?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	C.33 Transport Team On-Site Leader (check only one)	
C.21.c. Method of cooling +				<input type="checkbox"/> Sub-specialist Physician <input type="checkbox"/> Pediatrician <input type="checkbox"/> Other MD/Resident	
C.22 Heart Rate				<input type="checkbox"/> Neonatal Nurse Practitioner <input type="checkbox"/> Transport Specialist <input type="checkbox"/> Nurse	
C.23 Respiratory Rate				C.34a Team From <input type="checkbox"/> Receiving Hospital <input type="checkbox"/> Sending Hospital	
C.24 Oxygen Saturation				<input type="checkbox"/> Contract Service	
C.25 Respiratory Status *				C.34b Describe (name of Contract Service):	
C.26 Inspired Oxygen Concentration				C.35 Mode <input type="checkbox"/> Ground <input type="checkbox"/> Helicopter <input type="checkbox"/> Fixed Wing	
C.27 Respiratory Support %				Transport Team Informant Name(s)/Telephone Numbers	
C.28 Blood Pressure Systolic / Diastolic Mean					
Too low to register	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Comments	
C.29 Pressors	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
Additional Information for CPQCC Admit and Discharge Form Only					
Birth Head Circumference cm Labor Type <input type="checkbox"/> Spontaneous <input type="checkbox"/> Induced <input type="checkbox"/> Unknown Rupture of Membranes > 18 hours <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Delivery Mode <input type="checkbox"/> Spontaneous Vaginal <input type="checkbox"/> Operative Vaginal <input type="checkbox"/> Cesarean <input type="checkbox"/> Unknown					
Delayed Cord Clamping <input type="checkbox"/> Yes <input type="checkbox"/> 30-60 sec <input type="checkbox"/> 61-120 sec <input type="checkbox"/> >120 sec <input type="checkbox"/> No <input type="checkbox"/> Maternal Bleeding <input type="checkbox"/> Neonatal Causes <input type="checkbox"/> Other <input type="checkbox"/> Unknown					
Breathing before Clamped <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Cord milking performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Death <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Prior to Team Arrival <input type="checkbox"/> Prior to Departure from Sending Hospital <input type="checkbox"/> Prior to Arrival at Receiving NICU					
*Responsiveness: 0=Death 1=None, Seizure, Muscle Relaxant 2=Lethargic, no cry 3=vigorously withdraws, cry +Method of cooling: Passive, Selective Head, Whole Body, Other, Unknown *Respiratory Status: 1=Ventilator 2= Severe (apnea, gasping) 3=Other 9= Unknown Respiratory Rate: High Frequency Ventilation = 400 %Respiratory Support: 0 = None, 1 = Hood/Nasal Cannula, BiPAP, 2 = Nasal Continuous Positive Airway Pressure, 3 = Nasal Ventilation (NIPPV / NIMV) 4 = Oral/Nasal Endotracheal Tube 9= Unknown					

C.25 Respiratory Status

CHANGE

- Changed: “1 - Respirator” to “1 - Ventilator”
- Changed “2 – apnea, gasping, or intubated but not on respirator” to “2 – Severe (apnea, gasping)”

2020 Updated CPeTS Definition

In the designated field, select:

- 1- **Ventilator** if the infant was on the ventilator at the time of referral for transport.
- 2 - **Severe (apnea, gasping)** if the infant had severe respiratory complications, including apnea and/or gasping.
- 3 - **Other** for all other respiratory statuses (including “none” or “mild respiratory complications”).
- 9 - **Unknown** if this information cannot be obtained.

