

Indiana State Department of Toxicology

2023 Annual Report



Overview

The Indiana State Department of Toxicology (ISDT) provides forensic toxicology services for the state of Indiana through its laboratory testing and breath test program. ISDT has maintained its ongoing accreditation by ANAB for forensic toxicology testing and breath alcohol calibration since 2019.

Mission: Provide quality testing for alcohol and drugs, a dependable breath test program, expert testimony, and education on the science of forensic toxicology.

Vision: To provide quality forensic toxicology services for the state of Indiana.

Values: All programs in the Department operate with the following values at their core:

Quality

Impartiality

Transparency

Customer Focus

Employee Growth

Budget

The Department's budget is comprised of general fund appropriations, dedicated fund appropriations (from breath test program fees), and, when awarded, federal grants. ISDT's general fund appropriations for state FY23 (July 1, 2022-June 30, 2023) were \$2,760,026, and its dedicated fund appropriations were \$355,000. The Indiana Criminal Justice Institute (ICJI) awarded ISDT \$902,278 in National Highway Traffic Safety Administration grant funds for federal fiscal year 2023 (October 1, 2022-September 30, 2023). These funds were used for reduction of ISDT's laboratory case backlog/turnaround times, the purchase of supplies, equipment, and instruments, and salary and benefits for a Forensic Scientist and an Analytical Laboratory Supervisor.

Table 1: Department of Toxicology Funding

Fund	Amount
General fund	\$2,760,026
Dedicated fund	\$355,000
Grant fund	\$902,278
Total	\$4,017,304

The Indiana State Budget Committee approved an additional \$1,835,658 in funding to ISDT for laboratory and office renovations and the purchase of additional equipment. The projects associated with this funding will occur in 2024.

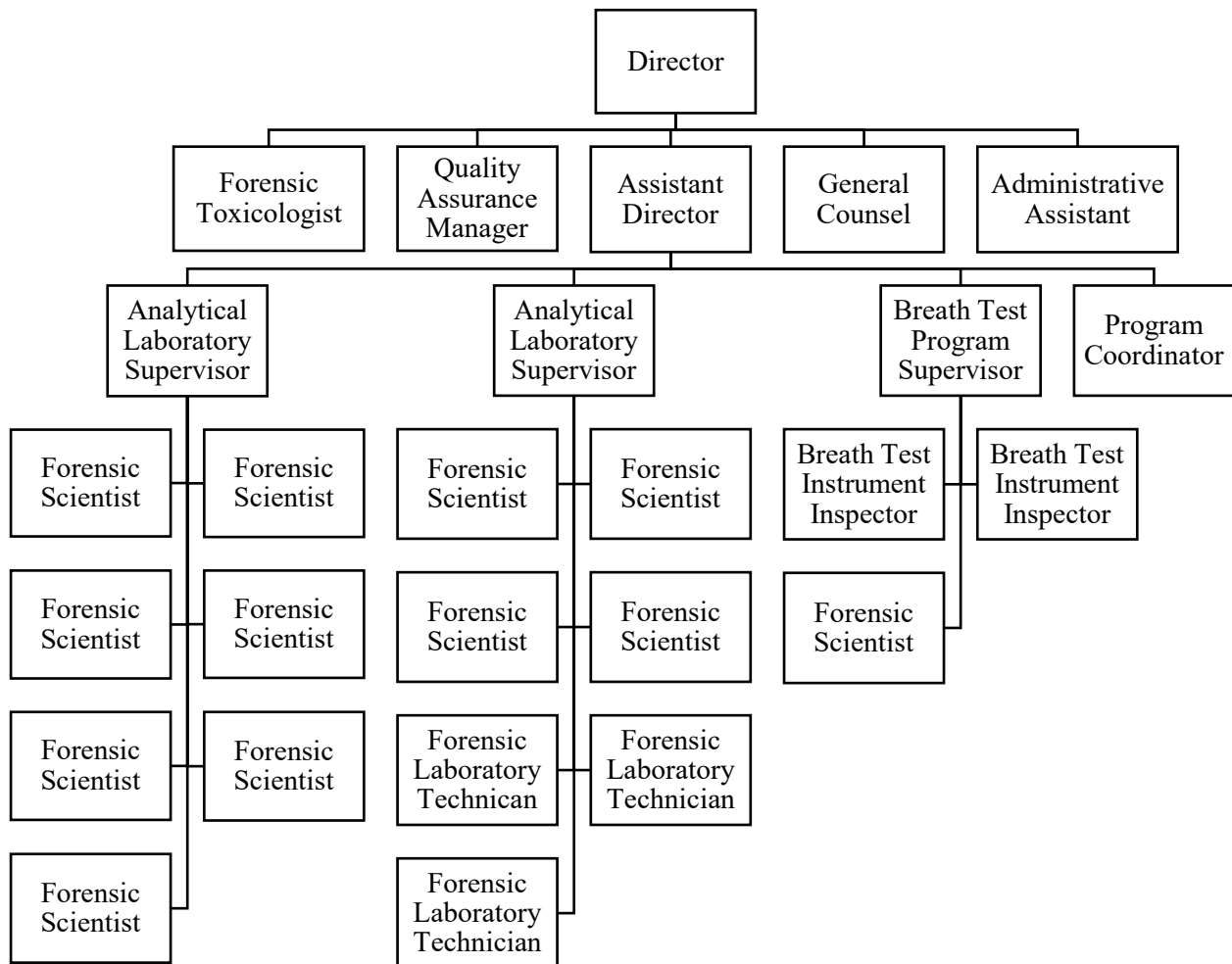
Staffing

ISDT ended 2023 with 23 of its 27 positions filled, as detailed in **Table 2**. See **Figure 1: ISDT Organizational Chart**. ISDT will receive additional funding in 2024 to hire three additional Forensic Scientists (two for the laboratory and one for the breath test program).

