Alcohol Use Disorder and Alcohol-Associated Liver Disease Diagnoses Rose 36% and 21% Over the Past Decade

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Key Findings:

- New diagnoses of alcohol use disorder (AUD) and alcohol-associated liver disease (ALD) rose from 2016 to 2025: AUD increased 36.3% and ALD increased 20.6%.
- Rates rose proportionally faster among women than men for both conditions, though the absolute increase was larger among men. Men's rates of AUD and ALD diagnoses stayed more than twice as high as women's throughout the study period.
- New AUD diagnoses increased across every generation, while new ALD diagnoses rose mainly in the younger and middle-aged generations but remained stable or declined in the oldest.

Alcohol use disorder (AUD), a medical condition marked by an inability to control drinking despite harm, affects an estimated 27.9 million people in the United States.[1] One of its most serious consequences is alcohol-associated liver disease (ALD), which includes a range of alcohol-related liver injury including fatty liver, hepatitis, and cirrhosis. Deaths from ALD roughly doubled between 1999 and 2022, with the sharpest acceleration in 2018 and disproportionate increases among women and adults aged 25 to 44.[2] These rising harms stand in contrast to survey data showing that the share of U.S. adults who report drinking recently fell to a record-low 54%, down from 62% in 2023.[3] What remains unclear is whether the incidence of newly diagnosed alcohol-attributable conditions has actually changed over the past decade, and which groups have been most affected.

We examined 196,522,676 U.S. adults aged 18 and older who received care at any point between 2016 and 2025. We tracked two groups of diagnoses, AUD and ALD. For each, we counted the first diagnosis per patient and calculated the crude annual incidence per 100,000 adults overall, by sex, and by generation as defined by birth year. Across the study period, new diagnoses of AUD and ALD rose substantially. The annual incidence of AUD climbed 36.3%, from 543.1 per 100,000 adults in 2016 to 740.5 in 2025, and ALD rose 20.6%, from 80.2 to 96.7 per 100,000, a steep relative increase from a comparatively low base (under 100 per 100,000 adults per year). Most of the increase in AUD occurred in 2023 alone: incidence was relatively stable from 2016 (543.1 per 100,000) through 2022 (577.2) and then rose 20.2% to 693.6 in 2023, a jump seen among both women and men and across every generation. Viewed across the full decade, AUD incidence rose gradually overall, dipping during the pandemic and stepping up in 2023. Part of that step-up might reflect changes in how alcohol-related conditions are coded, including revisions to the relevant diagnosis codes in late 2022, rather than true changes in incidence.

