

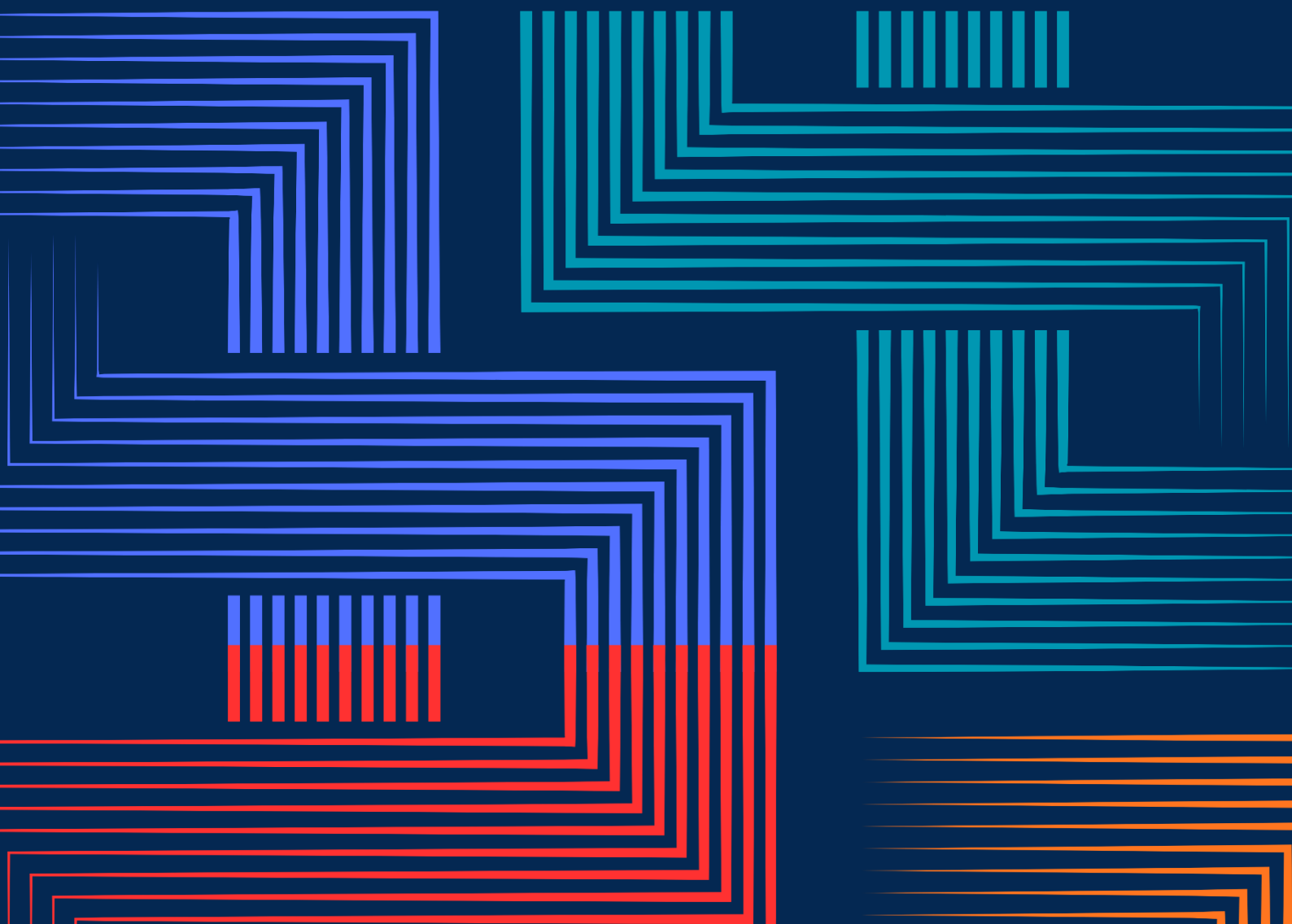


HEALTH INDICATOR

Revised version of particular indicators using an open data approach and standardized methodologies.

October 2025

Pre-interactive version



The Health Development Center is the direct source of authoritative health statistics and information in Mongolia. Its mission is to produce accessible data that informs better health policy and service decisions, ultimately leading to improved health and well-being for all Mongolian citizens

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Health Development Center

Department of Statistics, Big Data, and Research

Any enquiries about this publication should be directed to:

Health Development Center, Room 303, Ulaanbaatar, Mongolia

Tel: (976) 70128811

Email: info@hdc.gov.mn

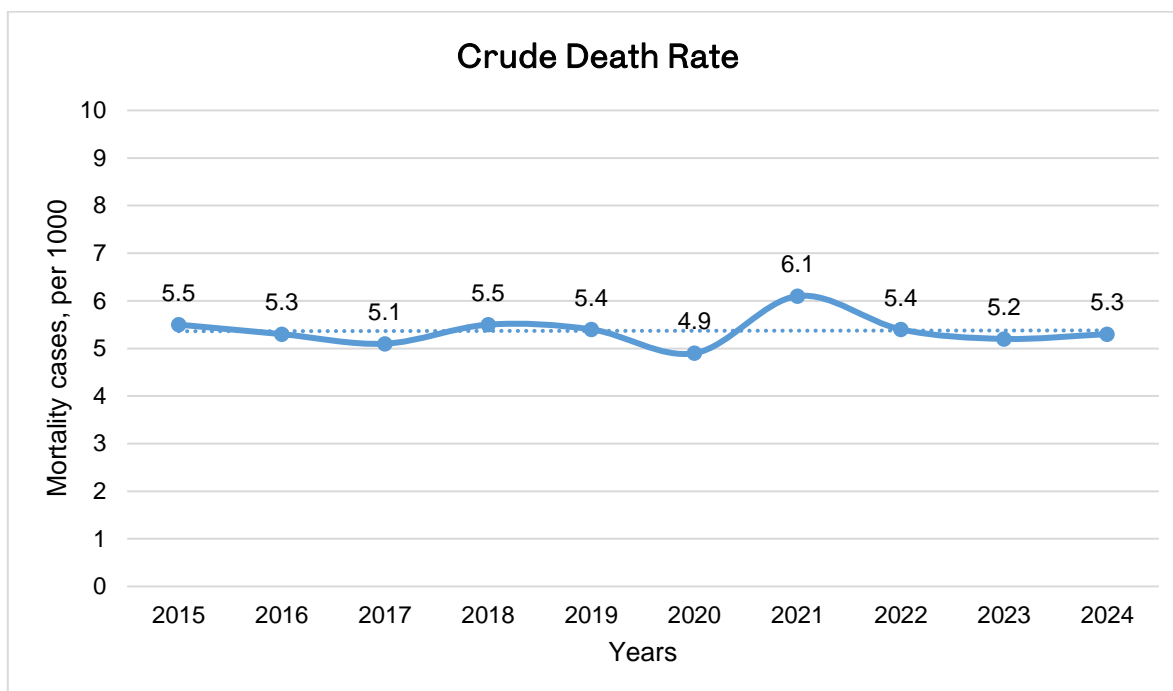
Please note that this revised version represents a preliminary framework for the development of interactive health indicators. The indicators included herein have been selected based on methodological and structural improvements introduced to enhance the validity, comparability, and interpretability of the current indicator set.

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MORTALITY

1. Crude Death Rate



Crude Death Rate (CDR) – Methodology

Definition

The Crude Death Rate (CDR) is defined as the number of deaths in a given year per 1,000 population.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.

- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public and 1,912/2,230 private healthcare facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting in rural and remote areas, as well as deaths occurring abroad.
- Lack of adjustment for population age structure.

Calculation

Formula:

$$\text{Crude Death Rate} = \frac{\text{Number of Deaths in a given year}}{\text{Average population}} * 1000$$

Calculation details

Numerator: Total number of registered deaths (all causes, all ages) in the given year.

Denominator: Average population (mean of January 1 and December 31 population estimates).

Unit of measurement: Number of deaths per 1,000 population.

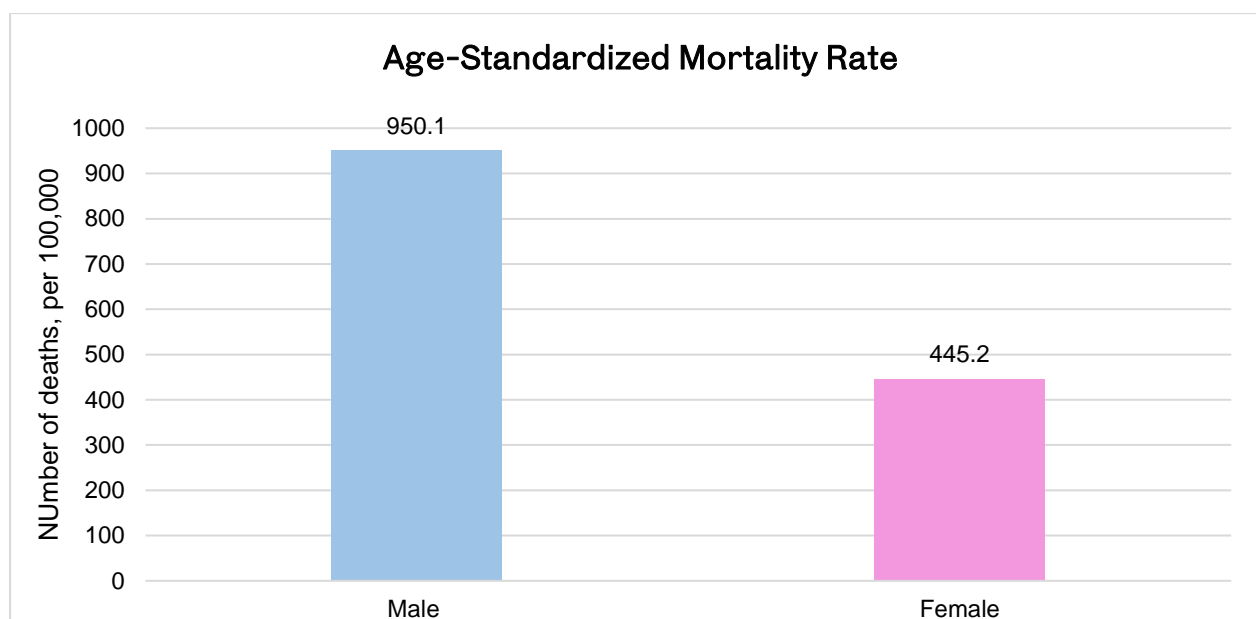
Stratification

In this report, annual crude death rates for 2015–2024 are presented, along with the 10-year average as a reference.

Calculation data:

Year	Average Population	Number of Deaths
2015	2,964,089	16,374
2016	3,026,905	16,181
2017	3,097,659	15,812
2018	3,159,049	17,331
2019	3,190,054	17,205
2020	3,225,152	15,922
2021	3,282,779	19,931
2022	3,340,454	17,981
2023	3,382,710	17,533
2024	3,419,193	18,113

2. Age standardized mortality rate



Age-Standardized Mortality Rate Methodology

Definition

The Age-Standardized Mortality Rate (ASMR) is the weighted average of age-specific mortality rates per 100,000 population, calculated using a standard population as weights.

Data source and number of cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.

- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting in remote rural areas and abroad,
- Sensitivity of results to the choice of standard population.

Calculation

Formula:

$$ASMR = \frac{\sum(r_i * \omega_i)}{\sum \omega_i} * 100,000$$

where:

$r_i = \frac{d_i}{\rho_i}$ = age-specific mortality rate for age group i

d_i = number of deaths in age group i

ρ_i = population in age group i

ω_i = standard population weight for age group i

Calculation details

Numerator: Age-specific deaths in the given year, by sex.

Denominator: Population of the corresponding age group.

Weights: WHO standard population applied to each age group.

Unit of measurement: Deaths per 100,000 population.

Stratification

The presented chart compares age-standardized mortality rates by sex (male and female) of 2015 and 2024.

Calculation data:

Male						Female				
Age	Death	Population	Mortality rate	standard population	weighted	Death	Pop	Mortality rate	standard population	weighted
0-4	500	173302	288.51	0.089	25.56	377	164605	229.03	0.089	20.29
5-9	77	198182	38.85	0.087	3.38	28	187873	14.90	0.087	1.30
10-14	78	186464	41.83	0.086	3.60	30	178391	16.82	0.086	1.45
15-19	110	137715	79.88	0.085	6.77	48	132542	36.21	0.085	3.07
20-24	135	105423	128.06	0.082	10.53	51	102165	49.92	0.082	4.10
25-29	179	112030	159.78	0.079	12.67	74	109908	67.33	0.079	5.34
30-34	357	130663	273.22	0.076	20.79	115	129038	89.12	0.076	6.78
35-39	608	143513	423.66	0.072	30.29	165	143214	115.21	0.072	8.24
40-44	733	118122	620.54	0.066	40.89	233	119411	195.12	0.066	12.86
45-49	1001	102889	972.89	0.06	58.76	345	107811	320.00	0.06	19.33
50-54	1142	88661	1288.05	0.054	69.17	388	96771	400.95	0.054	21.53
55-59	1329	70583	1882.89	0.046	85.67	543	83748	648.37	0.046	29.50
60-64	1476	56875	2595.17	0.037	96.54	653	73750	885.42	0.037	32.94
65-69	1198	34913	3431.39	0.03	101.57	641	50693	1264.47	0.03	37.43
70-74	841	18083	4650.78	0.022	102.78	624	29105	2143.96	0.022	47.38
75-79	625	9349	6685.21	0.015	101.62	620	16683	3716.36	0.015	56.49
80-84	571	6537	8734.89	0.009	79.49	691	11332	6097.78	0.009	55.49
85+	537	3410	15747.80	0.006	100.00	990	7696	12863.83	0.006	81.69

