

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 FY22 (July 1, 2021-June 30, 2022) were \$2,249,632, and ISDT's dedicated fund appropriations were \$355,000. The Indiana Criminal Justice Institute (ICJI) awarded ISDT \$946,029 in National Highway Traffic Safety Administration grant funds for federal fiscal year 2022 (October 1, 2021-September 30, 2022). 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	\$2,249,632
Dedicated fund	\$355,000
Grant fund	\$946,029

Message from the Director

One word to summarize ISDT in 2022 is "change." With the April 2022 retirement of the first director appointed after ISDT was established as a department of state government came a cascade of staffing changes. ISDT also added three new positions critical to its continued growth. While some fear or resist change because it leads to feelings of uncertainty, I embrace change as an opportunity for growth, learning, and improvement.

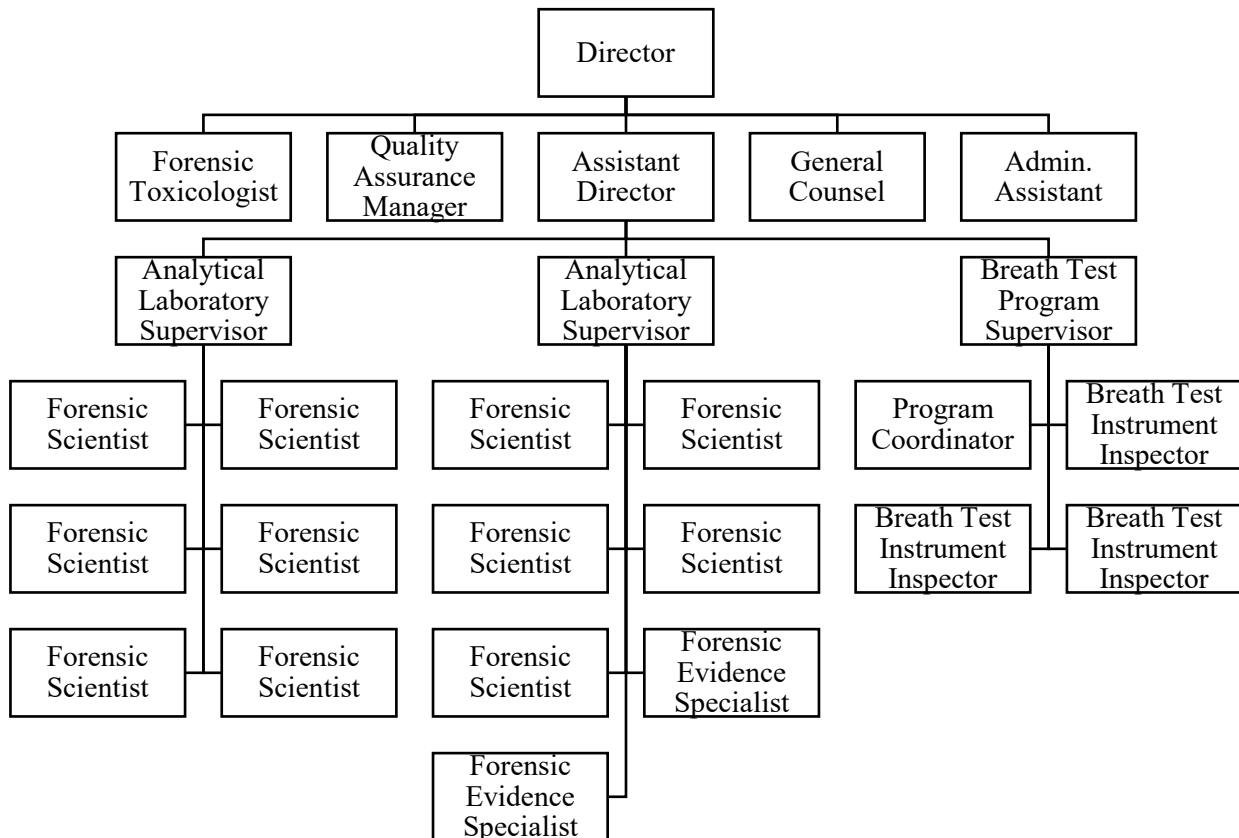
Staffing

ISDT ended 2022 with 21 of its 26 positions filled and added three new positions: an additional Forensic Scientist, an additional Analytical Laboratory Supervisor, and a Quality Assurance Manager, as detailed in Table 2. ISDT's organizational chart is shown in Figure 1: ISDT Organizational Chart.

