Perinatal Service Line Report

PURPOSE

Executives at the system level are working hard to manage population health and insure the appropriate alignment of patient risk with location of care. That task is critical when managing perinatal services across multiple hospitals at different levels of care, since OB claims can be one of the most expensive exposure areas. This report includes data for all your delivery facilities that are members of NPIC. Our hope is that seeing utilization and quality metrics across your service line will help you better manage the population health of your mothers and infants.

The *Perinatal Service Line Report (PSL)* allows executives to:

- Quickly assess each perinatal service in the system.
- Monitor volume and utilization by level of perinatal care.
- View quality and outcome metrics to determine areas of concern or risk exposure.
- Insure the risk profile of the hospital's population matches its clinical capabilities.
- Insure transfer patterns are appropriate and timely.
- Over time, determine whether system-wide initiatives are having an impact at the local level.

I. OVERVIEW OF THE TABLES

Data are displayed in the following four tables for all participating hospitals in your system, organized from the facility providing the highest level of care in this system (e.g., Regional Perinatal Center) to the facility providing the lowest level of care (e.g., Basic/Level I). The System Total/Average is provided in the first column followed by each of your system hospitals with their NPIC peer comparison subgroup next to the appropriate level hospital(s). The *System Average* is the average of the values for each hospital included in the report. The tables in this report display data for the period 1/1/21 – 12/31/21.

Please note: within each display of APR DRG subclasses (in maternal as well as neonatal tables), the percent of "ungroupable" cases is displayed but is not included in the calculation of the total percent of cases in subclasses .1 (minor complications) to .4 (extreme complications).

Table 1: Maternal Utilization and Acuity Analysis includes maternal utilization data and acuity information (e.g., case mix index, and subclass) for antepartum, delivery and postpartum discharges from each of your hospitals and their respective subgroup. The payer mix for MDC 14 is also displayed.

Table 2: Maternal Quality Analysis includes delivery discharges for each facility, and percent of cases for 19 maternal indicators (e.g., C-section with LOS >5 days, Admissions to AICU, Severe Maternal Morbidity).

Table 3: Neonatal Utilization and Acuity Analysis includes utilization data and acuity information (e.g., case mix index, subclass) for all neonates, all inborns, all transfers in and all transfers out (at 0 – 3 days of birth).

Table 4: Neonatal Quality Analysis includes 7 indicators for all neonates (e.g., % admitted to the special care nursery, % Died), and 16 indicators for all inborns (e.g., % readmitted within 28 days, % Total UNC subdivided into moderate and severe).

Data Definitions
Indicator definitions can be found in the Quarterly Report Specifications located on the NPIC Member Portal under "Resources" or "Quarterly Reports".

