



TIMELINESS STUDY – HOSPITAL REPORTS OF ADVERSE PREGNANCY OUTCOMES RECEIVED IN 2017

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PURPOSE

Timeliness studies are performed periodically by the Illinois Department of Public Health's (IDPH's) Adverse Pregnancy Outcomes Reporting System (APORS) to evaluate the amount of time hospitals take to report APORS cases. IDPH regulations require Illinois hospitals to report infants who meet the APORS case definition within seven days of the infant's hospital discharge, but the actual timeliness often varies from hospital to hospital. Assurance of timeliness is important because APORS cases are considered high-risk and, as such, are referred to a local community health agency for follow-up services. The sooner intervention services begin, the better the outcomes for high-risk infants and their families. This study assesses hospitals' performance in making timely reports in 2017. The results are used to provide hospital-specific feedback to improve case reporting.

METHODS

In 2017, 118 birth hospitals reported cases to APORS. The cases were reported electronically through the APORS database or on paper reporting forms provided by APORS. The hospital

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provides the infant’s hospital discharge date and the reporting date for paper report; the reporting date is generated automatically by the data system for electronic reports. These two dates were compared to determine hospital processing time for each report. In reporting year 2017, a total of 9,398 reports were analyzed. The average processing time was calculated for each hospital, as well as the percentage of cases reported within the seven-day requirement. An APORS case is considered timely if the report is completed by the hospital within seven days of the infant’s discharge. Cases for whom drug exposure was the only case condition were not included in this study because obtaining results from drug testing may take longer than seven days.

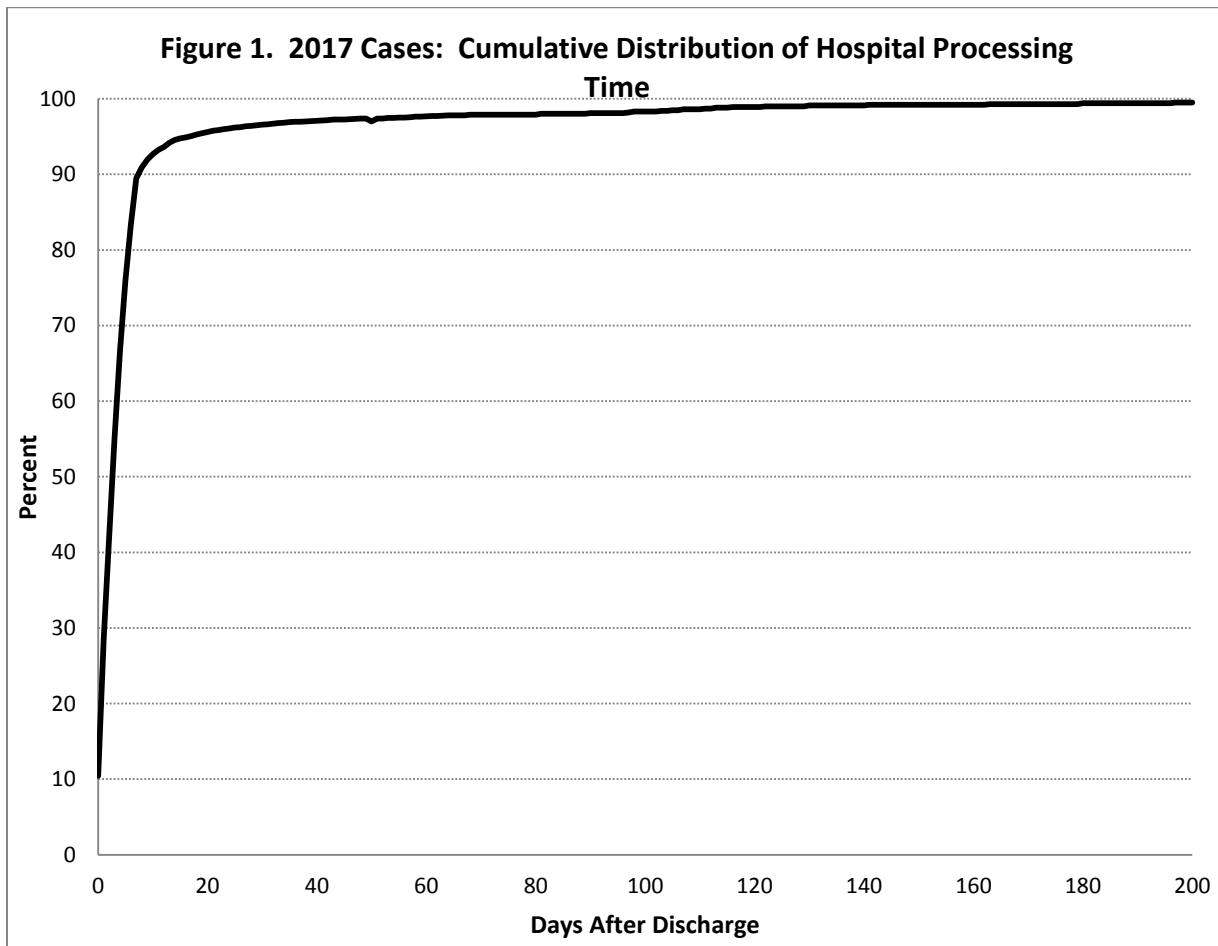
The APORS program also looked at the time it took for reports to arrive at IDPH. The reporting date on the Infant Discharge Record and the date the form was received by the APORS Program were compared to calculate transit time. Extended transit times to IDPH could delay referrals to local health departments for follow-up services. Transit times for cases reported through the electronic data system are zero days.