Annual Incidence of Alcohol Use Disorder and Alcohol-Associated Liver Disease

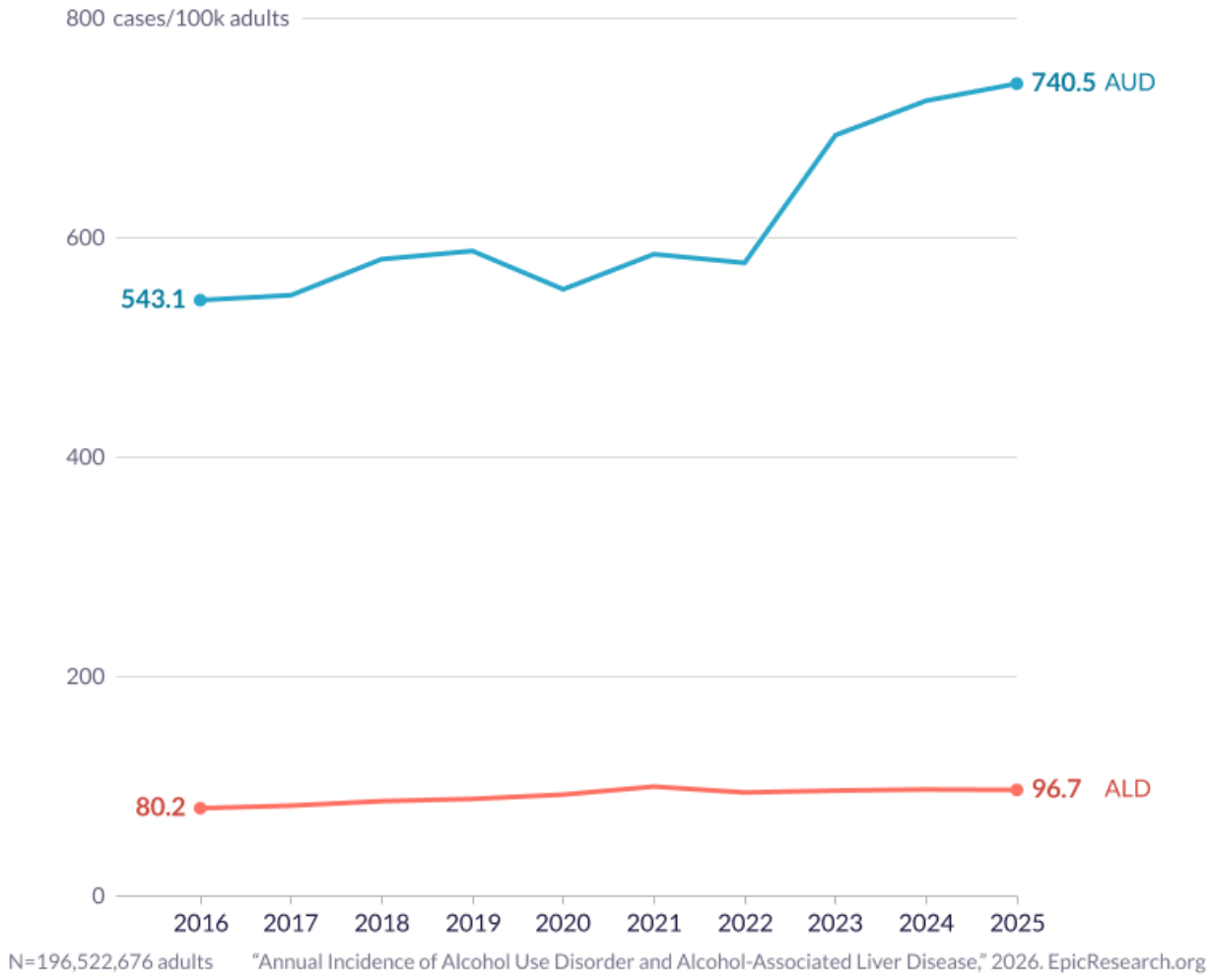


Figure 1. Annual incidence per 100,000 adults for alcohol use disorder and alcohol-associated liver disease.

Rates for both diagnoses in men were more than double rates in women throughout the study period, but women saw larger relative increases. New AUD diagnoses increased by 42.6% among women versus 30.0% among men, and new ALD diagnoses increased by 29.2% among women versus 13.3% among men. While the relative increase was greater in women, men still saw the greater absolute increase in new diagnoses per 100,000, increasing 250.2 per 100,000 for new AUD diagnoses compared to 145.4 per 100,000 for women.

Annual Incidence of Alcohol Use Disorder and Alcohol-Associated Liver Disease by Sex

