



U.S. CONSUMER PRODUCT SAFETY COMMISSION
4330 East West Highway, Bethesda MD 20814

June 8, 2018

TRANSMITTED VIA EMAIL

Mr. Len Morrissey
ASTM
100 Barr Harbor Dr.
West Conshohocken, PA 19428-2959

Re: CPSC Report to ASTM International F15.71 on Liquid Laundry Packet Injuries

Dear Mr. Morrissey:

This letter is the third in a series of reports to ASTM prepared by U.S. Consumer Product Safety Commission (CPSC) staff regarding hospital emergency room visits associated with liquid laundry packets.

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 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 is ASTM F3159-15e1, *Standard Safety Specification for Liquid Laundry Packets*, published in October 2015. By December 2016, these voluntary safety measures were implemented by industry (according to ASTM 15.71 participants), with nearly all of the products available for sale to consumers complying with the voluntary standards in ASTM F3159-15e1.

In evaluating the impact of these standards on safety, the ASTM data sub-team sought to monitor injuries associated with liquid laundry packets before, during, and after implementation of the standards, for which CPSC agreed to provide data reporting. In October 2017, CPSC prepared and presented its report to ASTM, detailing the estimated injuries seen in emergency departments associated with liquid laundry packets 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 prepared and presented its report to ASTM

¹ The report can be found at <https://cpsc.gov/s3fs-public/Liquid-Laundry-Packets-baseline.pdf>

describing the estimated injuries seen in emergency departments associated with liquid laundry packets in the transition period (July 2013 to December 2016). This letter constitutes the third report and provides information for the first year post-implementation, namely 2017. A future report is anticipated, as data become available, which will describe the estimated injuries in 2018.

Method

The National Electronic Injury Surveillance System (NEISS) is a national stratified probability sample of hospitals in the United States and its territories. There are five strata in the NEISS: 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. For each hospital in the sample, every emergency-department visit associated with a consumer product is recorded. To facilitate injury estimates associated with a product or product group, each injury has a product code that identifies the type of product involved. Information recorded for each injury includes sex, age, diagnosis, disposition, body part, and a brief narrative description of the injury, among other information. The information on stratum, hospital, age, and sex of the patient is known for all observations in this study. You can find additional information about NEISS online at: <http://www.cpsc.gov/library/neiss.html>.

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 relevant to liquid laundry packets, staff identified cases that indicated the involvement of liquid laundry packets upon review of the narrative description. 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 that is a population of particular concern to CPSC, and it is a critical age threshold in the Poison Prevention Packaging Act.

Estimated Injury Department Visits by Children

Table 1 includes 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 figures are so often similar, and at times, identical. To look at shorter periods than the initial baseline period, or the full transition period, 6-month periods are also provided so they can be viewed independently. Most of the injuries to children under age 5 and under age 6 resulted from ingestions. Only ingestion injuries occurred with sufficient frequency to produce statistically stable semiannual estimates. Ocular injuries were combined with ingestions to allow for both to be considered semiannually when evaluating the voluntary standards. The differences in injury estimates between semiannual periods were not statistically significant. The variance calculations for the baseline and transition periods have been revised to reflect the full structure of NEISS, including hospitals that did not

contribute cases to the estimates. This has made the variance estimates more conservative (*i.e.*, larger), and thus, has changed some of the outcomes of tests for statistical significance for the transition period.

Table 1. Estimated Emergency-Department Visits Associated with Liquid Laundry Packets for Children Under Age 5 and Under Age 6 by Time Period and Injury Type