3. Life Table Indicators

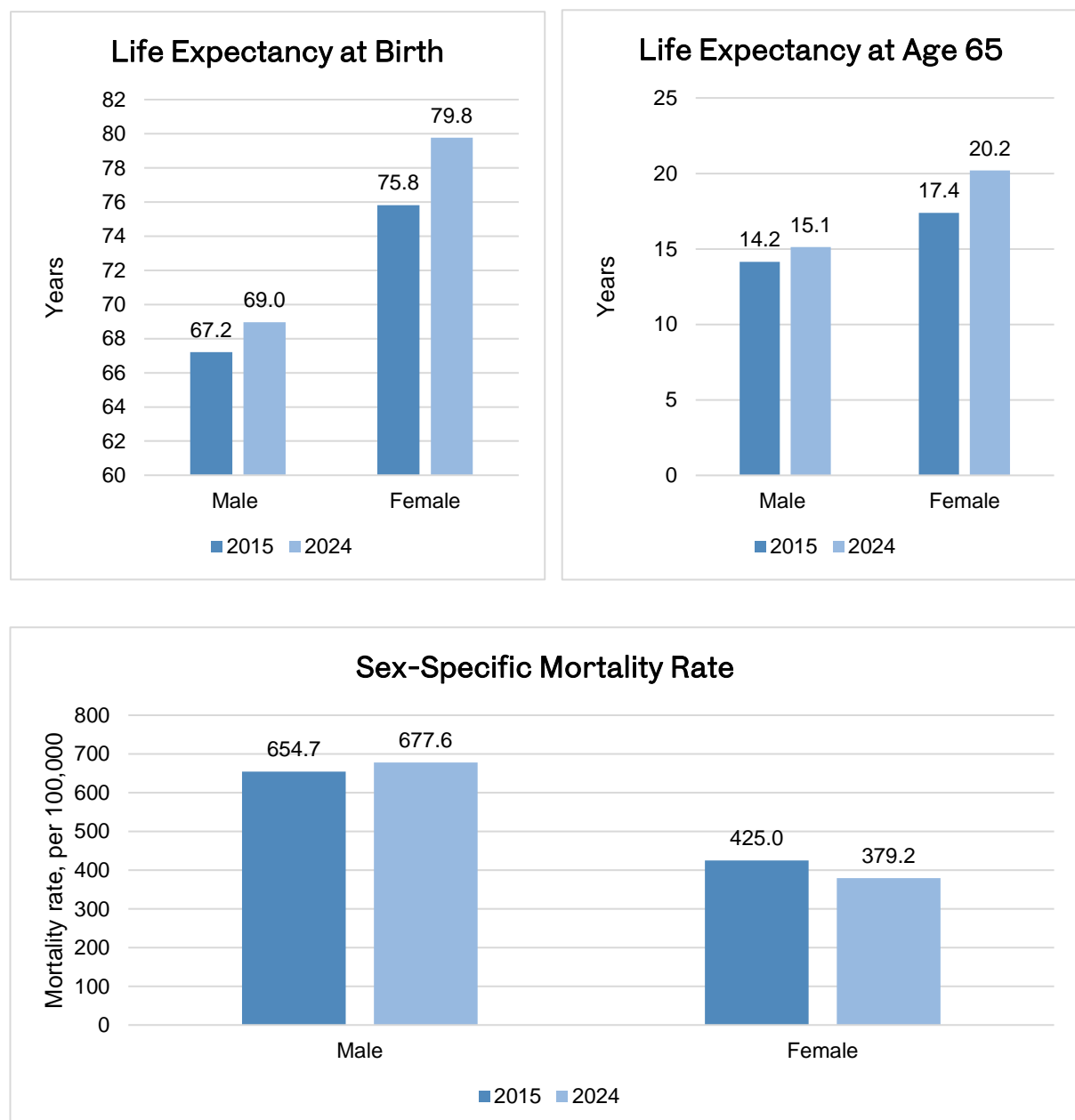
Life Table Methodology

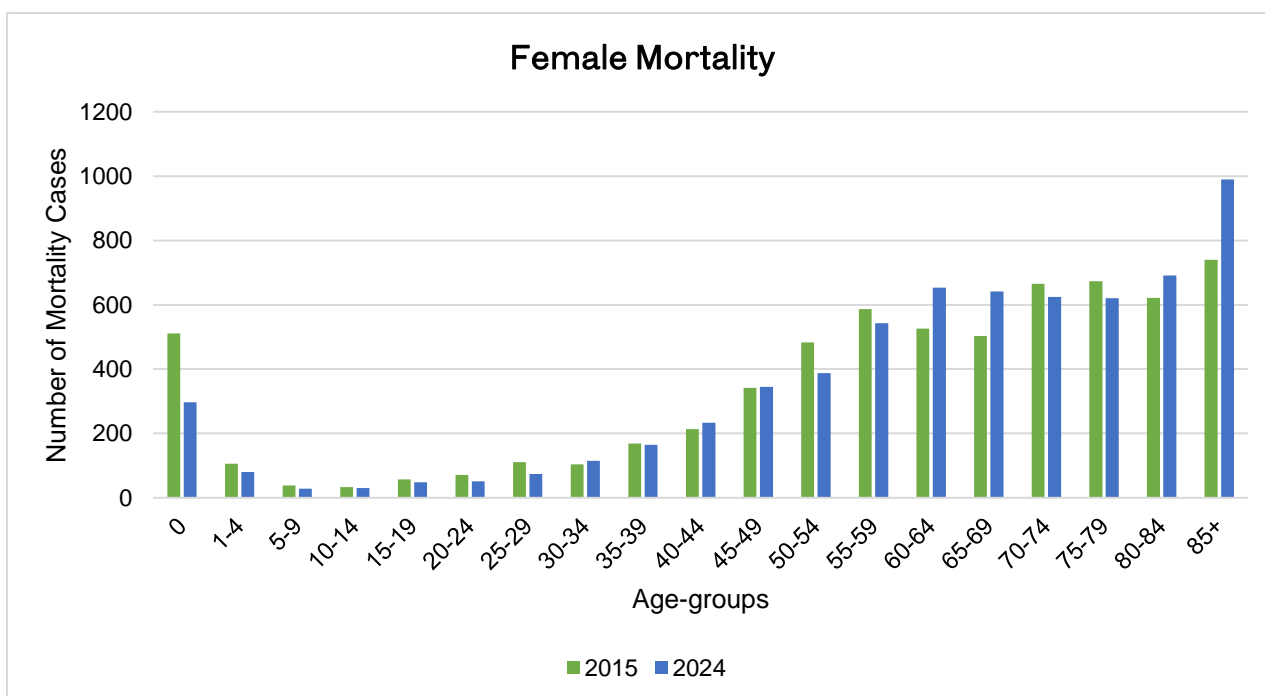
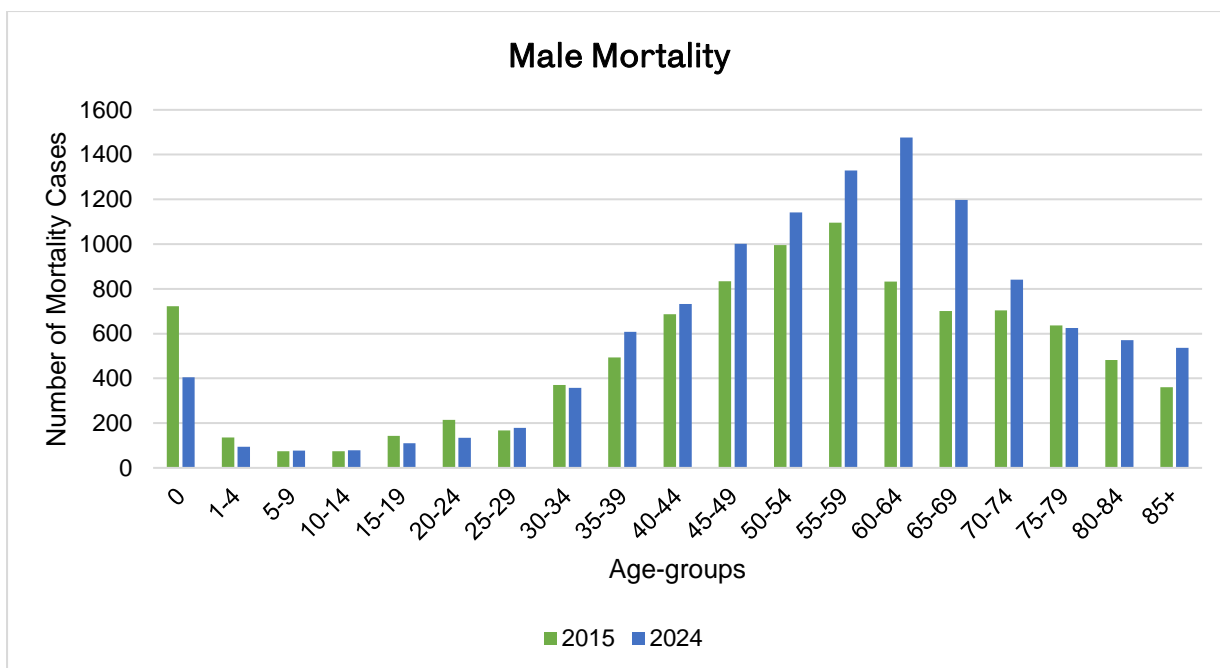
Definition

A **life table** is a demographic tool that models the mortality experience of a population across different ages.

It describes, for each age (or age group), the probability of dying before reaching the next age, the number of survivors, the number of deaths, the person-years lived, and the remaining life expectancy.

Life tables are the basis for calculating **life expectancy at birth**, **life expectancy at older ages**, and other survival indicators.





Data source and number of cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December

For constructing life tables, mortality rates are calculated using the number of deaths and population counts in each age group.

Data quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting in rural and remote areas and abroad

Calculation

A complete life table is constructed using the following standard steps:

Calculate age-specific mortality rates ($m_x = \frac{D_x}{P_x}$), where D_x = number of deaths in age group x , P_x = average population.

Convert to probability of dying in each age interval (q_x) using model life table formulas and assumptions about average years lived by those who die (a_x).

Compute survivors (l_x), starting from a hypothetical cohort of 100,000 births.

Calculate deaths ($d_x = l_x * q_x$) and survivors to the next age group (l_{x+n}).

Estimate person-years lived in each interval (L_x).

Aggregate total person-years above age x (T_x).

Derive life expectancy at each age ($e_x = \frac{T_x}{l_x}$).

Stratification

Sex (male, female)

Time periods (2015 and 2024)

Calculation data:

Male mortality 2015

Actual age	Interval	Number of deaths	Population size	Mortality rate between ages x and x+n in a given period	Average person-years alive in a given interval	Probability of dying between ages x and x+n	Probability of living from age x to age x+n	Number of people alive at age x	Number of deaths between ages x and x+n	Number of people alive between ages x and x+n	Number of people alive beyond age x	Number of people alive beyond age x
x	n	${}_nD_x$	${}_nN_x$	${}_nm_x$	${}_na_x$	${}_nq_x$	${}_np_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	e_x
0	1	723	39562	0.0183	0.1	0.0180	0.9820	100000	1798	98382	6720998	67.21
1-4	4	136	147787	0.0009	0.4	0.0037	0.9963	98202	361	391943	6622616	67.44
5-9	5	74	144910.5	0.0005	0.5	0.0026	0.9974	97841	249	488583	6230673	63.68
10-14	5	74	112490.5	0.0007	0.5	0.0033	0.9967	97592	320	487158	5742090	58.84
15-19	5	143	122034.5	0.0012	0.5	0.0058	0.9942	97271	568	484936	5254932	54.02
20-24	5	214	136675	0.0016	0.5	0.0078	0.9922	96703	754	481631	4769996	49.33
25-29	5	167	153980	0.0011	0.5	0.0054	0.9946	95949	519	478448	4288365	44.69
30-34	5	371	128711.5	0.0029	0.5	0.0143	0.9857	95430	1366	473737	3809917	39.92
35-39	5	493	114331	0.0043	0.5	0.0213	0.9787	94065	2006	465307	3336180	35.47
40-44	5	686	101060.5	0.0068	0.5	0.0334	0.9666	92058	3072	452610	2870873	31.19
45-49	5	834	84772	0.0098	0.5	0.0480	0.9520	88986	4272	434249	2418263	27.18
50-54	5	995	71813	0.0139	0.5	0.0670	0.9330	84714	5672	409388	1984014	23.42
55-59	5	1096	50517.5	0.0217	0.5	0.1029	0.8971	79041	8133	374874	1574626	19.92
60-64	5	833	28987	0.0287	0.5	0.1341	0.8659	70908	9506	330778	1199752	16.92
65-69	5	701	17923.5	0.0391	0.5	0.1781	0.8219	61403	10938	279669	868974	14.15
70-74	5	704	14151	0.0497	0.5	0.2212	0.7788	50465	11164	224413	589305	11.68
75-79	5	636	8818	0.0721	0.5	0.3055	0.6945	39300	12008	166483	364892	9.28
80-84	5	482	4394.5	0.1097	0.5	0.4304	0.5696	27293	11747	107097	198409	7.27
85+		360	2114.5	0.1703	0.5	1	0.0000	15546	15546	91312	91312	5.87

Female mortality 2015

Actual age	Interval	Number of deaths	Population size	Mortality rate between ages x and x+n in a given period	Average person-years alive in a given interval	Probability of dying between ages x and x+n	Probability of living from age x to age x+n	Number of people alive at age x	Number of deaths between ages x and x+n	Number of people alive between ages x and x+n	Number of people alive beyond age x	Number of people alive beyond age x
x	n	${}_nD_x$	${}_nN_x$	${}_nm_x$	${}_na_x$	${}_nq_x$	${}_np_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	e_x
0	1	511	37628	0.0136	0.1	0.0134	0.9866	100000	1342	98793	7582486	75.82
1-4	4	106	141440	0.0007	0.4	0.0030	0.9970	98658	295	393925	7483693	75.85
5-9	5	38	140166.5	0.0003	0.5	0.0014	0.9986	98363	133	491483	7089768	72.08
10-14	5	33	109241.5	0.0003	0.5	0.0015	0.9985	98230	148	490779	6598286	67.17
15-19	5	57	120089	0.0005	0.5	0.0024	0.9976	98082	232	489827	6107507	62.27
20-24	5	71	136354	0.0005	0.5	0.0026	0.9974	97849	254	488610	5617680	57.41
25-29	5	111	155763.5	0.0007	0.5	0.0036	0.9964	97595	347	487106	5129070	52.55
30-34	5	104	131986.5	0.0008	0.5	0.0039	0.9961	97248	382	485282	4641964	47.73
35-39	5	169	118682	0.0014	0.5	0.0071	0.9929	96865	687	482608	4156682	42.91
40-44	5	213	107514.5	0.0020	0.5	0.0099	0.9901	96178	948	478520	3674074	38.20
45-49	5	342	93671	0.0037	0.5	0.0181	0.9819	95230	1723	471843	3195554	33.56
50-54	5	483	81709	0.0059	0.5	0.0291	0.9709	93507	2723	460728	2723711	29.13
55-59	5	587	61117	0.0096	0.5	0.0469	0.9531	90784	4257	443275	2262983	24.93
60-64	5	526	37042.5	0.0142	0.5	0.0686	0.9314	86526	5933	417800	1819708	21.03
65-69	5	503	24774.5	0.0203	0.5	0.0966	0.9034	80594	7786	383502	1401908	17.39
70-74	5	665	18968.5	0.0351	0.5	0.1612	0.8388	72807	11734	334702	1018406	13.99
75-79	5	673	12401	0.0543	0.5	0.2389	0.7611	61073	14592	268886	683704	11.19
80-84	5	621	8134	0.0763	0.5	0.3205	0.6795	46481	14899	195156	414818	8.92
85+		740	5147	0.1438	0.5	1	0.0000	31582	31582	219662	219662	6.96

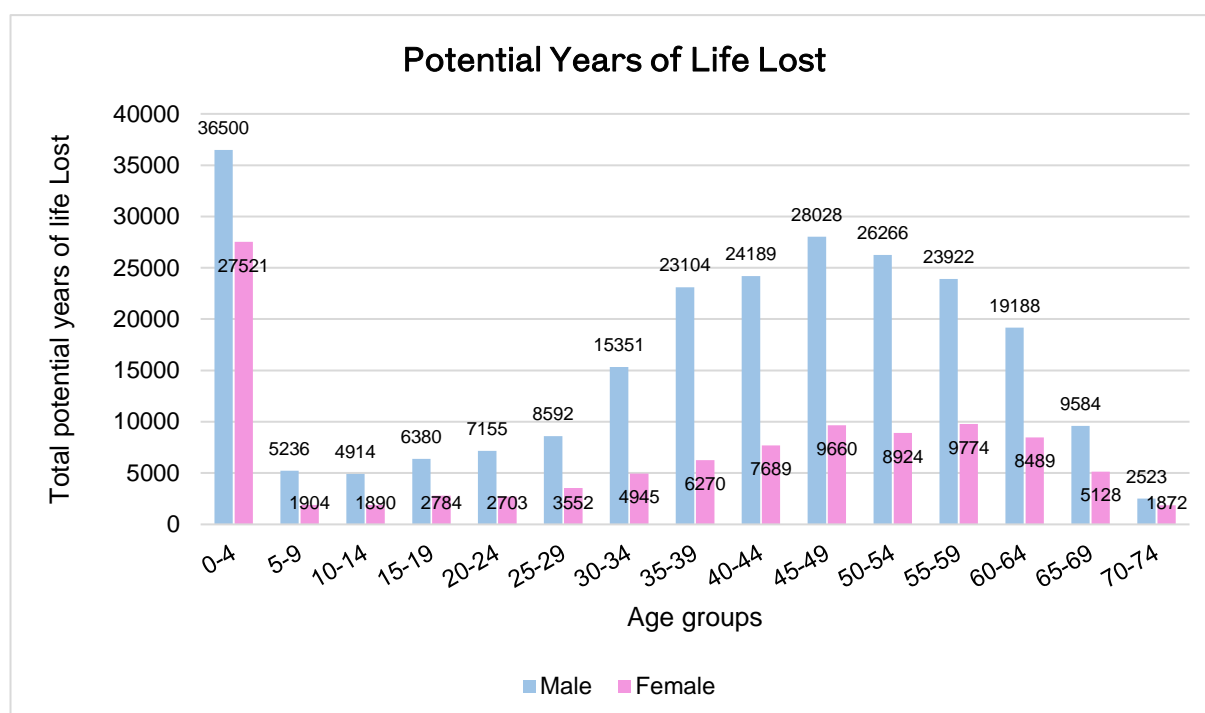
Male mortality 2024

Actual age	Interval	Number of deaths	Population size	Mortality rate between ages x and x+n in a given period	Average person-years alive in a given interval	Probability of dying between ages x and x+n	Probability of living from age x to age x+n	Number of people alive at age x	Number of deaths between ages x and x+n	Number of people alive between ages x and x+n	Number of people alive beyond age x	Number of people alive beyond age x
x	n	${}_nD_x$	${}_nN_x$	${}_nm_x$	${}_na_x$	${}_nq_x$	${}_np_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	e_x
0	1	405	30637	0.0132	0.1	0.0131	0.9869	100000	1306	98824	6896201	68.96
1-4	4	95	142665	0.0007	0.4	0.0027	0.9973	98694	262	394145	6797376	68.87
5-9	5	77	198182	0.0004	0.5	0.0019	0.9981	98431	191	491678	6403232	65.05
10-14	5	78	186464	0.0004	0.5	0.0021	0.9979	98240	205	490687	5911554	60.17
15-19	5	110	137715	0.0008	0.5	0.0040	0.9960	98035	391	489197	5420866	55.30
20-24	5	135	105423	0.0013	0.5	0.0064	0.9936	97644	623	486663	4931669	50.51
25-29	5	179	112030	0.0016	0.5	0.0080	0.9920	97021	772	483175	4445006	45.81
30-34	5	357	130663	0.0027	0.5	0.0136	0.9864	96249	1306	477980	3961832	41.16
35-39	5	608	143513	0.0042	0.5	0.0210	0.9790	94943	1990	469740	3483852	36.69
40-44	5	733	118122	0.0062	0.5	0.0306	0.9694	92953	2840	457664	3014112	32.43
45-49	5	1001	102889	0.0097	0.5	0.0475	0.9525	90113	4279	439866	2556448	28.37
50-54	5	1142	88661	0.0129	0.5	0.0624	0.9376	85833	5355	415779	2116582	24.66
55-59	5	1329	70583	0.0188	0.5	0.0899	0.9101	80478	7236	384300	1700804	21.13
60-64	5	1476	56875	0.0260	0.5	0.1219	0.8781	73242	8925	343898	1316504	17.97
65-69	5	1198	34913	0.0343	0.5	0.1580	0.8420	64317	10163	296179	972605	15.12
70-74	5	841	18083	0.0465	0.5	0.2083	0.7917	54154	11281	242568	676426	12.49
75-79	5	625	9349	0.0669	0.5	0.2864	0.7136	42873	12279	183668	433858	10.12
80-84	5	571	6537	0.0873	0.5	0.3585	0.6415	30594	10967	125554	250190	8.18
85+		537	3410	0.1575	0.5	1	0.0000	19627	19627	124635	124635	6.35