Table 2: Department of Toxicology Staffing as of 12/31/23

Position	Staff	Position	Staff
Director	1	Analytical Lab Supervisor	2
Assistant Director	1	Forensic Scientist- Lab	11
Forensic Toxicologist	1	Forensic Laboratory Technician	3 (2 vacant)
General Counsel	1	Breath Test Program Supervisor	1
Quality Assurance Manager	1	Breath Test Instrument Inspector	2
Program Coordinator	1	Forensic Scientist- Breath Test	1 (vacant)
Administrative Assistant	1 (1 vacant)		

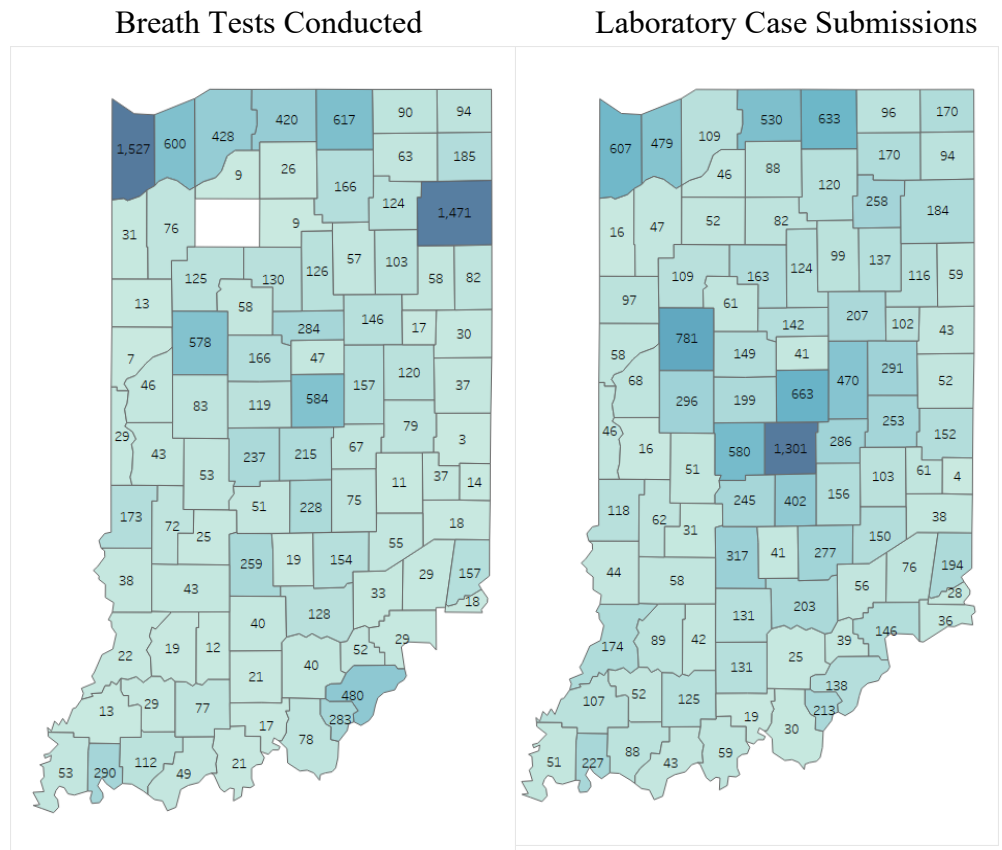
Figure 1: ISDT Organizational Chart



Customers

The maps in **Figure 2** show the numbers by county for completed evidentiary breath tests administered and cases submitted to ISDT for laboratory analysis in 2023. By statute all evidentiary breath tests are required to be performed on instruments certified by ISDT; consequently, the numbers of breath tests listed here account for all evidentiary breath tests conducted in the state last year. The numbers listed for laboratory submissions, however, only account for cases submitted to ISDT, as law enforcement agencies may have testing done by laboratories other than ISDT (e.g., private laboratories, other public laboratories, hospitals).

Figure 2: Maps of breath tests conducted and laboratory submissions



Testimony

In 2023, the Department received over 1,000 subpoenas and ISDT personnel provided testimony 86 times. Testimony includes depositions and court appearances related to laboratory testing, breath test program procedures, and interpretation of laboratory and breath test results.

