



Female	270	6,307	61.1	(55.8 - 66.4)	126	2,511	31.9	(24.3 - 39.5)	250	4,347	58.9	(50.7 - 67.1)	34	431	37.1	(20.1 - 54)
Male	184	4,012	38.9	(33.6 - 44.2)	306	5,359	68.1	(60.5 - 75.7)	167	3,035	41.1	(32.9 - 49.3)	59	733	62.9	(46 - 79.9)
<b>Disposition<sup>d</sup></b>																
Hospitalized	38	912	8.8	(5.9 - 11.8)	152	2,385	30.3	(21.1 - 39.6)	341	5,649	76.5	(68.9 - 84.2)	17	--	--	--
Treated/released or left against medical advice	416	9,407	91.2	(88.2 - 94.1)	278	5,427	69.0	(58.7 - 79.2)	76	1,733	23.5	(15.8 - 31.1)	76	1,003	86.2	(75.2 - 97.3)
<b>Type of Nonmedical Use</b>																
Abuse	NA	NA	NA	NA	273	4,929	62.6	(54.5 - 70.7)	NA	NA	NA	NA	NA	NA	NA	NA
Misuse	NA	NA	NA	NA	62	1,200	15.2	(10.7 - 19.8)	NA	NA	NA	NA	NA	NA	NA	NA
Overdose without indication of intent	NA	NA	NA	NA	97	1,740	22.1	(14.6 - 29.6)	NA	NA	NA	NA	NA	NA	NA	NA
<b>No. of Implicated Medications</b>																
1	345	7,959	77.1	(72.2 - 82)	321	5,721	72.7	(66.2 - 79.2)	187	3,143	42.6	(37.5 - 47.7)	85	1,065	91.5	(78.2 - 100)
2	85	1,873	18.2	(13.8 - 22.5)	72	1,359	17.3	(11.4 - 23.1)	122	2,364	32.0	(25 - 39)	5	--	--	--

3	11	--	--	--	24	602	7.6	(4.2 - 11.1)	66	1,094	14.8	(9.8 - 19.8)	2	--	--	--
4 or more	13	--	--	--	15	--	--	--	42	781	10.6	(6.4 - 14.7)	1	--	--	--
<b>Total</b>	<b>454</b>	<b>10,319</b>	<b>100.0</b>		<b>432</b>	<b>7,870</b>	<b>100.0</b>		<b>417</b>	<b>7,382</b>	<b>100.0</b>		<b>93</b>	<b>1,164</b>	<b>100.0</b>	

CI = confidence interval. NA = not applicable.

<sup>a</sup>Estimates are from the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance project, Centers for Disease Control and Prevention. Estimates based on <20 cases or total estimates <1200 for the study period are considered statistically unstable and are not shown (--).

<sup>b</sup>Nonmedical use includes abuse (clinician diagnosis of abuse or documentation of recreational use), misuse (using medication for symptom relief, but not using medication as directed), and overdoses without documentation of therapeutic intent, misuse, abuse, or self-harm.

<sup>c</sup>Coefficient of variation >30%.

<sup>d</sup>Missing for 2 cases of ED visits for harms from nonmedical CCM use.

**Supplement 2. Concurrent Substances Commonly Involved in Emergency Department (ED) Visits for Over-the-Counter (OTC) Cough and Cold Medication (CCM)-related Harms, 2017-2019<sup>a</sup>**

Concurrent substance <sup>b</sup>	Therapeutic Use				Nonmedical Use <sup>c</sup>				Self-harm using CCMs			
	Cases	Annual Estimate			Cases	Annual Estimate			Cases	Annual Estimate		
	No.	No.	%	95% CI	No.	No.	%	95% CI		No.	%	95% CI
<b>OTC cough and cold medications alone</b> (without other medications, illicit drugs, or alcohol)	356	8,184	79.3	(74.3 - 84.3)	177	3,042	38.7	(30.0 - 47.3)	114	1,779	24.1	(17.5 - 30.6)
<b>OTC cough and cold medications with other medications</b> (Alcohol and illicit drugs may also be involved)	91	1,931	18.7	(13.9 - 23.6)	104	2,051	26.1	(19.4 - 32.7)	220	4,050	54.9	(49.3 - 60.5)
Antibiotics	22	525	5.1	(2.7 - 7.5)	2	--	--	--	7	--	--	--
Non-opioid acetaminophen-containing analgesics	6	--	--	--	8	--	--	--	72	1,229	16.6	(12.7 - 20.6)
Antihistamines	17	--	--	--	18	--	--	--	51	1,020	13.8	(10.1 - 17.5)
Antidepressants	11	--	--	--	6	--	--	--	29	582	7.9	(4.2 - 11.5)
Benzodiazepines	4	--	--	--	36	862	11.0	(6.0 - 15.9)	22	569	7.7	(4.2 - 11.2)
Non-steroidal anti-inflammatory drugs (NSAIDs)	6	--	--	--	4	--	--	--	57	872	11.8	(9.3 - 14.4)
Prescription opioids	2	--	--	--	19	--	--	--	18	--	--	--
Other classes of medications	31	622	6.0	(3.7 - 8.4)	27	447	5.7	(2.5 - 8.8)	34	611	8.3	(4.2 - 12.3)
<b>OTC cough and cold medications with alcohol</b> (Other medications and illicit drugs may also be involved)	8	--	--	--	79	1,637	20.8	(15.0 - 26.7)	81	1,823	24.7	(17.8 - 31.6)