Table 2: Department of Toxicology Staffing as of 12/31/22

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

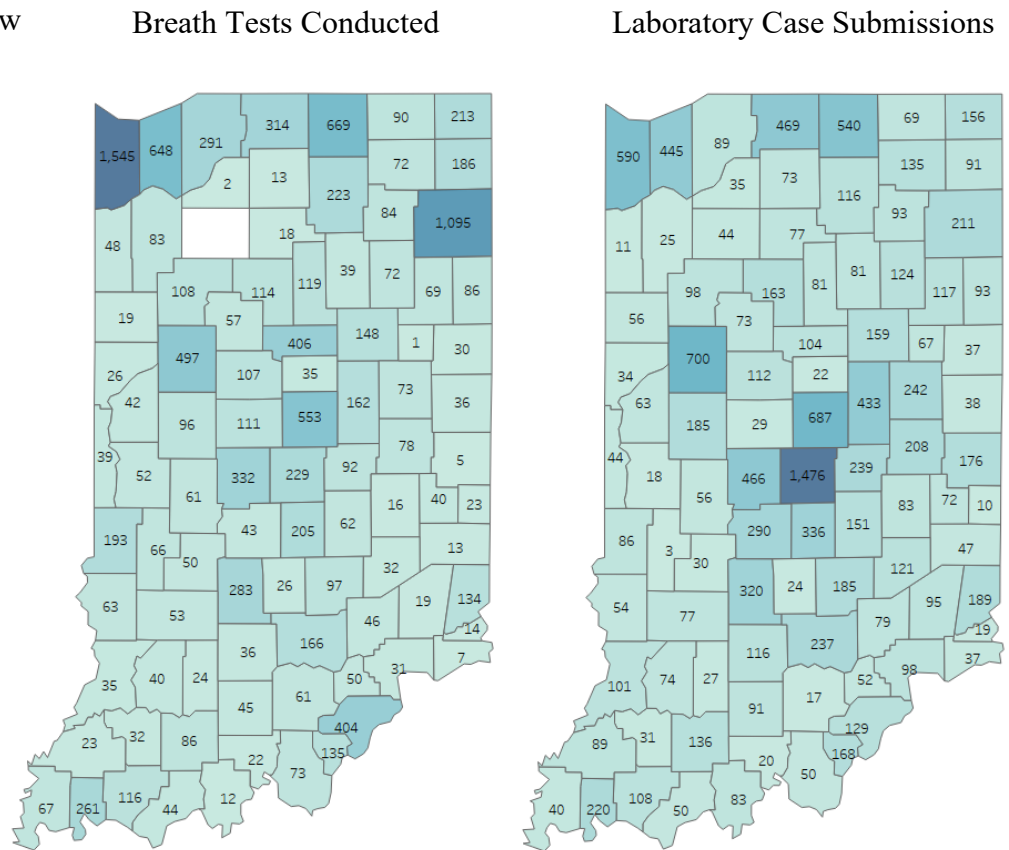
Figure 1: ISDT Organizational Chart



Customers

The maps in Figure 2 show the numbers of completed evidentiary breath tests administered (map on left) and the numbers of cases submitted to ISDT for laboratory analysis (map on right) by county in 2022. By statute all evidentiary breath tests are required to be performed on instruments certified by ISDT; consequently, the numbers of breath tests provided here account for all evidentiary breath tests conducted in the state last year. The numbers of laboratory submissions provided here, 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 2022, the Department received approximately 1,500 subpoenas and ISDT personnel provided testimony 62 times. Testimony includes depositions and court appearances related to laboratory testing, breath test program procedures, and interpretation of laboratory and breath test results.

