California Perinatal Transport System (CPeTS)

2015-2017 Reports and What's New for 2019

CPeTS Today

1

Transport Reports 2016-17

What infants were transported, and to what types of centers?

2

Real Time Bed Availability

The CPeTS website (www.perinatal.org) shows hospital capacity by region.

3

Changes for 2019

"Acute transport" no longer includes bed availability or insurance transports.

4

Resources for You

CPeTS staff are here to help!

California Perinatal Transport System

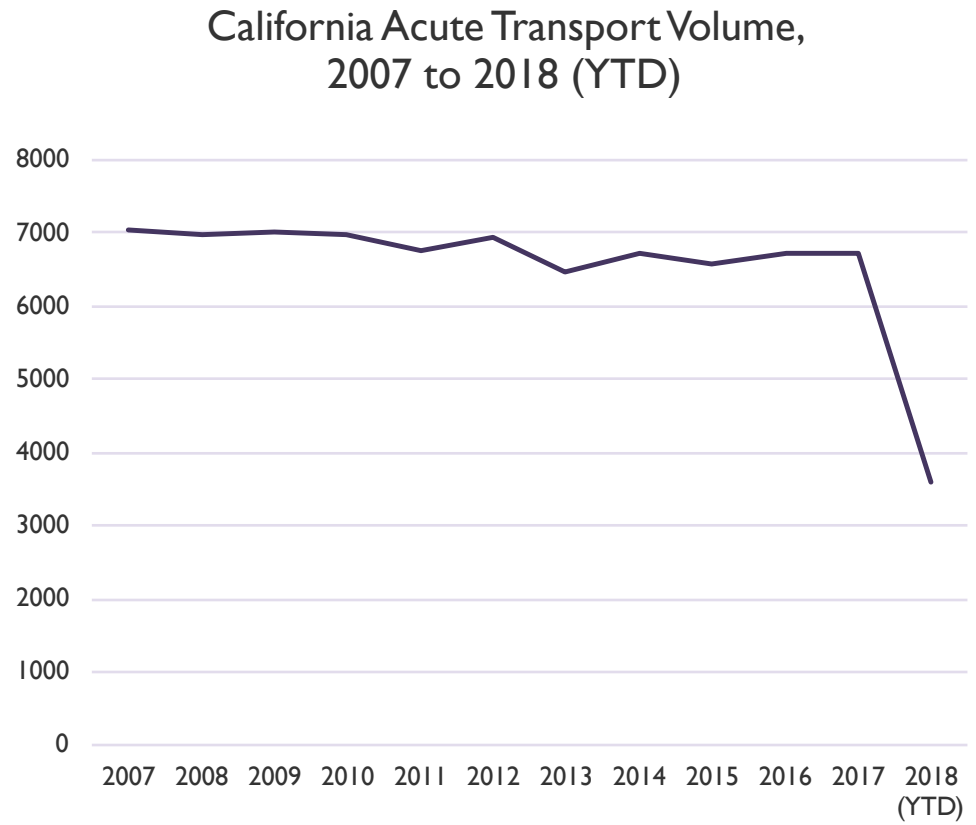
- Established 1976 with partners:
  - CPQCC
  - California Children's Services (CCS)
  - California Department of Public Health (CDPH)
  - Regional Perinatal Programs of California (RPPC)
- CPeTS website (www.perinatal.org)
  - Real time bed availability
  - Contact information for hospitals
- CPQCC NICU Data and Reports sites, transport data
  - Enter data for neonatal transports in and out
  - Review reports on transports for your center

Reporting 2015-17

California Neonatal Transport Data

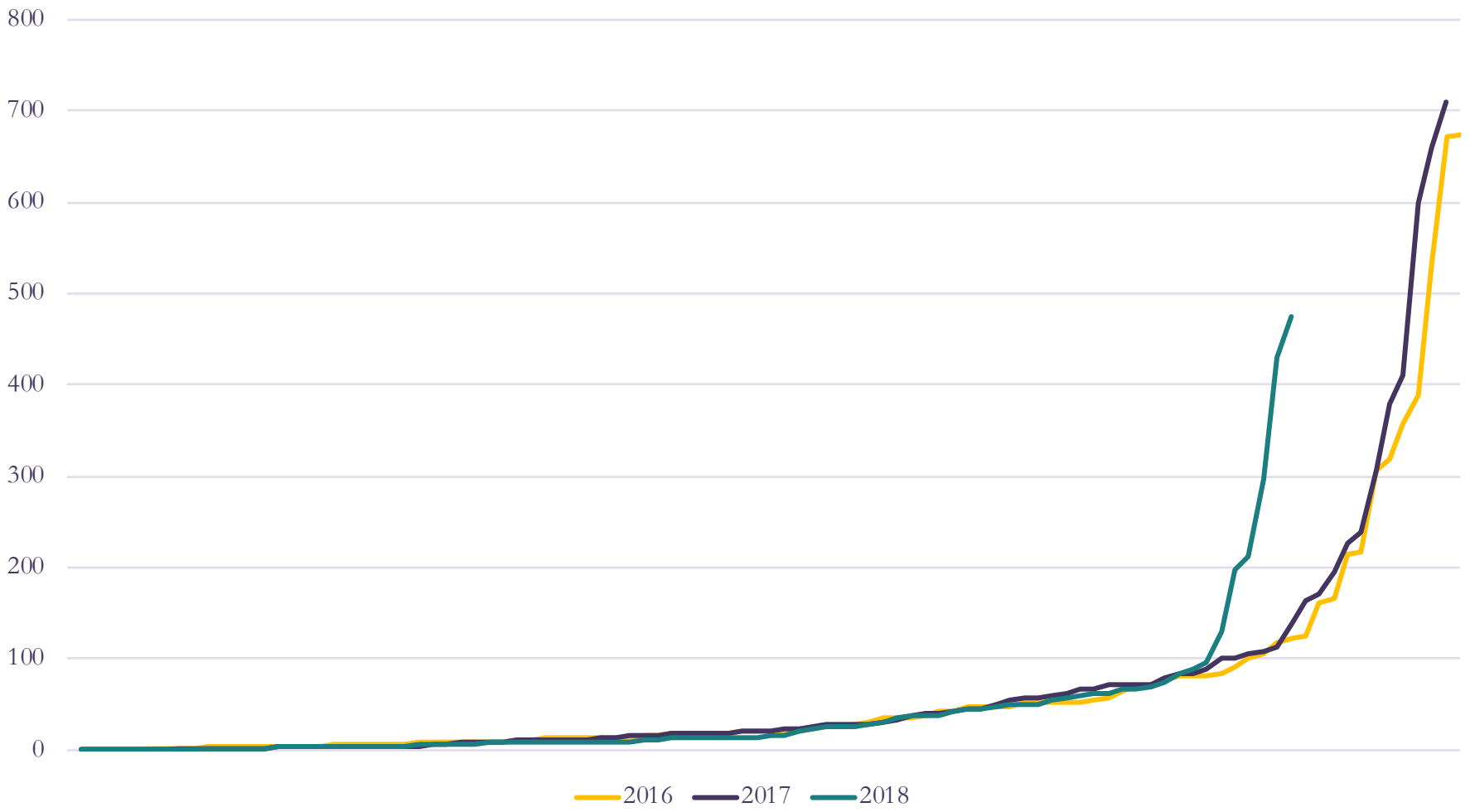
Year	Total Transports	Unknowns	Number of Entries per Record
2018 (YTD)	3,760	0.9	1.5
2017	6,743	1.1	2.1
2016	6,710	1.3	1.7
2015	6,584	1.4	1.9
2014	6,724	2.5	1.9
2013	6,477	1.6	1.9
2012	6,961	1.4	2.3
2011	6,750	1.6	2.7
2010	6,965	1.9	3.3
2009	7,025	2.1	3.6
2008	6,989	2.6	35
2007	7,045	4.9	4.0