Female mortality 2024

Actual age	Interval	Number of deaths	Population size	Mortality rate between ages x and x+n in a given period	Average person-years alive in a given interval	Probability of dying between ages x and x+n	Probability of living from age x to age x+n	Number of people alive at age x	Number of deaths between ages x and x+n	Number of people alive between ages x and x+n	Number of people alive beyond age x	Number of people alive beyond age x
x	n	${}_nD_x$	${}_nN_x$	${}_nm_x$	${}_na_x$	${}_nq_x$	${}_np_x$	l_x	${}_nd_x$	${}_nL_x$	T_x	e_x
0	1	297	28980	0.0102	0.1	0.0102	0.9898	100000	1015	99086	7977570	79.78
1-4	4	80	135625	0.0006	0.4	0.0024	0.9976	98985	233	395378	7878484	79.59
5-9	5	28	187873	0.0001	0.5	0.0007	0.9993	98751	74	493573	7483106	75.78
10-14	5	30	178391	0.0002	0.5	0.0008	0.9992	98678	83	493181	6989533	70.83
15-19	5	48	132542	0.0004	0.5	0.0018	0.9982	98595	178	492528	6496352	65.89
20-24	5	51	102165	0.0005	0.5	0.0025	0.9975	98416	245	491469	6003824	61.00
25-29	5	74	109908	0.0007	0.5	0.0034	0.9966	98171	330	490031	5512355	56.15
30-34	5	115	129038	0.0009	0.5	0.0044	0.9956	97841	435	488118	5022324	51.33
35-39	5	165	143214	0.0012	0.5	0.0057	0.9943	97406	560	485632	4534206	46.55
40-44	5	233	119411	0.0020	0.5	0.0097	0.9903	96847	940	481883	4048574	41.80
45-49	5	345	107811	0.0032	0.5	0.0159	0.9841	95906	1522	475726	3566691	37.19
50-54	5	388	96771	0.0040	0.5	0.0198	0.9802	94384	1873	467237	3090965	32.75
55-59	5	543	83748	0.0065	0.5	0.0319	0.9681	92511	2951	455175	2623729	28.36
60-64	5	653	73750	0.0089	0.5	0.0433	0.9567	89559	3879	438100	2168553	24.21
65-69	5	641	50693	0.0126	0.5	0.0613	0.9387	85680	5251	415274	1730454	20.20
70-74	5	624	29105	0.0214	0.5	0.1017	0.8983	80429	8183	381689	1315180	16.35
75-79	5	620	16683	0.0372	0.5	0.1700	0.8300	72246	12283	330522	933491	12.92
80-84	5	691	11332	0.0610	0.5	0.2646	0.7354	59963	15864	260154	602969	10.06
85+		990	7696	0.1286	0.5	1	0.0000	44099	44099	342815	342815	7.77

4. Potential Years of Life Lost



Potential Years of Life Lost (PYLL) Methodology

Definition

Potential Years of Life Lost (PYLL) measures the total number of years **not lived** by individuals who die before reaching a selected upper age limit (in this case <75). It reflects the impact of **premature mortality**, highlighting deaths that occur at younger ages and therefore contribute more to lost life years.

Data source and number of cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.

- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting of deaths in remote rural areas and abroad,
- Sensitivity to the chosen upper age limit (different cut-offs may yield different results).

Calculation

Formula:

$$PYLL = \sum(L - a) * d$$

where,

L=selected reference age (75 years)

a= midpoint of the age group at death

d=number of deaths in that age group

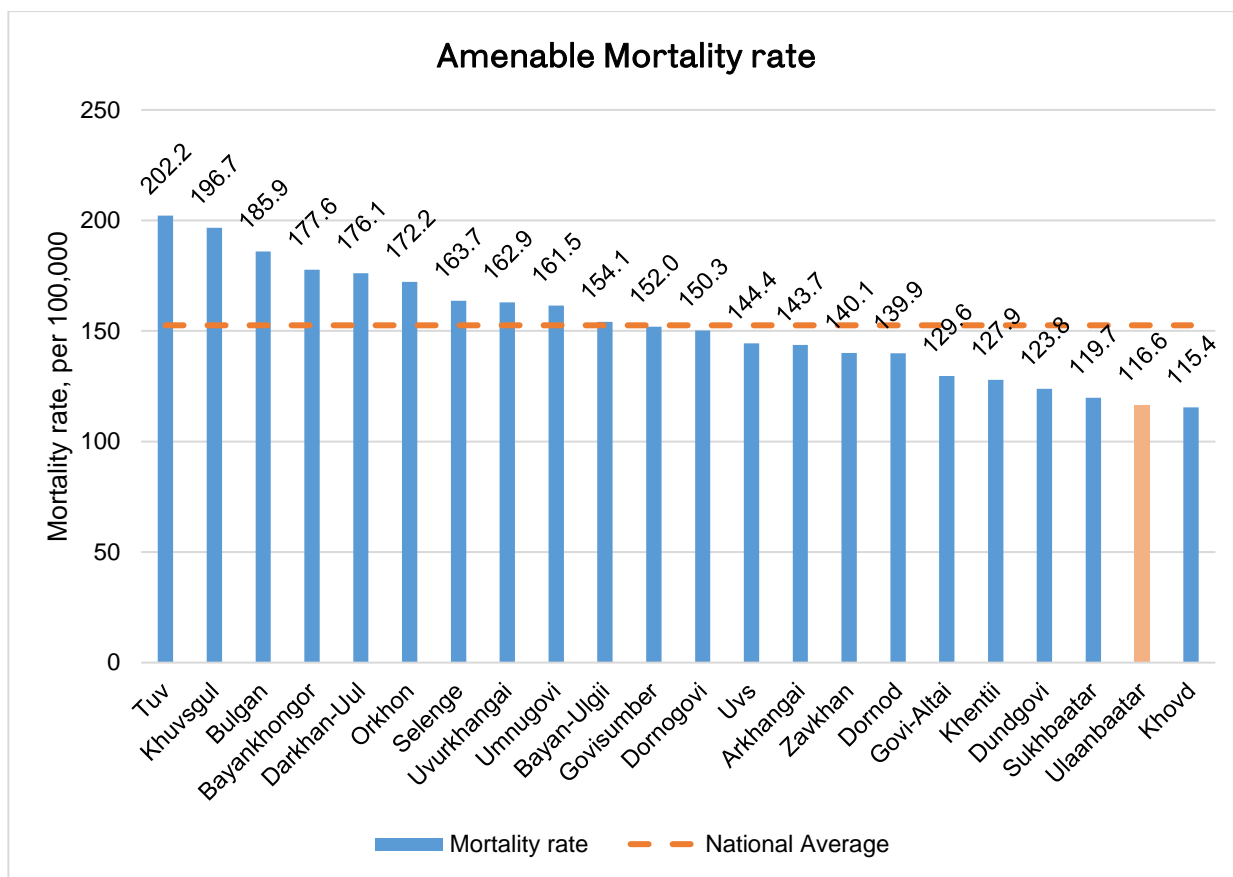
Stratification

PYLL is presented by age group and sex (male, female)

Calculation data:

Male					Female				
Age Group	Midpoint	Deaths	Years Life Lost	Total	Age Group	Midpoint	Deaths	Years Life Lost	Total
0-4	2	500	73	36500	0-4	2	377	73	27521
5-9	7	77	68	5236	5-9	7	28	68	1904
10-14	12	78	63	4914	10-14	12	30	63	1890
15-19	17	110	58	6380	15-19	17	48	58	2784
20-24	22	135	53	7155	20-24	22	51	53	2703
25-29	27	179	48	8592	25-29	27	74	48	3552
30-34	32	357	43	15351	30-34	32	115	43	4945
35-39	37	608	38	23104	35-39	37	165	38	6270
40-44	42	733	33	24189	40-44	42	233	33	7689
45-49	47	1001	28	28028	45-49	47	345	28	9660
50-54	52	1142	23	26266	50-54	52	388	23	8924
55-59	57	1329	18	23922	55-59	57	543	18	9774
60-64	62	1476	13	19188	60-64	62	653	13	8489
65-69	67	1198	8	9584	65-69	67	641	8	5128
70-74	72	841	3	2523	70-74	72	624	3	1872

5. Amenable Mortality Rate



Amenable Mortality Rate Methodology

Definition

Amenable mortality refers to deaths that could have been avoided through timely and effective health care interventions, such as early diagnosis, appropriate treatment, and high-quality clinical management. It is defined as the number of deaths per 100,000 population from conditions classified as *amenable to health care* according to the OECD/Eurostat lists of preventable and treatable causes of death (January 2022 version).

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting of deaths in remote rural areas and abroad

Calculation

Formula:

$$\begin{aligned} & \text{Amenable Mortality Rate} \\ &= \frac{\text{Number of Mortalities due to Amenable Diseases (age < 70)}}{\text{Average Population (age < 70)}} * 100,000 \end{aligned}$$

Calculation details:

Numerator: Results are presented as total number of mortality cases due to amendable diseases

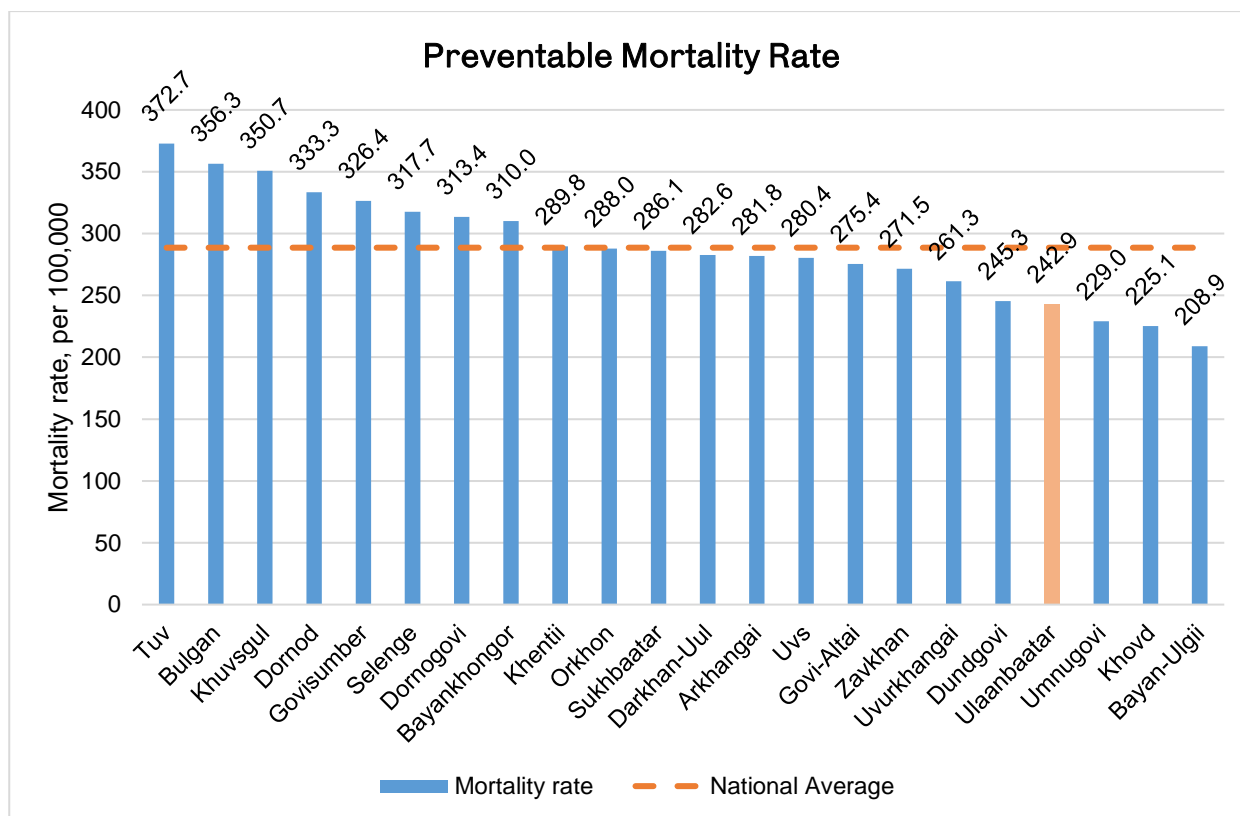
Denominator: Average population (from January 1 to December 31 estimates) is used as the denominator.

Stratification: Data were stratified by the 21 provinces and Ulaanbaatar city of Mongolia, according to the permanent residence of the deceased.

Calculation data:

Amenable mortality			
Province	Cases	Average population	Deaths per 100,000
Arkhangai	130	90,204	144.1178
Bayan-Ulgii	166	108,330	153.2355
Bayankhongor	153	86,090	177.721
Bulgan	108	57,862	186.651
Govi-Altai	72	55,310	130.1754
Govisumber	27	17,865	151.1335
Darkhan-Uul	177	101,113	175.0517
Dornogovi	105	70,084	149.8202
Dornod	115	82,155	139.9793
Dundgovi	54	44,422	121.5614
Zavkhan	97	69,019	140.541
Orkhon	175	103,283	169.4374
Uvurkhangai	182	111,503	163.2243
Umnugovi	122	76,802	158.85
Sukhbaatar	77	64,356	119.647
Selenge	168	102,506	163.8928
Tuv	179	88,523	202.2073
Uvs	120	83,160	144.3001
Ulaanbaatar	1871	1627,969	114.9285
Khovd	102	88,867	114.7783
Khuvsgul	262	133,127	196.8046
Khentii	98	76,705	127.7622

6. Preventable Mortality rate



Preventable Mortality Rate Methodology

Definition

Preventable mortality refers to deaths that could have been avoided primarily through effective public health interventions and preventive measures implemented before the onset of disease or injury. It is defined as the number of deaths per 100,000 population from conditions classified as *preventable through public health and primary prevention* according to the OECD/Eurostat lists (January 2022 version).

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting of deaths in remote rural areas and abroad

Calculation

Formula:

$$\text{Preventable Mortality Rate} = \frac{\text{Number of Mortalities due to Preventable Diseases (age<70)}}{\text{Average Population (age<70)}} * 100,000$$

Calculation details

Numerator: Total number of mortality cases due to preventable diseases and injuries within the age of 70.

Denominator: Annual average population (average of January 1 and December 31) within the age of 70.