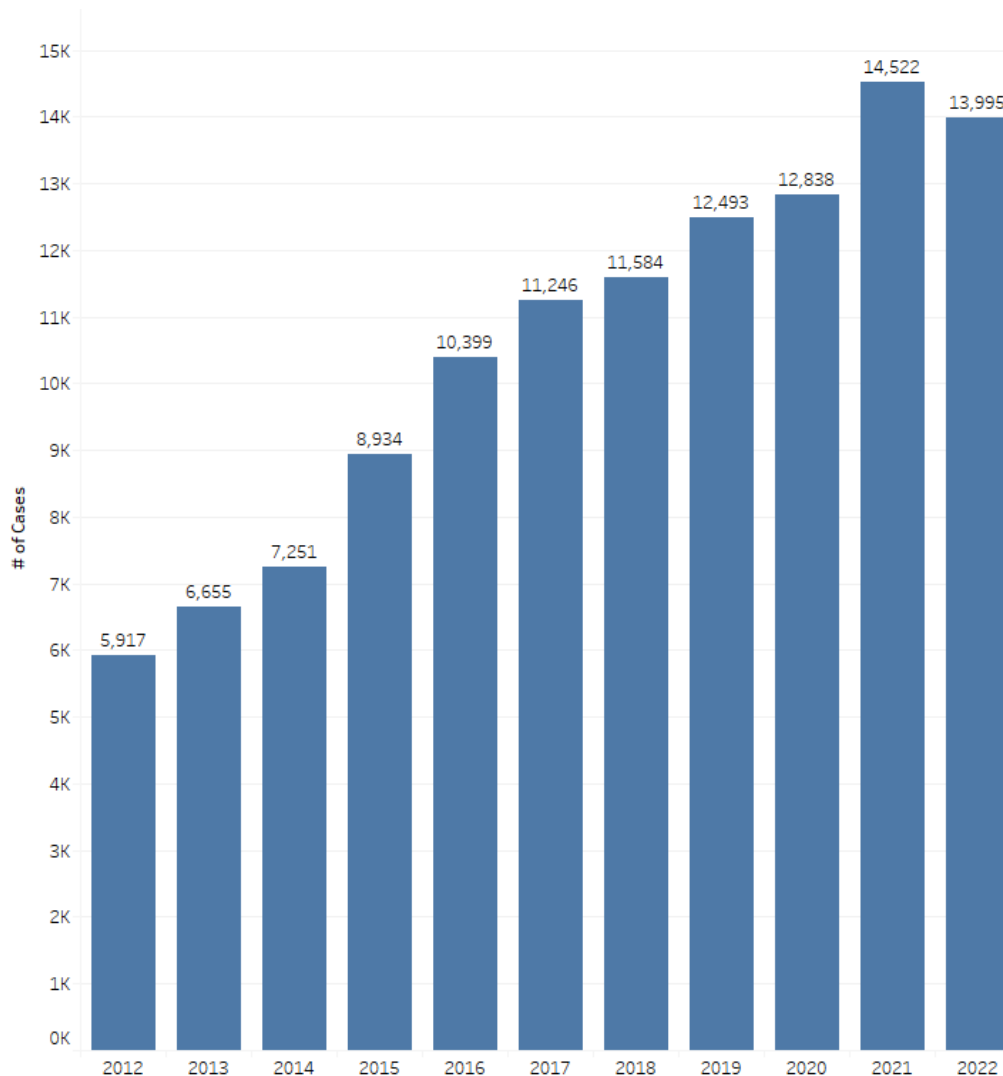
Analytical Laboratory Services

ISDT analyzed blood specimens submitted by 466 agencies in 2022, compared to 435 agencies in 2021. 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.

For the first time since ISDT was established as a state agency in 2012, laboratory case submissions in 2022 did not exceed those of the previous year, as shown in Figure 3.

Figure 3: Laboratory Case Submissions

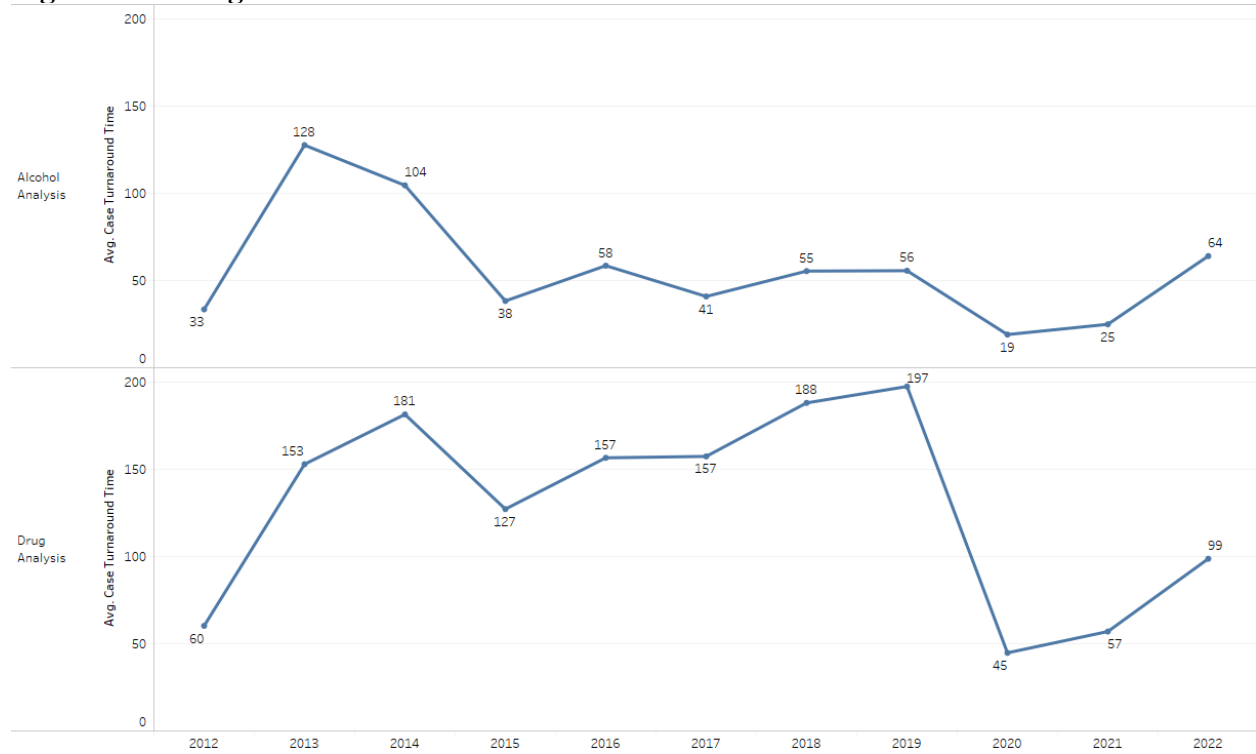
Note: values may differ from previous Annual Reports due to changes in methodology used in data compilation.



