



Liquid Laundry Packets Post-Implementation Period Report Through 2019

James Tark
U.S. Consumer Product Safety Commission
Directorate for Epidemiology
Division of Hazard Analysis
4330 East West Highway
Bethesda, MD 20814
December 2020

This analysis was prepared by the CPSC staff and it has not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

Background

In 2012, injury incident reports associated with liquid laundry packets began to appear in the surveillance data maintained by the CPSC. The main hazards were ingestions, which in the worst case, can lead to fatalities and ocular injuries that require medical assistance. In 2013, CPSC staff requested voluntary action by industry. Within months, ASTM held a kickoff meeting with ASTM 15.71 to address the hazards associated with these products, eventually developing a number of voluntary safety measures, including the packaging, labeling, and taste/dissolution properties of liquid laundry packets. The current voluntary standard, ASTM F3159-15e1, *Standard Safety Specification for Liquid Laundry Packets*, published in October 2015. By December 2016, industry implemented these voluntary safety measures (according to ASTM 15.71 participants), with nearly all of the products available for sale to consumers reportedly complying with the voluntary standards in ASTM F3159-15e1.

In evaluating the impact of ASTM F3159-15e1 on safety, ASTM's data sub-team sought to monitor injuries associated with liquid laundry packets before, during, and after implementation of the standard, for which CPSC staff agreed to provide data. Staff prepared and presented the following reports to ASTM:

- In October 2017, CPSC staff prepared and presented its report to ASTM, detailing the estimated injuries associated with liquid laundry packets seen in emergency departments that occurred in the *pre-implementation period* (defined by the ASTM data sub-team as July 2012 to June 2013).¹
- In February and March 2018, CPSC staff prepared and presented its report to ASTM, describing the estimated injuries associated with liquid laundry packets seen in emergency departments in the *transition period* (July 2013 to December 2016).²
- In June 2018, CPSC staff followed up with its report to ASTM, describing the estimated injuries associated with liquid laundry packets seen in emergency departments in the *post-implementation period* (January 2017 to December 2017).³
- In October 2019, CPSC staff followed up with its report to ASTM, describing the estimated injuries associated with liquid laundry packets seen in emergency departments in the *post-implementation period* (January 2018 to December 2018).⁴

This letter constitutes the fifth report and provides additional information for the *post-implementation period*, namely 2019. The report focuses on comparing the *pre-implementation period* with the *post-implementation period*. If needed, CPSC staff can provide a data update for estimated injuries in 2020, as data become available.

Method

The National Electronic Injury Surveillance System (NEISS) is a national stratified probability sample of hospitals in the United States and its territories. NEISS contains five strata: children's hospitals, small hospitals, medium hospitals, large hospitals, and very large hospitals. Within each stratum is a sample of hospitals that make up the primary sampling units (PSUs) of NEISS. Each hospital in the sample records every emergency-department visit associated with a consumer product. To facilitate injury estimates associated with a product, or product group, each injury has a product code that identifies the type of product involved. Sample hospitals record information for each injury, including sex, age, diagnosis, disposition, body part, along with a brief narrative description of the injury, among other information. CPSC has information on stratum, hospital, age, and sex of the patient for all observations in this study. You can find additional information about NEISS online at: <http://www.cpsc.gov/library/neiss.html>.

¹ The report, CPSC Report to ASTM International F15.71 on Liquid Laundry Packet Injuries can be found at: <https://cpsc.gov/s3fs-public/Liquid-Laundry-Packets-baseline.pdf>.

² The report with transition period can be found at: <https://www.cpsc.gov/s3fs-public/Liquid-Laundry-Packets-transition-period-report.pdf?hrqAVB3Ed05qlLHHomwayvsPM6B4FnN8>.

³ The report with post-implementation period (2017) can be found at: <https://www.cpsc.gov/s3fs-public/Liquid%20Laundry%20Packets%20postimplementation%20period%20report.pdf?czySkm8W7P.VZSL.WSdIwl0C.5PrXgI>.

⁴ The report with post-implementation period (2018) can be found at: https://www.cpsc.gov/s3fs-public/Liquid-Laundry-Packets-Post-Implementation-Period-Report-Through-2018_0.pdf?Nmn379v340vWX.6EREyHJZuFUvdEl.x.

