2024

MA & RI POISON CENTER

Serving Massachusetts & Rhode Island

2024 Annual Report:
Massachusetts

2024 Report: January 1, 2024 - December 31, 2024 *(MASSACHUSETTS)*

Purpose

The purpose of this report is to describe the cases that Massachusetts & Rhode Island Poison Center (MARI PC) received for the state of Massachusetts in the year 2024. Quarters are broken down into three-month periods. Details are below. *This specific report focuses on the entire year of 2024 (Q1-Q4).*

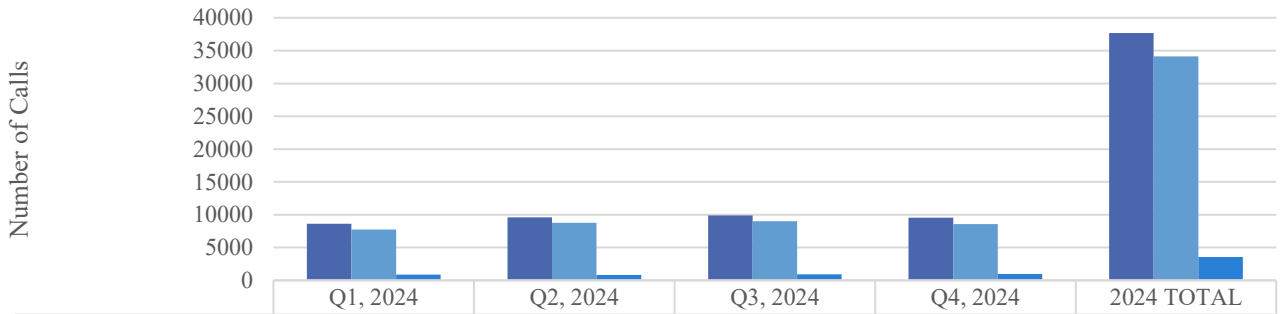
Quarter	Dates
Q1	January 1 – March 31, 2024
Q2	April 1 – June 30, 2024
Q3	July 1 – September 30, 2024
Q4	October 1 – December 31, 2024

Call Volume for MARI PC

The MA & RI Poison Center managed a total of 43,044 incoming calls for both Massachusetts and Rhode Island in 2024 (January 1, 2024 through December 31, 2024). This includes 39,199 exposure calls and 3,845 information calls.

In 2024, the MA & RI Poison Center managed a **total of 37,682 incoming calls for just Massachusetts**. Of those calls, **34,130 were for exposures and 3,552 were for information**. The breakdown of calls per quarter can be found below.