78,513 total records over 12 years, averaging 6,543 per completed year.



Neonatal Transports by Facility

2016 to 2018



Destination of First Acute Transport by Level of Care

2015 to 2017

Destination of First Transport, 2015 to 2017			
Receiving Hospital Type	Number (%) Transported In* 2015 rounded independently	Number (%) Transported In* 2016 rounded independently	Number (%) Transported In* 2017 rounded independently
Non-CCS NICU	58 (0.8%)	80 (1.2%)	15. (0.2%)
Intermediate NICU	82 (1.2%)	77 (1.2%)	41 (0.6%)
Community NICU	2006 (30%)	2058 (31%)	2114 (32%)
Regional NICU	4438 (67%)	4350 (66.3%)	4440 (67.2%)
Total	6584 (100%)	6565 (100%)	6610 (100%)

VLBW Infants Only 13% of Acute Transports

Acute Neonatal Transports, by Birthweight Category			
	2015	**2016**	**2017**
VLBW (<1,500 grams)	943	847	863
LBW + ABW (> 1,500 grams)	5,338	5,897	5,907
Total	6,281	6,744	6,770

Bed Availability

Perinatal.org

- Daily hospital updates of **Neonatal, ECMO and High Risk Maternity Beds**
- Monthly reports from Regional CPeTS on **Update Compliance**
- **Please keep your contact information up to date – check at least quarterly**

California Perinatal Transport System

Add New Hospital | Remove Hospital | Update Bed Availability

Home
Northern California
Southern California
Bed Availability
Northern California
Southern California
External Reference
Search
Quality Improvement Tools
Neonatal Transport Data System
Help

Hospital: * Admin - Kaiser Hospitals
Password:
Login

View Bed Availability - Southern 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.

REGIONAL Centers		Beds Available			
Hospital	City	Neonatal	ECMO	High Risk Maternity	Last Update
Cedars Sinai Medical Center	Los Angeles	2	open	open	10/2/2017 8:11:21 AM
Children's Hospital of Los Angeles	Los Angeles	1	open	n/a	10/2/2017 6:55:43 AM
Children's Hospital of Orange County	Orange	5 or more	open	n/a	10/1/2017 7:27:38 AM
Desert Regional Medical Center	Palm Springs	2	n/a	n/a	10/2/2017 7:27:15 AM
Harbor UCLA Medical Center	Torrance	3	n/a	open	8/8/2017 1:05:47 PM
Huntington Memorial Hospital	Pasadena	2	open	open	10/2/2017 12:04:18 AM
Kaiser Permanente Los Angeles Medical Center (Sunset)	Los Angeles	1	n/a	open	10/2/2017 7:58:07 AM
LAC/USC Medical Center	Los Angeles	4	n/a	n/a	10/2/2017 8:42:19 AM
Loma Linda University Children's Hospital	Loma Linda	3	open	n/a	8/8/2017 11:25:48 AM
Mattel Children's Hospital at UCLA	Los Angeles	2	open	n/a	10/2/2017 7:26:25 AM
Miller Children's Hospital	Long Beach	5 or more	n/a	open	10/1/2017 11:29:33 AM
Rady Children's Hospital San Diego	San Diego	1	open	n/a	10/2/2017 8:13:39 AM
Sharp Mary Birch Hospital for Women and Newborns	San Diego	3	n/a	open	10/2/2017 11:28:52 AM
UC Irvine Medical Center	Orange	5 or more	n/a	open	9/14/2017 12:44:27 PM
UC San Diego Medical Center	San Diego	2	n/a	closed	10/2/2017 7:24:14 AM

COMMUNITY Centers		Beds Available			
Hospital	City	Neonatal	ECMO	High Risk Maternity	Last Update
[redacted]	Los				10/2/2017

Hospital Referral and Contact Information

- Select a hospital in the Bed Availability screen (Northern California or Southern California) and click on its name to see the contact information.

Forms and Manuals

- All materials and support documents accessible at: perinatal.org website

2019 Changes and Resources

Changes in CPeTS Data Collection for 2019

TRANSPORT DATA SET (TRS) - Patient Diagnosis (tab 1, items C.1 - C.2):

Item C.2. Indication for Transport [T_TRANSCODE]

CHANGE: The definition for **Acute Transport** now excludes staffing/census issues (sometimes referred to as "bed availability") or insurance restrictions . These choices have been removed from **Item C.2 Indication for Transport [T_TRANSCODE].**

2019 Updated CPeTS Definition: An acute transport is movement of an infant from one in-patient setting to another in-patient setting for a higher level of care on or before Day 28 of life (i.e. medical, diagnostic, or surgical therapy that is not provided.)

- Select **Medical services** if the infant was transported for medical problems that require acute resolution.
- Select **Surgery** if the infant was transported primarily for major invasive surgery (requiring general anesthesia or its equivalent).