Cases submitted in 2022 included 10,748 requests for alcohol analysis and 8,565 requests for drug analysis, for a total of 19,313 testing requests. Of the cases submitted, 5,068 (36%) had requests for both alcohol and drug analyses, while 64% of the cases submitted requested only one analysis, which is consistent with past years.

ISDT defines turnaround time as the time from when the evidence was received until the date of the toxicology report. In 2022, the average turnaround time was 64 days for alcohol analysis and 99 days for drug analysis, as shown in Figure 4. Average turnaround times increased in 2022 due to many circumstances, primarily due to several staffing changes.

Figure 4: Average Case Turnaround Time



ISDT completed 9,553 requests for alcohol analysis and 6,809 requests for drug analysis in 2022, 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

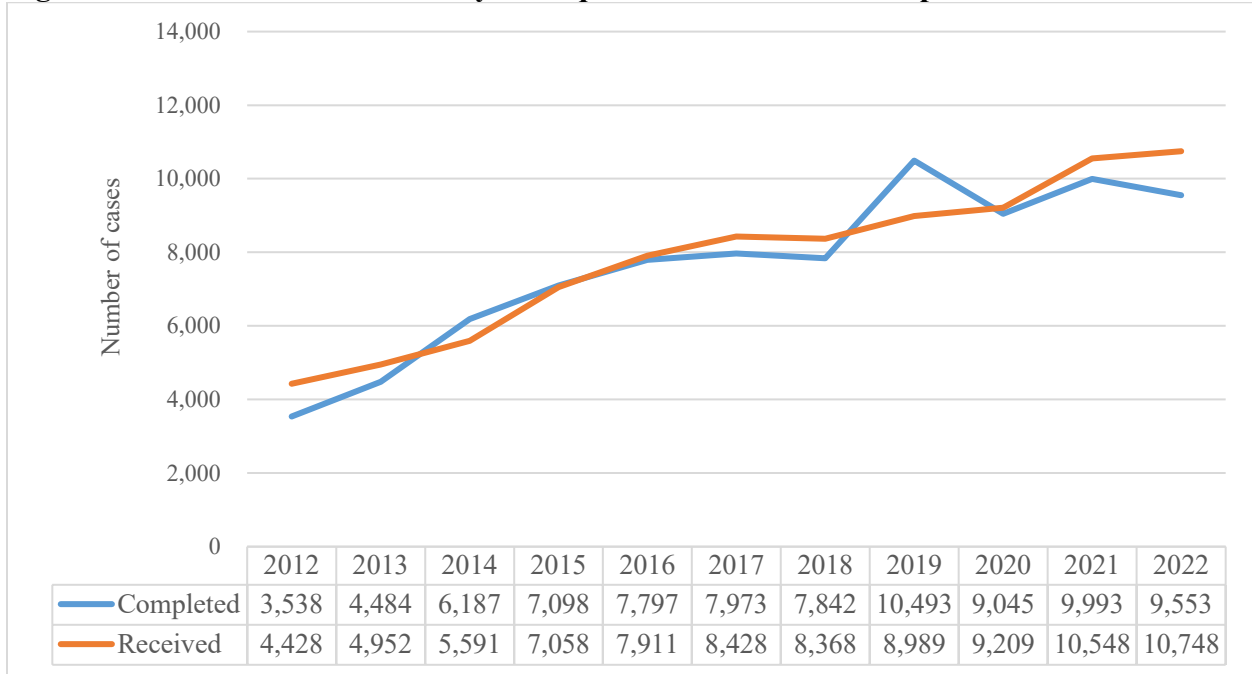
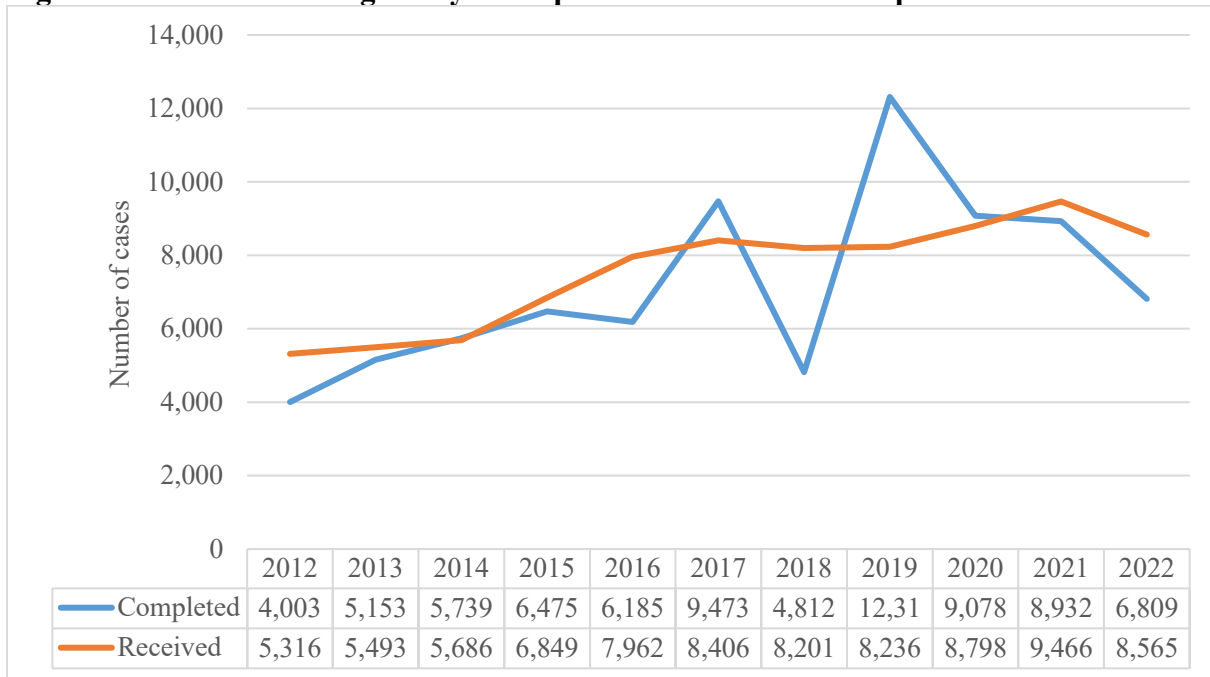