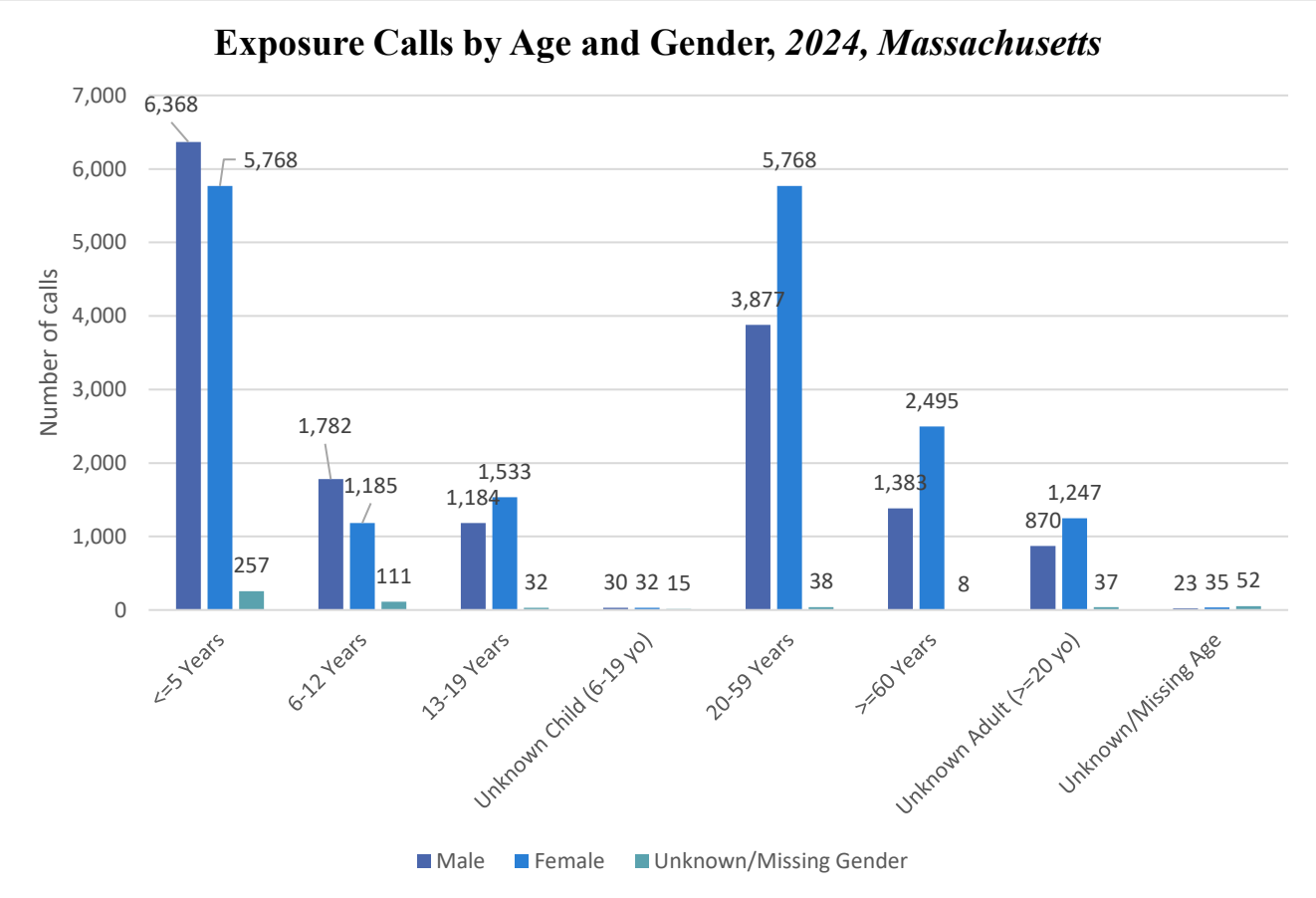
Total Calls by Category per 2024 Quarter for MARI PC, *Massachusetts*



	Q1, 2024	Q2, 2024	Q3, 2024	Q4, 2024	2024 TOTAL
Total Calls	8626	9583	9913	9560	37682
Total Exposure Calls	7765	8766	9011	8588	34130
Total Information Calls	861	817	902	972	3552

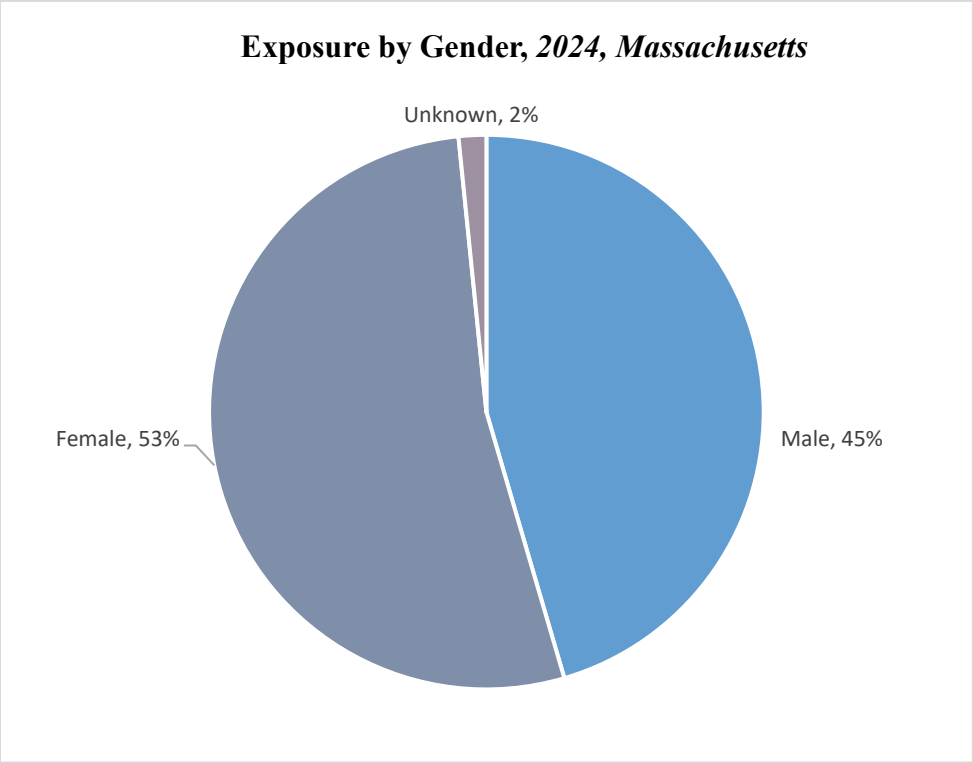
Who Are Poisoned in Exposure Calls?