Resources

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

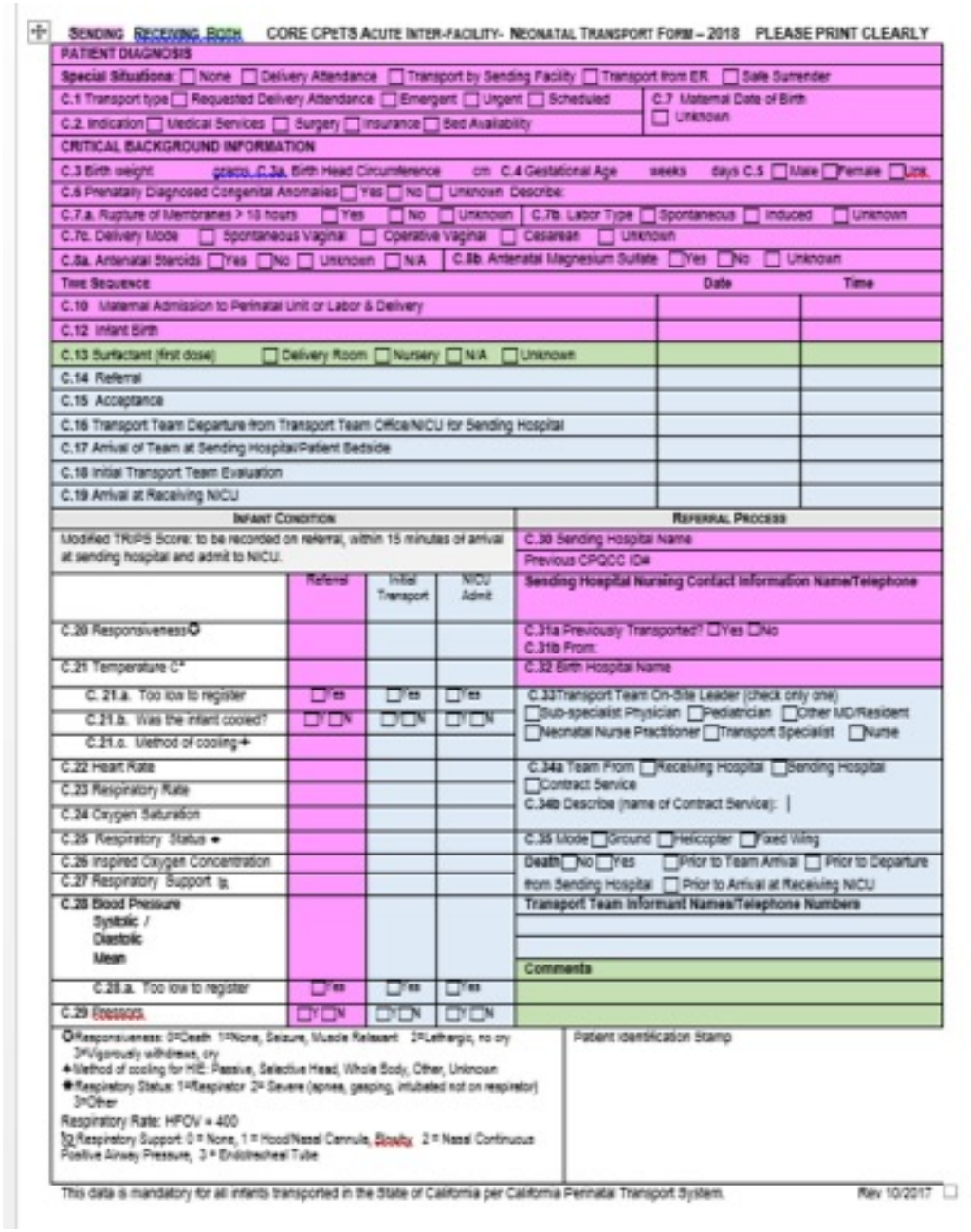
Data Collection Form

Data collection is the joint responsibility of the sending and receiving hospitals.

Sending

Receiving

Both



SENDING RECEIVING BOTH CORE CPeTS ACUTE INTER-FACILITY- NEONATAL TRANSPORT FORM – 2018 PLEASE PRINT CLEARLY

PATIENT DIAGNOSIS

Special Situations: ☐ None ☐ Delivery Attendance ☐ Transport by Sending Facility ☐ Transport from ER ☐ Safe Surrender

C.1 Transport type ☐ Requested Delivery Attendance ☐ Emergent ☐ Urgent ☐ Scheduled

C.2. Indication ☐ Medical Services ☐ Surgery ☐ Insurance ☐ Bed Availability

C.7 Maternal Date of Birth ☐ Unknown

CRITICAL BACKGROUND INFORMATION

C.3 Birth weight grams C.3a Birth Head Circumference cm C.4 Gestational Age weeks days C.5 ☐ Male ☐ Female ☐ Unk

C.6 Prenatally Diagnosed Congenital Anomalies ☐ Yes ☐ No ☐ Unknown Describe:

C.7.a. Rupture of Membranes > 18 hours ☐ Yes ☐ No ☐ Unknown C.7b Labor Type ☐ Spontaneous ☐ Induced ☐ Unknown

C.7c. Delivery Mode ☐ Spontaneous Vaginal ☐ Operative Vaginal ☐ Cesarean ☐ Unknown

C.8a. Antenatal Steroids ☐ Yes ☐ No ☐ Unknown ☐ N/A C.8b Antenatal Magnesium Sulfate ☐ Yes ☐ No ☐ Unknown

Time Sequence	Date	Time
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery		
C.12 Infant Birth		
C.13 Surfactant (first dose) ☐ Delivery Room ☐ Nursery ☐ N/A ☐ 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	Initial Transport	NICU Admit
Modified TRIPS Score: to be recorded on referral, within 15 minutes of arrival at sending hospital and admit to NICU.			
C.20 Responsiveness✪			
C.21 Temperature C°			
C. 21.a. Too low to register	☐Yes	☐Yes	☐Yes
C.21.b. Was the infant cooled?	☐Y ☐N	☐Y ☐N	☐Y ☐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 ⧖			
C.28 Blood Pressure Systolic / Diastolic Mean			
C.28.a. Too low to register	☐Yes	☐Yes	☐Yes
C.29 Inotropes	☐Y ☐N	☐Y ☐N	☐Y ☐N