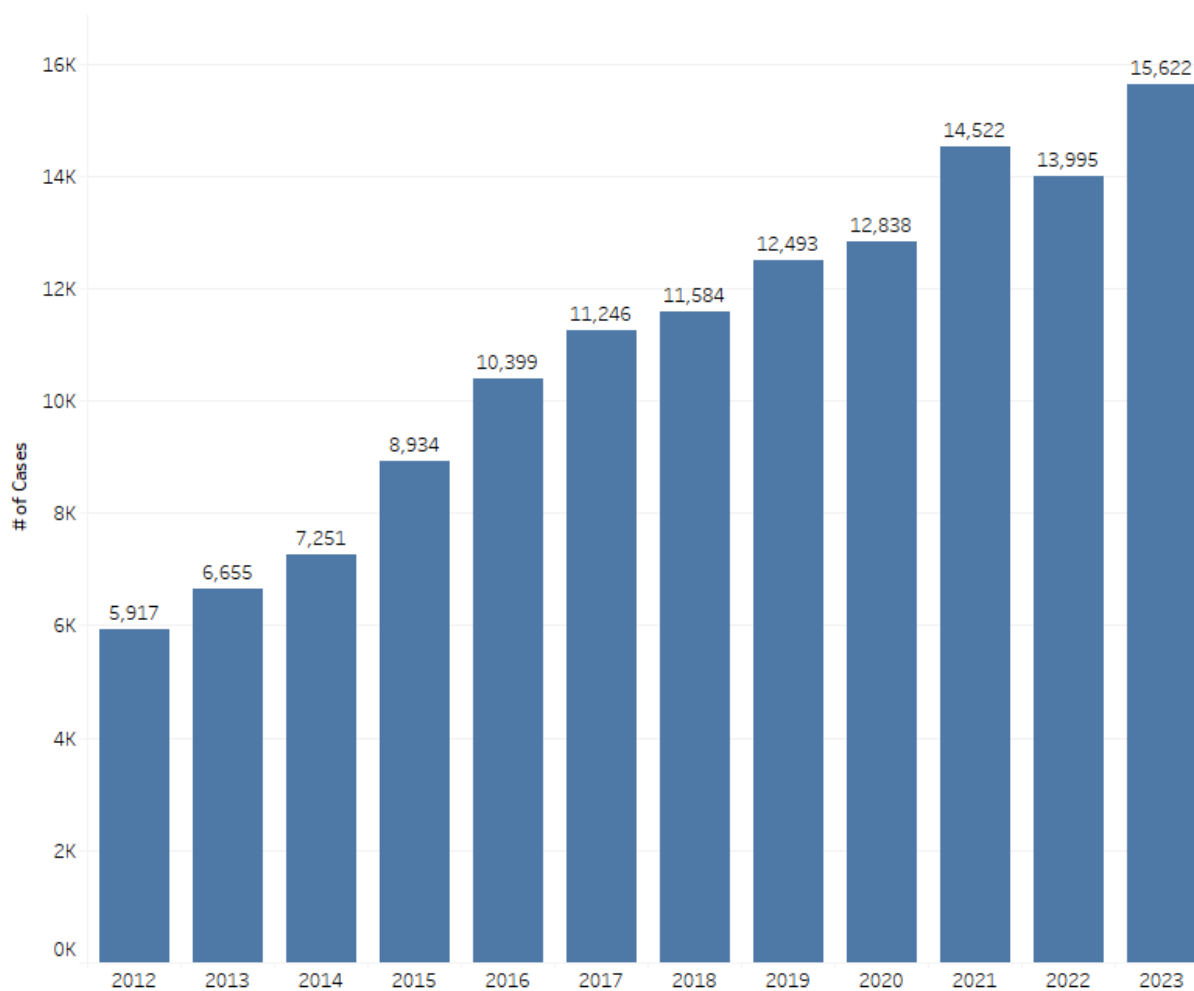
Analytical Laboratory Services

ISDT analyzed blood specimens submitted by 464 agencies in 2023. Submissions were received from coroners, town marshals, and state and local law enforcement agencies. Most agencies submit specimens for analysis in evidence collection kits provided by the Department. Agencies may submit evidence for alcohol analysis, drug analysis, or both. Numbers of case submissions received each year since ISDT became a state agency are shown in **Figure 3**.

In order to decrease turnaround times for all laboratory submissions and allow focus of resources where the need is most critical, ISDT implemented a stop-testing policy, effective July 1, 2023, for non-fatal/serious bodily injury traffic-related cases. Under the policy, where both alcohol and drug testing are requested, the drug testing request is canceled if the subject alcohol test result is ≥ 0.10 g/100 mL.