Most of the Massachusetts exposure calls to MARI PC in 2024 are for children 5 years and under (12,393 total exposure calls). Out of these calls for children 5 years and under, children 2 years of age had the highest number of cases (3,543 calls), followed by children 1 year of age (3,354 calls). Of all the exposure cases, most involved females (52.9%), while 45.5% involved males and 1.6% are unknown/missing gender.



Exposure Calls by Age, 2024, Massachusetts

	Q1, 2024	Q2, 2024	Q3, 2024	Q4, 2024	2024 TOTAL
<=5 years	2747	3186	3293	3167	**12,393**
6-12 years	721	833	744	780	**3,078**
13-19 years	712	742	583	712	**2,749**
20-59 years	2272	2480	2533	2398	**9,683**
>=60 years	889	987	1111	899	**3,886**
Other/ Unknown Age (Includes all ages)	424	538	747	632	**2,341**
Total Exposures	7765	8766	9011	8588	**34,130**

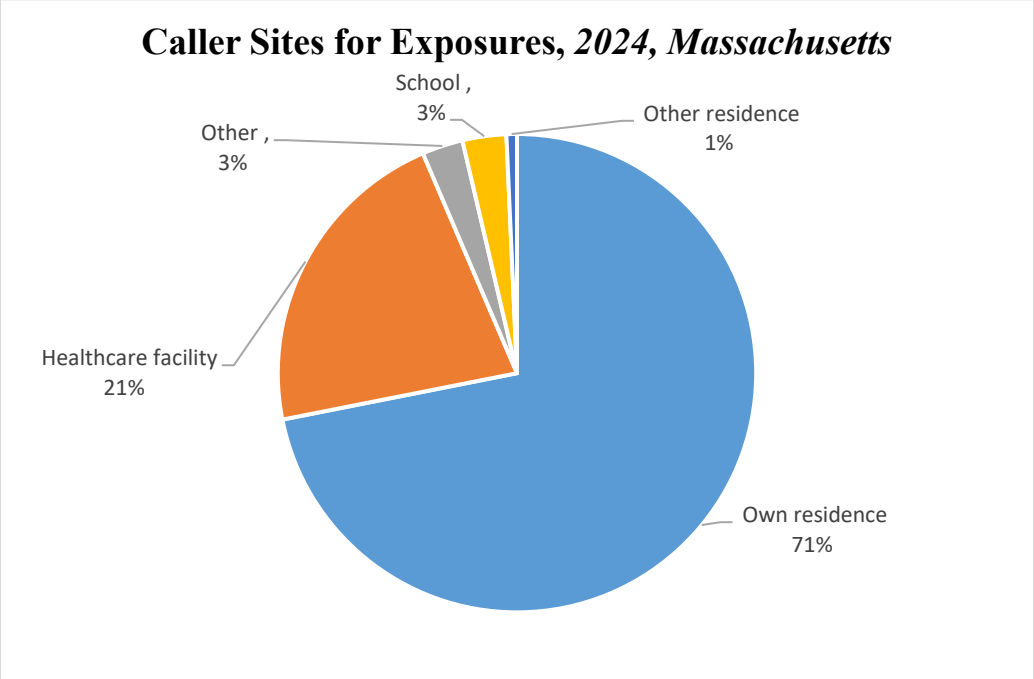


Where Do Poisonings Happen VS. Where Do People Call From?

What's the difference between Caller Site and Exposure Site?