Injury and 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.
All Injuries 7/2012 - 6/2013 (Pre-Implementation)	166	4,200	0.199	172	4,300	0.208	180	4,500	0.197
All Injuries 7/2013 - 12/2016 (Transition Period)	647	18,000	0.155	661	18,300	0.153	711	20,300	0.150
All Injuries 1/2017 – 12/2017 (Post-Implementation)	161	3,900	0.202	171	4,200	0.190	204	5,300	0.168
All Injuries 7/2012 -12/2012	82	2,300	0.228	84	2,400	0.244	85	2,400	0.242
All Injuries 1/2013 - 6/2013	84	1,900	0.233	88	1,900	0.230	95	2,200	0.199
All Injuries 7/2013 -12/2013	81	1,800	0.184	82	1,900	0.180	88	2,100	0.170
All Injuries 1/2014 - 6/2014	95	2,900	0.196	98	2,900	0.195	104	3,100	0.203
All Injuries 7/2014 -12/2014	92	2,800	0.233	93	2,800	0.232	102	3,200	0.230
All Injuries 1/2015 - 6/2015	92	2,900	0.219	96	2,900	0.217	101	3,200	0.200
All Injuries 7/2015 -12/2015	107	2,800	0.184	110	2,900	0.183	115	3,100	0.187
All Injuries 1/2016 - 6/2016	94	2,200	0.196	94	2,200	0.196	102	2,600	0.184
All Injuries 7/2016 -12/2016	86	2,600	0.250	88	2,700	0.242	99	3,200	0.229
All Injuries 1/2017 – 6/2017	90	2,400	0.268	92	2,400	0.267	108	2,900	0.217
All Injuries 7/2017 – 12/2017	71	1,600	0.271	79	1,800	0.241	96	2,400	0.225
Ingestions 7/2012 - 6/2013 (Pre-	138	3,300	0.197	139	3,400	0.197	139	3,400	0.197

Implementation)									
Ingestions 7/2013 - 12/2016 (Transition Period)	466	13,400	0.177	466	13,400	0.177	475	13,700	0.176
Ingestions 1/2017 – 12/2017 (Post-Implementation)	103	2,900	0.206	106	2,900	0.205	108	3,000	0.200
Ingestions 7/2012 - 12/2012	67	1,800	0.237	67	1,800	0.237	67	1,800	0.237
Ingestions 1/2013 - 6/2013	71	1,500	0.236	72	1,500	0.236	72	1,500	0.236
Ingestions 7/2013 - 12/2013	61	1,300	0.217	61	1,300	0.217	63	1,400	0.216
Ingestions 1/2014 - 6/2014	71	2,000	0.262	71	2,000	0.262	71	2,000	0.262
Ingestions 7/2014 - 12/2014	70	2,000	0.279	70	2,000	0.279	72	2,000	0.276
Ingestions 1/2015 - 6/2015	74	2,500	0.228	74	2,500	0.228	75	2,600	0.227
Ingestions 7/2015 - 12/2015	73	2,000	0.189	73	2,000	0.189	74	2,100	0.184
Ingestions 1/2016 - 6/2016	65	1,500	0.216	65	1,500	0.216	66	1,600	0.225
Ingestions 7/2016 - 12/2016	52	2,000	0.297	52	2,000	0.297	54	2,000	0.294
Ingestions 1/2017 – 6/2017	62	1,800	0.281	62	1,800	0.281	63	1,900	0.272
Ingestions 7/2017 – 12/2017	41	**	**	44	**	**	45	**	**
Ocular 7/2012 - 6/2013 (Pre-Implementation)	27	**	**	32	**	**	40	**	**
Ocular 7/2013 - 12/2016 (Transition Period)	164	4,200	0.143	178	4,500	0.142	208	5,600	0.148
Ocular 1/2017 – 12/2017 (Post-Implementation)	54	**	**	61	1,200	0.211	86	2,000	0.178
Ingestions/Ocular 7/2012 - 6/2013 (Pre-Implementation)	165	4,200	0.199	171	4,300	0.208	178	4,500	0.201