Figure 3: Laboratory Case Submissions

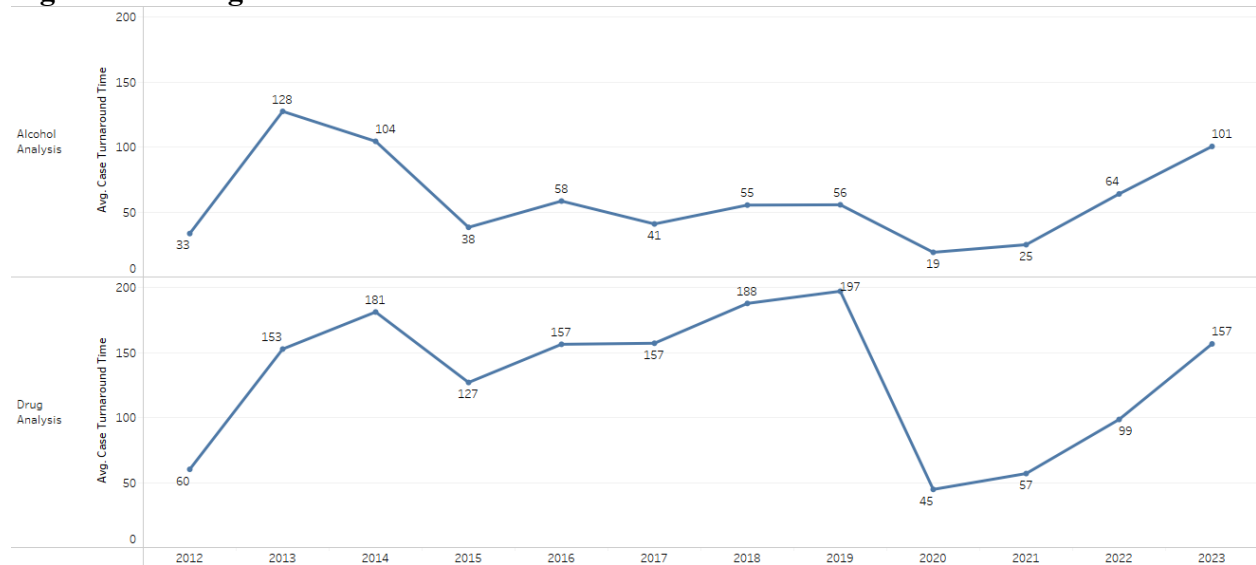
Note: values may differ from previous Annual Reports due to changes in methodology used in data compilation.



Cases submitted in 2023 included 12,442 requests for alcohol analysis and 9,476 requests for drug analysis, for a total of 21,918 testing requests.

ISDT defines turnaround time as the time from receipt of evidence to the date of the toxicology report. In 2023, the average turnaround time was 101 days for alcohol analysis and 157 days for drug analysis, as shown in **Figure 4**. Average turnaround times increased in 2023 due to many factors; primarily increased caseload, Forensic Scientists in training, and implementation of changes to testing policies and workflows to add efficiencies expected to result in decreased turnaround times in 2024.

Figure 4: Average Case Turnaround Time



ISDT completed 11,232 requests for alcohol analysis and 6,867 requests for drug analysis in 2023, as shown in **Figure 5** and **Figure 6**, respectively. All alcohol analysis is completed by ISDT staff, while some drug analysis is outsourced.