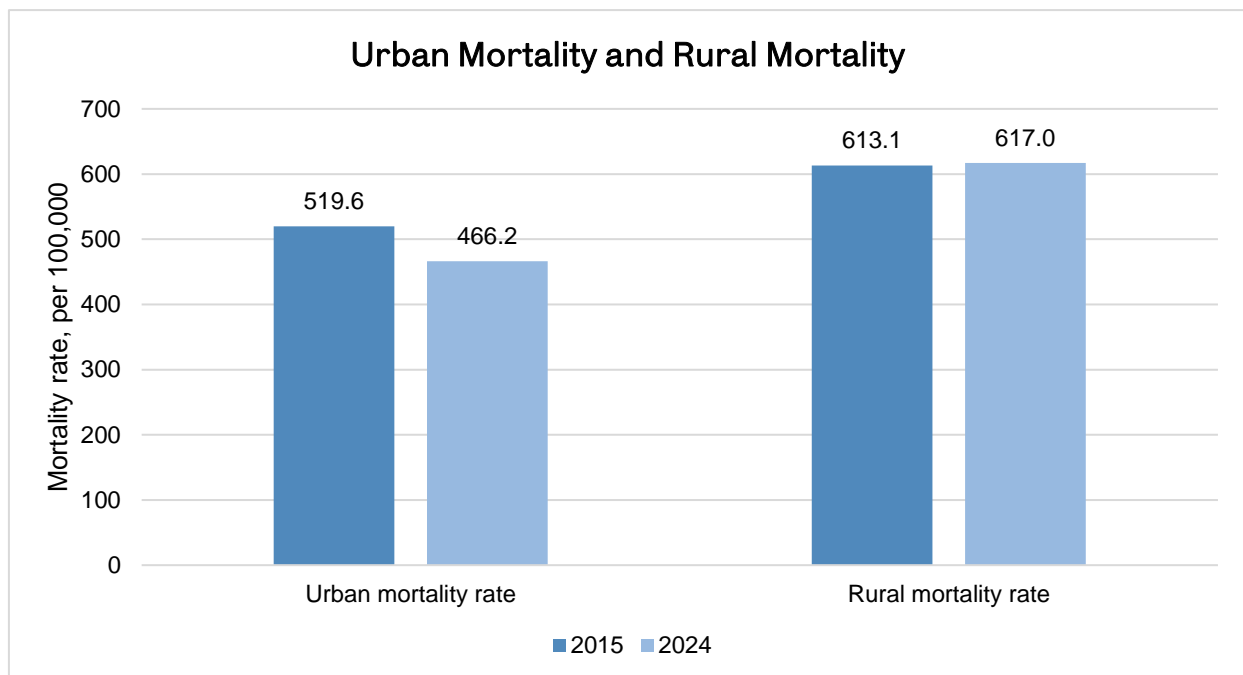
Stratification

Results are stratified by the 21 provinces and Ulaanbaatar city of Mongolia, according to the permanent residence of the deceased.

Calculation data:

Preventable			
	Cases	Total population /up to 69/	Deaths per 100,000 population
Arkhangai	255	90,204	282.6926
Bayan-Ulgii	225	108,330	207.6987
Bayankhongor	266	86,090	308.979
Bulgan	207	57,862	357.7477
Govi-Altai	153	55,310	276.6227
Govisumber	56	17,865	313.4621
Darkhan-Uul	284	101,113	280.8739
Dornogovi	219	70,084	312.4822
Dornod	274	82,155	333.5159
Dundgovi	109	44,422	245.3739
Zavkhan	188	69,019	272.3888
Orkhon	296	103,283	286.5912
Uvurkhangai	292	111,503	261.8764
Umnugovi	173	76,802	225.2546
Sukhbaatar	184	64,356	285.9096
Selenge	326	102,506	318.0302
Tuv	330	88,523	372.7845
Uvs	233	83,160	280.1828
Ulaanbaatar	3905	1627,969	239.8694
Khovd	199	88,867	223.9301
Khuvsgul	467	133,127	350.7929
Khentii	222	76,705	289.4205

7. Urban and Rural Mortality rate



Urban vs. Rural Mortality Rate Methodology

Definition

The urban vs. rural mortality rate compares mortality outcomes between populations living in urban and those in rural areas. This indicator highlights disparities in health outcomes due to differences in healthcare access, socioeconomic conditions, environmental risks, and demographic structures. It is expressed as the number of deaths per 100,000 population in each setting.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.

- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Migration between rural and urban areas,
- Possible misreporting of residence
- Regional differences in diagnostic capacity.

Calculation

Formula:

$$\text{Urban Mortality Rate} = \frac{\text{Number of Mortalities in Urban Population}}{\text{Urban Average Population}} * 100,000$$

$$\text{Rural Mortality Rate} = \frac{\text{Number of Mortalities in Rural Population}}{\text{Rural Average Population}} * 100,000$$

Calculation details

Numerator: Total number of mortality cases within each geographic category (urban or rural).

Denominator: Annual average population of urban and rural residents separately (average of January 1 and December 31)

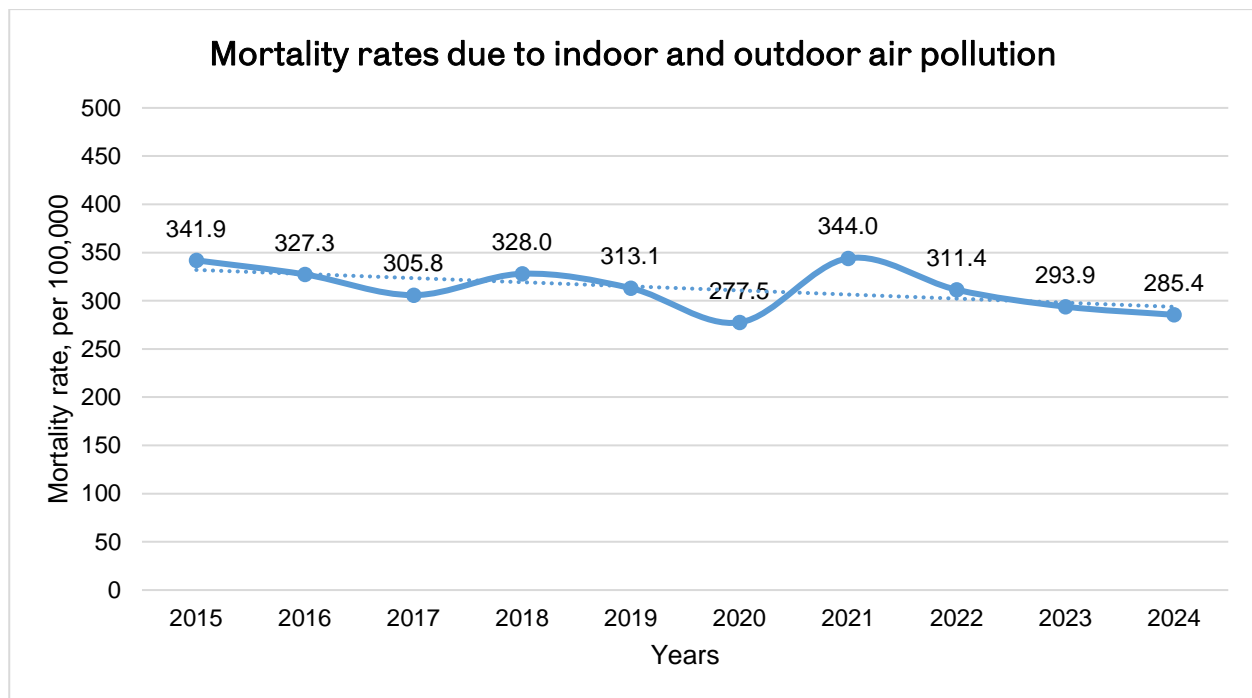
Stratification

Results are stratified into two categories: **Urban** (Ulaanbaatar city, Darkhan city, Erdenet city, and aimag centers) and **Rural** (soum and countryside populations).

Calculation data:

Variables	Urban Mortality rate		Rural Mortality rate	
Years	2015	2024	2015	2024
Cases of death	10,120	11,759	6,233	6,310
Average population	1,947,502	2,522,210	1,016,583	1,022,625

8. Mortality from Indoor and Outdoor Air Pollution



Mortality from Indoor and Outdoor Air Pollution – Methodology

Definition

Mortality from indoor and outdoor air pollution refers to deaths attributable to exposure to fine particulate matter (PM_{2.5}), household solid fuel combustion, and other air pollutants. It is defined as the number of deaths per 100,000 population caused by diseases strongly linked to air pollution, such as chronic respiratory diseases, lung cancer, ischemic heart disease, and stroke.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.

- **Verification:** Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- **External Oversight:** Additional audits may be conducted by State Statistics Inspectors.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Incomplete attribution of mortality to air pollution without exposure modeling.
- Under-registration of deaths abroad.

Calculation

Formula:

$$\text{Mortality Rate from Indoor and Outdoor Air pollution} = \frac{\text{Number of deaths attributed to air pollution}}{\text{Average population}} \times 100,000$$

Calculation details:

Numerator: Number of mortality cases attributed to indoor and outdoor air pollution exposures (all ages).

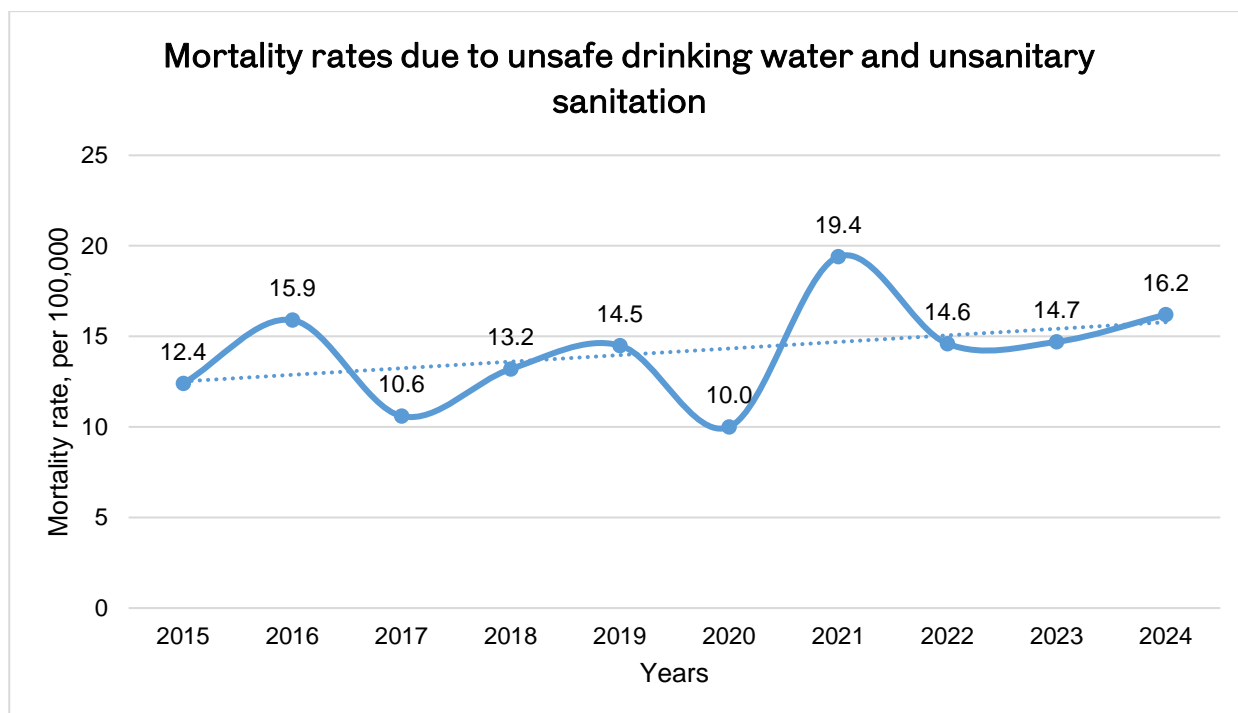
Denominator: Annual average population (average of January 1 and December 31).

Stratification: Data are presented as a 10-year time series (2015–2024) to illustrate long-term trends in mortality rates due to indoor and outdoor air pollution.

Calculation data:

Category	ICD10	Age	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Lower respiratory tract diseases	J09-J22	≤5	176	262	151	146	151	78	50	92	79	68
Trachea, bronchus, and lung cancer	C33-C34	≥25	359	354	396	405	452	425	450	486	413	504
Ischemic heart disease	I20-I25	≥25	2,561	2,463	2,436	2,656	2,457	2,173	2,901	2,567	2,490	2,378
Cerebrovascular disease (stroke)	I60-I69	≥25	2,031	1,987	1,933	2,087	1,908	1,835	2,028	1,975	1,854	1,795
Chronic obstructive pulmonary disease (COPD)	J40-J44	≥25	151	179	153	123	140	132	161	171	213	233
Average population			2,964,085	3,026,905	3,097,659	3,159,049	3,190,054	3,225,152	3,282,779	3,340,454	3,382,710	3,419,193

9. Mortality from Unsafe Drinking Water and Unsanitary Sanitation



Mortality from Unsafe Drinking Water and Unsanitary Sanitation – Methodology

Definition

Mortality from unsafe drinking water and unsanitary sanitation refers to deaths caused by exposure to contaminated water and inadequate sanitation facilities, leading to infectious diseases such as diarrheal diseases, cholera, typhoid fever, and other enteric infections. It is expressed as the number of deaths per 100,000 population attributable to unsafe water and poor sanitation conditions.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.

- **Verification:** Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- **External Oversight:** Additional audits may be conducted by State Statistics Inspectors.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations:

- Incomplete attribution of diarrheal disease deaths to unsafe water/sanitation without modeling.
- Possible under-diagnosis or misclassification of enteric diseases in rural areas.
- Unregistered deaths abroad not included.

Calculation

Formula:

$$\text{Mortality Rate from Unsafe Water and Sanitation} = \frac{\text{Number of deaths due to Unsafe Water and Sanitation}}{\text{Average population}} * 100,000$$

Calculation details:

Numerator: Total number of mortality cases attributable to unsafe drinking water and unsanitary sanitation.

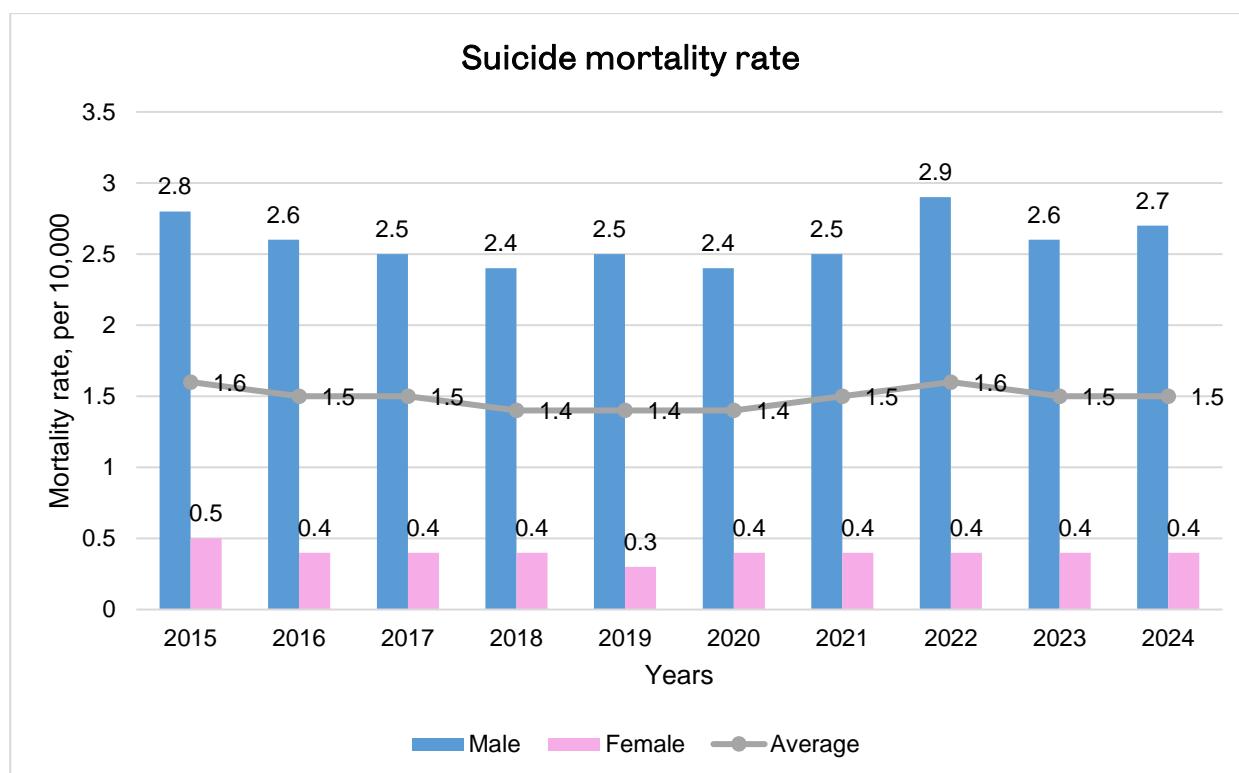
Denominator: Annual average population (average of January 1 and December 31).