INFANT CONDITIONS/TRIPS

INFANT CONDITION				REFERRAL PROCESS	
Modified TRIPS Score: to be recorded on referral, within 15 minutes of arrival at sending hospital and admit to NICU.				C.30 Sending Hospital Name	
				Previous CPQCC ID#	
	Referral	Initial Transport	NICU Admit	Sending Hospital Nursing Contact Information Name/Telephone	
C.20 Responsiveness				C.31a Previously Transported? <input type="checkbox"/> Yes <input type="checkbox"/> No	
C.21 Temperature C°				C.31b From:	
C.21.a. Too low to register	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	C.32 Birth Hospital Name	
C.21.b. Was the infant cooled?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	C.33 Transport Team On-Site Leader (check only one)	
C.21.c. Method of cooling +				<input type="checkbox"/> Sub-specialist Physician <input type="checkbox"/> Pediatrician <input type="checkbox"/> Other MD/Resident	
C.22 Heart Rate				<input type="checkbox"/> Neonatal Nurse Practitioner <input type="checkbox"/> Transport Specialist <input type="checkbox"/> Nurse	
C.23 Respiratory Rate				C.34a Team From <input type="checkbox"/> Receiving Hospital <input type="checkbox"/> Sending Hospital	
C.24 Oxygen Saturation				<input type="checkbox"/> Contract Service	
C.25 Respiratory Status *				C.34b Describe (name of Contract Service):	
C.26 Inspired Oxygen Concentration				C.35 Mode <input type="checkbox"/> Ground <input type="checkbox"/> Helicopter <input type="checkbox"/> Fixed Wing	
C.27 Respiratory Support %				Transport Team Informant Name/Telephone Numbers	
C.28 Blood Pressure Systolic / Diastolic Mean				Comments	
Too low to register	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes		
C.29 Pressors	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N		
Additional Information for CPQCC Admit and Discharge Form Only					
Birth Head Circumference cm Labor Type <input type="checkbox"/> Spontaneous <input type="checkbox"/> Induced <input type="checkbox"/> Unknown Rupture of Membranes > 18 hours <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Delivery Mode <input type="checkbox"/> Spontaneous Vaginal <input type="checkbox"/> Operative Vaginal <input type="checkbox"/> Cesarean <input type="checkbox"/> Unknown					
Delayed Cord Clamping <input type="checkbox"/> Yes <input type="checkbox"/> 30-60 sec <input type="checkbox"/> 61-120 sec <input type="checkbox"/> >120 sec <input type="checkbox"/> No <input type="checkbox"/> Maternal Bleeding <input type="checkbox"/> Neonatal Causes <input type="checkbox"/> Other <input type="checkbox"/> Unknown					
Breathing before Clamped <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Cord milking performed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown					
Death <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Prior to Team Arrival <input type="checkbox"/> Prior to Departure from Sending Hospital <input type="checkbox"/> Prior to Arrival at Receiving NICU					
Responsiveness: 0=Death 1=None, Seizure, Muscle Relaxant 2=Lethargic, no cry 3=Vigorously withdraws, cry +Method of cooling: Passive, Selective Head, Whole Body, Other, Unknown *Respiratory Status: 1=Ventilator 2= Severe (apnea, gasping) 3=Other 9= Unknown Respiratory Rate: High Frequency Ventilation = 400 Respiratory Support: 0 = None, 1 = Hood/Nasal Cannula, Blowby, 2 = Nasal Continuous Positive Airway Pressure, 3 = Nasal Ventilation(NIPPV / NIMV) 4 = Oral/Nasal Endotracheal Tube 9= Unknown					

C.27 Respiratory Support

CHANGE

- Changed “Nasal CPAP” to “Nasal Continuous Positive Airway Pressure” and added “without rate” to the definition.
- Added (Nasal Ventilation (NIPPV/NIMV) if the infant was ventilated using nasal intermittent positive pressure ventilation (NIPPV) or nasal intermittent mandatory ventilation (NIMV).
- Changed “Endotracheal Tube (ETT)” to “Oral/Nasal (ETT)”

2020 Updated CPeTS Definition

In the designated field, select:

0 - **None** if required no respiratory support.

1 - **Hood/NC or Blow-by** if the infant had spontaneous breathing and was supported using an oxygen hood or nasal cannula or blow-by.

2 - **Nasal Continuous Airway Pressure** if the infant was provided with Continuous Positive Airway Pressure (CPAP) using nasal CPAP without rate.

3 - **Nasal Ventilation (NIPPV/NIMV)** if the infant was ventilated using nasal intermittent positive pressure ventilation (NIPPV) or nasal intermittent mandatory ventilation (NIMV).