Referral Process
C.30 Sending Hospital Name
Previous CPQCC ID#
Sending Hospital Nursing Contact Information Name/Telephone
C.31a Previously Transported? ☐Yes ☐No C.31b From:
C.32 Birth Hospital Name
C.33Transport Team On-Site Leader (check only one) ☐Sub-specialist Physician ☐Pediatrician ☐Other MD/Resident ☐Neonatal Nurse Practitioner ☐Transport Specialist ☐Nurse
C.34a Team From ☐Receiving Hospital ☐Sending Hospital ☐Contract Service C.34b Describe (name of Contract Service):
C.35 Mode ☐Ground ☐Helicopter ☐Fixed Wing
Death ☐No ☐Yes ☐Prior to Team Arrival ☐Prior to Departure from Sending Hospital ☐Prior to Arrival at Receiving NICU
Transport Team Informant Names/Telephone Numbers
Comments

✪Responsiveness: 0=Death 1=None, Seizure, Muscle Relaxant 2=Lethargic, no cry 3=Vigorously withdraws, cry

✦Method of cooling for HIE: Passive, Selective Head, Whole Body, Other, Unknown

✸Respiratory Status: 1=Respirator 2= Severe (apnea, gasping, intubated not on respirator) 3=Other

Respiratory Rate: HFOV = 400

⧖Respiratory Support: 0 = None, 1 = Hood/Nasal Cannula, Blow-by 2 = Nasal Continuous Positive Airway Pressure, 3 = Endotracheal Tube

Patient Identification Stamp

This data is mandatory for all infants transported in the State of California per California Perinatal Transport System. Rev 10/2017

Alternate Form

- Some items on the CORE CPeTS form were added over the years to improve CPQCC Admit/Discharge form data acquisition on transported babies.
- These are not directly input into the neonatal transport database.

CORE CPeTS Acute Inter-facility- Neonatal Transport Form – 2018

PATIENT DIAGNOSIS	Special Situations: ☐ None ☐ Delivery Attendance ☐ Transport by Sending Hosp ☐ Transport from ER ☐ Safe Surrender			
C.1 Transport type ☐ Delivery Attendance ☐ Emergent ☐ Urgent ☐ Scheduled	C.2. Indication ☐ Medical ☐ Surgical ☐ Insurance ☐ Bed Availability			
CRITICAL BACKGROUND INFORMATION				
C.3 Birth weight grams	C.4 Gestational Age weeks days	C.5 Infant Sex ☐ Male ☐ Female ☐ Unk		
C.6 Prenatally Diagnosed Congenital Anomalies ☐ Yes ☐ No ☐ Unknown Describe:				
C.7 Maternal Date of Birth ☐ Unknown	C.8a. Antenatal Steroids ☐ Yes ☐ No ☐ Unknown ☐ N/A			
C.8b. Antenatal Magnesium Sulfate ☐ Yes ☐ No ☐ Unknown	C.9. See C.13			
TIME SEQUENCE			Date	Time
C.10 Maternal Admission to (Perinatal Unit or) Labor & Delivery				
C.12 Infant Birth				
C.9/13 Surfactant (first dose) ☐ Delivery Room ☐ Nursery ☐ N/A ☐ Unknown				
C.14 Referral (and Sending Hospital Evaluation Time)				
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 (and Receiving NICU Admission Evaluation)				

INFANT CONDITION				REFERRAL PROCESS
Modified TRIPS Score: data should be collected within 15 minutes of:	Referral	Initial Transport	NICU Admit	C.30 Sending Hospital Name
C.20 Responsiveness ○				Previous CPQCC Infant Record ID#
C.21 Temperature C°				Sending Hospital Nursing Contact Information Name/Telephone
C.21.a. Too low to register	☐Yes	☐Yes	☐Yes	C.31a Previously Transported? ☐Yes ☐No C.31b From:
C.21.b. Infant cooled for HIE?	☐Y ☐N	☐Y ☐N	☐Y ☐N	C.32 Birth Hospital Name
C.21.c. Method of cooling ✦				C.33Transport Team On-Site Leader (check only one) ☐Sub-specialist Physician ☐Pediatrician ☐Other MD/Resident ☐Neonatal Nurse Practitioner ☐Transport Specialist ☐Nurse
C.22 Heart Rate				
C.23 Respiratory Rate				C.34a Team Base ☐Receiving Hospital ☐Sending Hospital ☐Contract Service (Name)_____
C.24 Oxygen Saturation				
C.25 Respiratory Status ✱				C.35 Mode ☐Ground ☐Helicopter ☐Fixed Wing
C.26 Inspired Oxygen Concentration				Transport Team Informant Names/Telephone Numbers
C.27 Respiratory Support ⓢ				
C.28 Blood Pressure C.28.a. Systolic / C.28.b. Diastolic C.28.c. Mean Too low to register	☐Yes	☐Yes	☐Yes	Comments
C.29 Pressors	☐Y ☐N	☐Y ☐N	☐Y ☐N	

Additional Information for CPQCC Admit and Discharge Form Only		
Birth Head Circumference cm		Labor Type ☐ Spontaneous ☐ Induced ☐ Unknown
Delivery Mode ☐ Spont. Vaginal ☐ Op. Vaginal ☐ Cesarean ☐ Unknown		Rupture of Membranes > 18 hours ☐ Yes ☐ No ☐ Unknown
Death ☐ No ☐ Yes ☐ Prior to Team Arrival ☐ Prior to Departure from Sending Hospital ☐ Prior to Arrival at Receiving NICU		
○Responsiveness: 0=Death, 1=None, Seizure, Muscle Relaxant, 2=Lethargic, no cry 3=Vigorously withdraws, cry, 9= Unknown ✦Method of cooling: Passive, Selective Head, Whole Body, Other, Unknown ✱Respiratory Status: 1=Respirator 2= Severe (apnea, gasping, intubated not on respirator), 3=Other, 9= Unknown Respiratory Rate: HFOV = 400 ⓢRespiratory Support: 0 = None, 1 = Hood/Nasal Cannula, Blowby 2 = Nasal Continuous Positive Airway Pressure, 3 = Endotracheal Tube , 9= Unknown NOTE: C11. Omitted intentionally		

This data is mandatory for all infants transported in the State of California per California Perinatal Transport System. Rev 10/2017