Stratification: Data are presented as a 10-year time series (2015–2024) to show trends in mortality rates due to unsafe water and sanitation.

Calculation data:

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cases of Death	368	480	328	418	463	324	636	489	496	553
Average population	2,964,085	3,026,905	3,097,659	3,159,049	3,190,054	3,225,152	3,282,779	3,340,454	3,382,710	3,419,193

10. Suicide Mortality Rate



Suicide Mortality Rate Methodology

Definition

Suicide mortality refers to deaths resulting from intentional self-harm, as classified under ICD-10 codes *X60–X84* and *Y87.0*. This indicator measures the number of deaths per 100,000 population caused by suicide.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.

- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Limitations:

- Unregistered deaths abroad not included.
- Possible under-diagnosis or misclassification of enteric diseases in rural areas.

Calculation

Formula:

$$\text{Suicide Mortality Rate} = \frac{\text{Number of Deaths due to Suicide}}{\text{Average population}} * 100,000$$

Calculation details

Numerator: Total number of registered deaths due to suicide (ICD-10: X60–X84, Y87.0).

Denominator: Annual mid-year population (average of January 1 and December 31 estimates).

Stratification

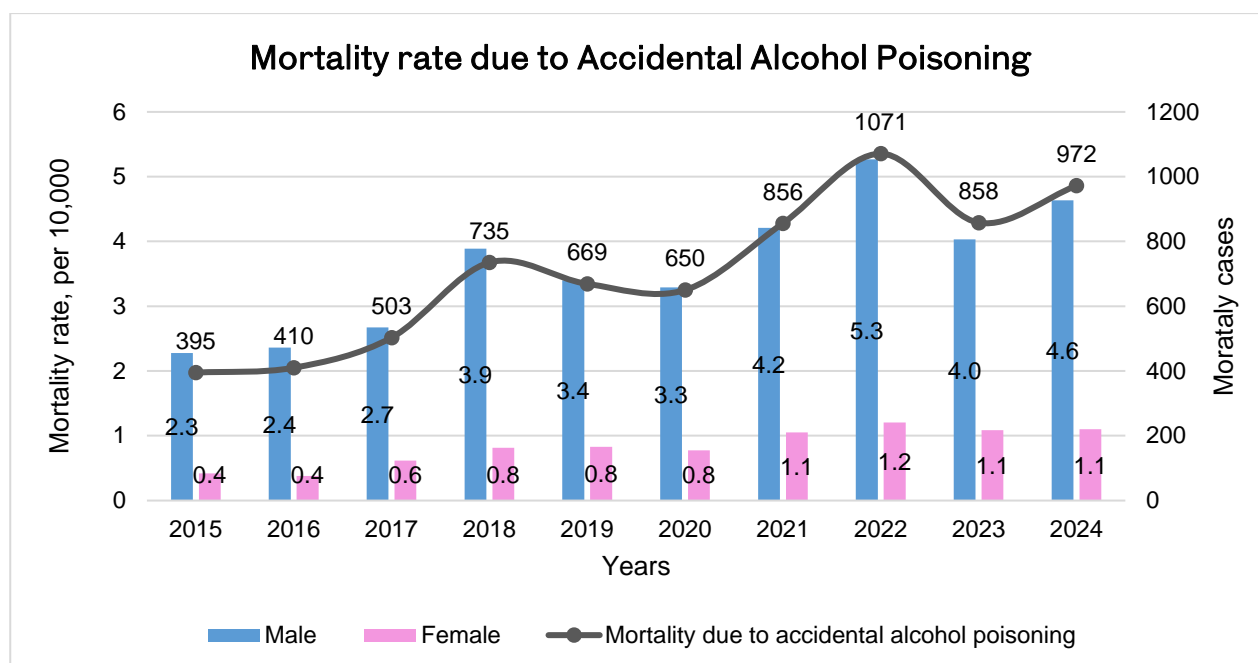
By sex: Separate rates are calculated for male and female populations.

Average: The overall national suicide mortality rate (combined male and female).

Calculation Data:

Number of Suicide Cases										
Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Male	408	387	380	380	397	384	411	470	436	460
Female	71	63	70	65	50	67	72	76	62	64

11. Mortality due to Accidental Alcohol Poisoning



Mortality due to Accidental Alcohol Poisoning – Methodology

Definition

Mortality due to accidental alcohol poisoning refers to deaths caused by unintentional consumption of excessive amounts of alcohol leading to toxic effects. It is expressed as the number of deaths per 10,000 population. This indicator captures the direct public health burden of harmful alcohol consumption patterns, particularly acute intoxication events.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.

- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations:

- Misclassification may occur where alcohol-related deaths are coded as “other poisonings” or “unspecified causes.”
- Underreporting in rural areas where toxicological testing is limited.
- Deaths abroad are excluded if not registered officially.

Calculation

Formula:

$$\text{Mortality Rate from Accidental Alcohol Poisoning} = \frac{\text{Number of deaths due to Accidental Alcohol Poisoning}}{\text{Average population}} * 10,000$$

Calculation details:

Numerator: Number of deaths classified under ICD-10 code X45 in a given year.

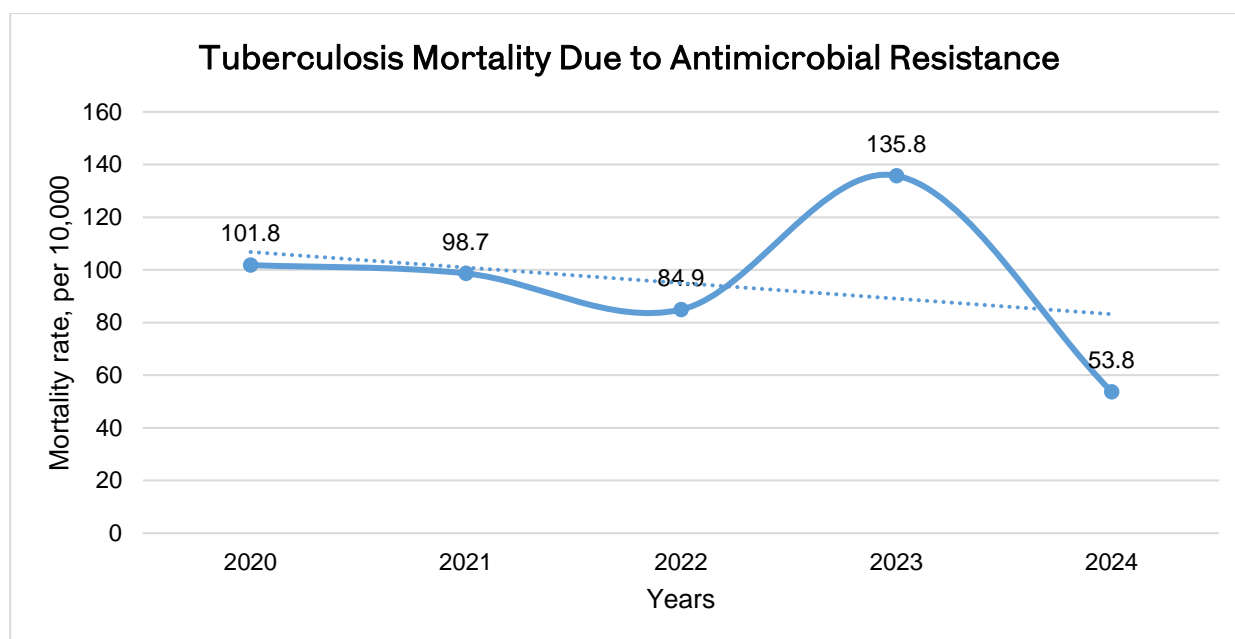
Denominator: Annual average population (average of January 1 and December 31).

Stratification: Data are disaggregated by sex (male, female) and presented as a 10-year time series (2015–2024). Mortality cases (absolute numbers) are also presented alongside mortality rates.

Calculation data:

Mortality cases due to accidental alcohol poisoning										
Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Male	332	352	406	604	535	523	681	867	672	781
Female	63	58	97	131	134	127	175	204	186	191
Total	395	410	503	735	669	650	856	1071	858	972
Average population										
Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Male	1456 505	1489 354	15203 05	15539 22	15732 82	159011 2	16177 70	16456 57	16669 45	16858 42
Female	1507 580	1537 552	15773 55	16051 27	16167 71	16350 40	1665 010	16947 97	17157 65	17333 52

12. Tuberculosis Mortality Due to Antimicrobial Resistance



Tuberculosis Mortality Due to Antimicrobial Resistance – Methodology

Definition

Tuberculosis (TB) mortality due to antimicrobial resistance refers to deaths from TB among patients infected with drug-resistant strains, such as multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB). This indicator reflects the combined burden of TB and antimicrobial resistance, highlighting challenges in effective treatment and control.

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.

- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations:

- Misclassification may occur if TB deaths are recorded without drug-resistance status.
- Limited laboratory capacity in rural areas can reduce detection of MDR/XDR-TB.
- Unregistered deaths abroad are excluded.

Calculation

Formula:

$$\begin{aligned}
 & \textbf{\textit{TB Mortality rate due to Antimicrobial Resistance}} = \\
 & \frac{\textbf{\textit{Number of deaths due to TB antimicrobial resistance}}}{\textbf{\textit{Average population}}} * 10,000
 \end{aligned}$$

Calculation details:

Numerator: Number of TB deaths attributable to antimicrobial resistance (MDR-TB and XDR-TB).

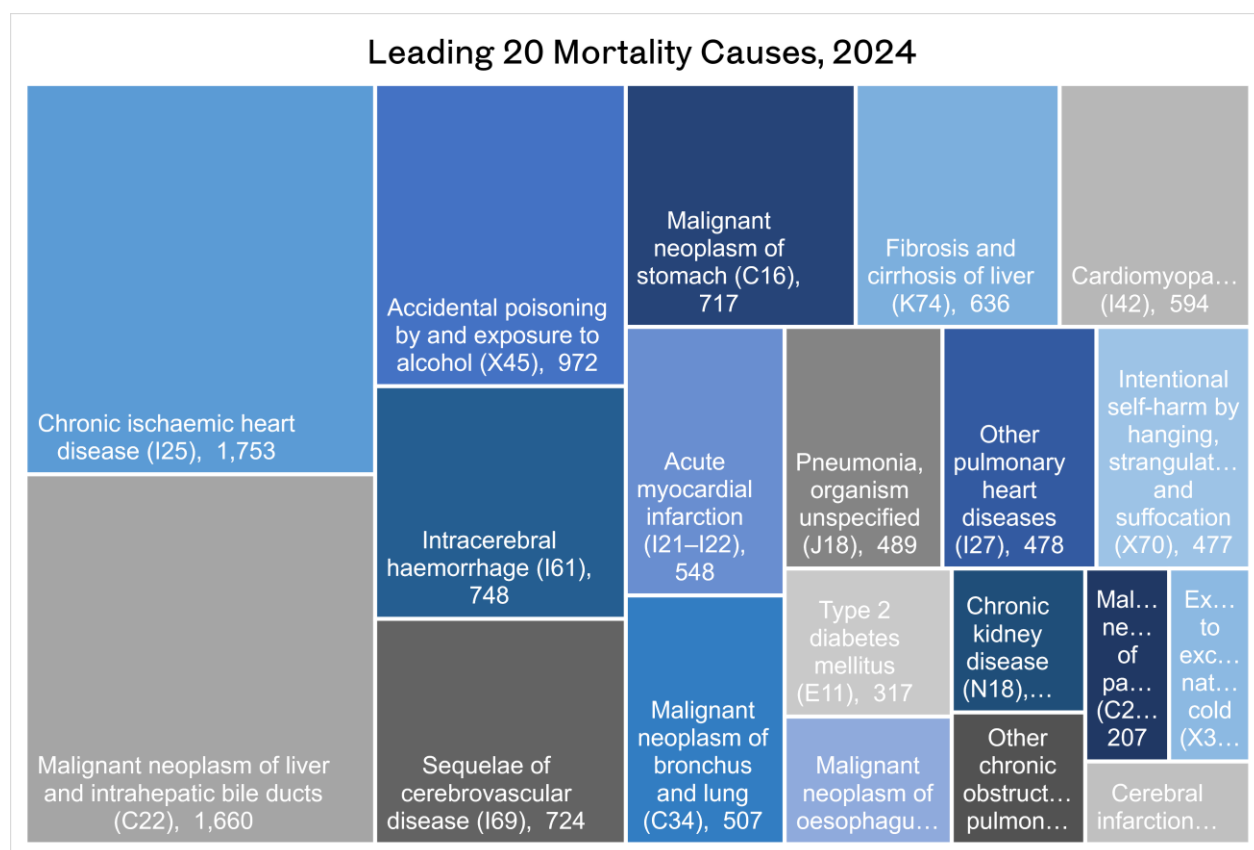
Denominator: Annual average population (average of January 1 and December 31).

Stratification: Data are presented as a 5-year time series (2020–2024) to illustrate recent trends in TB mortality due to antimicrobial resistance.

Calculation data:

TB cases					
Years	2020	2021	2022	2023	2024
Antimicrobial resitance deaths	34	23	20	32	12
Total number of TB cases	3339	2331	2355	2357	2232

13. Leading 20 Mortality causes of 2024



Leading 20 Mortality Causes – Methodology

Definition

The Top 20 Mortality Causes indicator identifies the twenty leading causes of death within a given population and year, ranked according to the number of deaths attributed to each underlying cause of death as classified by the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).

Data Source and Number of Cases

Mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all domestically registered deaths, regardless of the residency status of the deceased.

Population denominators are obtained from the National Statistics Office (NSO) of Mongolia, using annual average population estimates (average of January 1 and December 31 estimates).

Data Quality

Mortality data are collected through a comprehensive acquisition system, with a legal obligation for all health facilities to report deaths.

- Coverage: All registered domestic deaths are included.
- Verification: Data are first checked at the healthcare institution level by statisticians, then double-checked at the HDC.
- External Oversight: Additional audits may be conducted by State Statistics Inspectors.
- Reporting Compliance (2024): Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Order No. A/611 of the Minister of Health.

Potential limitations include:

- Underreporting in rural and remote areas, as well as deaths occurring abroad.
- Lack of adjustment for population age structure.

Calculation:

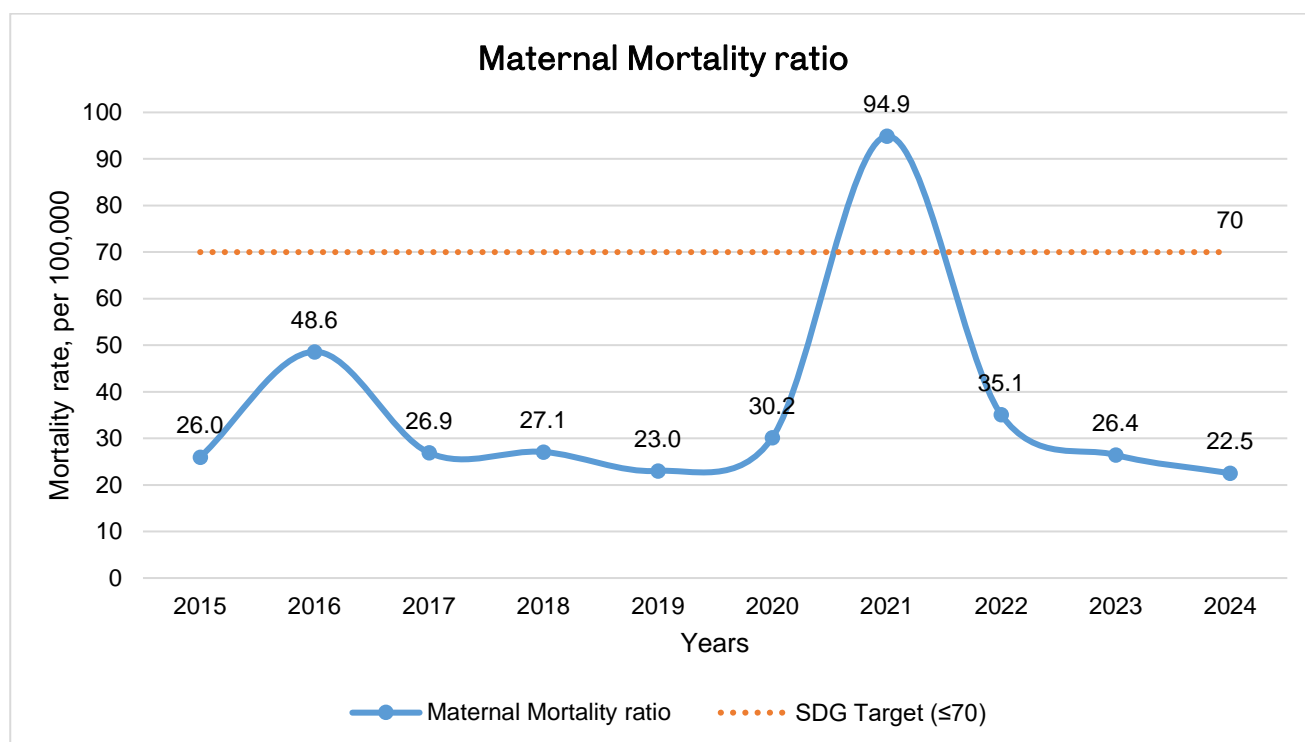
- All mortality data in the reference year (2024) were counted and sorted by frequency (number of cases) according to their ICD-10 primary diagnosis codes.
- The top diagnostic categories were then ranked in descending order and visualized using a treemap, where each rectangle's size represents the relative number of cases.