Ingestions/Ocular 7/2013 - 12/2016* (Transition Period)	630	17,600	0.160	644	17,800	0.158	683	19,300	0.159
Ingestions/Ocular 1/2017 – 12/2017 (Post- Implementation)	157	3,900	0.203	167	4,100	0.192	194	5,000	0.170
Ingestions/Ocular 7/2012 - 12/2012	82	2,300	.228	84	2,400	0.244	85	2,400	0.242
Ingestions/Ocular 1/2013 - 6/2013	83	1,900	0.233	87	1,900	0.231	93	2,100	0.218
Ingestions/Ocular 7/2013 - 12/2013	79	1,800	0.186	80	1,900	0.182	85	2,100	0.173
Ingestions/Ocular 1/2014 - 6/2014	93	2,800	0.201	96	2,900	0.200	101	3,000	0.198
Ingestions/Ocular 7/2014 - 12/2014*	87	2,600	0.254	88	2,600	0.252	96	2,900	0.252
Ingestions/Ocular 1/2015 - 6/2015	92	2,900	0.219	96	2,900	0.217	99	3,100	0.205
Ingestions/Ocular 7/2015 - 12/2015	104	2,700	0.191	107	2,700	0.190	110	2,900	0.195
Ingestions/Ocular 1/2016 - 6/2016	92	2,200	0.197	92	2,200	0.197	98	2,400	0.194
Ingestions/Ocular 7/2016 - 12/2016	83	2,500	0.251	85	2,600	0.243	94	3,000	0.238
Ingestions/Ocular 1/2017 – 6/2017	88	2,400	0.269	90	2,400	0.268	102	2,700	0.234
Ingestions/Ocular 7/2017 – 12/2017	69	1,500	0.276	77	1,800	0.245	92	2,200	0.230
Dermal 7/2012 - 6/2013 (Pre- Implementation)	1	**	**	1	**	**	2	**	**
Dermal 7/2013 - 12/2016* (Transition Period)	15	**	**	15	**	**	25	**	**
Dermal 1/2017 – 12/2017 (Post- Implementation)	4	**	**	4	**	**	10	**	**
Inhalation/Thermal burn/Phimosis 7/2013 - 12/2016 (Transition Period)	2	**	**	2	**	**	3	**	**

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

*Case counts and estimates revised to account for a double-counted case in the transition period report.

**Does 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. We needed the data to provide context to determine changes in injury risks. Table 2 shows the sales in both 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 Periods	Units (in millions)	Number of Packets (in millions)
6/24/2012 - 6/22/2013 (Pre-Implementation)	58.075	2,051
6/23/2013 -12/31/2016 (Transition Period)	340.080	12,462
1/1/2017 – 12/30/2017 (Post-Implementation)	131.760	4,706
6/24/2012 - 1/5/2013	30.054	1,044
1/6/2013 - 6/22/2013	28.021	1,007
6/23/2013 - 1/4/2014	35.059	1,329
1/5/2014 - 6/21/2014	36.754	1,381
6/22/2014 - 1/3/2015	49.872	1,789
1/4/2015 - 6/20/2015	44.272	1,638
6/21/2015 - 1/2/2016	54.298	1,981
1/3/2016 - 6/18/2016	53.310	1,918
6/19/2016 - 12/31/2016	66.514	2,426
1/1/2017 – 6/17/2017	62.540	2,200
6/18/2017 – 12/30/2017	69.220	2,506

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

Table 3 combines the unrounded emergency department-visit estimates used to produce Table 1, with the sales figures in Table 2, to produce emergency department-visit rates per million units sold, and per million packets sold. When sales are considered, the differences in ER visit rates per unit and per packet between the baseline period and the post-transition period were statistically significant for each age grouping. Figure 1 presents the 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 the estimated emergency department rates per unit and per packet for each reportable 6-month period for all ages for ingestions and ocular injuries only. The transition period report included a figure for ingestions only; however, a 6-month estimate for these injuries could not be produced meeting publication criteria in each time period covered by the report.

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

Injury and 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
All Injuries 7/2012 - 6/2013 (Pre-Implementation)	72	2.0	74	2.1	78	2.2
All Injuries 7/2013 - 12/2016 (Transition Period)	53	1.4	54	1.5	60	1.6
All Injuries 1/2017 - 12/2017 (Post-Implementation)	30*	0.8*	32*	0.9*	40*	1.1*
All Injuries 7/2012 -12/2012	76	2.2	79	2.3	79	2.3
All Injuries 1/2013 - 6/2013	68	1.9	69	1.9	77	2.1
All Injuries 7/2013 - 12/2013	51	1.4	54	1.4	60	1.6
All Injuries 1/2014 - 6/2014	79	2.1	79	2.1	84	2.2
All Injuries 7/2014 - 12/2014	56	1.6	56	1.6	64	1.8
All Injuries 1/2015 - 6/2015	66	1.8	66	1.8	72	2.0
All Injuries 7/2015 - 12/2015	52	1.4	53	1.5	57	1.6
All Injuries 1/2016 - 6/2016	41	1.1	41	1.1	49	1.4
All Injuries 7/2016 - 12/2016	39	1.1	41	1.1	48	1.3
All Injuries 1/2017 - 6/2017	38	1.1	38	1.1	46	1.3
All Injuries 7/2017 - 12/2017	23*	0.6*	26*	0.7*	35*	1.0*
Ingestions 7/2012 - 6/2013 (Pre-Implementation)	58	1.6	58	1.6	58	1.6
Ingestions 7/2013 - 12/2016	39	1.1	39	1.1	40	1.1