CPeTS/CPQCC Neonatal Transport Data Report Request Form

- 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

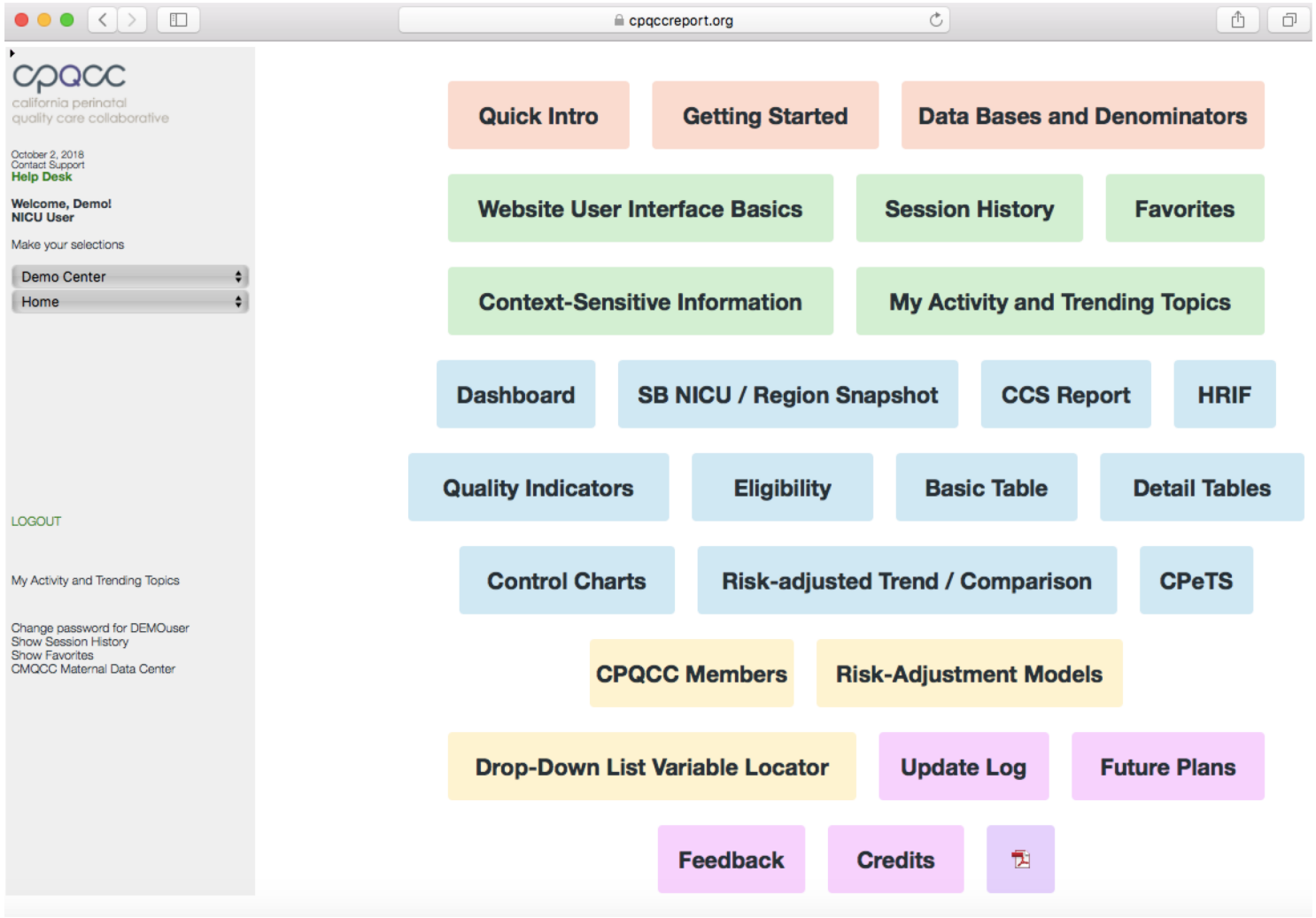
Name of Person Requesting Data	
Hospital Affiliation/Region	
Full Hospital Address	
E-mail Address to send report to	
Date Needed (allow 2 weeks)	

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		Emergent
Select One		Urgent
Transport In		Scheduled
Transport Out		Select One Transport Provider Type
Select One Data Year		Receiving Facility
2010		Referring Facility
2009		Contract Service
2008		

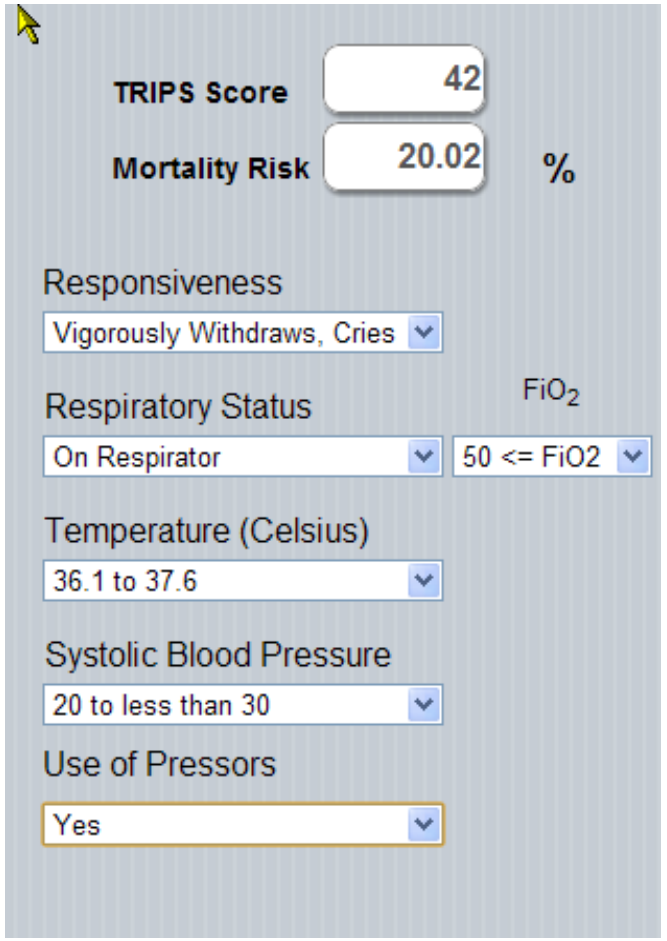
Select One From Below		Select One Transport Type
CPQCC Member Facility Number		All Transports
Non-CPQCC Facility OSHPD Number		Delivery Room Requested
Perinatal Region		Emergent
Select One		Urgent
Transport In		Scheduled
Transport Out		Select One Transport Provider Type
Select One Data Year		Receiving Facility
2010		Referring Facility
2009		Contract Service
2008		