Figure 5: Number of Alcohol Analysis Requests Received and Completed

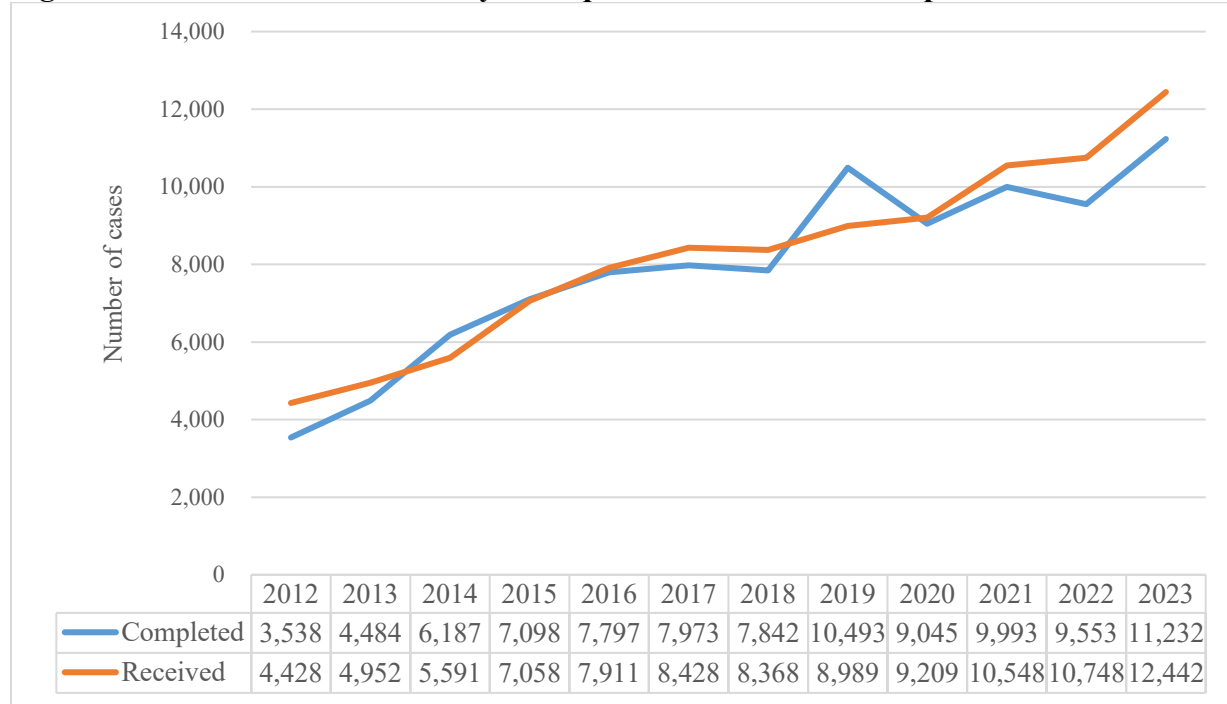
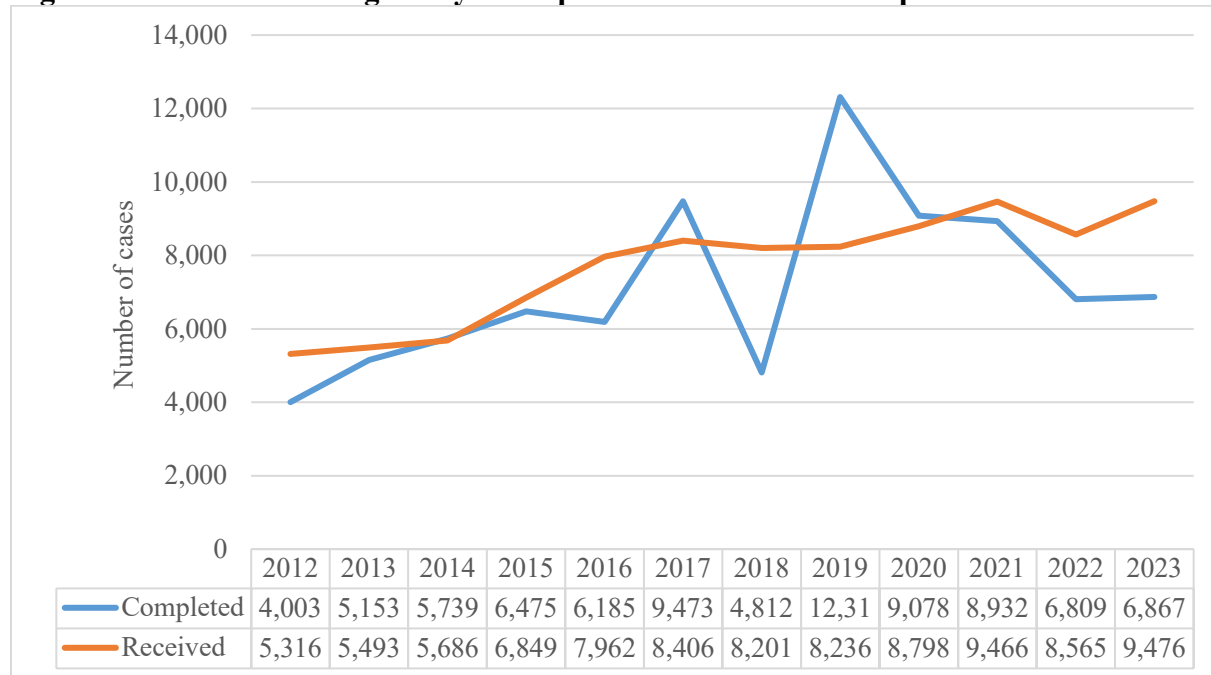


Figure 6: Number of Drug Analysis Requests Received and Completed



Of the specimens ISDT screened for drugs in 2023, 66.7% were positive for one or more drugs or drug metabolites, which was relatively consistent with 2021 and 2022. The distribution of positive results by drug class over the last three years is shown in **Table 3**.

Table 3: Drug Class Positivity

Drug Class	Year			
	2020	2021	2022	2023
Cannabinoids	52.1%	53.4%	56.0%	60.9%
Stimulants	37.3%	39.6%	36.6%	34.6%
Opioids	21.3%	29.0%	25.8%	24.7%
Benzodiazepines/Z-drugs	20.8%	18.8%	18.7%	18.1%
Cocaine	9.9%	9.3%	10.1%	9.4%
Cyclobenzaprine	0.7%	1.0%	1.3%	1.1%
Barbiturates	0.8%	0.7%	0.6%	0.6%
Carisoprodol	0.3%	0.2%	0.2%	0.3%
Buprenorphine	0.1%	0.2%	0.1%	0.3%

Agencies submitting specimens to ISDT for testing indicate offense information on the Toxicology Analysis Request form (TAR). Of the cases received in 2023, ~97% were traffic related, which was consistent with past years.

Table 4: Case Offenses

Note: percentages add up to greater than 100% because cases can be submitted with multiple offenses listed.

Traffic/Non-Traffic	Offense	% of cases
Traffic	Operating Vehicle While Intoxicated	74.7%
	Property Damage Crash	15.5%
	Personal Injury/Serious Bodily Injury Crash	16.1%
	Fatal Crash	3.0%
	Other: Traffic Related	3.1%
Non-Traffic	Death Investigation	0.7%
	Homicide	0.1%
	Juvenile	0.8%
	Other: Non-Traffic Related	1.0%
	Suicide	0.1%
	Overdose	0.1%
	Sexual Assault	0.1%
Child Neglect/Endangerment	0.2%	
Unknown		1.4%

As indicated by submitting agencies on the TAR, the majority (74.9%) of specimens submitted for alcohol analysis were from male subjects, and 23.7% were from female subjects, which is consistent with past years (see **Figure 7**).