To identify emergency department-treated injuries associated with liquid laundry packets, CPSC staff searched the following product codes: 949 (Laundry soaps or detergents), 976 (Detergents, not specified), 983 (Soaps, excluding laundry soaps or detergents), and 934 (Dishwasher detergents). Although some of these codes would not appear to be relevant to liquid laundry packets, upon review of the narrative description, staff identified cases indicating the involvement of liquid laundry packets. The ASTM data sub-team determined that the focus of the analysis would be on children under age 6. However, estimates for the population under age 5 are included here, as well, because this is a critical age threshold in the Poison Prevention Packaging Act, and it is a population of particular concern to CPSC staff.

Estimated Emergency Department Visits by Children

Tables 1a - 1e include the estimated emergency department visits for children under age 5, children under age 6, and for all ages. The “N” refers to the number of cases used to produce the estimate, and the “C.V.” refers to the coefficient of variation for the estimate. Most of the injuries occurred to children under age 5, which is why the three age groups are so often similar, and at times, identical. To look at shorter periods than the initial baseline period, staff also provides 6-month periods so each can be viewed independently. The focus of this report is on comparing the estimated injuries during the pre-implementation period with the post-implementation period. Staff did not conduct statistical tests comparing the transitional period. Staff excluded the estimates for the 6-month intervals that comprise the transition period, but the transition period is available in prior reports. Most of the injuries to children under age 5 and under age 6 resulted from ingestions. The semiannual estimates for each of the individual injury types did not meet the reporting criteria for NEISS to produce statistically stable results. Hence, staff combined ocular injuries with ingestions to allow for both to be considered semiannually when evaluating the voluntary standard.

Table 1a. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets by Age Group and Time Period – All Injuries

Time period	Under Age 5			Under Age 6			All Ages		
	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.
7/2012 - 6/2013 (Pre-Implementation)	166	4,200	0.199	172	4,300	0.208	180	4,500	0.197
1/2017 – 12/2017	161	3,900	0.202	171	4,200	0.190	204	5,300	0.168
1/2018 – 12/2018	145	3,300	0.162	151	3,500	0.155	177	4,400	0.143
1/2019 – 12/2019	154	3,600	0.159	163	3,800	0.153	188	4,700	0.140
7/2012 - 12/2012	82	2,300	0.228	84	2,400	0.244	85	2,400	0.242
1/2013 - 6/2013	84	1,900	0.233	88	1,900	0.230	95	2,200	0.199
1/2017 – 6/2017	90	2,400	0.268	92	2,400	0.267	108	2,900	0.217
7/2017 – 12/2017	71	1,600	0.271	79	1,800	0.241	96	2,400	0.225
1/2018 – 6/2018	67	1,500	0.223	70	1,700	0.207	81	2,000	0.197
7/2018 – 12/2018	78	1,800	0.173	81	1,800	0.171	96	2,400	0.159
1/2019 – 6/2019	65	1,400	0.267	67	1,500	0.254	76	1,900	0.255
7/2019 – 12/2019	89	2,200	0.159	96	2,300	0.157	112	2,900	0.137

⁺Injury estimates are rounded to the nearest 100 and may not sum to totals due to rounding.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 1b. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets by Age Group and Time Period – Ingestions

Time period	Under Age 5			Under Age 6			All Ages		
	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.
7/2012 - 6/2013 (Pre-Implementation)	138	3,300	0.197	139	3,400	0.197	139	3,400	0.197
1/2017 – 12/2017	103	2,900	0.206	106	2,900	0.205	108	3,000	0.200
1/2018 – 12/2018	82	1,900	0.204	82	1,900	0.204	83	1,900	0.204
1/2019 – 12/2019	88	2,000	0.217	89	2,000	0.216	91	2,000	0.208
7/2012 - 12/2012	67	1,800	0.237	67	1,800	0.237	67	1,800	0.237
1/2013 - 6/2013	71	1,500	0.236	72	1,500	0.236	72	1,500	0.236
1/2017 – 6/2017	62	1,800	0.281	62	1,800	0.281	63	1,900	0.272

⁺Injury estimates are rounded to the nearest 100 and may not sum to totals due to rounding.