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Table 1: Maternal Utilization and Acuity Analysis Hospital System ID: SAMPLE Date Range of Data: 1/1/2021 - 12/31/2021	System Total/ Average	Subgroup AR*		Subgroup NB*	
		SA1	AR Average	SA2	NB Average
Total MDC 14 - Pregnancy and Related Conditions	3,663	3,168	4,192	495	750
Antepartum Discharges (by APR DRGs)	**203**	**172**	**256**	**31**	**24**
% of System Total	100.0%	84.7%	--	15.3%	--
Case Mix Index	0.4443	0.4882	0.4812	0.4003	0.4332
ALOS	2.7	4.1	3.6	1.4	2.0
Subclass .1 Minor Complications (column %)	25.8%	12.8%	16.9%	38.7%	32.0%
Subclass .2 Moderate Complications	46.1%	47.1%	47.7%	45.2%	41.7%
Subclass .3 Major Complications	22.4%	32.0%	29.6%	12.9%	21.7%
Subclass .4 Extreme Complications	5.7%	8.1%	5.8%	3.2%	4.6%
Ungroupable	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Delivery Discharges (by APR DRGs)	**3,364**	**2,910**	**3,812**	**454**	**712**
% of System Total	100.0%	86.5%	--	13.5%	--
Case Mix Index	0.4004	0.4232	0.4210	0.3776	0.3925
ALOS	2.4	2.5	3.0	2.3	2.2
Subclass .1 Minor Complications	44.4%	43.4%	42.6%	45.4%	51.6%
Subclass .2 Moderate Complications	47.0%	46.2%	45.1%	47.8%	42.3%
Subclass .3 Major Complications	8.3%	9.8%	11.7%	6.8%	5.9%
Subclass .4 Extreme Complications	0.3%	0.6%	0.7%	0.0%	0.2%
Ungroupable	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Postpartum Discharges (by APR DRGs)	**69**	**66**	**103**	**3**	**11**
% of System Total	100.0%	95.7%	--	4.3%	--
Case Mix Index	0.5906	0.4643	0.5312	0.7168	0.4439
ALOS	2.4	2.8	2.9	2.0	2.5
Subclass .1 Minor Complications	34.1%	34.9%	33.8%	33.3%	34.9%
Subclass .2 Moderate Complications	37.1%	40.9%	40.4%	33.3%	50.3%
Subclass .3 Major Complications	25.8%	18.2%	19.1%	33.3%	12.3%
Subclass .4 Extreme Complications	3.0%	6.1%	6.7%	0.0%	2.6%
Ungroupable	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
MDC 14 Payer Mix					
Medicaid	32.9%	32.8%	26.5%	32.9%	34.5%
Medicare	0.2%	0.2%	0.6%	0.2%	0.9%
Commercial Insurance/TRICARE	39.3%	59.1%	41.9%	19.6%	37.6%
HMO	27.0%	7.3%	19.7%	46.7%	15.2%
Self-Pay/Free Care	0.4%	0.2%	0.7%	0.6%	2.2%
Other/Missing Payers	0.3%	0.5%	10.5%	0.0%	9.5%

* NPIC peer subgroup comparisons: AR - Academic Regional Perinatal Centers; NB - Non-Academic Basic

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Table 2: Maternal Quality Analysis Hospital System ID: SAMPLE Date Range of Data: 1/1/2021 - 12/31/2021	System Total/ Average	Subgroup AR*		Subgroup NB*	
		SA1	AR Average	SA2	NB Average
Total Delivery Discharges	3,364	2,910	3,812	454	712
% of System Total	100.0%	86.5%	--	13.5%	--
Overview: Maternal Quality					
Admitted from another hospital	1.2%	2.2%	1.3%	0.2%	0.0%
Multiple gestation	1.6%	2.9%	2.4%	0.4%	0.8%
Cesarean Sections with LOS > 5 days	1.4%	2.1%	3.7%	0.7%	0.3%
VBAC	16.6%	13.6%	19.7%	19.6%	12.2%
Operative Vaginal Deliveries	4.1%	5.6%	5.2%	2.6%	4.6%
Episiotomy	2.4%	3.5%	2.3%	1.2%	3.6%
PSI 18: OB Trauma with Instruments	10.9%	10.7%	15.3%	11.1%	9.8%
PSI 19: OB Trauma without Instruments	2.3%	2.2%	1.9%	2.4%	1.8%
Estimated Rate of Inductions	37.4%	38.9%	34.1%	35.9%	31.6%
Estimated Rate of Inductions resulting in a Cesarean Section	13.9%	18.5%	21.6%	9.2%	20.0%
Delivered < 37 weeks GA	7.7%	11.8%	11.8%	3.5%	5.6%
Coded with a postpartum hemorrhage (PPH)	8.6%	6.1%	7.2%	11.0%	4.1%
Coded with a PPH and red blood cells transfusion	0.1%	0.2%	0.8%	0.0%	0.5%
Coded with PPH and hysterectomy	0.1%	0.3%	0.1%	0.0%	0.1%
Coded with shoulder dystocia	4.0%	2.5%	2.2%	5.5%	3.5%
Coded with gestational diabetes	12.3%	10.9%	10.9%	13.7%	11.5%
Admitted to Adult Intensive Care Unit (AICU)	0.2%	0.5%	0.9%	0.0%	0.2%
Died	0.00%	0.00%	0.01%	0.00%	0.01%
Transferred out within 1 day	0.99%	0.00%	0.01%	1.98%	0.81%
Readmitted within 42 days	0.6%	0.9%	1.7%	0.2%	0.8%
Severe Maternal Morbidity (SMM)	0.8%	1.4%	3.6%	0.2%	1.2%