(Transition Period)						
Ingestions 1/2017 - 12/2017 (Post-Implementation)	22*	0.6*	22*	0.6*	23*	0.6*
Ingestions 7/2012 - 12/2012	60	1.7	60	1.7	60	1.7
Ingestions 1/2013 - 6/2013	55	1.5	55	1.5	55	1.5
Ingestions 7/2013 - 12/2013	37	1.0	37	1.0	40	1.1
Ingestions 1/2014 - 6/2014	54	1.4	54	1.4	54	1.4
Ingestions 7/2014 - 12/2014	40	1.1	40	1.1	40	1.1
Ingestions 1/2015 - 6/2015	56	1.5	56	1.5	59	1.6
Ingestions 7/2015 - 12/2015	37	1.0	37	1.0	39	1.1
Ingestions 1/2016 - 6/2016	28*	0.8*	28*	0.8*	30*	0.8*
Ingestions 7/2016 - 12/2016	30	0.8*	30	0.8*	30*	0.8*
Ingestions 1/2017 - 6/2017	29*	0.8*	29*	0.8*	31*	0.9*
Ingestions 7/2017 - 12/2017	**	**	**	**	**	**
Ing./Ocular 7/2012 - 6/2013 (Pre-Implementation)	72	2.0	74	2.1	77	2.1
Ing./Ocular 7/2013 - 12/2016+ (Transition Period)	52	1.4	53	1.4	57	1.5
Ing./Ocular 1/2017 - 12/2017 (Post-Implementation)	30*	0.8*	31*	0.9*	38*	1.1*
Ing./Ocular 7/2012 - 12/2012	76	2.2	79	2.3	79	2.3
Ing./Ocular 1/2013 - 6/2013	68	1.9	68	1.9	74	1.9
Ing./Ocular 7/2013 - 12/2013	51	1.3	53	1.4	59	1.4
Ing./Ocular 1/2014 - 6/2014	77	2.1	78	2.1	81	2.1
Ing./Ocular 7/2014 - 12/2014+	52	1.5	53	1.5	58	1.6
Ing./Ocular 1/2015 - 6/2015	65	1.7	65	1.8	69	1.8
Ing./Ocular 7/2015 - 12/2015	50	1.4	50	1.4	54	1.4
Ing./Ocular 1/2016 - 6/2016	42	1.2	42	1.2	44	1.2
Ing./Ocular 7/2016 - 12/2016	38	1.0*	40	1.1*	46	1.1
Ing./Ocular 1/2017 - 6/2017	38	1.1	38	1.1	44	1.2
Ing./Ocular 7/2017 - 12/2017	22*	0.6*	25*	0.7*	32*	0.9*

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

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

+Case counts and estimates revised to account for a double counted case in the transition period report. Estimates for the baseline reporting period are shaded in gray, estimates for the post-implementation period are bolded.

Figure 1. All Est. Emergency Department-Visit Rates by Unit and Total Number of Packets Sold