Semiannual estimates in 7/2017 – 12/2019 period do not meet NEISS criteria of at least 1,200 for publication of an estimate.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 1c. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets by Age Group and Time Period – Ocular Injuries

Time period	Under Age 5			Under Age 6			All Ages		
	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.
7/2012 - 6/2013 (Pre-Implementation)	27	**	**	32	**	**	40	**	**
1/2017 – 12/2017	54	**	**	61	1,200	0.211	86	2,000	0.178
1/2018 – 12/2018	56	1,300	0.113	61	1,400	0.100	79	2,100	0.077
1/2019 – 12/2019	60	1,500	0.177	67	1,700	0.137	83	2,400	0.115
7/2019 – 12/2019	38	**	**	43	1,200	0.142	53	1,500	0.073

⁺Injury estimates are rounded to the nearest 100 and may not sum to totals due to rounding.

**Does not meet NEISS criteria of at least 1,200 for publication of an estimate.

Semiannual estimates in pre-implementation and 1/2017 through 6/2019 periods do not meet NEISS criteria of at least 1,200 for publication of an estimate.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 1d. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets by Age Group and Time Period – Ingestions/Ocular Injuries

Time period	Under Age 5			Under Age 6			All Ages		
	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.
7/2012 - 6/2013 (Pre-Implementation)	165	4,200	0.199	171	4,300	0.208	178	4,500	0.201
1/2017 – 12/2017	157	3,900	0.203	167	4,100	0.192	194	5,000	0.170
1/2018 – 12/2018	138	3,200	0.161	143	3,400	0.154	162	4,000	0.151
1/2019 – 12/2019	148	3,400	0.163	156	3,700	0.154	174	4,400	0.144
7/2012 - 12/2012	82	2,300	0.228	84	2,400	0.244	85	2,400	0.242
1/2013 - 6/2013	83	1,900	0.233	87	1,900	0.231	93	2,100	0.218
1/2017 – 6/2017	88	2,400	0.269	90	2,400	0.268	102	2,700	0.234
7/2017 – 12/2017	69	1,500	0.276	77	1,800	0.245	92	2,200	0.230
1/2018 – 6/2018	63	1,400	0.226	66	1,500	0.210	74	1,700	0.213
7/2018 – 12/2018	75	1,800	0.174	77	1,800	0.173	88	2,300	0.165
1/2019 – 6/2019	63	1,300	0.265	65	1,400	0.252	71	1,800	0.256
7/2019 – 12/2019	85	2,100	0.169	91	2,200	0.158	103	2,600	0.136

⁺Injury estimates are rounded to the nearest 100 and may not sum to totals due to rounding.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 1e. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets by Age Group and Time Period – Dermal Injuries

Time period	Under Age 5			Under Age 6			All Ages		
	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.	N	Est. ED Visits ⁺	C.V.
7/2012 - 6/2013 (Pre-Implementation)	1	**	**	1	**	**	2	**	**
1/2017 – 12/2017	4	**	**	4	**	**	10	**	**
1/2018 – 12/2018	5	**	**	6	**	**	10	**	**
1/2019 – 12/2019	3	**	**	3	**	**	9	**	**

⁺Injury estimates are rounded to the nearest 100 and may not sum to totals due to rounding.

**Does not meet NEISS criteria of at least 1,200 for publication of an estimate.

Semiannual estimates in pre-implementation and post-implementation periods do not meet NEISS criteria of at least 1,200 for publication of an estimate.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Sales Data and Injury Rates

CPSC received aggregated point-of-sale data from Nielsen via the Rocky Mountain Poison and Drug Center. The data provided context necessary to determine changes in injury risks. Table 2 shows the sales in units (which is a single package sold that can include multiple laundry packets), and in total number of packets. The data are compiled in 4-week intervals, and thus, the data can be aggregated similarly (but not identically) to the periods of interest.