RESULTS

Processing Time for Cases Reported In 2017. Among all the cases, processing time ranged from zero to 697 days with the median being three days and the mean being eight days. A comparison of the mean with median suggests a positively skewed distribution of processing times. The cumulative distributions of cases with respect to reporting time are displayed in Figure 1; 89.5 percent of the cases were reported within the required seven days. Table 1 shows the average hospital processing time ranged from zero to 225 days. Sixty-six hospitals (55.9 percent)

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averaged seven or fewer days to process their reports. Hospital names on Tables 1 and 2 were eliminated to protect confidentiality. Table 2 shows that 44 (37.3 percent) hospitals reported 90 percent of cases, or more, within seven days of an infant’s discharge.



Source: Illinois Department of Public Health, Adverse Pregnancy Outcome Reporting System as of January 2018

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Table 1. 2017 Cases: Average Time for Processing Infant Discharge Records by Hospital

Hospital Number	Number of Reports	Average Days	Hospital Number	Number of Reports	Average Days	Hospital Number	Number of Reports	Average Days
1	75	1.2	41	69	5.6	81	9	33.9
2	3	1.3	42	245	5.6	82	7	4.6
3	85	1.6	43	229	5.9	83	4	28.8
4	45	2.0	44	143	5.9	84	30	0.7
5	4	2.3	45	320	5.9	85	14	33.7
6	584	2.6	46	99	6.0	86	47	5.6
7	3	2.7	47	374	6.3	87	19	9.9
8	188	2.8	48	19	6.5	88	12	22.6
9	23	2.9	49	334	6.7	89	18	29.4
10	35	2.9	50	446	6.7	90	1	135.0
11	19	2.9	51	45	7.2	91	1	176.0
12	399	3.0	52	9	7.6	92	86	5.0
13	24	3.1	53	164	7.8	93	22	110.7
14	62	3.1	54	5	7.8	94	8	2.8
15	54	3.2	55	8	8.0	95	17	8.0
16	42	3.4	56	95	8.3	96	47	5.7
17	64	3.6	57	11	8.7	97	27	3.0
18	124	3.6	58	34	9.0	98	2	63.5
19	25	3.7	59	34	12.6	99	42	1.1
20	114	3.7	60	97	13.3	100	44	3.7
21	15	3.8	61	432	14.6	101	4	0.0
22	14	3.9	62	34	23.3	102	31	12.1
23	148	4.0	63	194	36.1	103	10	22.4
24	6	4.0	64	3	45.3	104	6	81.7
25	47	4.1	65	40	47.6	105	15	17.8
26	223	4.1	66	5	50.0	106	4	39.3
27	276	4.1	67	1	92.0	107	39	135.6
28	245	4.2	68	3	224.7	108	17	7.4
29	5	4.2	69	873	5.9	109	7	17.9
30	165	4.3	70	269	3.1	110	4	24.3
31	49	4.4	71	12	23.7	111	14	12.6
32	26	4.4	72	31	9.8	112	3	2.7
33	38	4.7	73	3	2.7	113	108	18.4
34	114	4.7	74	80	8.2	114	11	12.6
35	30	4.7	75	7	77.7	115	29	14.7
36	45	4.9	76	4	0.5	116	8	4.5
37	16	4.9	77	4	58.8	117	7	30.4
38	273	5.0	78	2	75.0	118	2	147.0
39	1	5.0	79	41	12.4			
40	44	5.1	80	52	12.3	APORS Average		8.0