Calculation data:

ICD-10	Cases
Chronic ischaemic heart disease (I25)	1,753
Malignant neoplasm of liver and intrahepatic bile ducts (C22)	1,660
Accidental poisoning by and exposure to alcohol (X45)	972
Intracerebral haemorrhage (I61)	748
Sequelae of cerebrovascular disease (I69)	724
Malignant neoplasm of stomach (C16)	717
Fibrosis and cirrhosis of liver (K74)	636
Cardiomyopathy (I42)	594
Acute myocardial infarction (I21–I22)	548
Malignant neoplasm of bronchus and lung (C34)	507
Pneumonia, organism unspecified (J18)	489
Other pulmonary heart diseases (I27)	478
Intentional self-harm by hanging, strangulation, and suffocation (X70)	477
Type 2 diabetes mellitus (E11)	317
Malignant neoplasm of oesophagus (C15)	273
Chronic kidney disease (N18)	247
Other chronic obstructive pulmonary disease (COPD) (J44)	226
Malignant neoplasm of pancreas (C25)	207
Exposure to excessive natural cold (X31)	201
Cerebral infarction (I63)	175

MATERNITY AND CHILD

1. Maternal Mortality Ratio



Maternal Mortality Ratio (MMR) – Methodology

Definition

The Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during pregnancy, childbirth, or within 42 days of termination of pregnancy, from causes related to or aggravated by the pregnancy or its management, per 100,000 live births in a given year. It reflects both the quality of maternal healthcare and the effectiveness of the health system in preventing avoidable maternal deaths.

Data Source and Number of Cases

Maternal mortality statistics are compiled by the Health Development Center (HDC) based on reports from 621 public and 1,912 private healthcare institutions across Mongolia. Data include all registered maternal deaths, irrespective of residency status of the deceased.

The number of live births (denominator) is obtained from the Health Development Center's vital statistics, validated against the National Statistics Office (NSO) estimates.

Data Quality

Maternal mortality data are collected under the legally mandated national health reporting system.

- **Coverage:** All public hospitals and maternity centers (100%) are included; private hospital reporting is high but not complete.
- **Verification:** Each reported maternal death undergoes review at both the provincial and national levels through maternal death audit committees. Data are double-checked at the HDC before consolidation.
- **External Oversight:** Independent reviews may be conducted by State Statistics Inspectors.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Underreporting of maternal deaths outside health facilities or occurring abroad.
- Possible misclassification of late maternal deaths (after 42 days) or indirect causes.
- Variability in ICD coding and cause-of-death certification practices across institutions.

Calculation

Formula:

$$MMR = \frac{\text{Number of maternal deaths in a given year}}{\text{Number of live births in the same year}} * 100,000$$

- **Numerator:** Total number of registered maternal deaths (direct and indirect, within 42 days postpartum).
- **Denominator:** Total number of live births in the same year.
- **Unit of Measurement:** Maternal deaths per 100,000 live births.

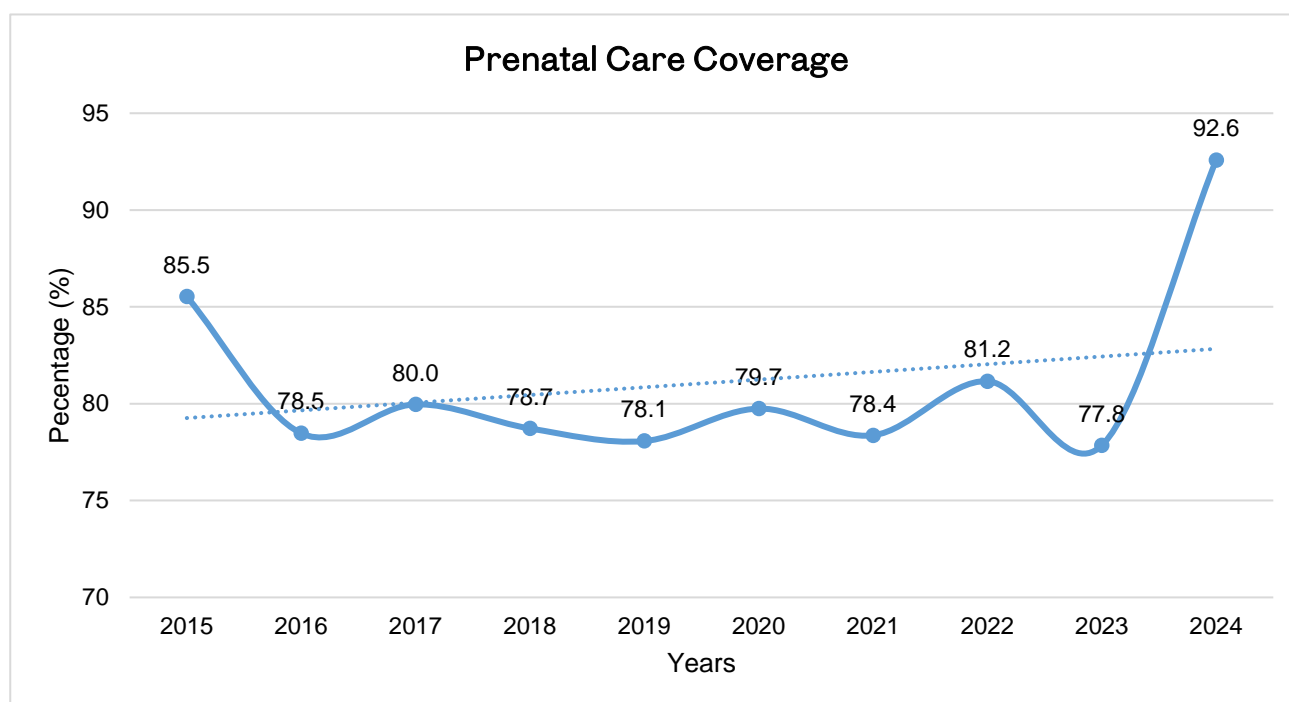
Stratification

In this report, annual maternal mortality ratios for 2015–2024 are presented, with comparisons to the Sustainable Development Goal (SDG) target of ≤70 maternal deaths per 100,000 live births.

Calculation Data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Maternal Mortality	21	38	20	21	18	23	68	23	17	13
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756

2. Prenatal care coverage



Prenatal Care Coverage – Methodology

Definition

Prenatal (antenatal) care coverage is defined as the proportion of women with a live birth in a given year who received at least six antenatal care (ANC) visit with a skilled healthcare provider during pregnancy. It reflects the reach of essential maternal health services and the first point of contact between pregnant women and the health system.

Data Source and Number of Cases

Prenatal care coverage statistics are compiled by the Health Development Center (HDC) of Mongolia, based on mandatory routine reports from 621 public and 1,912 private healthcare institutions. Data include all recorded antenatal care visits provided to pregnant women during pregnancy.

The number of live births (denominator) is derived from HDC maternal health statistics and validated against National Statistics Office (NSO) estimates.

Data Quality

Prenatal care data are collected under the national health information reporting system, with legal obligations for all health facilities to submit complete and timely reports.

- **Coverage:** All documented ANC visits in public facilities are included; private facilities report with high but not full compliance.

- **Verification:** Facility statisticians review and submit monthly reports, which are consolidated and double-checked by the HDC.
- **External Oversight:** Periodic audits may be conducted by State Statistics Inspectors to ensure accuracy.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Underreporting of ANC visits in rural and remote areas lacking electronic reporting systems.
- Exclusion of antenatal care received abroad.
- Possible overestimation of coverage when multiple visits are recorded but the same woman is counted more than once in some facilities.

Calculation

Formula:

$$\text{Prenatal Care Coverage} = \frac{\text{Number of women with 6 + visits during pregnancy}}{\text{Number of live births}} * 100$$

- **Numerator:** Number of women with at least one ANC visit during pregnancy.
- **Denominator:** Number of live births in the same year.
- **Unit of Measurement:** Percent (%) of live births covered by at least one prenatal care visit.

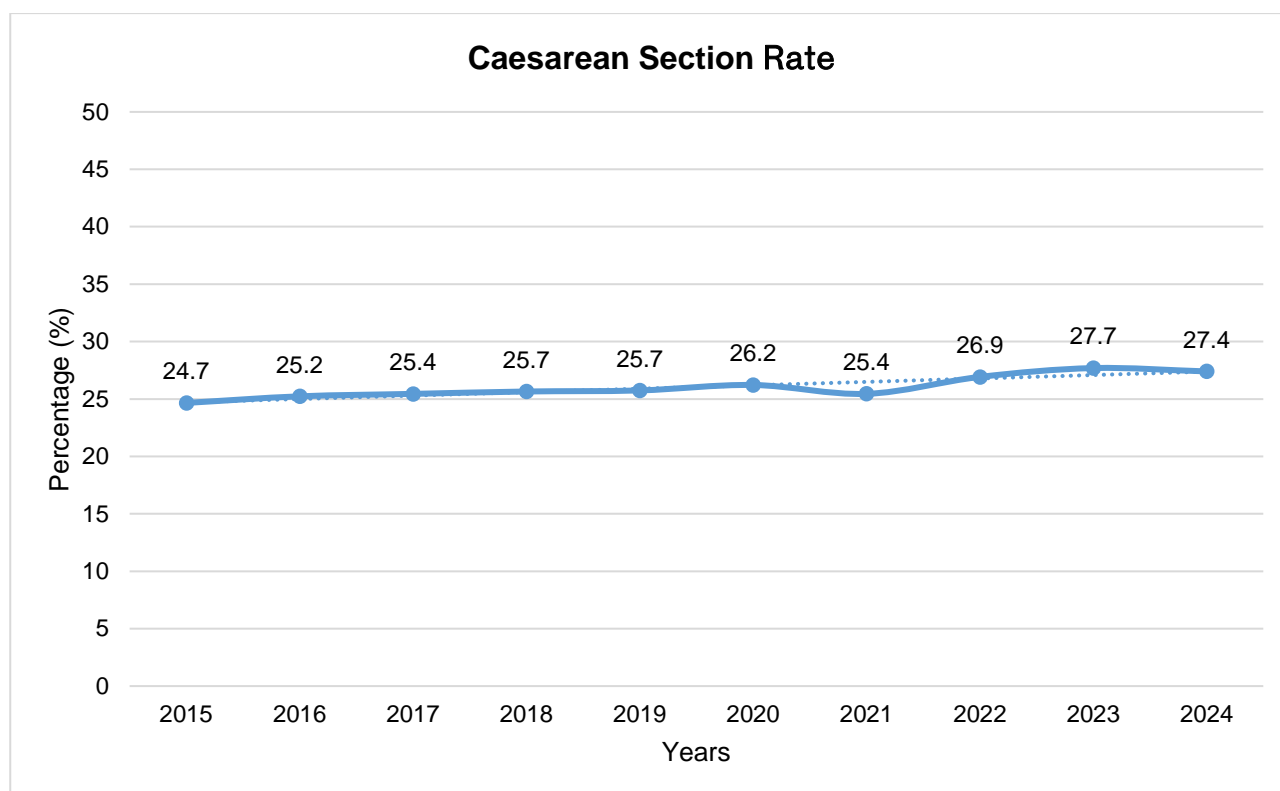
Stratification

In this report, annual prenatal care coverage for 2015–2024 is presented, disaggregated by province and Ulaanbaatar districts where data are available.

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
6+ visits for prenatal care	69,175	61,363	59,438	61,032	61,070	60,817	56,158	53,231	50,059	53,466
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756

3. Caesarean Section Rate



Caesarean Section (C-Section) Rate – Methodology

Definition

The Caesarean Section (C-section) rate is defined as the proportion of live births delivered by caesarean section in a given year, expressed as a percentage of all live births. This indicator reflects access to obstetric surgical services and provides insights into both potential underuse (limited access to life-saving interventions) and overuse (unnecessary surgical deliveries).

Data Source and Number of Cases

C-section data are compiled by the Health Development Center (HDC) of Mongolia from mandatory reports submitted by 621 public and 1,912 private healthcare institutions. Data include all recorded live births by mode of delivery (vaginal or C-section).

Population denominators (live births) are obtained from the HDC's maternal health statistics and validated against the National Statistics Office (NSO).

Data Quality

Delivery data are collected under the national health reporting system, with a legal obligation for all health facilities to submit complete information.

- **Coverage:** All public maternity and delivery facilities are included; private hospitals report with high but not full compliance.

- **Verification:** Data are first checked by facility statisticians, then consolidated and verified at the HDC.
- **External Oversight:** State Statistics Inspectors may conduct audits.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Possible underreporting of deliveries conducted in remote areas or abroad.
- No distinction between elective and emergency C-sections in routine data.
- Inconsistent recording practices across facilities.

Calculation

Formula:

$$C - Section Rate = \frac{Number\ of\ live\ births\ delivered\ by\ C - section}{Number\ of\ live\ births} * 100$$

- **Numerator:** Number of live births delivered by caesarean section.
- **Denominator:** Total number of live births in the same year.
- **Unit of Measurement:** Percent (%) of live births.

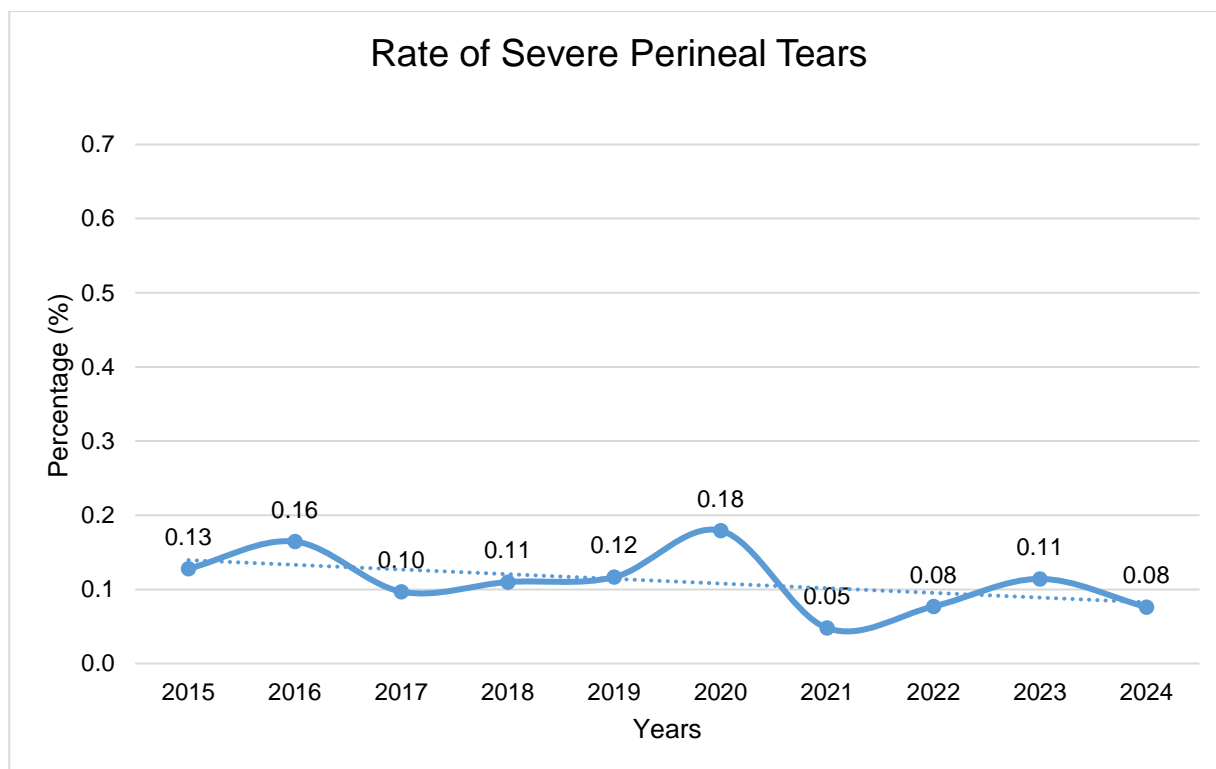
Stratification

In this report, annual C-section rates for 2015–2024 are presented. Disaggregation by province and Ulaanbaatar districts is available where reported.