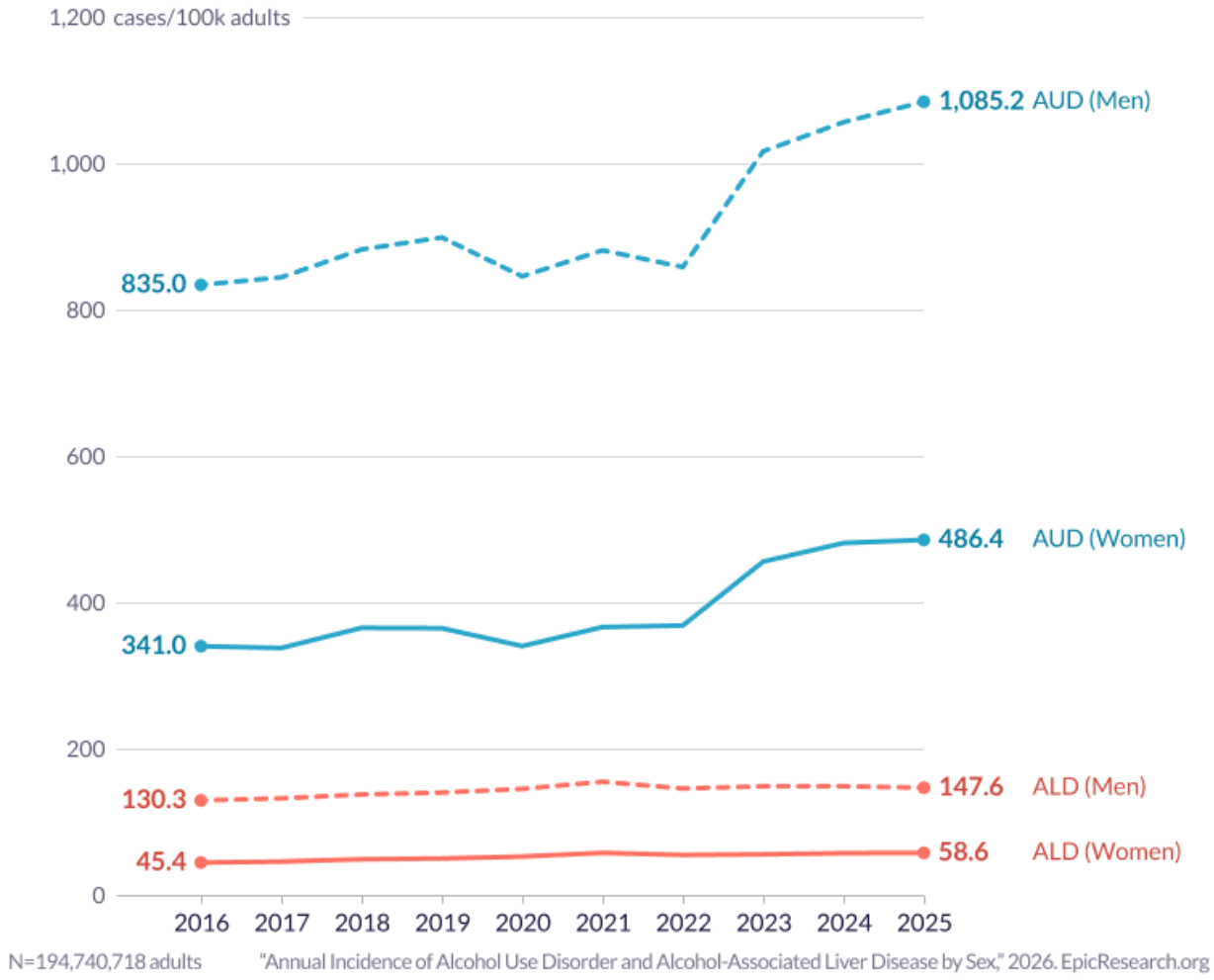


Figure 2. Annual incidence per 100,000 adults for AUD and ALD among women and men.

Both diagnoses rose in every generation, but in different patterns. New AUD diagnoses increased in every generation, including the oldest: up 54.3% among the Silent Generation (born 1928–1945), 32.3% among Baby Boomers (1946–1964), and roughly 30% among both Generation X (1965–1980) and Millennials (1981–1996). New ALD diagnoses, by contrast, climbed steeply in Generation X and Millennials but were flat or slightly lower in the oldest generations. Because older age is itself an established risk factor for alcohol-associated liver disease,[4] much of the steep ALD increase in the younger generations likely reflects their aging into higher-risk years over the decade rather than a true rise in per-person risk. Generation Z (born 1997-2012), whose oldest members were just reaching adulthood when the study began, had the largest relative increase in AUD (56.6%); their ALD rate rose from 1.3 to 16.2 per 100,000 between 2017 and 2025 but remained uncommon.