<b>OTC cough and cold medications with illicit drugs</b> Other medications and alcohol may also be involved)	4	--	--	--	165	3,079	39.1	(28.4 - 49.9)	108	2,017	27.3	(22.5 - 32.1)
Marijuana	2	--	--	--	103	1,910	24.3	(15.3 - 33.2)	78	1,449	19.6	(15.5 - 23.7)
Illicit opioids (heroin, fentanyl, unspecified opioids)	0	--	--	--	36	614 <sup>d</sup>	7.8	(3.3 - 12.3)	14	--	--	--
Illicit stimulants (cocaine, methamphetamine, unspecified amphetamines)	0	--	--	--	52	1,067	13.6	(8.8 - 18.4)	27	577	7.8	(4.5 - 11.2)
<sup>a</sup> Estimates are from the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance project, Centers for Disease Control and Prevention. Estimates based on <20 cases or total estimates <1200 for the study period are considered statistically unstable and are not shown (--). ED visits for unsupervised pediatric CCM exposures are not shown (1,164 estimated visits annually).												
<sup>b</sup> Illicit drugs include specified illicit substances (e.g., heroin, cocaine), as well as unspecified opioids and unspecified amphetamines (e.g., documentation of opioid ingestion, but unclear whether prescription opioids or illicit opioids were taken).												
<sup>c</sup> Nonmedical use includes abuse (clinician diagnosis of abuse or documentation of recreational use), misuse (using medication for symptom relief, but not using medication as directed), and overdoses without documentation of therapeutic intent, misuse, abuse, or self-harm.												
<sup>d</sup> Coefficient of variation >30%.												

**Supplement 3. National Estimates of Emergency Department (ED) Visits for Harms Attributed to Over-the-Counter (OTC) Cough and Cold Medications (CCMs), by Clinical Manifestations and Concurrent Substance Use, 2017-2019<sup>a</sup>**

Manifestations <sup>b</sup>	OTC CCMs Only				OTC CCMs with Other Substances			
	Cases	Annual Estimate			Cases	Annual Estimate		
	No.	No.	%	95% CI	No.	No.	%	95% CI
Severe allergic reaction	48	1,049	7.4	(4.8 - 10.0)	9	--	--	--
Altered mental status/unresponsiveness	126	2,207	15.6	(11.9 - 19.4)	214	4,301	34.1	(27.7 - 40.5)
Presyncope/syncope/fall/injury	59	1,305	9.2	(6.5 - 12.0)	37	637	5.0	(2.7 - 7.4)
Psychiatric or other central nervous system effect	61	1,358	9.6	(6.5 - 12.8)	33	677	5.4	(3.3 - 7.4)
Cardiovascular effect	44	1,207	8.6	(5.6 - 11.5)	27	556	4.4	(2.5 - 6.3)
Mild-to-moderate allergic reaction	112	2,514	17.8	(13.1 - 22.5)	21	--	--	--
Other effect	48	842	6.0	(3.5 - 8.4)	41	767	6.1	(3.9 - 8.2)
Increased drug level only	11	--	--	--	37	676	5.4	(3.7 - 7)
No documented clinical manifestations	224	3,484	24.7	(19.0 - 30.3)	244	4,383	34.7	(27.6 - 41.9)
<b>Total</b>	<b>733</b>	<b>14,111</b>	<b>100.0</b>		<b>663</b>	<b>12,624</b>	<b>100.0</b>	

CI = confidence interval.

<sup>a</sup>Estimates are from the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance project, Centers for Disease Control and Prevention. Estimates based on <20 cases or total estimates <1200 for the study period are considered statistically unstable and are not shown (--).

<sup>b</sup>Clinical manifestations were categorized in a mutually exclusive and hierarchical manner (e.g., a case involving depressed consciousness and nausea would be classified as altered mental status/unresponsiveness based on the depressed consciousness).