Figure 6: Number of Drug Analysis Requests Received and Completed



Of the cases ISDT screened for drugs in 2022, 67.6% were positive for one or more drugs or drug metabolites, which was relatively consistent with 2020 and 2021. 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
Cannabinoids	52.1%	53.4%	56.0%
Stimulants	37.3%	39.6%	36.6%
Opioids	21.3%	29.0%	25.8%
Benzodiazepines/Z-drugs	20.8%	18.8%	18.7%
Cocaine	9.9%	9.3%	10.1%
Cyclobenzaprine	0.7%	1.0%	1.3%
Barbiturates	0.8%	0.7%	0.6%
Carisoprodol	0.3%	0.2%	0.2%
Buprenorphine	0.1%	0.2%	0.1%

Agencies submitting specimens to ISDT for testing indicate offense information on the Toxicology Analysis Request form (TAR). Of the cases received in 2022, ~95% 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	68.7%
	Property Damage Crash	17.7%
	Personal Injury/Serious Bodily Injury Crash	16.7%
	Fatal Crash	4.0%
	Other: Traffic Related	2.9%
Non-Traffic	Death Investigation	1.8%
	Homicide	1.4%
	Juvenile	0.6%
	Other: Non-Traffic Related	0.6%
	Suicide	0.3%
	Infant Death (0-2)	0.1%
	Overdose	0.1%
	Sexual Assault	0.1%
	Child Neglect/Endangerment	0.1%
	Elder Neglect/Endangerment	<0.1%
Public Intoxication	<0.1%	
Unknown		0.7%

As indicated by submitting agencies on the TAR, the majority (75.2%) of specimens submitted for alcohol analysis were from male subjects, and 24.1% were from female subjects, which is consistent with past years (see Figure 7).