Figure 7: Subject Gender in Blood Alcohol Cases

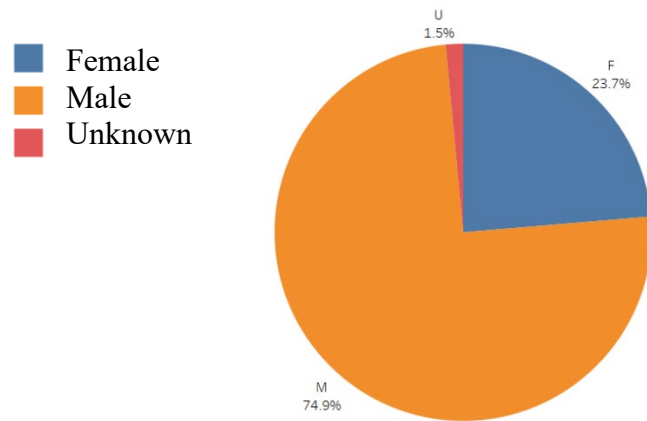
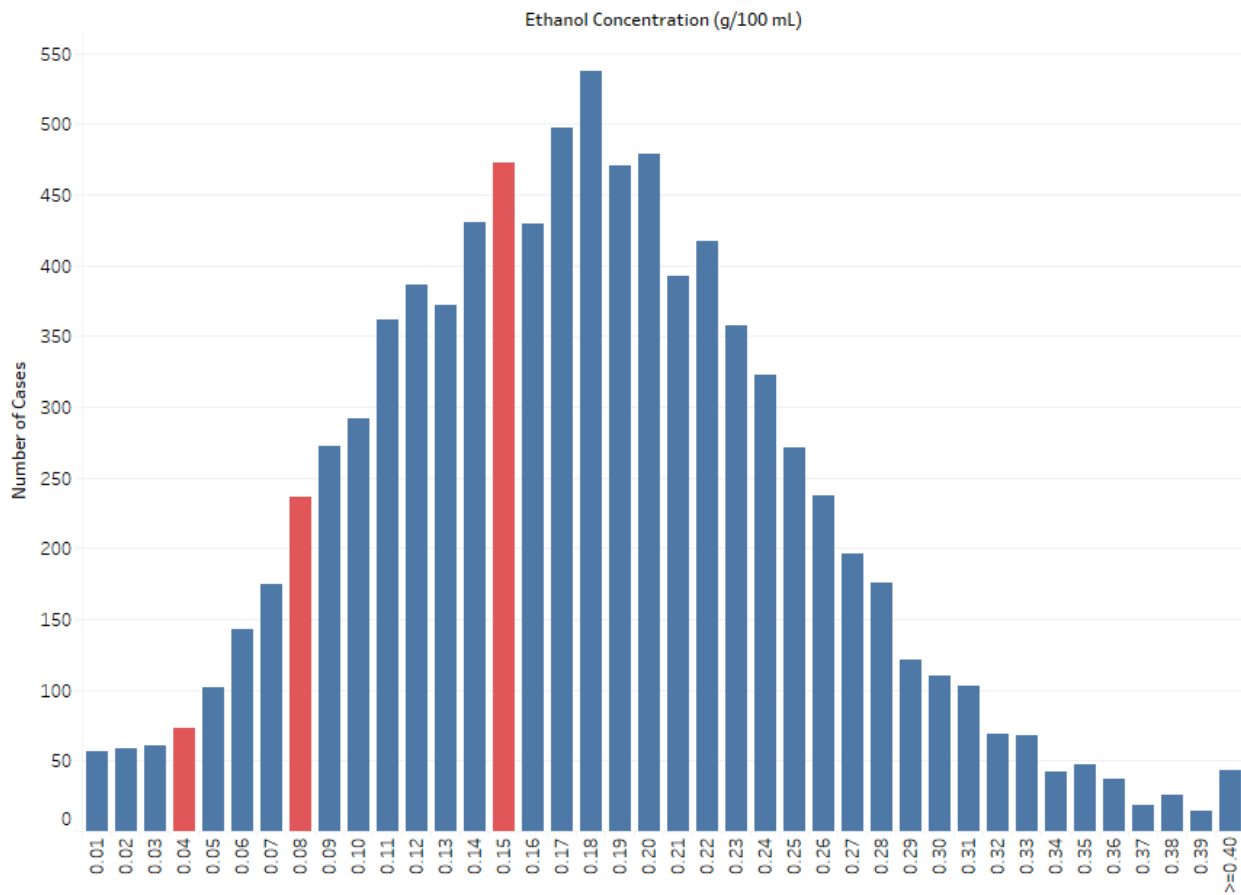


Figure 8 shows the number of cases reported by subject blood alcohol concentration (BAC). BAC was greater than or equal to 0.08 g/100 mL in ~93% of cases and greater than or equal to 0.015 g/100 mL in ~66% of cases.