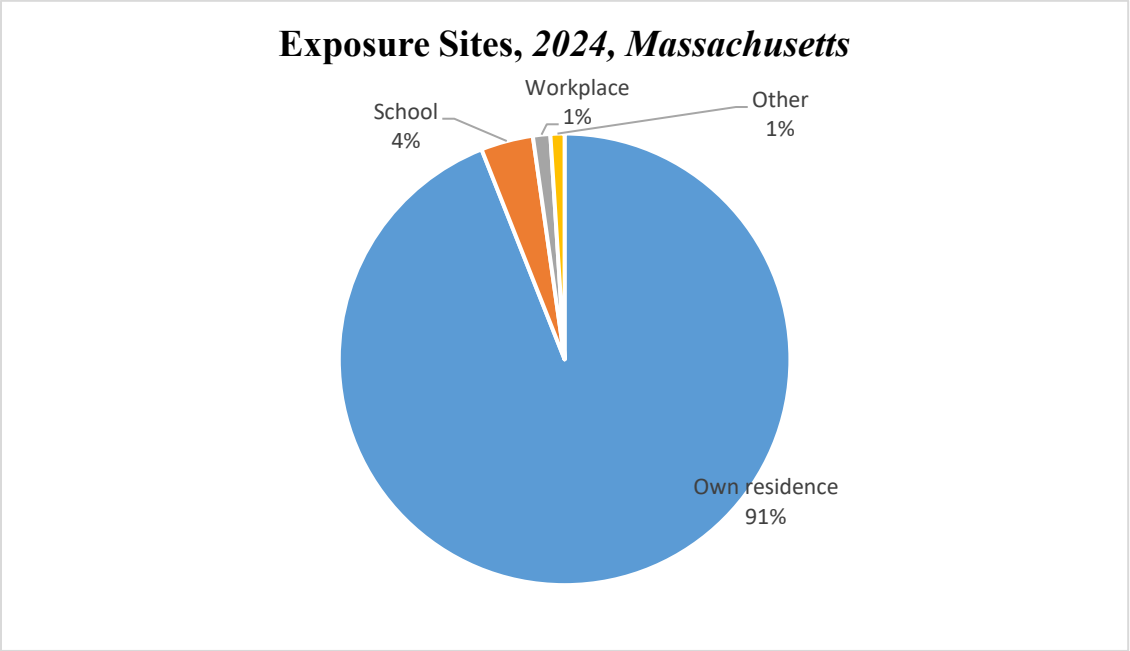
Caller site is the location from where people are calling. Exposure site is where people are exposed to a poison. These two sites may be different or the same. For example, a child may unintentionally take two doses of their medicine at home before going to school. When they get to school, the school nurse calls MARI PC asking for advice. In this circumstance, the caller site is the school, and the exposure site is a home residence.

In 2024, the most common caller site is patients' own residence (n= 24,314, ~71%) followed by health care facility (n=7,329, ~21%).



Caller Sites for Exposures	Q1 2024 Calls (n)	Q2 2024 Calls (n)	Q3 2024 Calls (n)	Q4 2024 Calls (n)	2024 Total
Own residence	5339	6261	6581	6133	**24,314**
Healthcare facility	1782	1887	1865	1795	**7,329**
Other	250	205	221	261	**937**
School	269	255	180	297	**1,001**
Other residence	56	69	74	41	**240**
Workplace	34	53	40	32	**159**
Public area	21	27	36	15	**99**
Unknown	9	8	12	9	**38**
Restaurant / food service	5	1	2	5	**13**
Total	**7765**	**8766**	**9011**	**8588**	**34,130**

Regarding exposure sites in 2024, most individuals were exposed to poisons at their own residence (n= 31,316, 91.76%). There was also a small percentage of exposures at schools (n= 1,247, 3.65%).