4 - **Oral/Nasal ETT** if the infant was ventilated using an endotracheal tube. Do not enter ETT if an endotracheal tube was placed only for suctioning and assisted ventilation was not given through the tube.

9 - **Unknown** if this information cannot be obtained.

Form used for primary care facilities to request their transport out data.

Form found on perinatal.org website.

CPeTS/CPQCC Neonatal Transport Data Report Request 2020

Name of Person Requesting Data	
Hospital Affiliation/Region	
Full Hospital Address	
E-mail Address to send report to	
Date Needed (allow 2 weeks)	

Please be as specific as possible when requesting reports. Please check all applicable and complete one set of information for each report requested. Send completed request to Lisa@perinatalnetwork.org

Select One From Below		Select One Transport Type	
CPQCC Member Facility Number		All Transports	
Non-CPQCC Facility OSHPD Number		Delivery Room Requested	
Perinatal Region (specify)		Emergent	
Select One		Urgent	
Transport In		Scheduled	
Transport Out		Select One Transport Provider Type	
Select One Data Year		Receiving Facility	
2019		Referring Facility	
2018		Contract Service	
2017			

+

Select One From Below		Select One Transport Type	
CPQCC Member Facility Number		All Transports	
Non-CPQCC Facility OSHPD Number		Delivery Room Requested	
Perinatal Region		Emergent	
Select One		Urgent	
Transport In		Scheduled	
Transport Out		Select One Transport Provider Type	
Select One Data Year		Receiving Facility	
2019		Referring Facility	
2018		Contract Service	
2017			

NEONATAL QUALITY IMPROVEMENT ISSUES

The Neonatal Transport Database was designed to inform quality improvement efforts on the following issues as well as many more.

- Perceived underutilization of maternal transport;
- Perceived delay in decision to transport infant;
- Difficulty in obtaining transport placement/ acceptance;
- Delay in effecting transport following decision; and
- Consistent referring facility competency regarding infant stabilization prior to the transport team's arrival, as well as transport team competency.

STANDARDIZED REPORTS

CPQCCReport.org

- Statewide
- Regional
 - Transport In
 - Transport Out
- Hospital
 - Transport In
 - Transport Out

USE OF THERAPEUTIC HYPOTHERMIA AND NEONATAL TRANSPORT FOR HIE IN THE STATE OF CALIFORNIA

Background and Aims

Therapeutic hypothermia (TH) significantly improves outcomes for newborns with moderate or severe HIE and is the standard of care. Implementation requires education of providers at birth hospitals to facilitate timely identification and transfer of eligible infants to a TH center.

Objectives: To evaluate the association of maternal, neonatal, birth hospital characteristics, and transport processes with the use of therapeutic hypothermia for hypoxic ischemic encephalopathy (HIE) in California.

Methods

We utilized data from the California Perinatal Quality Care Collaborative (CPQCC) and the California Perinatal Transport System (CPeTS) for 2013-2016. CPQCC gathers data from hospitals representing > 90% of NICUs in the State.

We compared maternal, neonatal, birth hospital characteristics, and transport processes between those neonates who were transported within 3 days after birth and received TH (TTH+) and those who were transported in the same time frame but not treated with TH (TTH-).

Grade of HIE was defined using Vermont Oxford Network criteria. Qualifying conditions for CPQCC eligibility began including suspected encephalopathy or perinatal asphyxia in 2013.

Results

Between 2013 and 2016:

- There were 1,679 neonates with HIE (any grade)
 - 1,347 (80%) were TH treated
 - 132 of 1038 (13%) with moderate/severe HIE did not receive TH
- 939 of 1,374 (70%) were transported within 3 days for TH treatment (TTH+)
- 214 of 1,347 were transported in the first 3 days but were not treated (TTH-)
 - 94/314 (44%) had moderate/severe HIE

USE OF THERAPEUTIC HYPOTHERMIA AND NEONATAL TRANSPORT FOR HIE IN THE STATE OF CALIFORNIA

During this time period there were 139 participating CPQCC centers

- 66 centers treated ≥ 1 patient with TH
- 54 centers treated ≥ 2 patients with TH
- In hospitals with < 500 births/year 31% of HIE patients were transported and did not receive TH, compared to those with 2,000-2,499 births/year in which 16% of HIE patients were transported and did not receive TH
- In six counties in the State fewer than 50% of the HIE babies born in their region were transported and received TH
- Distance from TH center was not associated with transport for TH treatment (table)

Table. Characteristics of neonates who were transported and not treated with TH compared to those who were transported and treated with TH.