NICU Reports



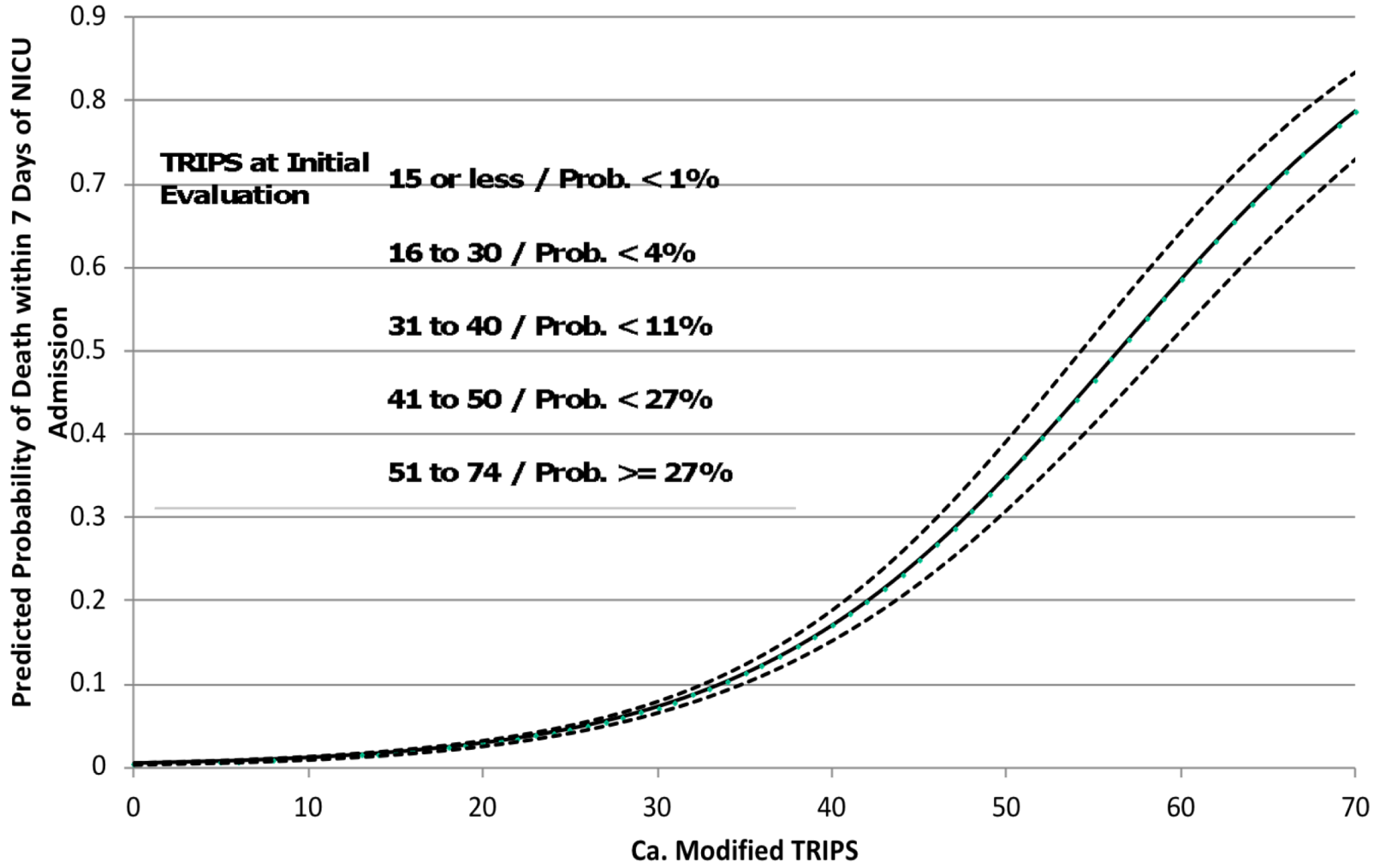
TRIPS MOBILE APP

http://www.health-info-solutions.com/CPQCC-CPeTS/tripsmobile/tripsmobile.html



CA Modified TRIPS Score

Predicted Probability of Death within 7 days of NICU Admission



Report Content

Transport QI

- Possible under-use of maternal transport
- Possible delay in decision to transport infant
- Difficulty in obtaining transport placement/ acceptance
- Delay in transport following decision
- Ability to stabilize infant before and during transport

Standardized Reports

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

CPeTS Transport Out Report

Neonatal Transports OUT Report: Infants born between 01/01/2016 and 12/31/2016

California Perinatal Quality Care Collaborative (CPQCC) and California Perinatal Transport System (CPeTS)

REFERRING LOCATION: SAMPLE FACILITY *This report is final.*

Contents:

CPeTS Transport In Report

Neonatal Transports IN Report: Infants born between 01/01/2016 and 12/31/2016

California Perinatal Quality Care Collaborative (CPQCC) and California Perinatal Transport System (CPeTS)

RECEIVING LOCATION: SAMPLE HOSPITAL *This report is final.*

Contents:

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
- Small numbers can be misleading. Viewing multiple years of data can provide clarity

Transport In Standardized Reports

Neonatal Transports IN Report: Infants born between 01/01/2016 and 12/31/2016

California Perinatal Quality Care Collaborative (CPQCC) and California Perinatal Transport System (CPeTS)

RECEIVING LOCATION: SAMPLE HOSPITAL *This report is final.*

Contents:

Volume

- Is volume adequate to maintain competence? For small babies, for large babies?
- Is birthweight of transported in babies appropriate for center's level of care?

Table 1: Acute Transports IN Activity, by Birth Weight

Birth Weight (grams)	Center		CPQCC Network		Community NICUs	
	N	%	N	%	N	%
All Birth Weights	82	100	6,710	100	2,085	100
500 or less	0	0.0	14	0.2	2	0.1
501 to 750	3	3.7	173	2.6	35	1.7
751 to 1,000	4	4.9	202	3.0	64	3.1
1,001 to 1,500	5	6.1	424	6.3	154	7.4
1,501 to 2,500	23	28.0	1,692	25.2	599	28.7
over 2,500	47	57.3	4,205	62.7	1,231	59.0

Transport Type

- Is transport type appropriate?
- Are there definition issues?
- Refer to Neonatal Transport Data Definitions Manual (perinatal.org)

Table 2: Acute Transports IN Activity by Transport Type and by Birth Weight

Birth Weight (grams)	Center					CPQCC Network				Community NICUs			
	N	DR	Emer-gent	Urgent	Sche-duled	DR	Emer-gent	Urgent	Sche-duled	DR	Emer-gent	Urgent	Sche-duled
All Birth Weights	82	4.9	18.3	72.0	4.9	6.3	40.1	40.5	12.8	5.5	30.8	43.9	19.2
500 or less	0	NA	NA	NA	NA	7.1	78.6	14.3	0.0	0.0	100	0.0	0.0
501 to 750	3	66.7	33.3	0.0	0.0	9.2	48.6	29.5	12.1	22.9	28.6	22.9	25.7
751 to 1,000	4	25.0	75.0	0.0	0.0	18.3	39.6	31.2	9.9	26.6	34.4	23.4	12.5
1,001 to 1,500	5	0.0	40.0	60.0	0.0	18.6	32.8	26.9	21.0	14.3	24.7	25.3	35.1
1,501 to 2,500	23	4.3	8.7	82.6	4.3	12.4	35.3	36.4	15.5	8.5	25.5	41.9	23.4
over 2,500	47	0.0	14.9	78.7	6.4	1.9	42.2	44.5	11.1	1.3	33.9	49.0	15.4

Notes:
Transport Type Other is not shown in the table.