Figure 8: Blood Alcohol Result Distribution

Note: red bars indicate the statutory alcohol limits for commercial driver license holders (0.040 g/100 mL of blood) and operation of a vehicle (0.080 and 0.150 g/100 mL of blood)

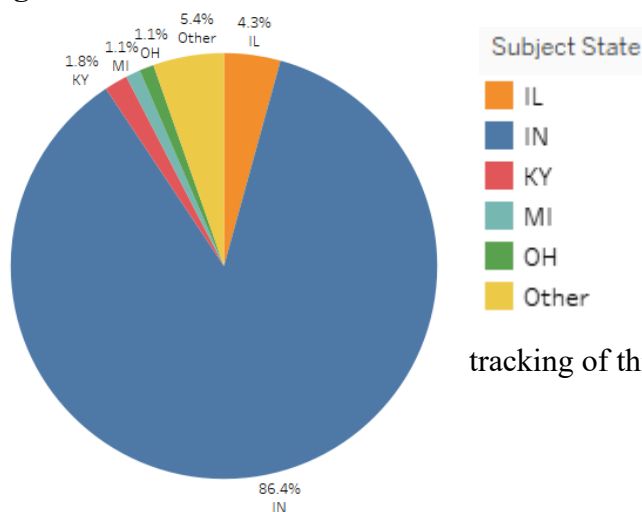


The number of attempted breath tests by county is shown in **Table 5**. The ten counties with the most attempted breath tests account for approximately 53% of all attempted breath tests in 2023.

Table 5: County and Number of Subject Tests Attempted

Lake	1527	Grant	146	Wells	58	Vermillion	29
Allen	1471	Cass	130	Wabash	57	Marshall	26
Elkhart	617	Jackson	128	Decatur	55	Owen	25
Porter	600	Miami	126	Putnam	53	Knox	22
Hamilton	584	White	125	Posey	53	Perry	21
Tippecanoe	578	Whitley	124	Scott	52	Orange	21
Clark	480	Delaware	120	Morgan	51	Brown	19
La Porte	428	Boone	119	Spencer	49	Daviess	19
St. Joseph	420	Warrick	112	Tipton	47	Franklin	18
Vanderburgh	290	Huntington	103	Fountain	46	Ohio	18
Howard	284	Steuben	94	Parke	43	Blackford	17
Floyd	283	La Grange	90	Greene	43	Crawford	17
Monroe	259	Montgomery	83	Lawrence	40	Union	14
Hendricks	237	Adams	82	Washington	40	Benton	13
Johnson	228	Henry	79	Sullivan	38	Gibson	13
Marion	215	Harrison	78	Randolph	37	Martin	12
De Kalb	185	Dubois	77	Fayette	37	Rush	11
Vigo	173	Jasper	76	Jennings	33	Starke	9
Clinton	166	Shelby	75	Newton	31	Fulton	9
Kosciusko	166	Clay	72	Jay	30	Warren	7
Dearborn	157	Hancock	67	Ripley	29	Wayne	3
Madison	157	Noble	63	Jefferson	29		
Bartholomew	154	Carroll	58	Pike	29		