	Transported and not treated (TTH-) N=214	Transported and treated (TTH+) N=939	P-Value
Gestational Age	38.8 (± 1.5)	38.9 (± 1.5)	0.140
Male	129 (60)	559 (60)	0.840
Fetal Distress	103 (48)	575 (61)	<0.001
APGAR at 10 min ≤ 5	43 (30)	420 (50)	<0.001
Intubated & Ventilated	82 (38)	607 (65)	<0.001
DR Epinephrine	15 (7)	184 (20)	<0.001
Cardiac Compressions	43 (20)	360 (38)	<0.001
No Cord or Baby Gas	121 (57)	255 (27)	<0.001
pH	7 (± 0.2)	7 (± 0.2)	0.298
Base Deficit	14 (± 6.4)	16.1 (± 6.5)	0.005
Severity of HIE			
Mild HIE	120 (56)	310 (33)	<0.001
Moderate HIE	47 (22)	428 (46)	
Severe HIE	47 (22)	201 (21)	
Seizures (clinical/EEG)	104 (49)	393 (42)	0.072
*Time to Referral (min)	757 (± 1014.1)	142.5 (± 350.8)	<0.001
Time from Acceptance to Departure of Transport Team (min)	62.9 (± 119.9)	50 (± 33.4)	0.006
Distance from Referral to Receiving Hospital (miles)	27.4 (± 32.4)	29.1 (± 36.6)	0.542
Arrival Temperature $^{\circ}\text{C}$	36 (± 1.6)	34 (± 1.3)	<0.001

USE OF THERAPEUTIC HYPOTHERMIA AND NEONATAL TRANSPORT FOR HIE IN THE STATE OF CALIFORNIA

Summary

TH use in California is broadly implemented with 80% of infants with HIE receiving treatment.

70% of TH treated patients are transported to a TH center.

TTH- infants were missing assessment of key eligibility criteria with 50% not having a reported cord or baby blood gas value (pH or base deficit).

Fewer babies with mild HIE were TTH+ compared to those with moderate/severe HIE.

There was no difference in the incidence of seizures in TTH- and TTH+ infants suggesting a similar level of illness and a missed opportunity for treatment for TTH- neonates.

Time to referral was significantly later in TTH- patients (>12 vs. < 3 hrs) than in TTH+. Temperature on arrival was lower in TTH+ infants suggesting the use of cooling during transport.

Distance from birth hospital to a TH center was not associated with transport for TH treatment which affirms the equal availability for transport across vast distances in California.

Education directed at smaller birth volume (< 500/yr) hospitals may be warranted as only 69% of potentially eligible patients were transferred for treatment.

Conclusions

Despite national and international recommendations for the use of TH for moderate/severe HIE, there are a large number of neonates in California who do not receive treatment or are not transported in a timely fashion preventing assessment for TH eligibility.

Ongoing education and outreach regarding TH eligibility and the need to initiate treatment in the first 6 hours after birth is needed as evidenced by the lack of cord or baby blood gas measurements and the delay in time to referral for transport in transported but not treated patients.

DATA MINING USING STANDARDIZED REPORTS AS SCREENING TOOLS

- Variations in practice between your facility and region, or level of care or total CPQCC network
- Outliers in practice
- Data that seems unlikely or incorrect
- Areas where quality improvement activities for the unit are underway
- Areas where expansion or change in level of care are anticipated
- Keep in mind small numbers can be misleading. Using multiple years of data can provide clarity in these situations.



THANK YOU FOR YOUR TIME AND COMMITMENT!