* NPIC peer subgroup comparisons: AR - Academic Regional Perinatal Centers; NB - Non-Academic Basic

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Table 3: Neonatal Utilization and Acuity Analysis Hospital System ID: SAMPLE Date Range of Data: 1/1/2021 - 12/31/2021	System Total/ Average	Subgroup AR*		Subgroup NB*	
		SA1	AR Average	SA2	NB Average
All Neonates	**3,574**	**3,112**	**4,087**	**462**	**726**
% of System Total	100.0%	87.1%	--	12.9%	--
Case Mix Index	0.4191	0.6858	0.6850	0.1523	0.1608
ALOS	3.7	5.5	5.3	1.8	2.0
Subclass .1 Minor Complications (Col. %)	71.5%	66.9%	64.4%	76.1%	74.2%
Subclass .2 Moderate Complications	19.2%	21.0%	23.3%	17.4%	20.8%
Subclass .3 Major Complications	8.0%	9.9%	10.5%	6.1%	4.9%
Subclass .4 Extreme Complications	1.3%	2.2%	1.8%	0.4%	0.1%
Ungroupable	*0.6%*	*0.9%*	*2.0%*	*0.2%*	*0.4%*
All Inborns	**3,456**	**2,999**	**3,898**	**457**	**718**
% of System Total	100.0%	86.8%	--	13.2%	--
Case Mix Index	0.3881	0.6235	0.6499	0.1527	0.1596
ALOS	3.5	5.2	5.0	1.8	2.0
Subclass .1 Minor Complications	72.2%	68.3%	65.5%	76.1%	74.3%
Subclass .2 Moderate Complications	19.0%	20.7%	23.0%	17.3%	20.7%
Subclass .3 Major Complications	7.7%	9.2%	10.0%	6.1%	4.9%
Subclass .4 Extreme Complications	1.1%	1.9%	1.6%	0.4%	0.1%
Ungroupable	*0.5%*	*0.8%*	*0.5%*	*0.2%*	*0.3%*
All Transfers In	**51**	**51**	**65**	**0**	**0**
% of System Total	100.0%	100.0%	--	0.0%	--
Case Mix Index	3.4957	3.4957	3.5908	--	--
ALOS	21.8	21.8	18.8	--	--
Subclass .1 Minor Complications	26.5%	26.5%	27.9%	--	--
Subclass .2 Moderate Complications	24.5%	24.5%	23.2%	--	--
Subclass .3 Major Complications	32.7%	32.7%	29.1%	--	--
Subclass .4 Extreme Complications	16.3%	16.3%	19.8%	--	--
Ungroupable	*3.9%*	*3.9%*	*26.8%*	*--*	*--*
Inborns Transferred Out (0-3 days of birth)	**55**	**31**	**19**	**24**	**25**
% of System Total	100.0%	56.4%	--	43.6%	--
Case Mix Index	0.1857	0.2333	0.2807	0.1381	0.1352
ALOS	1.1	1.2	1.4	1.1	1.3
Subclass .1 Minor Complications	35.2%	3.7%	9.2%	66.7%	58.1%
Subclass .2 Moderate Complications	40.3%	55.6%	27.3%	25.0%	34.6%
Subclass .3 Major Complications	11.3%	18.5%	22.9%	4.2%	6.9%
Subclass .4 Extreme Complications	13.2%	22.2%	40.6%	4.2%	0.4%
Ungroupable	*6.5%*	*12.9%*	*4.8%*	*0.0%*	*0.2%*

* NPIC peer subgroup comparisons: AR - Academic Regional Perinatal Centers; NB - Non-Academic Basic