Annual Incidence of Alcohol Use Disorder by Generation

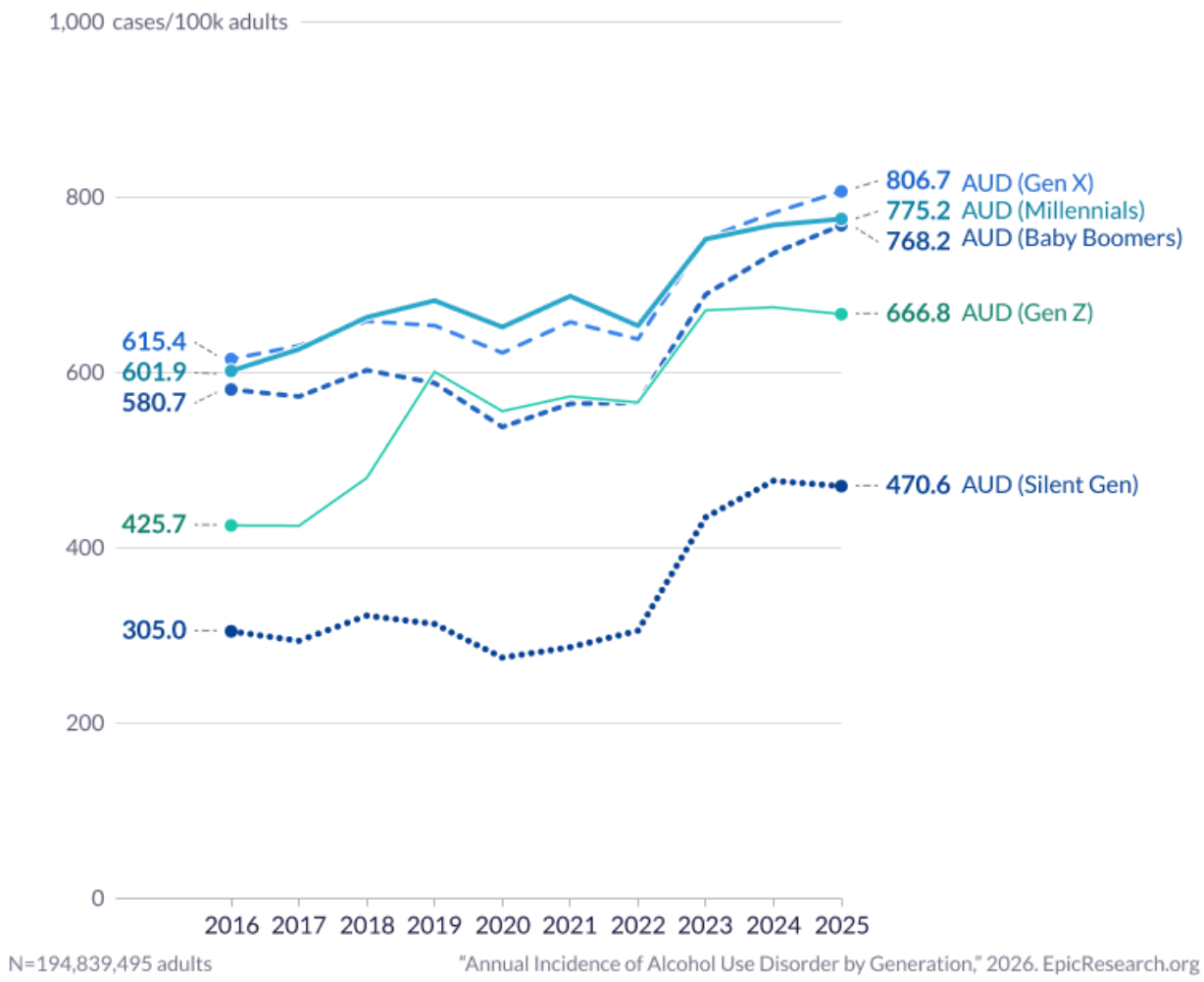


Figure 3. Annual incidence per 100,000 adults for AUD by generation.