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Live births delivered by C-section	19,941	19,730	18,913	19,887	20,138	19,995	18,236	17,658	17,807	15,825
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756

4. Rate of Severe Perineal Tears



Rate of Severe Perineal Tears – Methodology

Definition

The rate of severe perineal tears is defined as the proportion of vaginal births where the mother sustains a **third- or fourth-degree perineal laceration** during delivery, expressed as a percentage of all vaginal births. Third-degree tears involve injury to the anal sphincter complex, while fourth-degree tears extend into the rectal mucosa. This indicator is internationally recognized as a maternal safety and quality-of-care measure.

Data Source and Number of Cases

Statistics on severe perineal tears are compiled by the Health Development Center (HDC) of Mongolia, based on mandatory reports from 621 public and 1,912 private health facilities.

The denominator (vaginal births) is derived from HDC delivery statistics and validated against live birth records from the National Statistics Office (NSO).

Data Quality

Severe perineal tear data are collected under the national health reporting system, with legal requirements for reporting delivery outcomes.

- **Coverage:** All vaginal births in public maternity facilities are included; private hospital coverage is high but not complete.
- **Verification:** Diagnoses are recorded by attending obstetric staff and checked by statisticians at facility and HDC level.
- **External Oversight:** State Statistics Inspectors may conduct independent audits of reporting accuracy.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control procedures follow the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Underreporting due to misclassification of tear severity or incomplete recording.
- Differences in diagnostic capacity across facilities, especially between tertiary hospitals and rural clinics.
- Exclusion of births outside facilities or abroad.

Calculation

Formula:

$$\text{Rate of Severe Perineal Tears} = \frac{\text{Cases of 3rd and 4th degree tears}}{\text{Number of vaginal births}} * 100$$

- **Numerator:** Number of vaginal births with a recorded third- or fourth-degree tear.
- **Denominator:** Total number of vaginal births in the same year.
- **Unit of Measurement:** Percent (%) of vaginal births.

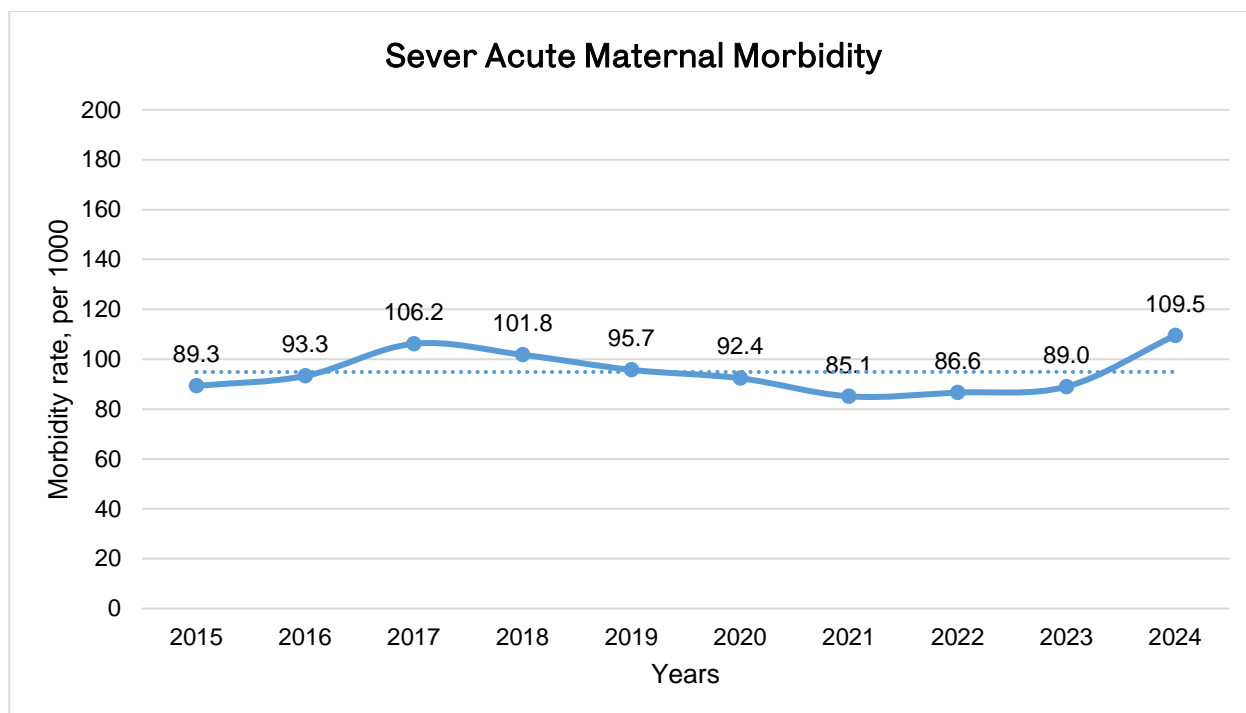
Stratification

In this report, annual severe perineal tear rates are presented for 2015–2024. A trendline is added to illustrate the overall direction of change over the 10-year period. Where available, data may be further disaggregated by province, Ulaanbaatar district, maternal age, parity, and delivery method (instrumental vs. spontaneous vaginal birth).

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cases of severe perineal tears	77	95	53	62	66	98	34	36	52	31
Number of Vaginal births	60,172	57,780	54,681	56,415	56,626	54,649	70,979	46,779	45,553	40,665

5. Severe Acute Maternal Morbidity



Severe Acute Maternal Morbidity (SAMM) – Methodology

Definition

Severe Acute Maternal Morbidity (SAMM) refers to potentially life-threatening maternal complications during pregnancy, childbirth, or within the postpartum period, which require intensive medical intervention but do not result in maternal death. SAMM is used as a proxy indicator for maternal mortality, reflecting both the quality of obstetric care and the resilience of health systems.

Data source and number of cases

SAMM cases are identified from the Health Development Center (HDC), which compiles reports from all public and private maternity facilities across Mongolia. Data include all women who experienced specific morbidities during pregnancy, delivery, or postpartum, as classified under ICD-10.

The following **ICD-10 codes** qualify as SAMM:

- **Obstetric hemorrhage and related conditions:** O20.0 (threatened abortion with hemorrhage), O44 (placenta previa), O45 (premature separation of placenta), O46 (antepartum hemorrhage), O72 (postpartum hemorrhage)
- **Hypertensive disorders:** O14 (preeclampsia), O15 (eclampsia)
- **Infections:** O85 (puerperal sepsis), O86 (other puerperal infections), A41 (septicemia)

- **Thromboembolic disorders:** I26 (pulmonary embolism), I80–I82 (deep vein thrombosis, embolism and thrombosis of veins)
- **Organ dysfunction/failure:** N17 (acute renal failure), J96 (respiratory failure), K72 (hepatic failure), R57 (shock)
-
- **Other obstetric complications:** O88 (obstetric embolism), O90 (complications of the puerperium), O99 (other maternal diseases complicating pregnancy, childbirth and the puerperium)

Data quality

The maternity database is maintained under a mandatory reporting framework, with legal obligations for all maternity facilities to submit case reports.

- **Coverage:** Nationwide coverage of public and private maternity hospitals.
- **Verification:** Case coding is performed by trained medical coders and reviewed by HDC.
- **Consistency:** ICD-10 coding rules are applied uniformly across institutions.

Potential limitations

- Underreporting may occur in smaller private facilities or in cases where complications are not fully documented.
- Misclassification between severe and moderate maternal morbidity can affect comparability.
- Differences in coding practices over time may influence trend analysis.

Calculation method

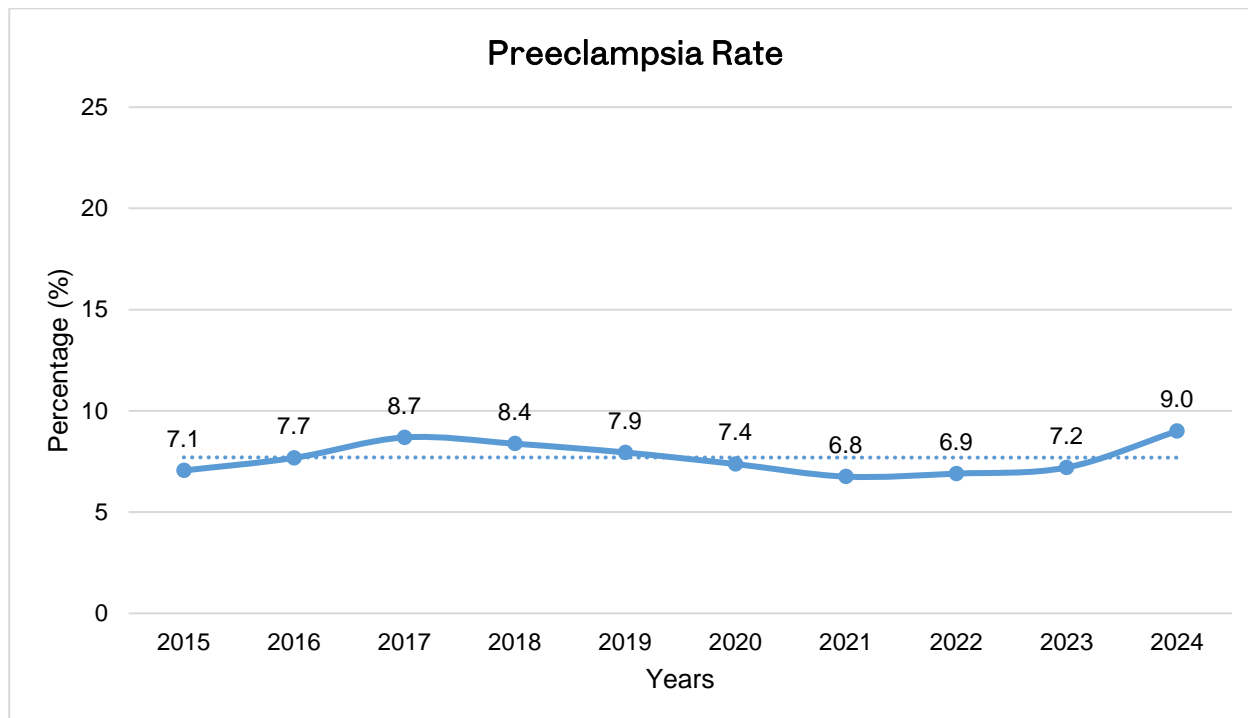
$$SMM\ rate = \frac{Number\ of\ SMM\ cases}{Number\ of\ live\ births} * 1000$$

- **Numerator:** Total number of SMM cases.
- **Denominator:** Total number of births (live and stillbirths)
- **Unit of Measurement:** Cases per 1,000 live births

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Number of cases	7,222	7,294	7,895	7,891	7,489	7,045	6,100	5,682	5,724	6,325
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756

6. Preeclampsia Rate



Preeclampsia Rate – Methodology

Definition

The preeclampsia rate is defined as the proportion of women diagnosed with preeclampsia during pregnancy, expressed as a percentage of total births in a given year. Preeclampsia is a hypertensive disorder of pregnancy, typically arising after 20 weeks of gestation, characterized by elevated blood pressure and proteinuria, and is a leading cause of maternal and perinatal morbidity and mortality.

Data Source and Number of Cases

Preeclampsia data are compiled by the Health Development Center (HDC) of Mongolia, based on mandatory reports submitted by 621 public and 1,912 private healthcare institutions.

- **Numerator:** All reported cases of preeclampsia (ICD-10 codes O14–O15) among women who delivered in a given year.
- **Denominator:** By international standard, the denominator is **live births**. In Mongolia, the denominator may also be calculated as **нийт амаржсан эхийн тоо** (all delivering mothers, including live births and stillbirths) for internal monitoring.

Data Quality

Data are collected through the national health reporting system under legal obligations.

- **Coverage:** All public maternity facilities are included; private facilities report with high but incomplete coverage.
- **Verification:** Diagnoses are made clinically by obstetricians, recorded at facility level, and checked by statisticians before consolidation at HDC.
- **External Oversight:** State Statistics Inspectors may conduct random audits.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control procedures follow the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Possible underdiagnosis in rural or low-resource facilities due to limited diagnostic tools.
- Misclassification between gestational hypertension and preeclampsia.
- Underreporting from private hospitals or cases managed outside facilities.

Calculation

Formula:

$$\text{Preeclampsia rate} = \frac{\text{Cases of Preeclampsia}}{\text{Total number of births}} \times 100$$

- **Numerator:** Total number of preeclampsia cases (ICD-10 O14, O15).
- **Denominator:** Total number of births (live and stillbirths)
- **Unit of Measurement:** Percent (%) of births.

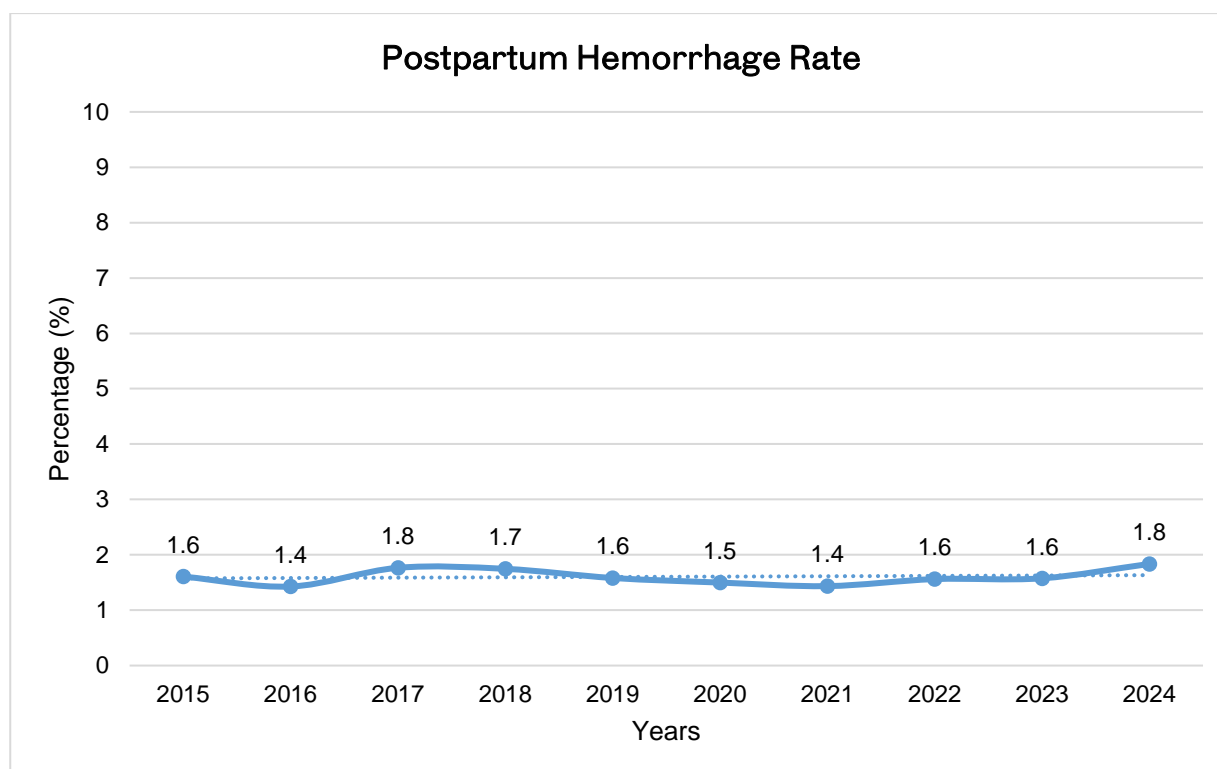
Stratification

In this report, annual preeclampsia rates for 2015–2024 are presented, with disaggregation by province and Ulaanbaatar districts where available. Data may also be stratified by maternal age, parity, and mode of delivery (C-section vs. vaginal).