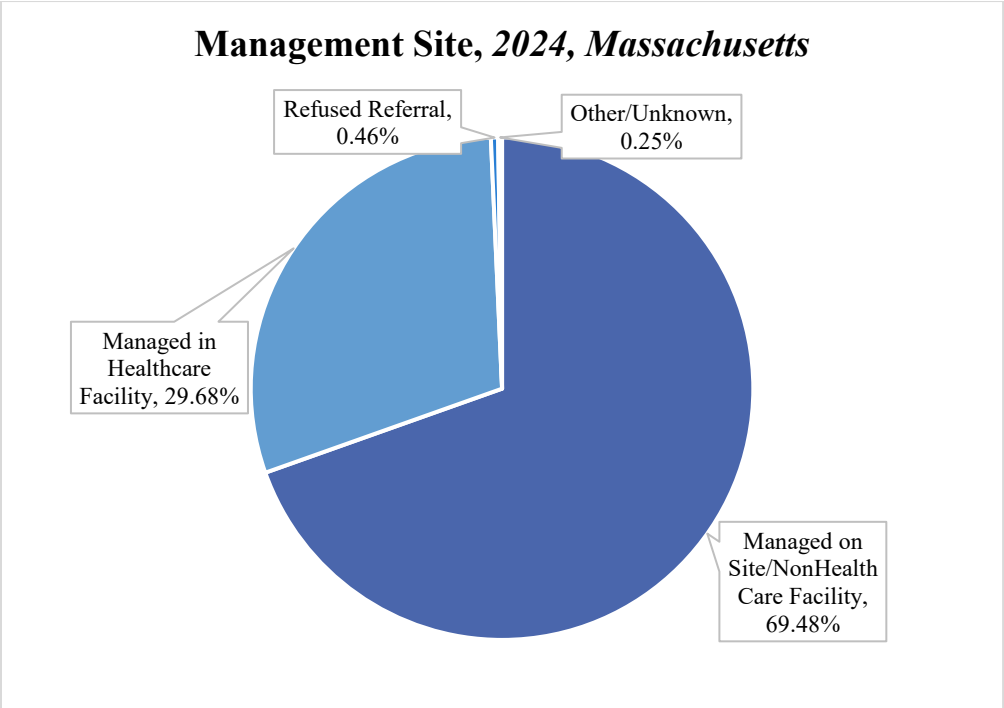
With What Were They Poisoned?

The table below depicts the top ten most common substance exposures in 2024 in Massachusetts. More exposures involved pharmaceutical substances (57.2%) than non-pharmaceutical substances (42.8%).

Most Common Substances	Non-Pharmaceutical	Pharmaceutical
1	Household Cleaners (n=2933)	Analgesics (n=3882)
2	Cosmetics/Personal Care Products (n=2343)	Antidepressants (n=2368)
3	Foreign Bodies/Toys/Miscellaneous (n=2117)	Cardiovascular Drugs (n=1946)
4	Plants (n=1234)	Antihistamines (n=1737)
5	Chemicals (n=1063)	Sedatives/Hypnotics/Antipsychotics (n=1559)
6	Pesticides (n=1030)	Stimulants and Street Drugs (n=1055) **&** Topical Preparations (n=1055)
7	Alcohols (n=1006)	Stimulants and Street Drugs (n=1055) **&** Topical Preparations (n=1055)
8	Dietary supplements/herbals/homeopathic (n=863)	Anticonvulsants (n=1034)
9	Arts/Crafts/Office Supplies (n=624)	Vitamins (n=980)
10	Fumes/Gases/Vapors (n=614)	Hormones and Hormone Antagonists (n=926)