Figure 7: Subject Gender in Blood Alcohol Cases

- Female
- Male
- Unknown

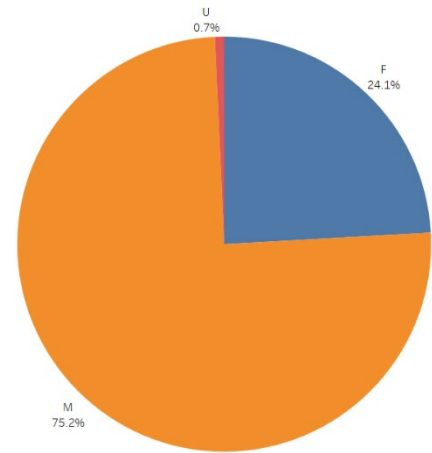
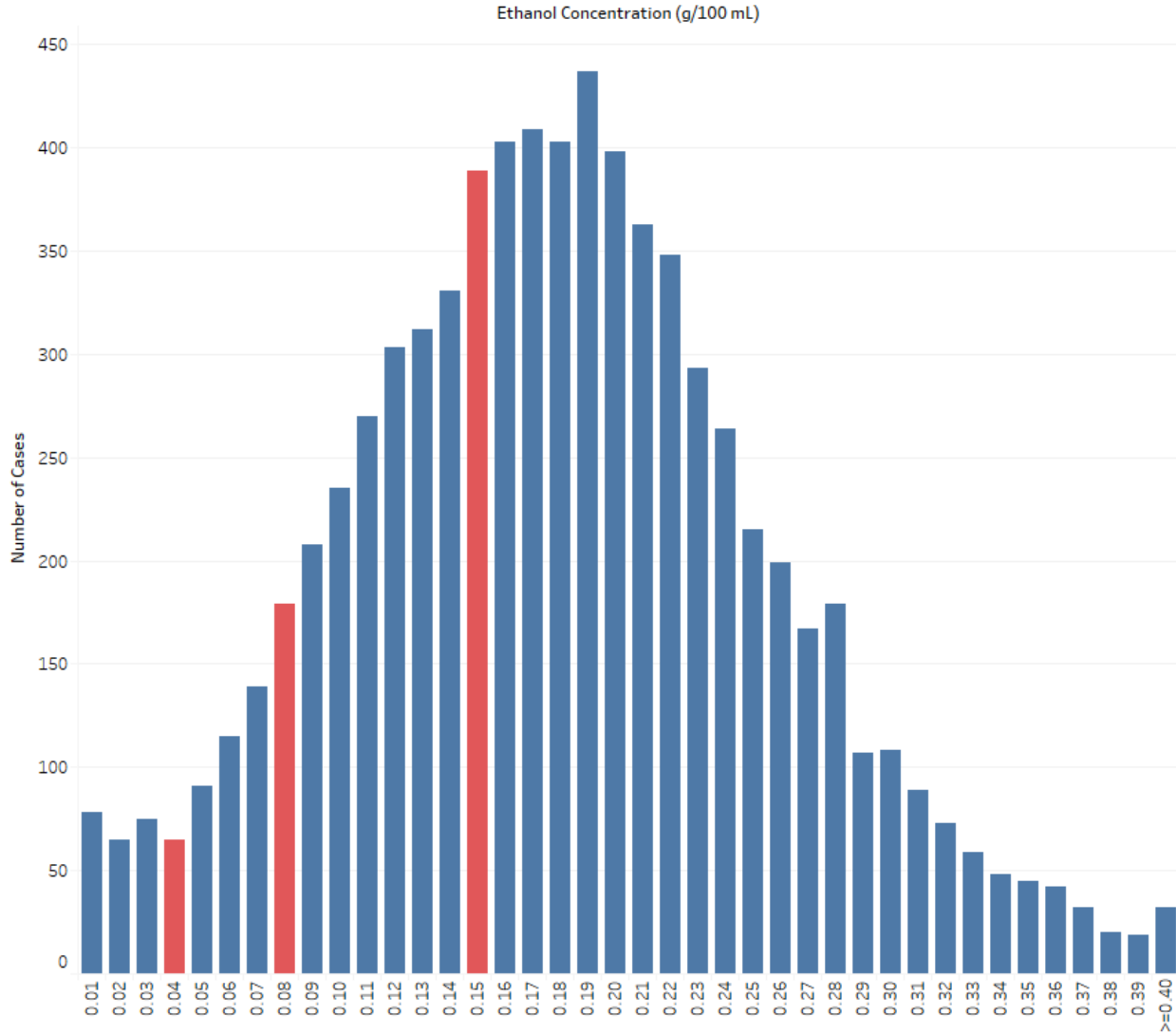


Figure 8 shows the number of cases reported for different blood alcohol concentrations (BAC). ~92% of cases had a BAC ≥ 0.08 g/100 mL and ~68% of cases had a BAC ≥ 0.015 g/100 mL.