Table 2. Sales of Laundry Packets by Unit and Total Number of Packets by Time Period

Time Period	Units (in millions)	Number of Packets (in millions)
6/24/2012 - 6/22/2013 (Pre-Implementation)	58.075	2,051
1/1/2017 – 12/30/2017	131.760	4,706
12/31/2017 – 12/30/2018	136.337	4,915
12/31/2018 – 12/28/2019	143.680	5,200
6/24/2012 - 1/5/2013	30.054	1,044
1/6/2013 - 6/22/2013	28.021	1,007
1/1/2017 – 6/17/2017	62.540	2,200
6/18/2017 – 12/30/2017	69.220	2,506
12/31/2017 – 6/17/2018	60.479	2,242
6/18/2018 – 12/30/2018	75.858	2,673
12/31/2018 – 6/15/2019	62.425	2,327
6/16/2019 – 12/28/2019	81.255	2,874

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Tables 3a – 3c combine the unrounded emergency department-visit estimates used to produce Tables 1a – 1e, with the sales figures in Table 2, to produce emergency department-visit rates per million units sold, and per million packets sold. Staff found that when sales are considered, the differences in ED visit rates per unit and per packet between the baseline period and the post-transition period were statistically significant for each age grouping.

Table 3a. Estimated Emergency Department-Visit Rates by Units and Total Number of Packets Sold - All Injuries

Time period	Under Age 5		Under Age 6		All Ages	
	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets
7/2012 - 6/2013 (Pre-Implementation)	72	2.0	74	2.1	78	2.2
1/2017 - 12/2017	30*	0.8*	32*	0.9*	40*	1.1*
1/2018 - 12/2018	24*	0.7*	26*	0.7*	32*	0.9*
1/2019 - 12/2019	25*	0.7*	27*	0.7*	33*	0.9*
7/2012 -12/2012	76	2.2	79	2.3	79	2.3
1/2013 - 6/2013	68	1.9	69	1.9	77	2.1
1/2017 - 6/2017	38	1.1	38	1.1	46	1.3
7/2017 - 12/2017	23*	0.6*	26*	0.7*	35*	1.0*
1/2018 - 6/2018	25*	0.7*	28*	0.7*	33*	0.9*
7/2018 - 12/2018	24*	0.7*	24*	0.7*	32*	0.9*
1/2019 – 6/2019	23*	0.6*	24*	0.6*	30*	0.8*
7/2019 – 12/2019	27*	0.8*	29*	0.8*	35*	1.0*

*Indicates a statistically significant difference from the baseline July 2012 to June 2013 period.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 3b. Estimated Emergency Department-Visit Rates by Units and Total Number of Packets Sold - Ingestions

Time period	Under Age 5		Under Age 6		All Ages	
	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets
7/2012 - 6/2013 (Pre-Implementation)	58	1.6	58	1.6	58	1.6
1/2017 - 12/2017	22*	0.6*	22*	0.6*	23*	0.6*
1/2018 - 12/2018	14*	0.4*	14*	0.4*	14*	0.4*
1/2019 - 12/2019	14*	0.4*	14*	0.4*	14*	0.4*
7/2012 - 12/2012	60	1.7	60	1.7	60	1.7
1/2013 - 6/2013	55	1.5	55	1.5	55	1.5
1/2017 - 6/2017	29*	0.8*	29*	0.8*	31*	0.9*

*Indicates a statistically significant difference from the baseline July 2012 to June 2013 period.

Semiannual estimates in 7/2017 through 12/2019 periods do not meet NEISS criteria of at least 1,200 for publication of an estimate. Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 3c. Estimated Emergency Department-Visit Rates by Units and Total Number of Packets Sold – Ingestions/Ocular Injuries