Figure 10: State of Issued Driver License

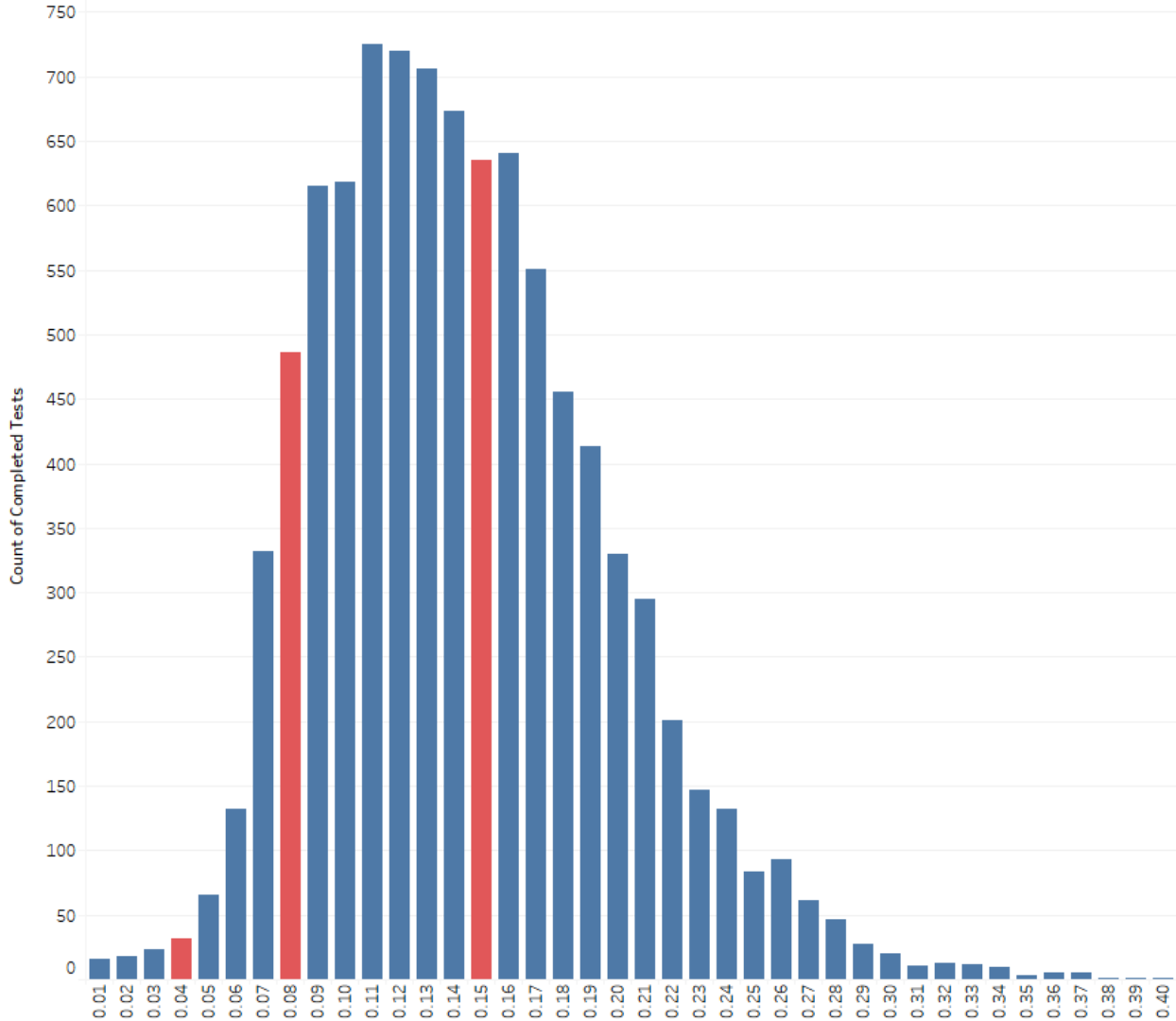


Of the subjects tested in 2023, 86.4% had licenses from Indiana, 4.3% from Illinois, 1.8% from Kentucky, 1.1% from Michigan, 1.1% from Ohio, and the remaining 5.4% were from other states and countries, as show in **Figure 10**.

These numbers are consistent with those reported each year since 2016 when tracking of this information began.

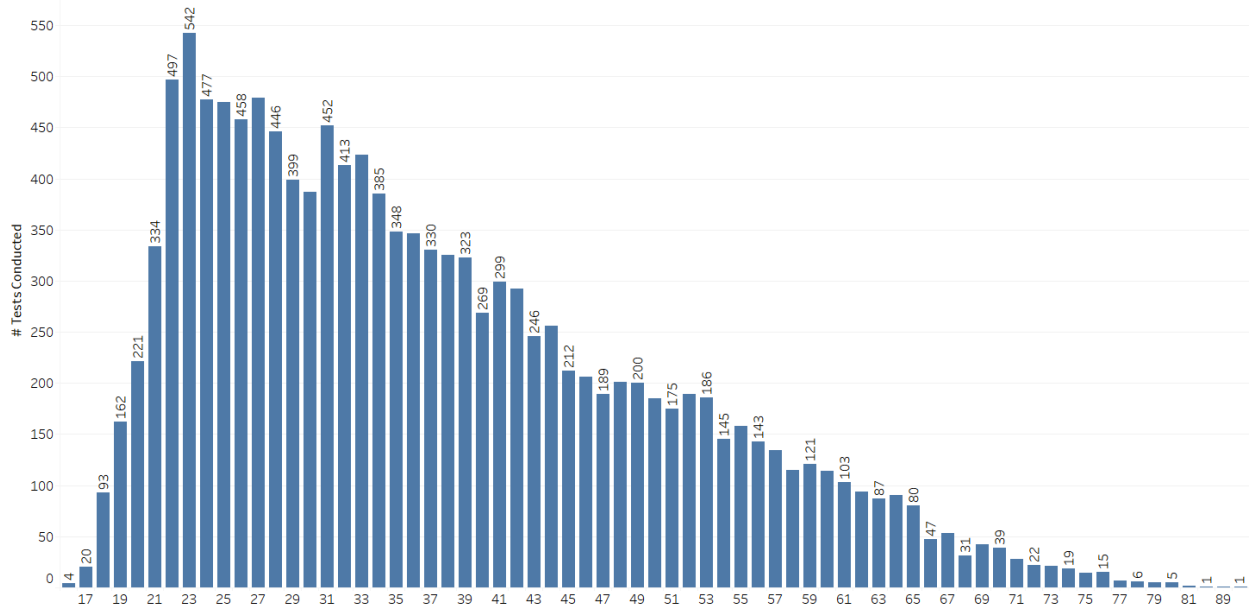
Of the completed breath tests in 2023, ~8% had results between 0.000-0.079 g/210 L of breath, 47.8% had results between 0.080-0.149 g/210 L of breath, and 44.1% had results ≥ 0.150 g/210 L of breath, as indicated in **Figure 11**.

Figure 11: Breath Alcohol Result Distribution



As shown in **Figure 12**, the subjects tested were between 16 and 89 years of age, with the greatest number of subjects at 23 years of age.

Figure 12: Number of Breath Alcohol Test by Subject Age



Ignition Interlock

There are currently 14 ignition interlock device models certified by ISDT. Certifications are valid for three years. Two device models were recertified in 2023. Vendors of certified device models reported that 1,729 ignition interlock devices were installed in vehicles in Indiana as of December 1st 2023, compared to 1,686 in December 2022. This number is a snapshot in time and does not reflect all devices installed over the course of the entire year. A list of all certified ignition interlock device models and contact information for the device providers is available on the ISDT website (<https://www.in.gov/isdt/certified-device-models/>).

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