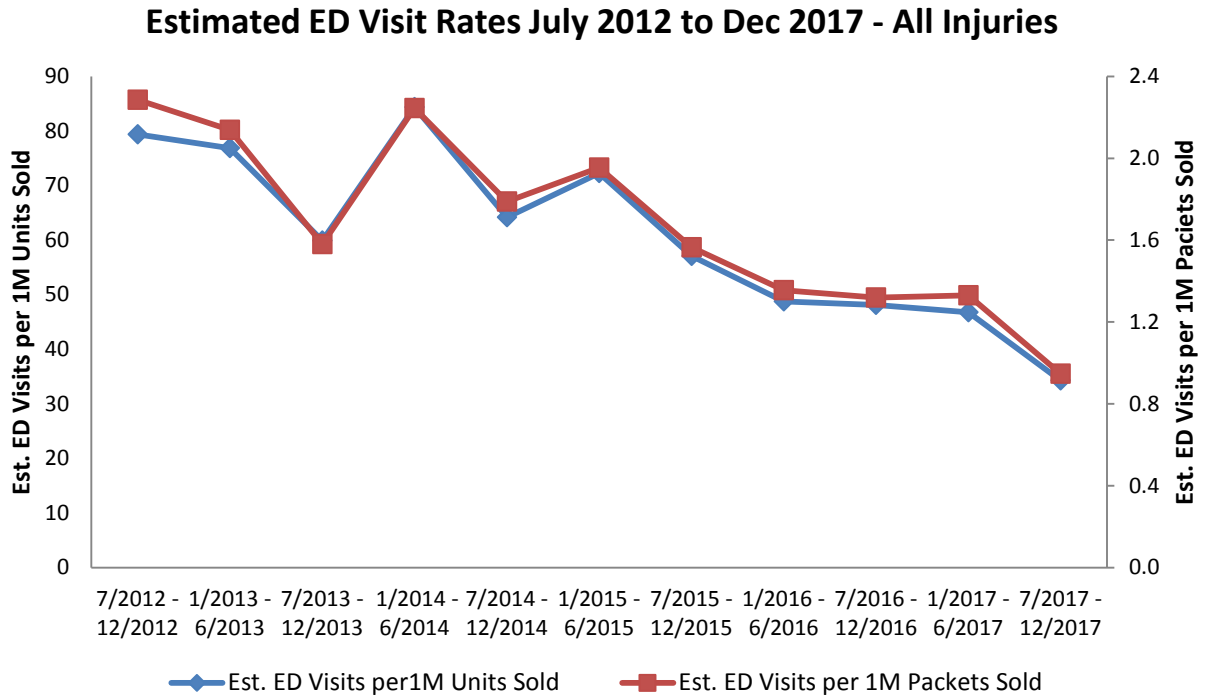
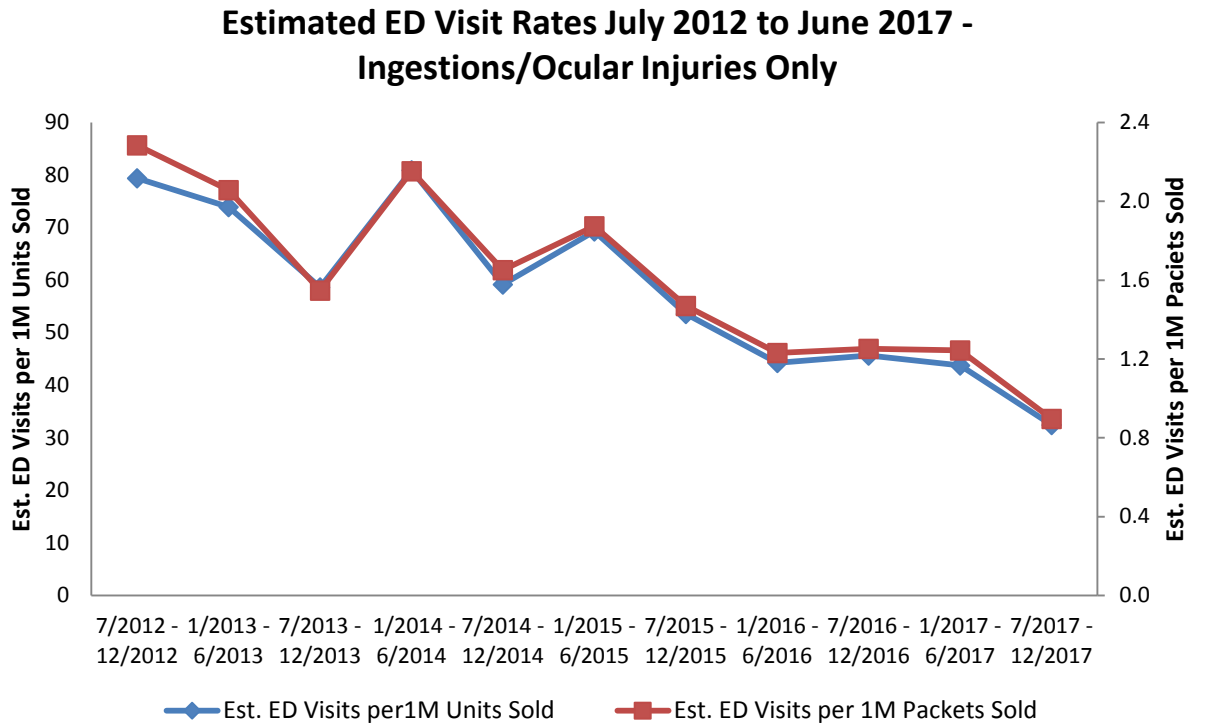