Source: Illinois Department of Public Health, Adverse Pregnancy Outcomes Reporting System as of January 2018.

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Table 2. 2017 Cases: Percentage of Reports Submitted Within Seven Days by Hospital

Hospital Number	Number of Reports	% Reports in 7 Days	Hospital Number	Number of Reports	% Reports in 7 Days	Hospital Number	Number of Reports	% Reports in 7 Days
1	45	75.6	41	124	95.2	81	114	99.1
2	2	50.0	42	4	100.0	82	23	91.3
3	8	87.5	43	47	72.3	83	399	97.2
4	245	89.0	44	19	89.5	84	12	66.7
5	10	60.0	45	14	85.7	85	15	80.0
6	14	71.4	46	3	0.0	86	18	61.1
7	6	33.3	47	2	50.0	87	4	50.0
8	114	88.6	48	95	72.6	88	99	83.8
9	446	86.3	49	19	94.7	89	47	85.1
10	38	97.4	50	47	85.1	90	45	97.8
11	245	87.8	51	34	85.3	91	9	66.7
12	164	84.8	52	31	71.0	92	334	86.5
13	1	0.0	53	29	79.3	93	19	89.5
14	269	97.0	54	2	0.0	94	44	81.8
15	42	95.2	55	6	83.3	95	320	88.4
16	17	94.1	56	4	100.0	96	97	71.1
17	273	95.6	57	5	80.0	97	4	75.0
18	15	86.7	58	11	90.9	98	148	91.9
19	85	96.5	59	11	81.8	99	8	87.5
20	14	92.9	60	5	20.0	100	108	81.5
21	22	45.5	61	62	96.8	101	276	91.7
22	30	86.7	62	26	80.8	102	873	96.6
23	42	97.6	63	1	0.0	103	64	98.4
24	16	81.3	64	35	94.3	104	34	67.6
25	52	84.6	65	41	82.9	105	4	100.0
26	45	100.0	66	3	33.3	106	374	84.8
27	1	100.0	67	69	88.4	107	7	85.7
28	8	87.5	68	4	50.0	108	12	50.0
29	165	97.0	69	5	60.0	109	30	100.0
30	188	95.2	70	3	100.0	110	40	5.0
31	80	76.3	71	3	100.0	111	31	77.4
32	7	71.4	72	3	100.0	112	86	94.2
33	75	96.0	73	24	91.7	113	432	80.3
34	229	95.6	74	584	98.3	114	223	92.8
35	27	88.9	75	3	100.0	115	143	94.4
36	1	0.0	76	7	42.9	116	194	87.1
37	7	85.7	77	25	92.0	117	39	64.1
38	44	97.7	78	4	75.0	118	34	88.2
39	9	77.8	79	54	98.1			
40	49	83.7	80	17	94.1	All APORS Cases		89.5

Source: Illinois Department of Public Health, Adverse Pregnancy Outcomes Reporting System as of January 2018.