Outliers

- When outliers are identified, consider a chart view to better understand possible issues.

What is your internal standard?

Table 6: Time from Acceptance to Team Departure for Referring Hospital, *Emergent Transports Only*

Time Difference	Center		CPQCC Network %	Community NICUs %
	N	%		
All Infants Transferred In	15	100	100	100
Up to 30 minutes	2	13.3	31.8	31.8
31 - 60 minutes	9	60.0	45.4	41.9
1 - 2 hours	1	6.7	16.5	19.2
2 - 4 hours	2	13.3	4.6	5.4
4 - 8 hours	0	0.0	1.2	1.1
> 8 hours	1	6.7	0.5	0.6
Mean	4H 11M		56M	1H 4M
Median	40M		40M	45M

What is your internal standard? (cont)

- Is the referring facility prepared when team arrives?

  Is your transport team spending appropriate amounts of time to provide safe, competent transport?

  Do you have adequate personnel?

Table 6: Time from Acceptance to Team Departure for Referring Hospital, *Emergent Transports Only*

Time Difference	Center		CPQCC Network %	Community NICUs %
	N	%		
All Infants Transferred In	15	100	100	100
Up to 30 minutes	2	13.3	31.8	31.8
31 - 60 minutes	9	60.0	45.4	41.9
1 - 2 hours	1	6.7	16.5	19.2
2 - 4 hours	2	13.3	4.6	5.4
4 - 8 hours	0	0.0	1.2	1.1
> 8 hours	1	6.7	0.5	0.6
Mean	4H 11M		56M	1H 4M
Median	40M		40M	45M

TRIPS Scores

- TRIPS Scores demonstrate Infant Risk
- Missing score data points should be addressed with team and referral facility (ie, BP).

- The TRIPS Score for this facility for VLBW infants at referral is higher than typical for CPQCC or other community NICUs.
  Does the referring facility need education, training, support for resuscitation and stabilization prior to transport?

Table 11: Mean California TRIPS at Referral, by Birth Weight

Birth Weight (grams)	Center		CPQCC Network Mean	Community NICUs Mean
	N	Mean		
All Birth Weights	61	6.1	7.8	6.1
500 or less	0	NA	29.3	40.0
501 to 750	1	37.0	29.3	29.1
751 to 1,000	1	37.0	21.7	25.4
1,001 to 1,500	5	16.0	11.8	10.2
1,501 to 2,500	17	4.7	6.7	5.0
over 2,500	37	3.8	6.2	4.7

15 or less / Prob. < 1%

16 to 30 / Prob. < 4%

31 to 40 / Prob. < 11%

41 to 50 / Prob. < 27%

51 to 74 / Prob. >= 27%

Discuss in Joint Mortality and Morbidity Conferences? Case Review?

Table 13: Mean California TRIPS at Initial Evaluation, by Birth Weight

Birth Weight (grams)	Center		CPQCC Network Mean	Community NICUs Mean
	N	Mean		
All Birth Weights	67	7.7	8.2	6.6
500 or less	0	NA	34.9	45.0
501 to 750	2	55.5	29.6	32.5
751 to 1,000	2	39.0	23.5	27.0
1,001 to 1,500	5	12.8	14.3	12.5
1,501 to 2,500	20	4.9	7.1	5.5
over 2,500	38	4.3	6.1	4.5

- Note substantial improvement in scores between initial Team Evaluation and NICU Admission. This may be a sign of good practice or of need to consult/ advise changes in care prior to team arrival.

Table 15: Mean California TRIPS at NICU Admission, by Birth Weight

Birth Weight (grams)	Center		CPQCC Network Mean	Community NICUs Mean
	N	Mean		
All Birth Weights	72	7.2	8.2	6.3
500 or less	0	NA	37.3	54.0
501 to 750	3	33.3	31.5	31.9
751 to 1,000	3	32.7	23.5	27.7
1,001 to 1,500	5	12.8	13.5	10.9
1,501 to 2,500	21	4.8	6.8	5.1
over 2,500	40	3.9	6.2	4.3

Mean Change in TRIPS from Referral to Initial Evaluation

Quality Change Point (QCP) of < 10% indicates that there was no excess deterioration between referral and initial evaluation.

Table 16: Mean change in TRIPS from Referral to Initial Evaluation, by Birth Weight

Birth Weight (grams)	QCP	Center				CPQCC Network Mean Change	Community NICUs Mean Change
		N Infants	N Infants Exceeding QCP	% Infants Exceeding QCP	Mean Change		
All Birth Weights	-	54	3	5.6	0.1	0.5	0.2
500 or less	9	0	NA	NA	NA	5.4	5.0
501 to 750	9	1	0	0.0	0.0	-1.0	-2.8
751 to 1,000	4	0	NA	NA	NA	1.2	-0.1
1,001 to 1,500	4	5	0	0.0	-3.2	0.9	0.5
1,501 to 2,500	4	15	1	6.7	-0.2	0.5	0.5
over 2,500	4	33	2	6.1	0.8	0.4	0.1

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Mean Change in TRIPS from Initial Evaluation to NICU Admission

QCP of < 10% indicates that there was no excess deterioration between initial evaluation and NICU admission.