Figure 2. Est. Emergency Dept.-Visit Rates by Unit and Total Number of Packets Sold (Ingestions/Ocular)



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.²

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)	19.939	24.069	315.071
7/2013 -12/2016 (Transition Period)	19.906	23.944	320.234
1/2017 – 12/2017 (Post-Implementation)	19.972	23.978	325.294
7/2012 - 12/2013	19.969	24.102	314.548
1/2013 - 06/2013	19.909	24.035	315.595
7/2013 - 12/2014	19.856	23.962	316.758
1/2014 - 6/2014	19.875	23.917	317.909
7/2014 - 12/2015	19.905	23.899	319.137
1/2015 - 6/2015	19.926	23.930	320.262
7/2015 - 12/2016	19.922	23.956	321.428
1/2016 - 6/2016	19.925	23.973	322.486
7/2016 - 12/2016	19.936	23.969	323.655
1/2017 – 6/2017	19.962	23.972	324.716
7/2017 – 12/2017	19.981	23.984	325.872

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

Table 5 combines the unrounded emergency department-visit estimates used to produce Table 1, 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). The differences in population-adjusted injury rates between 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.

² The Monthly Postcensal Resident Population counts can be found at: <https://www.census.gov/data/tables/2017/demo/popest/nation-detail.html>.

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

Injury and time period	Under Age 5	Under Age 6	All Ages
All Injuries 7/2012 - 6/2013 (Pre-Implementation)	210.6	178.4	14.4
All Injuries 7/2013 - 12/2016 (Transition Period)	906.7	765.5	63.5
All Injuries 1/2017 - 12/2017 (Post-Implementation)	197.2	174.0	16.3
All Injuries 7/2012 -12/2012	114.9	98.3	7.6
All Injuries 1/2013 - 6/2013	95.1	79.8	6.8
All Injuries 7/2013 - 12/2013	91.4	79.1	6.6
All Injuries 1/2014 - 6/2014	147.1	123.3	9.8
All Injuries 7/2014 - 12/2014	142.3	119.2	10.0
All Injuries 1/2015 - 6/2015	143.8	121.1	10.0
All Injuries 7/2015 - 12/2015	142.3	119.4	9.6
All Injuries 1/2016 - 6/2016	111.5	92.7	8.1
All Injuries 7/2016 - 12/2016	128.4	110.9	9.9
All Injuries 1/2017 - 6/2017	119.0	99.5	9.0
All Injuries 7/2017 - 12/2017	78.3	74.5	7.3
Ingestions 7/2012 - 6/2013 (Pre-Implementation)	165.5	139.2	10.6
Ingestions 7/2013 - 12/2016 (Transition Period)	672.7	559.3	42.7
Ingestions 1/2017 - 12/2017 (Post-Implementation)	145.2	122.0	9.2
Ingestions 7/2012 - 12/2012	90.1	75.3	5.8
Ingestions 1/2013 - 6/2013	75.3	63.9	4.9
Ingestions 7/2013 - 12/2013	67.1	55.6	4.3
Ingestions 1/2014 - 6/2014	101.5	84.3	6.3
Ingestions 7/2014 - 12/2014	100.1	83.4	6.3
Ingestions 1/2015 - 6/2015	127.4	106.1	8.0
Ingestions 7/2015 - 12/2015	100.8	83.9	6.5
Ingestions 1/2016 - 6/2016	74.5	61.9	4.9
Ingestions 7/2016 - 12/2016	101.2	84.2	6.3
Ingestions 1/2017 - 6/2017	92.3	76.8	5.9
Ingestions 7/2017 - 12/2017	**	**	**
Ing./Ocular 7/2012 - 6/2013 (Pre-Implementation)	210.0	178.2	14.1
Ing./Ocular 7/2013 - 12/2016* (Transition Period)	882.5	745.4	60.2
Ing./Ocular 1/2017 - 12/2017 (Post-Implementation)	195.1	172.2	15.3
Ing./Ocular 7/2012 - 12/2012	114.9	98.3	7.6
Ing./Ocular 1/2013 - 6/2013	95.1	79.8	6.6
Ing./Ocular 7/2013 - 12/2013	90.3	78.2	6.5