Transit Time for Cases Reported In 2017. Among all the cases, transit time for paper reports ranged from zero to 134 days with the mean being 0.2 days and median zero days. Only two hospitals (1.7 percent) averaged more than seven days to process their reports. Sixteen hospitals (13.6 percent) had a least one record that took more than seven days in transit.

DISCUSSION

Case-Level Assessment. In 2017, more cases (17.9 percent) were reported on the day after discharge than any other day. This day, the following three days, and the day of discharge itself were the top five reporting days, accounting for two-thirds (66.7 percent) of the reports. Almost 90 percent of cases were reported within seven days of discharge, as required by administrative rules. This is an improvement over 2016 when 86.1 percent of cases were reported within seven days. Timely reporting assures that newborns can be offered case-management services soon after discharge from hospital, when the children and families will most benefit.

Hospital-Level Assessment. The main objective of the study is to assess the timeliness of reporting APORS cases at the hospital level. To that end, individual hospitals were rated based on Infant Discharge Reports received in 2017. Twenty hospitals were not rated as they submitted too few cases (fewer than five) to provide stable estimates. Table 3 illustrates how the categorical ratings were determined. Of the 98 rated hospitals, 74 (75.5 percent) met compliance standards, representing an improvement over 2016 when 66 (of 104 rated hospitals, or 63.4percent) met the same standard.

Table 3. Hospital Ratings for Compliance with Timeliness Standards in 2017

Rating	Cases Reported Within 7 Days	Number of Hospitals	Percentage
Compliant	80 - 100%	74	75.5
Not Compliant	< 80%	24	24.5

A facility-specific report, “Hospital Compliance Report” was prepared for each hospital (an example is in the Appendix) and has been distributed to each hospital. This report documents each facility’s level of compliance with APORS’s requirements. It also contains information about the transit times for a facility’s IDRs. In addition, this study report is provided to hospital staffs so that they have an overview of the study and its results.

Training and Education. Hospital training and education is important for APORS data quality, case completeness, and timeliness. In January 2017, APORS staff held an educational webinar for all hospital reporting staff and administrators in the state, focusing on timeliness in reporting. Timeliness requirements and report statistics calculations were reviewed, and the importance of timelines was discussed, along with suggested strategies for case identification. A recording of the webinar was made available for hospital staff to watch at any time and was posted on the IDPH SharePoint website. Additionally, throughout the year, APORS provided individual level training for facilities with compliance challenges or staff turnover.

APORS regards the timeliness study as an important tool for determining hospital compliance with reporting standards, and will repeat this study annually. The hospital-specific timeliness reports serve as a valuable measure of facility performance and can assist hospital managers with identifying issues regarding timely reporting.

Appendix Sample Report

Illinois Department of Public Health
Adverse Pregnancy Outcomes Reporting System

Timeliness Study for Cases Submitted in 2017
Hospital Compliance Report

January 2018

Timeliness Standard for Reporting APORS Cases:

Cases must be reported within seven days of the infant’s discharge or death.

Hospital Name
Facility ID Number

Cases Reported	Average Time (Days)	Percent of Cases Reported within 7 Days	Compliance Rating
45	2.6	93.3%	Compliant

Compliant means that 80 percent to 100 percent of the cases were reported within seven days.

Not Compliant means fewer than 80 percent of the cases were reported within seven days.

Not rated means the hospital reported fewer than five cases or it was an out-of-state hospital and not subject to APORS regulations.

The following information does not have a bearing on compliance or non-compliance with the timeliness standard for reporting APORS cases, but delays in reporting may impact the care a child receives after discharge from hospital.

Average Time in Transit (Days)	Percent of Cases Received within 7 Days of Being Reported
3.8	91.1%