Table 17: Mean change in TRIPS from Initial Evaluation to NICU Admission, by Birth Weight

Birth Weight (grams)	QCP	Center				CPQCC Network Mean Change	Community NICUs Mean Change
		N Infants	N Infants Exceeding QCP	% Infants Exceeding QCP	Mean Change		
All Birth Weights	-	66	2	3.0	-1.5	0.1	-0.2
500 or less	11	0	NA	NA	NA	2.4	9.0
501 to 750	11	2	0	0.0	-27.5	1.1	-0.2
751 to 1,000	9	1	0	0.0	-33.0	1.3	1.0
1,001 to 1,500	7	5	0	0.0	0.0	-0.4	-1.2
1,501 to 2,500	4	20	1	5.0	0.0	-0.1	-0.2
over 2,500	4	38	1	2.6	-0.3	0.1	-0.2

Standardized Transport Out Reports

Neonatal Transports OUT Report: Infants born between 01/01/2016 and 12/31/2016

California Perinatal Quality Care Collaborative (CPQCC) and California Perinatal Transport System (CPeTS)

REFERRING LOCATION: SAMPLE FACILITY *This report is final.*

Table 1: Acute Transport OUT Activity, by Birth Weight
Table 4: Time from Maternal Admission to Infant Birth
Table 5: Mean Time from Maternal Admission to Infant Birth, by Birth Weight
Table 8: California TRIPS at Referral
Table 9: Mean California TRIPS at Referral, by Birth Weight
Table 13: Time from Referral to Transport Team Arrival at Referring Hospital

- Volume: This demonstrates appropriate case selection and/or maternal transport.
  Total transport rate 1.68/1,000 vs 2.77/1,000 in California.
  VLBW transport rate in facility unable to provide ongoing care:
  0.2/1,000 vs. 0.4/1,000

Table 1: Acute Transport OUT Activity, by Birth Weight

Birth Weight (grams)	Transports Originating From ...								
	Center			LA-San Gabriel-Inland Orange Primary Care Hospitals			California Primary Care Hospitals		
	Births N	Transports N	%	Births N	Transports N	%	Births N	Transports N	%
All	1,731	29	1.7	7,398	179	2.4	98,087	2,713	2.8
500 or less	0	0	NA	3	0	0.0	51	1	2.0
501 to 750	0	0	NA	1	1	100	75	28	37.3
751 to 1,000	0	0	NA	3	2	66.7	73	49	67.1
1,001 to 1,500	3	3	100	6	9	150	184	107	58.2
1,501 to 2,500	113	12	10.6	318	55	17.3	4,200	700	16.7
over 2,500	1,615	14	0.9	7,067	112	1.6	93,504	1,828	2.0

The Births columns are based on birth records captured in real-time through AVSS.

Implications for OB Care?

Table 4: Time from Maternal Admission to Infant Birth

Time Difference	Center		LA-San Gabriel-Inland Orange Primary Care Hospitals	California Primary Care Hospitals
	N	%	%	%
All Infants Transferred Out	28	100	100	100
Post Birth Admission	0	0.0	1.3	1.4
0 - 2 hours	6	21.4	11.3	22.4
>2 - 4 hours	4	14.3	23.9	18.4
>4 - 6 hours	3	10.7	8.8	8.9
>6 - 12 hours	9	32.1	19.5	17.1
>12 - 36 hours	5	17.9	25.2	24.4
>36 hours	1	3.6	10.1	7.4
Mean	9H 14M		16H 13M	17H 51M
Median	7H 1M		7H 23M	5H 43M

Of the 3 infants born weighing <1,500 grams, the mean time of maternal admission to birth was 3 hours, 16 minutes – probably not sufficient to accomplish and maternal transport.
Only 12 of the 113 infants born weighing between 1500 and 2,500 grams were transported, making it difficult to say which mothers may have benefitted from transport.

Table 5: Mean Time from Maternal Admission to Infant Birth, by Birth Weight

Birth Weight (grams)	Center		LA-San Gabriel-Inland Orange Primary Care Hospitals Mean	California Primary Care Hospitals Mean
	N	Mean		
All	28	9H 14M	16H 13M	17H 51M
500 or less	0	NA	NA	3H 2M
501 to 750	0	NA	2D 18H 37M	18H 54M
751 to 1,000	0	NA	7H 46M	4H 22M
1,001 to 1,500	3	3H 16M	1D 1H 26M	15H 57M
1,501 to 2,500	12	8H 41M	20H 29M	16H 15M
over 2,500	13	11H 7M	12H 50M	19H 1M

At first glance it appears that all infants in this facility had TRIPS Scores with the lowest predicted mortality in the first 7 days following transport…

Table 8: California TRIPS at Referral

TRIPS at Referral	Center		LA-San Gabriel-Inland Orange Primary Care Hospitals %	California Primary Care Hospitals %
	N	%		
All Scores	25	100	100	100
14 or less / Prob. < 1%	25	100	91.1	87.1
15 to 31 / Prob. < 5%	0	0.0	5.2	8.4
32 to 38 / Prob. < 10%	0	0.0	1.5	2.6
39 to 49 / Prob. < 25%	0	0.0	0.7	1.6
>=50 / Prob. >= 25%	0	0.0	1.5	0.3
Mean Score	0.6		3.7	5.0
Median Score	0.0		0.0	0.0

Notes:
For each TRIPS score range, the associated estimated risk of death within 7 days of transfer is displayed in the first table column.

…until we note that the VLBW infants had missing components of the TRIPS Score and were not able to be calculated. This should be considered a quality improvement opportunity.

Table 9: Mean California TRIPS at Referral, by Birth Weight

Birth Weight (grams)	Center		LA-San Gabriel-Inland Orange Primary Care Hospitals Mean	California Primary Care Hospitals Mean
	N	Mean		
All	25	0.6	3.7	5.0
500 or less	0	NA	NA	47.0
501 to 750	0	NA	54.0	35.0
751 to 1,000	0	NA	NA	23.7
1,001 to 1,500	3	0.0	10.4	11.8
1,501 to 2,500	10	0.7	2.2	5.0
over 2,500	12	0.6	3.4	4.2

Urban facility with receiving NICU less than 5 miles from referring facility

Table 13: Time from Referral to Transport Team Arrival at Referring Hospital

Time Difference	Center		LA-San Gabriel-Inland Orange Primary Care Hospitals %	California Primary Care Hospitals %
	N	%		
All Infants Transferred Out	28	100	100	100
0 - 30 minutes	0	0.0	1.1	0.6
31 - 60 minutes	6	21.4	28.5	10.0
61 - 90 minutes	17	60.7	36.9	27.3
91 - 120 minutes	4	14.3	20.1	25.3
>2 hours	1	3.6	13.4	36.7
Mean	1H 22M		2H 19M	2H 42M
Median	1H 17M		1H 15M	1H 45M

Maternal Levels of Care

Quality Improvement Issues

- Mothers who would have benefitted from transport but did not receive it.

Thank You…

…for your time and commitment!

California Perinatal Transport System