Annual Incidence of Alcohol-Associated Liver Disease by Generation

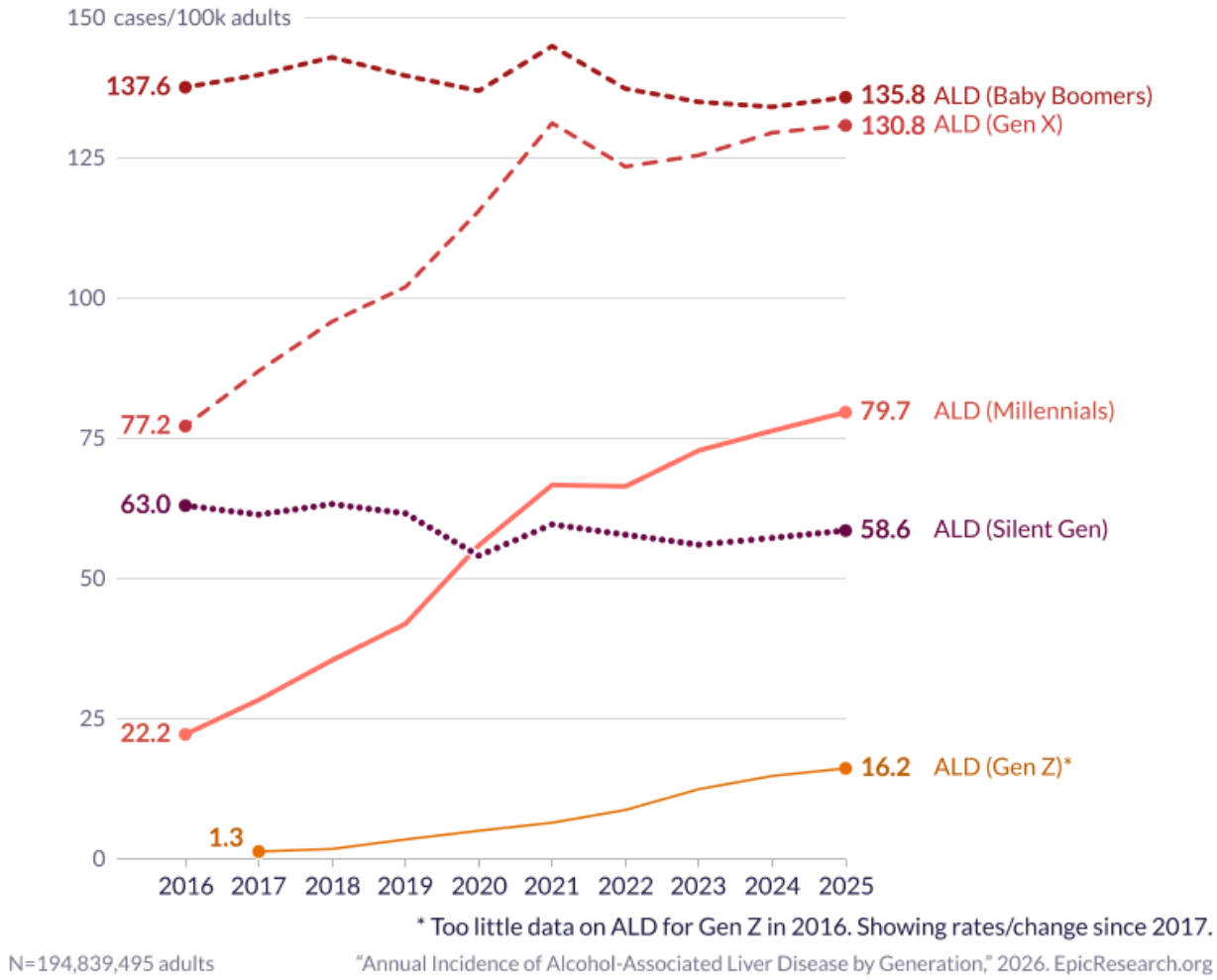


Figure 4. Annual incidence per 100,000 adults for ALD by generation. Generation Z rates are shown from 2017 onward.