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)

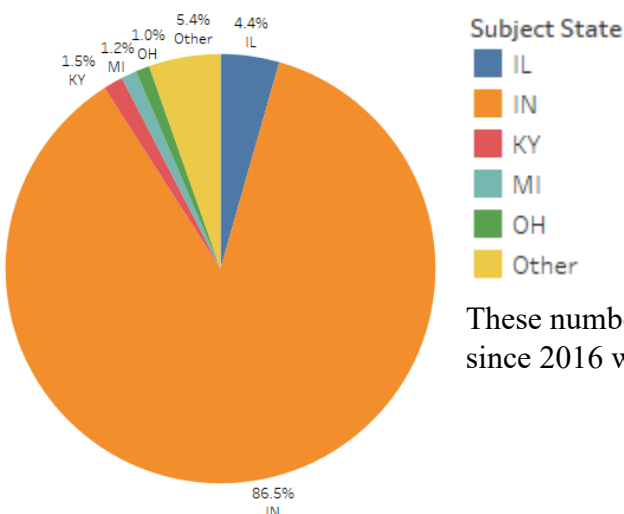


The number of attempted breath tests by county is shown in Table 5. The ten counties with the most attempted breath tests account for approximately 51% of all attempted breath tests in 2022.

Table 5: County and Number of Subject Tests Attempted

Lake	1545	Dearborn	134	Sullivan	63	Pike	32
Allen	1095	Miami	119	Shelby	62	Decatur	32
Elkhart	669	Warrick	116	Washington	61	Jefferson	31
Porter	648	Cass	114	Putnam	61	Jay	30
Hamilton	553	Boone	111	Carroll	57	Warren	26
Tippecanoe	497	White	108	Greene	53	Brown	26
Howard	406	Clinton	107	Parke	52	Martin	24
Clark	404	Bartholomew	97	Scott	50	Union	23
Hendricks	332	Montgomery	96	Owen	50	Gibson	23
St. Joseph	314	Hancock	92	Newton	48	Crawford	22
LaPorte	291	LaGrange	90	Jennings	46	Ripley	19
Monroe	283	Dubois	86	Orange	45	Benton	19
Vanderburgh	261	Adams	86	Spencer	44	Fulton	18
Marion	229	Whitley	84	Morgan	43	Rush	16
Kosciusko	223	Jasper	83	Fountain	42	Ohio	14
Steuben	213	Henry	78	Fayette	40	Marshall	13
Johnson	205	Harrison	73	Daviess	40	Franklin	13
Vigo	193	Delaware	73	Wabash	39	Perry	12
DeKalb	186	Noble	72	Vermillion	39	Switzerland	7
Jackson	166	Huntington	72	Randolph	36	Wayne	5
Madison	162	Wells	69	Lawrence	36	Starke	2
Grant	148	Posey	67	Tipton	35	Blackford	1
Floyd	135	Clay	66	Knox	35		