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Table 4: Neonatal Quality Analysis Hospital System ID: SAMPLE Date Range of Data: 1/1/2021 - 12/31/2021	System Total/ Average	Subgroup AR*		Subgroup NB*	
		SA1	AR Average	SA2	NB Average
All Neonates	**3,574**	**3,112**	**4,087**	**462**	**726**
Special Care nursery % *(not displayed for Level I hospitals)*	25.0%	25.0%	20.9%	NA	NA
Hypothermia	0.1%	0.1%	0.2%	0.0%	0.2%
Hyperbilirubinemia	15.8%	11.9%	22.8%	19.7%	17.5%
Died	0.59%	0.74%	0.53%	0.43%	0.12%
Severe Hypoxia/Asphyxia	1.8%	2.7%	3.0%	0.9%	0.4%
Coded with Neonatal Abstinence Syndrome	0.6%	0.9%	0.7%	0.2%	0.9%
Readmitted within 28 days	0.8%	0.5%	1.4%	1.1%	0.8%
All Inborns	**3,456**	**2,999**	**3,898**	**457**	**718**
< 2500 grams	8.6%	13.9%	11.0%	3.3%	5.4%
< 1500 grams	1.8%	3.0%	2.2%	0.7%	0.2%
Singletons	96.6%	94.2%	95.4%	99.1%	97.9%
Delivered by Cesarean Section	31.2%	38.5%	34.4%	23.9%	31.7%
Birth Trauma (PSI 17)	0.23%	0.25%	0.59%	0.22%	0.65%
Special Care nursery % *(not displayed for Level I hospitals)*	23.1%	23.1%	17.2%	NA	NA
Transferred out within 3 days of birth	3.1%	1.0%	0.5%	5.3%	3.5%
Hypothermia	0.0%	0.1%	0.2%	0.0%	0.2%
Hyperbilirubinemia	14.9%	11.1%	21.7%	18.8%	16.9%
Died (≥ 500 grams)	0.17%	0.34%	0.31%	0.00%	0.00%
Severe Hypoxia/Asphyxia	1.6%	2.3%	2.4%	0.9%	0.4%
Coded with Neonatal Abstinence Syndrome (NAS)	0.5%	0.7%	0.6%	0.2%	0.9%
PC-06.0: Unexpected Complications in Term Newborns**	42.5	41.7	33.9	43.4	33.6
PC-06.1: Severe Rate	21.4	16.4	12.0	26.5	25.7
PC-06.2: Moderate Rate	21.1	25.3	21.9	16.9	7.9
Readmitted within 28 days	0.8%	0.5%	1.4%	1.2%	0.8%

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** All PC-06 rates are per 1,000. TJC PC-06, Specifications Manual for Joint Commission National Quality Measures v2021B2, www.jointcommission.org

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Table 4: Neonatal Quality Analysis *(continued)* Hospital System ID: SAMPLE Date Range of Data: 1/1/2021 - 12/31/2021	System Total/ Average	Subgroup AR*		Subgroup NB*	
		SA1	AR Average	SA2	NB Average
All Transfers In	**51**	**51**	**65**	**0**	**0**
Special Care nursery % *(not displayed for Level I hospitals)*	98.0%	98.0%	80.7%	NA	NA
Hypothermia	0.0%	0.0%	0.0%	--	--
Hyperbilirubinemia	27.5%	27.5%	30.5%	--	--
Died	1.96%	1.96%	2.51%	--	--
Severe Hypoxia/Asphyxia	13.7%	13.7%	14.6%	--	--
Coded with Neonatal Abstinence Syndrome	7.8%	7.8%	4.1%	--	--
Readmitted within 28 days	0.0%	0.0%	0.5%	--	--
Inborns Transferred Out (0-3 days of birth)	**55**	**31**	**19**	**24**	**25**
< 2500 grams	27.5%	25.8%	37.9%	29.2%	28.7%
< 1500 grams	3.7%	3.2%	7.2%	4.2%	4.2%
Singletons	94.7%	93.6%	90.3%	95.8%	95.3%
Delivered by Cesarean Section	54.7%	67.7%	56.8%	41.7%	51.0%
Special Care nursery % *(not displayed for Level I hospitals)*	87.1%	87.1%	82.1%	NA	NA
Hypothermia	1.6%	3.2%	0.7%	0.0%	0.4%
Hyperbilirubinemia	2.1%	0.0%	9.9%	4.2%	3.4%
Severe Hypoxia/Asphyxia	7.4%	6.5%	10.4%	8.3%	4.0%
Coded with Neonatal Abstinence Syndrome (NAS)	2.1%	0.0%	1.2%	4.2%	3.5%
Readmitted within 28 days	0.0%	0.0%	2.1%	0.0%	2.7%

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