Treatment

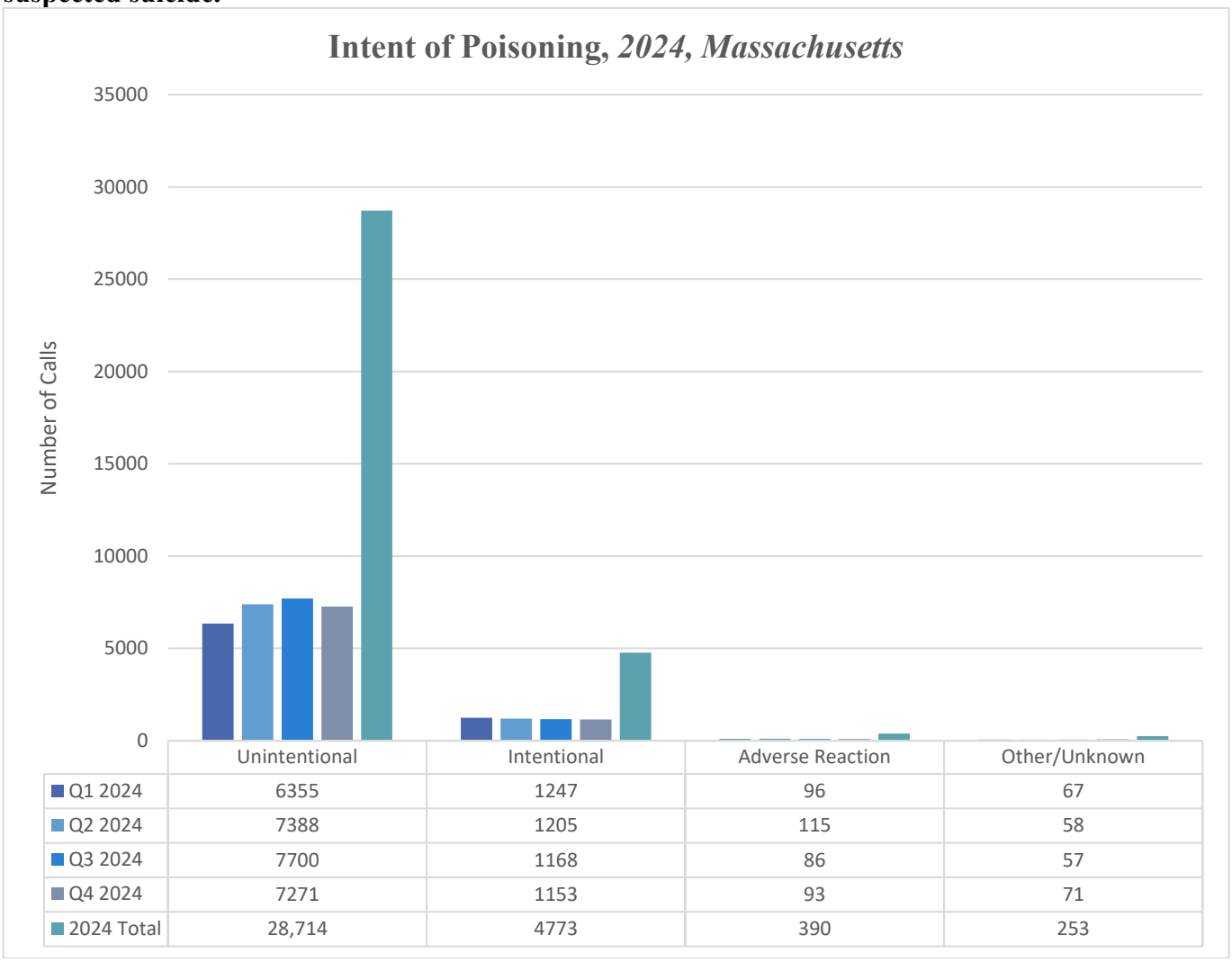
The majority of exposure calls in 2024 were managed on-site (69.5%) and did not require treatment at a health care facility, compared to 26.7% of exposure calls that were treated at a health care facility.



	Q1 2024 Calls (n)	Q2 2024 Calls (n)	Q3 2024 Calls (n)	Q4 2024 Calls (n)	2024 Total (n)
Managed on Site	5201	6133	6324	6056	**23,714**
Managed in Health Care Facility	2497	2546	2605	2482	**10,130**
Refused Referral	29	51	41	36	**157**
Other/Unknown	38	36	41	14	**129**
Total Exposures	7765	8766	9011	8588	**34,130**

What Was the Intent of the Poisoning?

Most poison exposures for 2024 were recorded as unintentional (n = 28,714, 84.7%) and 4,773 cases were classified as intentional (13.4%). **Of the 4,773 intentional calls, 3,452 calls were recorded as suspected suicide.**