Figure 10: State of Issued Driver License

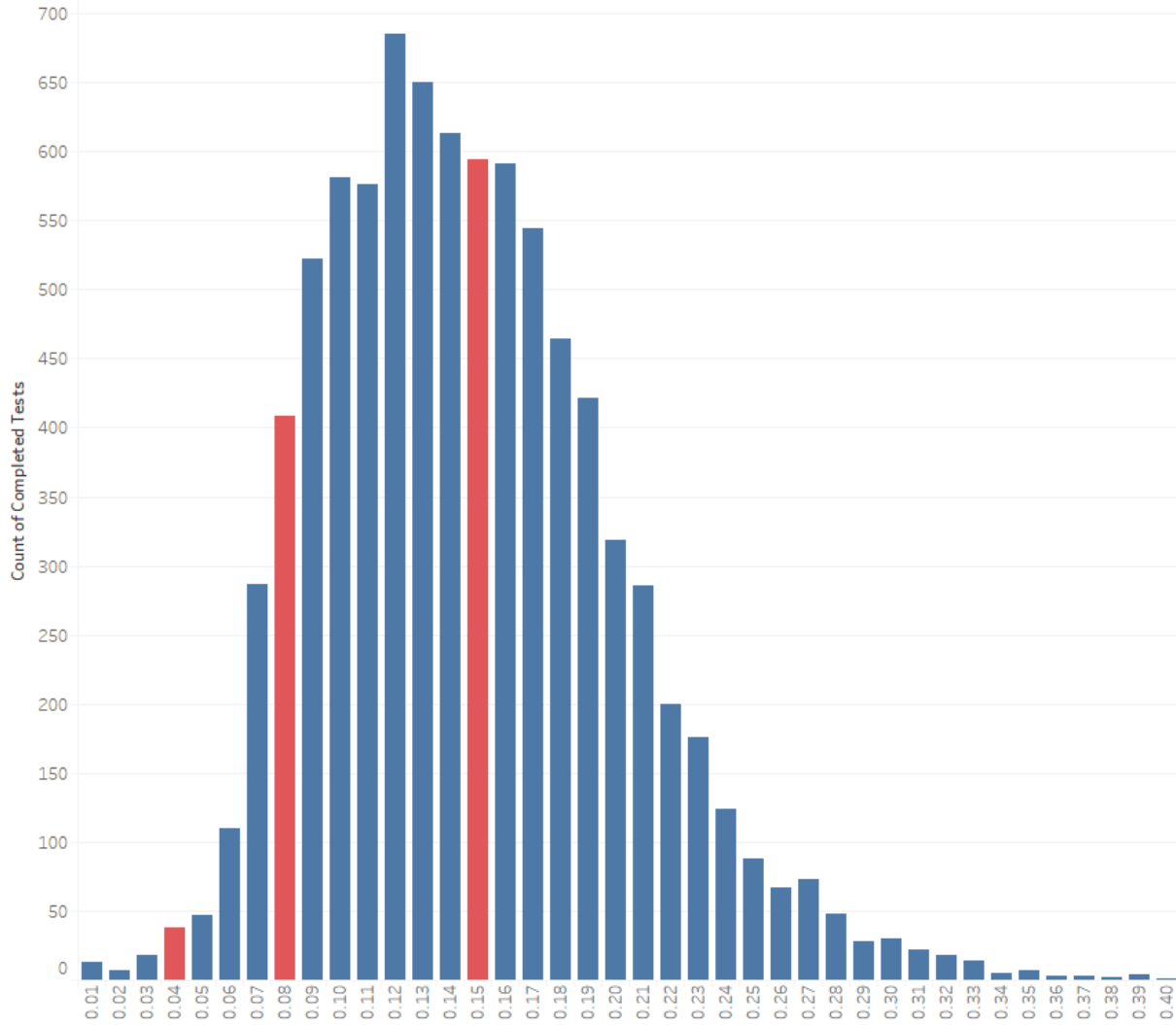


Of the subjects tested in 2022, 86.5% had licenses from Indiana, 4.4% from Illinois, 1.5% from Kentucky, 1.2% from Michigan, 1.0% from Ohio, and the remaining 5.4% were from other states and countries, as show in Figure 10.

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

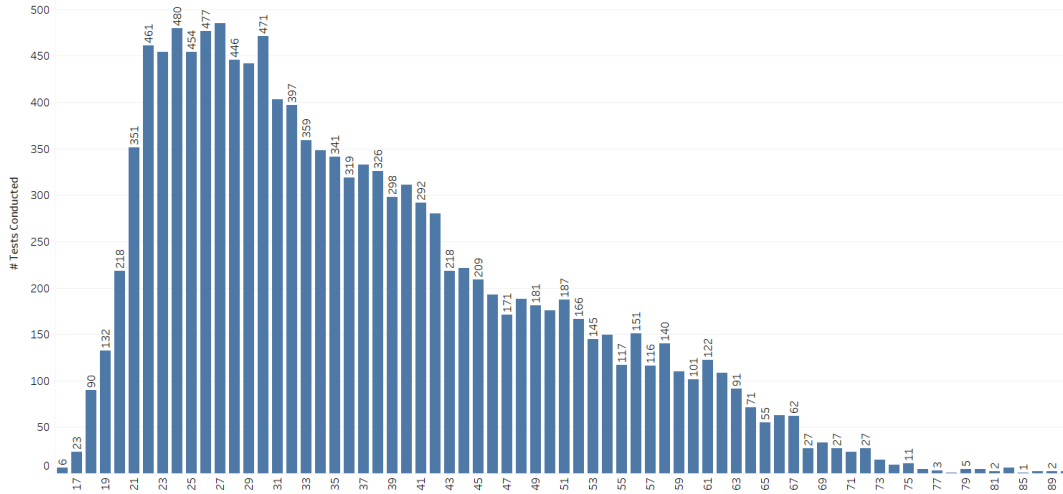
Of the completed breath tests in 2022, ~6% had results between 0.000-0.079 g/210 L of breath, 46% had results between 0.080-0.149 g/210 L of breath, and 48% had results ≥ 0.150 g/210 L of breath, as indicated in Figure 11.

Figure 11: Breath Alcohol Result Distribution



As shown in Figure 12, the subjects tested were between 16 and 90 years of age, with the greatest number of subjects at 24 years of age and approximately 3.7% of subjects under the age 21.

Figure 12: Number of Breath Alcohol Test by Subject Age



Ignition Interlock

There are currently 12 ignition interlock device models certified by ISDT. Certifications are valid for three years. Seven device models were recertified in 2022. Vendors of certified device models reported that 1,686 ignition interlock devices were installed in vehicles in Indiana at the beginning of December 2022, compared to 1,505 in 2021. 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 are available on the ISDT website (<https://www.in.gov/isdt/certified-device-models/>).

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