These data come from Cosmos, a dataset created in collaboration with a community of Epic health systems representing more than 300 million patient records from 2,200 hospitals and more than 50,000 clinics from all 50 U.S. states, Canada, Lebanon, and Saudi Arabia. This study was completed by two teams that worked independently, each composed of a clinician and research scientist. The two teams came to similar conclusions. Graphics by Brian Olson.

References

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Data Definitions

Term	Definition
Study period	1/1/2016 through 12/31/2025
Study population: inclusion	Adults who: • Were aged 18 or older • Had a most recent residence in the U.S. • Had at least one **outpatient face-to-face visit** before the **index date** • Were an active patient in a given year (had any **outpatient face-to-face visit** in that year or the year prior), counted in each year they were active
Study population: exclusion	For each condition, patients who had a prior diagnosis of that condition before the **index date**
Index date	For each condition, the date of the first **qualifying diagnosis** of that condition within the **study period**
Qualifying diagnosis	A single billing or encounter diagnosis carrying the condition's code(s), in any care setting
Outcomes	Crude annual incidence of **alcohol use disorder (AUD)** and **alcohol-associated liver disease (ALD)**
Incidence rate	Crude annual rate of first diagnoses per 100,000 active adults
Alcohol use disorder (AUD)	ICD-10-CM code F10* (excluding remission codes F10.11, F10.21, and F10.91)
Alcohol-associated liver disease (ALD)	ICD-10-CM codes K70.0–K70.4
Outpatient face-to-face visit	Derived encounter type of "Emergency," "Hospital Outpatient Visit," "Office Visit," "Well Child," "Follow-up," "Telemedicine," "Urgent Care," "Walk-In," "Routine Prenatal," "Postpartum Visit," or "Fetal Care Consult"
Generation	The Silent Generation: Birth year between 1928-1945 Baby Boomers: Birth year between 1946-1964 Generation X: Birth year between 1965-1980 Millennials: Birth year between 1981-1996 Generation Z: Birth year between 1997-2012 Prior Generations: Birth year prior to 1928
Model specifications	Descriptive crude rates over time
Limitations	• The denominator is care-seeking patients, not the general population. • Diagnosis-based measures undercount true burden, and completeness may vary by subgroup. • Because rates are crude rather than age-standardized, trends partly reflect shifts in the age and sex composition of the active-patient population over time, including generations aging into higher-risk years. • A first-coded diagnosis reflects when a condition was formally diagnosed, not when it began, especially for the chronic conditions

	captured here, such as alcohol-associated cirrhosis, which develop gradually and are often coded well after onset. • Rising diagnosis rates may partly reflect increased screening, coding intensity, and health care utilization rather than true changes in incidence. • Changes to ICD-10-CM codes for alcohol use that took effect October 1, 2022, might contribute to the increase in AUD diagnoses beginning in 2023.

Table 1. Baseline Characteristics of the Study Population

Characteristic	Category	Patients (N)	% of population
Total	All	196,522,676	100.0
Evaluated sex	Female	104,823,426	53.3
	Male	89,917,292	45.8
	Other	1,781,958	0.9
Birth-year generation	The Silent Generation	17,652,201	9.0
	Baby Boomers	51,727,313	26.3
	Generation X	45,013,631	22.9
	Millennials	52,119,549	26.5
	Generation Z	28,326,801	14.4
	Prior Generations	1,683,181	0.9

Table 2. Annual Incidence of Alcohol Use Disorder and Alcohol-Associated Liver Disease