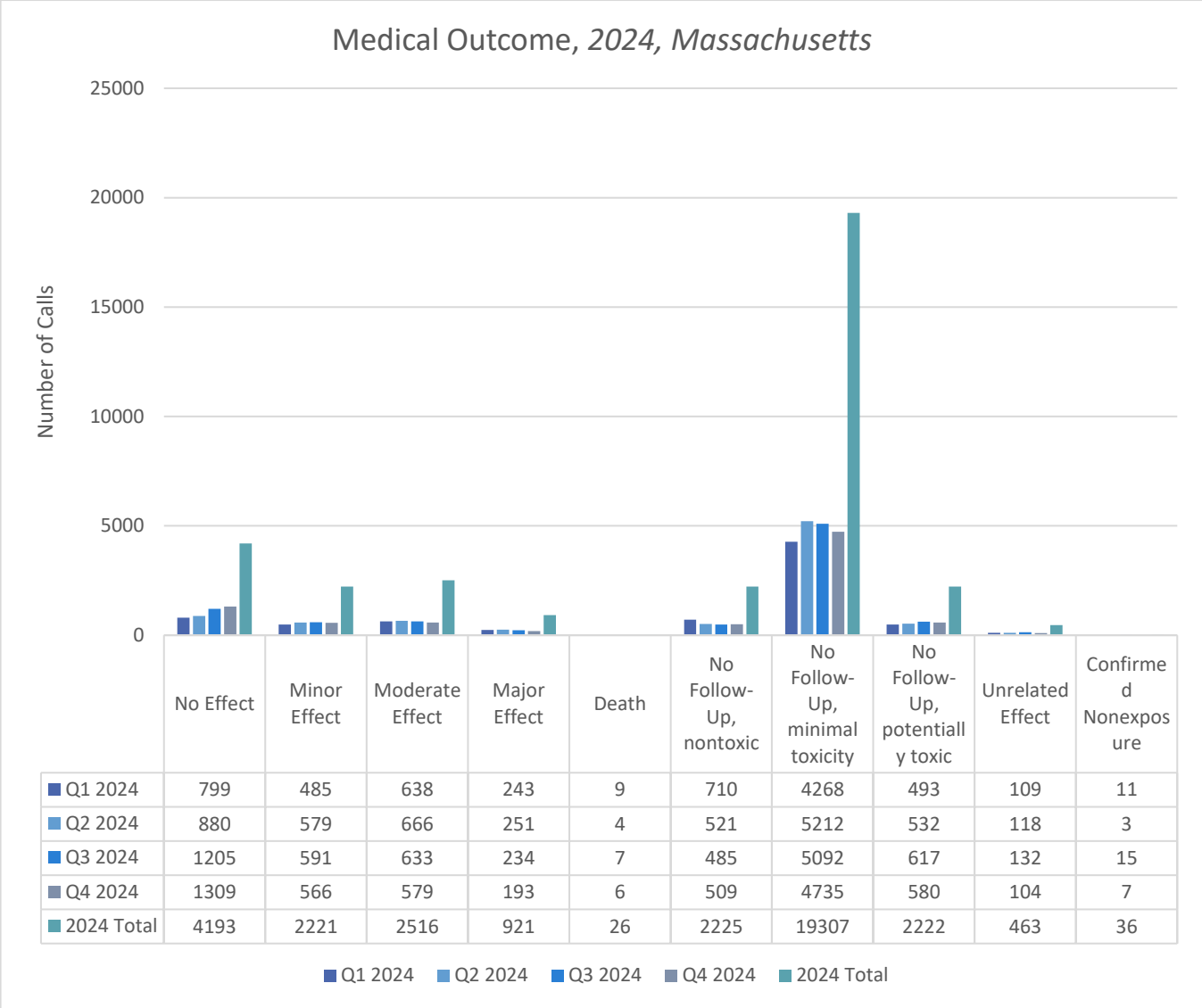


	Unintentional	Intentional	Adverse Reaction	Other/Unknown
Q1 2024	6355	1247	96	67
Q2 2024	7388	1205	115	58
Q3 2024	7700	1168	86	57
Q4 2024	7271	1153	93	71
2024 Total	28,714	4773	390	253

Medical Outcome

The total number of exposures resulting in deaths in 2024 was 26 (.08% of all exposures). 12.3% of total exposures resulted in no effect, 6.5% of exposures were classified as minor effect, 7.4% of exposures were categorized as moderate effect, and 2.7% of exposures were categorized as major effect. There was no follow-up for 6.5% of exposures as they were judged non-toxic. There was no follow-up for 56.6% of exposures that were judged to be minimally toxic nor for 6.5% of exposures that were judged to be potentially toxic.

The following table summarizes the medical outcome categories for 2024.



	No Effect	Minor Effect	Moderate Effect	Major Effect	Death	No Follow-Up, nontoxic	No Follow-Up, minimal toxicity	No Follow-Up, potentially toxic	Unrelated Effect	Confirmed Nonexposure
Q1 2024	799	485	638	243	9	710	4268	493	109	11
Q2 2024	880	579	666	251	4	521	5212	532	118	3
Q3 2024	1205	591	633	234	7	485	5092	617	132	15
Q4 2024	1309	566	579	193	6	509	4735	580	104	7
2024 Total	4193	2221	2516	921	26	2225	19307	2222	463	36

Summary of Death Cases

The data below describes the death cases for the state of Massachusetts in 2024. There were 26 deaths; 18 were intentional (12 being suspected suicide).