Ing./Ocular 1/2014 - 6/2014	142.7	119.7	9.4
Ing./Ocular 7/2014 - 12/2014*	130.9	109.7	9.0
Ing./Ocular 1/2015 - 6/2015	143.8	121.1	9.6
Ing./Ocular 7/2015 - 12/2015	135.9	114.2	9.1
Ing./Ocular 1/2016 - 6/2016	111.1	92.3	7.3
Ing./Ocular 7/2016 - 12/2016	127.7	110.4	9.4
Ing./Ocular 1/2017 - 6/2017	118.5	99.1	8.4
Ing./Ocular 7/2017 - 12/2017	76.6	73.1	6.9

+Case counts and estimates revised to account for a double counted case in the transition period report.

**Does 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.

Injury Severity

Table 6 shows the disposition for all of the injuries seen in the baseline period (July 2012 to June 2013). The treated-and-released category was the only one large enough to produce a publishable NEISS estimate. Therefore, only percentages are shown.

Table 6. Disposition of Estimated Emergency-Department Visits Associated with Liquid Laundry Packets for Children Under Age 5 and Under Age 6 July 2012 to June 2013

Disposition	Under Age 5	Under Age 6	All Ages ⁺
Treated and Released	82%	83%	84%
Admitted, Transferred	12%	11%	11%
Held for Observation	3%	3%	3%
Left Without Being Seen	3%	3%	3%

⁺Percentages may not round to totals due to rounding.

Table 7 shows the disposition for all of the injuries seen in the transition period (July 2013 to December 2016). The treated-and-released and admitted/transferred categories were the only ones large enough to produce a publishable NEISS estimate. Therefore, only percentages are shown. The changes between the baseline and transition periods are not statistically significant.

Table 7. Disposition of Estimated Emergency-Department Visits Associated with Liquid Laundry Packets for Children Under Age 5 and Under Age 6 July 2013 to December 2016

Disposition	Under Age 5 ⁺	Under Age 6 ⁺	All Ages
Treated and Released	88%	88%	89%
Admitted, Transferred	8%	8%	8%
Held for Observation	2%	2%	2%
Left Without Being Seen	1%	1%	1%

⁺Percentages may not round to totals due to rounding.

Table 8 shows the disposition for all of the injuries seen in the transition period (January 2017 to December 2017). The treated-and-released category was the only one large enough to produce a publishable NEISS estimate. Therefore, only percentages are shown. The decline in the proportion of emergency department visitors that were admitted to the hospital or transferred showed a statistically significant decline for each age group.

Table 8. Disposition of Estimated Emergency-Department Visits Associated with Liquid Laundry Packets for Children Under Age 5 and Under Age 6 January 2017 to December 2017

Disposition	Under Age 5	Under Age 6 ⁺	All Ages ⁺
Treated and Released	91%	92%	93%
Admitted, Transferred	3%	3%	2%
Held for Observation	2%	2%	1%
Left Without Being Seen	4%	4%	3%

⁺Percentages may not round to totals due to rounding.

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 one fatality in the post-implementation period January 2017 to December 2017 (an elderly man who reportedly lacked full mental capacity and may have been exposed to outdated packaging who ingested a liquid laundry packet).

Sincerely,

Stephen Hanway
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Cc: Patricia L. Edwards, CPSC Voluntary Standards Coordinator