Condition	Year	Incident cases	Active adults	Rate per 100,000
AUD	2016	258,875	47,662,549	543.1
	2017	303,200	55,357,137	547.7
	2018	371,540	63,992,908	580.6
	2019	413,374	70,302,656	588.0
	2020	423,118	76,502,832	553.1
	2021	487,151	83,250,664	585.2
	2022	539,607	93,487,452	577.2
	2023	695,039	100,203,993	693.6
	2024	781,053	107,737,591	725.0
	2025	865,609	116,888,712	740.5
ALD	2016	38,984	48,614,466	80.2
	2017	46,630	56,566,118	82.4
	2018	56,726	65,495,445	86.6
	2019	63,955	72,140,540	88.7
	2020	72,835	78,691,177	92.6
	2021	85,646	85,755,939	99.9
	2022	91,061	96,400,986	94.5
	2023	99,653	103,528,056	96.3
	2024	108,519	111,646,514	97.2
	2025	117,452	121,419,782	96.7

Table 3. Annual Incidence of Alcohol Use Disorder and Alcohol-Associated Liver Disease by Sex

Condition	Sex	Year	Incident cases	Active adults	Rate per 100,000
AUD	Women	2016	96,007	28,151,337	341.0
		2017	110,132	32,509,218	338.8
		2018	137,057	37,435,957	366.1
		2019	150,043	41,031,732	365.7
		2020	151,521	44,403,433	341.2
		2021	176,280	47,986,596	367.4
		2022	198,512	53,731,829	369.4
		2023	263,572	57,701,573	456.8
		2024	298,666	61,940,523	482.2
		2025	325,508	66,928,257	486.4
	Men	2016	160,333	19,201,260	835.0
		2017	189,828	22,455,409	845.4
		2018	230,305	26,071,057	883.4
		2019	258,353	28,713,991	899.7
		2020	266,289	31,453,906	846.6
		2021	304,382	34,505,583	882.1
		2022	333,966	38,862,044	859.4
		2023	422,331	41,507,819	1,017.5
		2024	472,342	44,670,808	1,057.4
		2025	528,333	48,684,784	1,085.2
ALD	Women	2016	12,927	28,480,569	45.4
		2017	15,396	32,931,665	46.8
		2018	18,948	37,962,823	49.9
		2019	21,247	41,680,047	51.0
		2020	24,276	45,177,442	53.7
		2021	28,712	48,875,090	58.7
		2022	30,560	54,771,693	55.8
		2023	33,375	58,899,357	56.7
		2024	36,968	63,367,970	58.3
		2025	40,227	68,606,559	58.6
	Men	2016	25,818	19,815,133	130.3
		2017	30,942	23,229,902	133.2
		2018	37,410	27,030,892	138.4
		2019	42,195	29,882,973	141.2
		2020	47,971	32,842,124	146.1
		2021	56,219	36,090,765	155.8
		2022	59,629	40,697,247	146.5
		2023	65,270	43,588,794	149.7
		2024	70,451	47,098,288	149.6
		2025	75,978	51,475,462	147.6

Table 4. Annual Incidence of Alcohol Use Disorder by Generation

Generation	Year	Incident cases	Active adults	Rate per 100,000
The Silent Generation	2016	21,355	7,002,606	305.0
	2017	22,407	7,620,993	294.0