Summary of Death Cases, *2024, Massachusetts*					
Quarter	**Age Range**	**Male**	**Female**	**Substance**	**Intent of Poisoning**
1	Unknown Adult		1	Gabapentin	Intentional-suspected suicide
1	30-39 years		1	Tylenol	Intentional – suspected suicide
1	30-39 years		1	Acetaminophen, Effexor, Clozaril, Buspar, trazodone hydrochloride, benztropine mesylate	Intentional – suspected suicide
1	40-49 years		1	Tylenol, ibuprofen, hydroxyzine, ziprasidone	Intentional – suspected suicide
1	60-69 years		1	Propranolol, trazodone, Benadryl allergy, benzodiazepine, lorazepam	Intentional – suspected suicide
1	60-69 years	1		Ethylene glycol	Unknown reason
1	70-79 years		1	Unknown substance unlikely to be a drug	Unknown reason
1	70-79 years		1	Percocet	Intentional – suspected suicide
1	80-89 years	1		Metformin, fenofibrate, pramipexole	Intentional – suspected suicide
2	17 years old		1	Tylenol	Intentional – suspected suicide
2	70-79 years		1	Eliquis, duloxetine	Intentional-suspected suicide
2	80-89 years		1	Amlodipine, metoprolol	Intentional – suspected suicide
2	80-89 years	1		Ativan	Unintentional – general
3	20-29 years	1		Drugs N.O.S., codeine, ethanol (beverage), marijuana: Dried Plant	Adverse reaction - food
3	30-39 years		1	Unknown drug	Intentional – abuse
3	30-39 years	1		Drugs N.O.S., unknown suspicious powder (not otherwise specified)	Intentional – suspected suicide
3	40-49 years		1	Cocaine, fentanyl, drugs N.O.S.	Intentional - unknown
3	50-59 years		1	Acetaminophen	Intentional - misuse
3	50-59 years	1		Marijuana – other or unknown preparation	Intentional - abuse

3	50-59 years	1		Colchicine	Adverse reaction - drug
4	20-29 years	1		Sodium Nitrite	Intentional - Unknown
4	20-29 years	1		Sodium Nitrite	Intentional – suspected suicide
4	50-59 years	1		Acetaminophen	Unintentional - Unknown
4	60-69 years	1		Ethylene Glycol	Intentional - Unknown
4	70-79 years	1		Hydrogen Sulfide	Unintentional - Environment
4	70-79 years		1	Methanol	Unknown - Unknown
	Total	12	14		

Educational Outreach

Material Distribution

The data below reflects the educational materials distributed throughout Massachusetts in 2024. *Please note that numbers are lower due to education coordinator role being vacant.*

Educational Material	2024
English Brochures	400
Spanish Brochures	0
Other Language Brochures	60
English Magnets	450
English Stickers	320
Spanish Stickers	20
Magnifiers	0
Others	0
Total	**1250**

Community Outreach

The data below reflects the community outreach conducted throughout Massachusetts in 2024. *Please note that numbers are lower due to education coordinator role being vacant.*

Date	Event	Location	Attendance total	Type of Engagement	Presenter
n/a	n/a	n/a	n/a	n/a	n/a

Social Media Analytics

The data below reflects the number of interactions the public had with MARI PC's Facebook and X (previously known as Twitter) social media accounts in 2024. *Please note that numbers are lower due to education coordinator role being vacant.*

	X (previously known as Twitter)			Facebook	
	Number of Tweets	Number of Impressions	Number of Current Followers	Page Likes	Followers
2024	7	312	357 (+19)	336	355 (+15)

Data References

Data referenced in this 2024 Massachusetts report was recollected for each quarter in March of 2025 through Toxicall.

Publications

Brown CW, Goldfine CE, Allan-Blitz LT, Erickson TB. Occupational, environmental, and toxicological health risks of mining metals for lithium-ion batteries: a narrative review of the Pubmed database. J Occup Med Toxicol. 2024 Aug 27;19(1):35. doi: 10.1186/s12995-024-00433-6. PMID: 39192280; PMCID: PMC11348589.

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End of Report.