Time period	Under Age 5		Under Age 6		All Ages	
	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets	Est. ED Visits per 1 million units	Est. ED Visits per 1 million packets
7/2012 - 6/2013 (Pre-Implementation)	72	2.0	74	2.1	77	2.1
1/2017 - 12/2017	30*	0.8*	31*	0.9*	38*	1.1*
1/2018 - 12/2018	23*	0.6*	25*	0.7*	30*	0.8*
1/2019 - 12/2019	24*	0.7*	26*	0.7*	30*	0.8*
7/2012 - 12/2012	76	2.2	79	2.3	79	2.3
1/2013 - 6/2013	68	1.9	68	1.9	74	1.9
1/2017 - 6/2017	38	1.1	38	1.1	44	1.2
7/2017 - 12/2017	22*	0.6*	25*	0.7*	32*	0.9*
1/2018 - 6/2018	23*	0.6*	25*	0.7*	28*	0.8*
7/2018 - 12/2018	24*	0.7*	24*	0.7*	31*	0.9*
1/2019 - 6/2019	22*	0.6*	23*	0.6*	28*	0.8*
7/2019 - 12/2019	26*	0.7*	28*	0.8*	32*	0.9*

*Indicates a statistically significant difference from the baseline July 2012 to June 2013 period.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Figure 1 presents staff’s estimated emergency department-visit rates per unit and per packet for each 6-month period for all ages for all types of injuries. Figure 2 presents staff’s estimated emergency department rates per unit and per packet for each reportable 6-month period for all ages for ingestions and ocular injuries only.

Figure 1. Estimated Emergency Department-Visit Rates by Unit and Total Number of Packets Sold for All Injuries (All Ages)

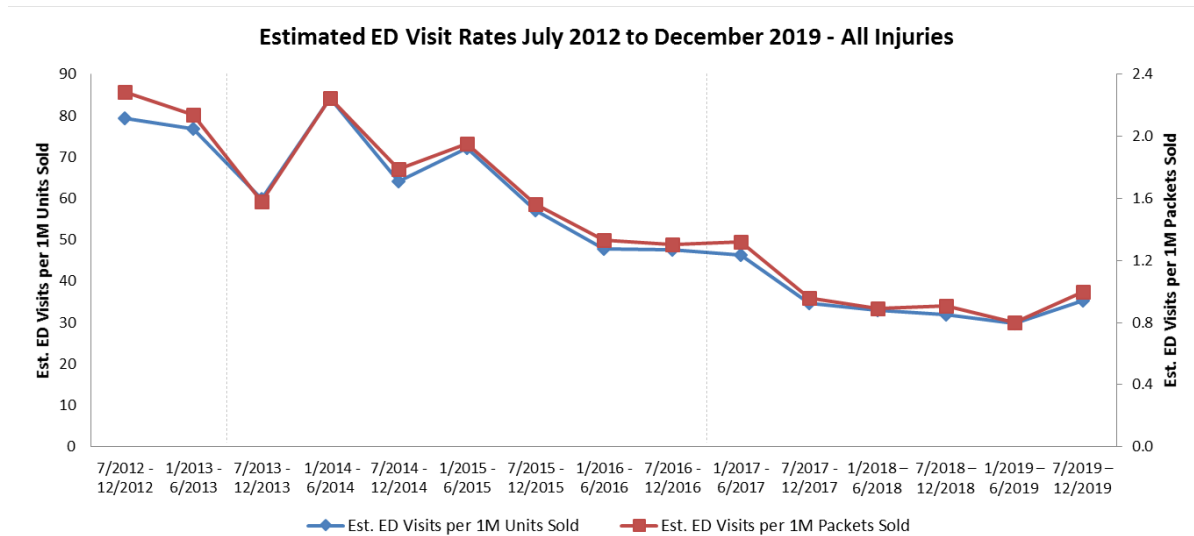
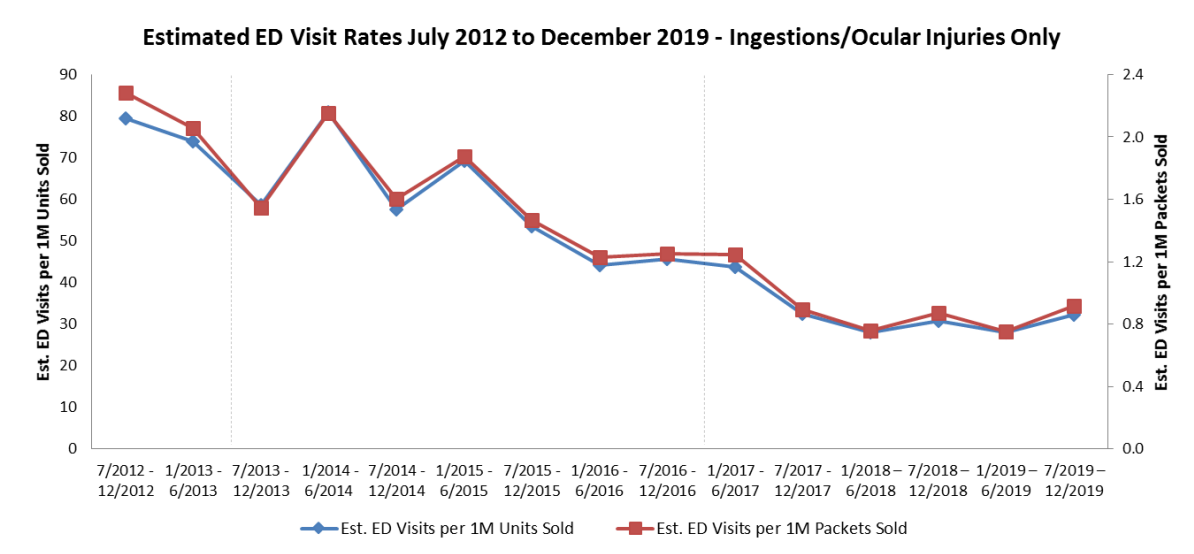