	2018	27,078	8,392,650	322.6
	2019	27,607	8,813,512	313.2
	2020	24,531	8,925,969	274.8
	2021	25,191	8,787,666	286.7
	2022	27,656	9,047,246	305.7
	2023	39,534	9,086,966	435.1
	2024	42,357	8,889,039	476.5
	2025	40,534	8,613,904	470.6
Baby Boomers	2016	93,171	16,045,720	580.7
	2017	104,130	18,179,425	572.8
	2018	125,589	20,839,589	602.6
	2019	134,984	22,951,698	588.1
	2020	132,178	24,572,298	537.9
	2021	146,044	25,867,516	564.6
	2022	160,980	28,465,384	565.5
	2023	210,260	30,500,917	689.4
	2024	236,540	32,127,271	736.3
	2025	257,720	33,547,421	768.2
Generation X	2016	72,476	11,776,242	615.4
	2017	84,898	13,461,117	630.7
	2018	102,167	15,507,624	658.8
	2019	112,994	17,287,610	653.6
	2020	117,045	18,800,654	622.6
	2021	132,947	20,209,325	657.9
	2022	144,686	22,671,207	638.2
	2023	184,881	24,546,171	753.2
	2024	205,852	26,311,697	782.4
	2025	225,226	27,921,085	806.7
Millennials	2016	67,682	11,244,277	601.9
	2017	80,544	12,850,872	626.8
	2018	98,248	14,814,715	663.2
	2019	112,936	16,555,167	682.2
	2020	118,519	18,177,213	652.0
	2021	135,770	19,753,400	687.3
	2022	146,276	22,383,614	653.5
	2023	183,716	24,421,318	752.3
	2024	203,546	26,489,528	768.4
	2025	220,951	28,500,865	775.2
Generation Z	2016	3,002	705,151	425.7
	2017	10,260	2,413,059	425.2
	2018	17,536	3,654,964	479.8
	2019	24,048	4,000,350	601.1
	2020	30,222	5,435,650	556.0
	2021	46,763	8,161,374	573.0
	2022	59,615	10,534,158	565.9
	2023	76,110	11,342,414	671.0
	2024	92,344	13,688,825	674.6
	2025	120,914	18,133,245	666.8

Table 5. Annual Incidence of Alcohol-Associated Liver Disease by Generation

Generation	Year	Incident cases	Active adults	Rate per 100,000
The Silent Generation	2016	4,459	7,075,267	63.0
	2017	4,732	7,707,621	61.4
	2018	5,374	8,493,980	63.3
	2019	5,503	8,931,729	61.6
	2020	4,900	9,058,241	54.1
	2021	5,326	8,927,310	59.7
	2022	5,315	9,194,826	57.8
	2023	5,180	9,243,992	56.0
	2024	5,190	9,066,554	57.2
	2025	5,160	8,810,078	58.6
Baby Boomers	2016	22,555	16,390,820	137.6
	2017	26,010	18,601,505	139.8
	2018	30,521	21,348,601	143.0
	2019	32,909	23,561,845	139.7
	2020	34,631	25,279,408	137.0
	2021	38,638	26,656,538	144.9
	2022	40,324	29,356,703	137.4
	2023	42,521	31,498,599	135.0
	2024	44,636	33,280,385	134.1
	2025	47,360	34,865,364	135.8
Generation X	2016	9,304	12,053,824	77.2
	2017	12,017	13,812,521	87.0
	2018	15,278	15,944,693	95.8
	2019	18,175	17,821,883	102.0
	2020	22,453	19,431,069	115.6
	2021	27,458	20,929,239	131.2
	2022	29,015	23,504,047	123.4
	2023	31,992	25,495,200	125.5
	2024	35,510	27,418,358	129.5
	2025	38,180	29,188,835	130.8
Millennials	2016	2,553	11,489,410	22.2
	2017	3,736	13,170,165	28.4
	2018	5,392	15,220,357	35.4
	2019	7,154	17,060,114	41.9
	2020	10,508	18,788,959	55.9
	2021	13,644	20,460,994	66.7
	2022	15,423	23,219,473	66.4
	2023	18,490	25,379,487	72.9
	2024	21,083	27,612,869	76.4
	2025	23,731	29,792,816	79.7
Generation Z	2016	—	—	—
	2017	32	2,437,554	1.3
	2018	66	3,699,084	1.8
	2019	141	4,065,484	3.5
	2020	279	5,537,209	5.0
	2021	536	8,305,666	6.5
	2022	938	10,735,656	8.7
	2023	1,442	11,600,077	12.4

	2024	2,078	14,032,768	14.8
	2025	3,004	18,586,520	16.2