Figure 2. Estimated Emergency Department.-Visit Rates by Unit and Total Number of Packets Sold for Ingestions/Ocular Injuries (All Ages)



Population Data and Injury Rates

Table 4 shows the average population counts from U.S. Census Bureau in millions corresponding most closely to the 6-month time periods.⁵

Table 4. U.S. Resident Population by Age Category and Time Period (in millions)

Time Periods	Under Age 5	Under Age 6	All Ages
7/2012 - 6/2013 (Pre-Implementation)	19.934	24.063	314.937
1/2017 – 12/2018	19.849	23.858	326.108
1/2019 – 12/2019	19.704	23.735	329.113
7/2012 - 12/2013	19.964	24.096	314.419
1/2013 - 06/2013	19.904	24.029	315.454
1/2017 – 6/2017	19.910	23.924	324.578
7/2017 – 12/2017	19.869	23.874	325.622
1/2018 – 6/2018	19.823	23.838	326.588
7/2018 – 12/2018	19.792	23.797	327.642
1/2019 – 6/2019	19.736	23.750	328.592
7/2019 – 12/2019	19.672	23.719	329.633

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Tables 5a - 5c combine the unrounded emergency department-visit estimates used to produce Tables 1a – 1e, with the population figures in Table 4, to produce emergency department-visit rates per million persons of each age group (under 5, under 6, and all ages). Staff found that the differences in population-adjusted injury rates between pre-implementation and post-implementation in both annual and semiannual periods were not statistically significant. The rates of emergency department-visits were much higher for children under age 5 and under age 6, than for all ages.

Table 5a. Estimated Emergency Department-Visit Population-Adjusted Injury Rates by Age and Time Period (Estimated ED Visits per 1 Million Population) – All Injuries

Time period	Under Age 5	Under Age 6	All Ages
7/2012 - 6/2013 (Pre-Implementation)	210.7	178.4	14.4
1/2017 - 12/2017	198.0	174.5	16.3
1/2018 - 12/2018	168.6	147.5	13.5
1/2019 - 12/2019	183.8	162.2	14.4
7/2012 -12/2012	114.9	98.4	7.6
1/2013 - 6/2013	95.2	79.8	6.8
1/2017 - 6/2017	119.3	99.7	9.0
7/2017 - 12/2017	78.7	74.8	7.3
1/2018 - 6/2018	77.3	70.4	6.1
7/2018 - 12/2018	91.4	77.2	7.3
1/2019 – 6/2019	72.1	63.6	5.7
7/2019 – 12/2019	111.8	98.6	8.7

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

⁵ The Monthly Postcensal Resident Population counts of 2019 can be found at: <https://www.census.gov/data/datasets/time-series/demo/popest/2010s-national-detail.html>.

Table 5b. Estimated Emergency Department-Visit Population-Adjusted Injury Rates by Age and Time Period (Estimated ED Visits per 1 Million Population) – Ingestions

Time period	Under Age 5	Under Age 6	All Ages
7/2012 - 6/2013 (Pre-Implementation)	167.8	139.3	10.6
1/2017 - 12/2017	145.8	122.4	9.3
1/2018 - 12/2018	97.1	80.7	5.9
1/2019 - 12/2019	98.6	82.2	6.2
7/2012 - 12/2012	90.9	75.3	5.8
1/2013 - 6/2013	75.4	63.9	4.9
1/2017 - 6/2017	92.5	77.0	5.9

Semiannual estimates in 7/2017 through 12/2019 periods do not meet NEISS criteria of at least 1,200 for publication of an estimate. Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Table 5c. Estimated Emergency Department-Visit Population-Adjusted Injury Rates by Age and Time Period (Estimated ED Visits per 1 Million Population) – Ingestions/Ocular Injuries

Time period	Under Age 5	Under Age 6	All Ages
7/2012 - 6/2013 (Pre-Implementation)	210.1	178.2	14.2
1/2017 - 12/2017	195.9	172.8	15.3
1/2018 - 12/2018	160.8	140.9	12.3
1/2019 - 12/2019	175.0	154.7	13.3
7/2012 - 12/2012	114.9	98.4	7.6
1/2013 - 6/2013	95.2	79.8	6.6
1/2017 - 6/2017	118.8	99.3	8.4
7/2017 - 12/2017	77.0	73.4	6.9
1/2018 - 6/2018	70.3	64.6	5.2
7/2018 - 12/2018	90.6	76.3	7.1
1/2019 - 6/2019	68.1	60.4	5.3
7/2019 - 12/2019	107.0	94.3	8.0

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Injury Severity

Table 6 shows the disposition for all of the injuries seen in the baseline period (July 2012 to June 2013) and the post-implementation period (January 2017 to December 2019). The treated-and-released category was the only one large enough to produce a publishable NEISS estimate. Staff is not presenting any statistical test results due to small sample sizes. Instead, Table 6 only shows percentages.

Table 6. Disposition of Estimated Emergency-Department Visits Associated with Liquid Laundry Packets for Different Age Groups in Baseline vs Post-Implementation

Disposition	Under Age 5	Under Age 6	All Ages ⁺
Treated and Released			
7/2012 - 6/2013 (Pre-Implementation)	82%	83%	84%
2017	91%	92%	93%
2018	91%	92%	94%
2019	93%	94%	95%
Admitted, Transferred			
7/2012 - 6/2013 (Pre-Implementation)	12%	11%	11%
2017	3%	3%	2%
2018	5%	5%	4%
2019	5%	5%	4%
Held for Observation			
7/2012 - 6/2013 (Pre-Implementation)	3%	3%	3%
2017	2%	2%	1%
2018	1%	1%	0%
2019	1%	1%	0%
Left Without Being Seen			
7/2012 - 6/2013 (Pre-Implementation)	3%	3%	3%
2017	4%	4%	3%
2018	3%	3%	2%
2019	1%	1%	1%

⁺Percentages may not total 100 due to rounding.

Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Fatalities

CPSC is aware of one fatality in the baseline period July 2012 to June 2013 (an elderly woman with Alzheimer's, who died after ingesting liquid laundry packets). CPSC is aware of seven additional fatalities in the United States between July 2013 and December 2016, including two involving children under 2 years of age and five adults. All of the victims had ingested at least one liquid laundry packet. The adult victims all suffered from Alzheimer's or dementia. The two children died in 2013, three adults died in 2014, one adult died in 2015, and another adult died in 2016. CPSC is aware of three fatalities in the post-implementation period January 2017 to December 2019. In 2017, an elderly man who reportedly lacked full mental capacity, and may have been exposed to outdated packaging, ingested a liquid laundry packet. Another elderly man with chronic obstructive pulmonary disease thought the liquid laundry packet was candy and ingested it, then died a month later in 2017. In 2018, a 43-year-old man, who may have been associated with pica, ingested liquid laundry packets and died of detergent toxicity. CPSC is not aware of any fatalities in 2019.