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cases of preeclampsia	5,674	5,973	6,419	6,456	6,165	5,581	4,806	4,492	4,603	5,156
Total number of births	80,434	77,803	73,884	77,058	77,601	75,694	71,166	65,098	63,915	57,319

7. Postpartum Hemorrhage (PPH) Rate



Postpartum Hemorrhage (PPH) Rate – Methodology

Definition

The postpartum hemorrhage (PPH) rate is defined as the proportion of women who experience significant blood loss (≥ 500 ml after vaginal birth or ≥ 1000 ml after caesarean section) within 24 hours after delivery, expressed as a percentage of total births. PPH is one of the leading causes of maternal morbidity and mortality worldwide and is a key indicator of obstetric care quality.

Data Source and Number of Cases

PPH data are compiled by the Health Development Center (HDC) of Mongolia, based on routine reports submitted by 621 public and 1,912 private health facilities.

- **Numerator:** Number of mothers diagnosed with postpartum hemorrhage following delivery, classified according to ICD-10 codes O72.0–O72.3.
- **Denominator:** Total births (live births + stillbirths) in the same year, as reported by the HDC and validated against National Statistics Office (NSO) data.

Data Quality

PPH cases are recorded under the national health reporting system with legal obligations for reporting.

- **Coverage:** All delivery facilities (public and private) are required to report cases.

- **Verification:** Clinical staff diagnose and record cases in facility registers; statisticians consolidate and double-check reports at the HDC.
- **External Oversight:** State Statistics Inspectors may conduct audits on delivery complications.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Data quality procedures follow the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Possible underreporting of mild PPH cases, especially in rural or resource-limited facilities.
- Variability in estimating or measuring blood loss across facilities.
- Lack of distinction between primary PPH (within 24 hours) and secondary PPH (after 24 hours) in routine reports.

Calculation

Formula:

$$\text{Postpartum Hemorrhage Rate} = \frac{\text{Cases of PPH}}{\text{Number of live births}} * 100$$

- **Numerator:** Number of deliveries complicated by postpartum hemorrhage.
- **Denominator:** Total births (live births + stillbirths).
- **Unit of Measurement:** Percent (%) of total births.

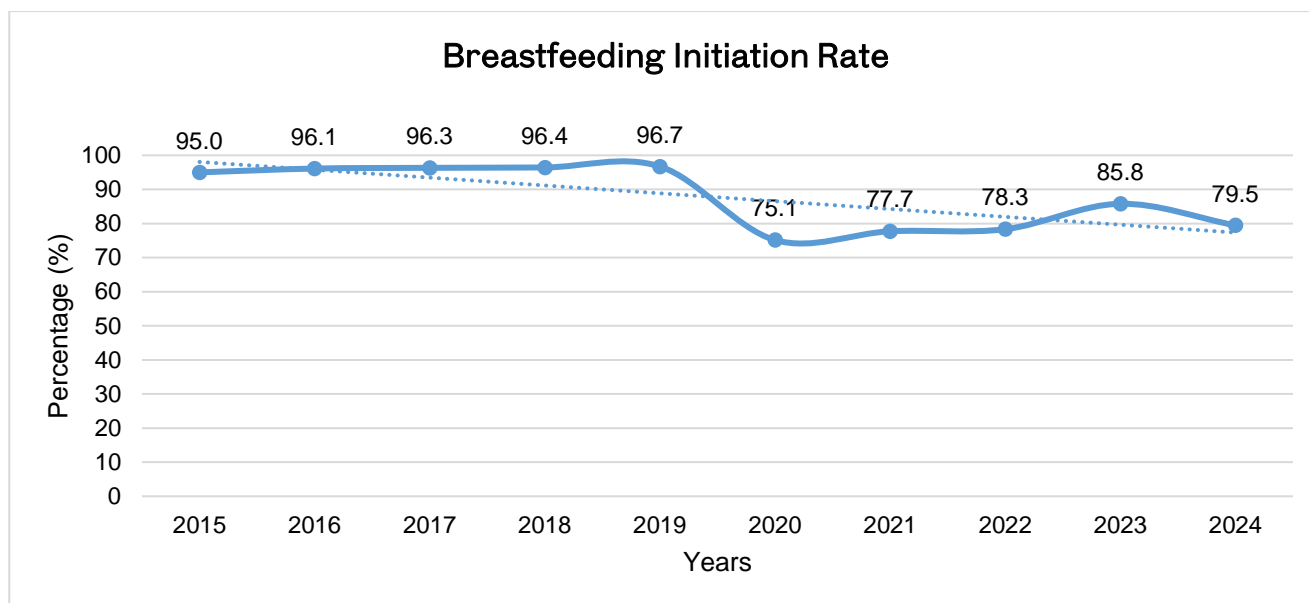
Stratification

In this report, annual PPH rates are presented for 2015–2024. Where available, results are disaggregated by province, Ulaanbaatar districts, type of delivery (vaginal vs. caesarean), and maternal age group.

Calculation data:

Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Postpartum Hemorrhage cases	1,299	1,116	1,312	1,354	1,237	1,143	1,028	1,024	1,013	1,060
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756

8. Breastfeeding Initiation Rate



Breastfeeding Initiation Rate – Methodology

Definition

The breastfeeding initiation rate is defined as the proportion of newborns who were put to the breast within the first hour after birth, expressed as a percentage of total live births in a given year. Early initiation of breastfeeding is an essential newborn care practice recommended by WHO and UNICEF, as it promotes maternal–infant bonding, stimulates milk production, and reduces neonatal morbidity and mortality.

Data Source and Number of Cases

Breastfeeding initiation data are compiled by the Health Development Center (HDC) of Mongolia, based on routine reports from 621 public and 1,912 private healthcare institutions.

Data Quality

Breastfeeding initiation data are collected under the national health reporting system with legal obligations for facilities to submit maternal and newborn care indicators.

- **Coverage:** All births attended at health facilities are included; however, births outside facilities may be underreported.
- **Verification:** Data are recorded by maternity ward staff at delivery, consolidated monthly, and reviewed at the HDC.
- **External Oversight:** State Statistics Inspectors may conduct random data audits.
- **Reporting Compliance (2024):** Data were submitted by 621/621 public facilities and 1,912/2,230 private facilities.

Quality control follows the Law on Statistics of Mongolia (1997, revised) and Minister of Health Order No. A/611.

Potential limitations include:

- Underreporting of home births or facility births without immediate breastfeeding records.
- Possible misclassification if breastfeeding occurred after one hour but was still recorded as “initiated.”
- Variability in recording practices between health facilities.

Calculation

Formula:

$$\text{Breastfeeding Initiation Rate} = \frac{\text{Number of newborns breastfed within 90 minutes of birth}}{\text{Number of live births}} * 100$$

- **Numerator:** Newborns breastfed within the first 90 minutes after delivery.
- **Denominator:** Total live births in the same year.
- **Unit of Measurement:** Percent (%) of live births.

Stratification

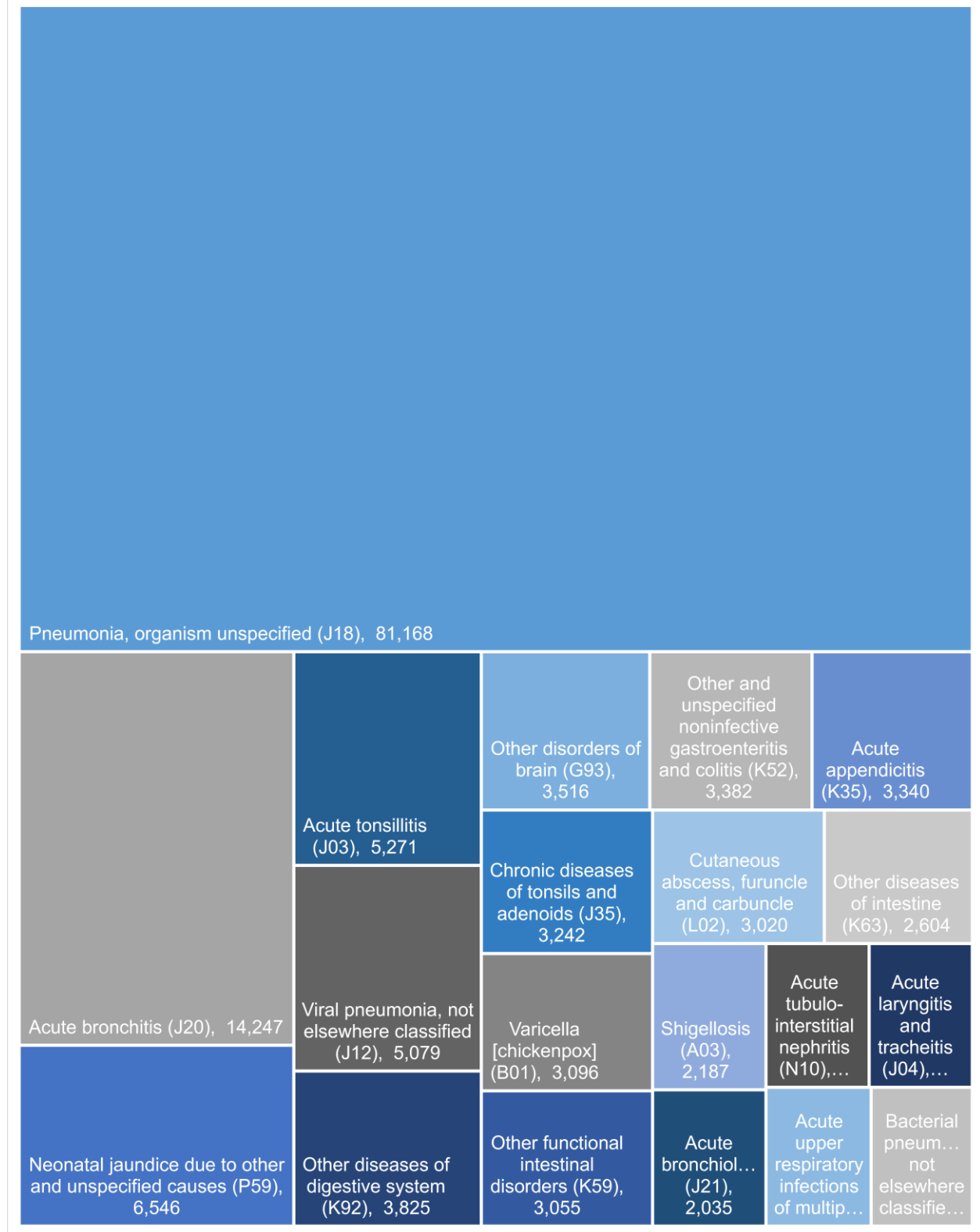
In this report, breastfeeding initiation rates for 2015–2024 are presented. Where data are available, rates are disaggregated by province, Ulaanbaatar districts, maternal age group, and type of delivery (vaginal vs. caesarean).

Calculation data:

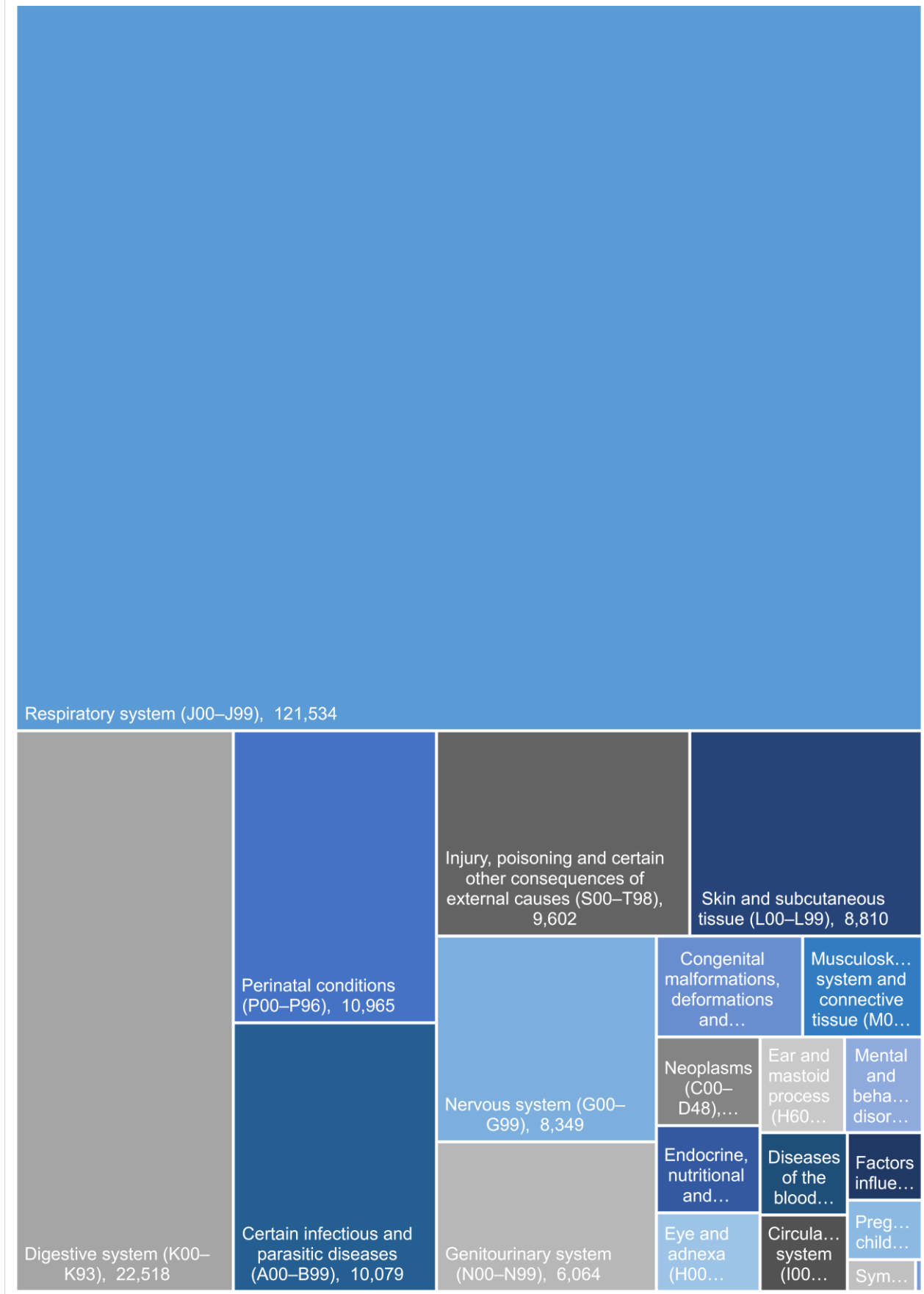
Years	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Live births	80,875	78,194	74,328	77,528	78,223	76,261	71,659	65,586	64,306	57,756
Breastfeeding Initiation	76,829	75,159	71,599	74,768	75,654	57,308	55,693	51,372	55,165	45,893

9. Inpatient Pediatric Disease

Leading 20 Inpatient Pediatric Diseases, 2024



Inpatient Pediatric Diseases by disease group, 2024



Inpatient Pediatric Diseases – Methodology

Definition

The *Inpatient Pediatric Diseases* indicators visualize the **distribution of morbidity reports among children aged 0–17 years**. Each rectangle in the treemap represents one ICD-10 diagnostic category/disease group, and its area is proportional to the **number of inpatient pediatric cases** in a given year.

This indicator reflects the **leading causes of hospitalization** among children.

Data Source and Number of Cases

Hospital morbidity data are collected and compiled by the **Health Development Center (HDC)** from reports submitted by all health facilities, including regional diagnostic and treatment centers and specialized hospitals.

Data include all **inpatient discharges of children aged 0–17 years** in 2024, classified by **primary diagnosis** according to the **International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)**.

Each record represents one hospital admission. Only cases admitted to **public and private hospitals** providing inpatient care were included.

Data Quality

Hospital discharge data are routinely reviewed for completeness and internal consistency before national aggregation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.
- **Verification:** Diagnosis codes are validated at the facility level by statisticians and checked by the HDC Morbidity Statistics Unit.
- **Classification:** Coding follows WHO ICD-10 guidelines and the *Hospital Morbidity Coding Manual (HDC, 2020)*.
- **Reporting Compliance (2024):** 100% (621/621) public hospitals and 86% (1,912/2,230) private hospitals submitted complete data.

Calculation:

All inpatient discharge diagnoses among children aged 0–17 years in the reference year (2024) were counted and sorted by frequency (number of cases) according to their ICD-10 primary diagnosis codes.

The top diagnostic categories were then ranked in descending order and visualized using a treemap, where each rectangle's size represents the relative number of cases.

Calculation data:

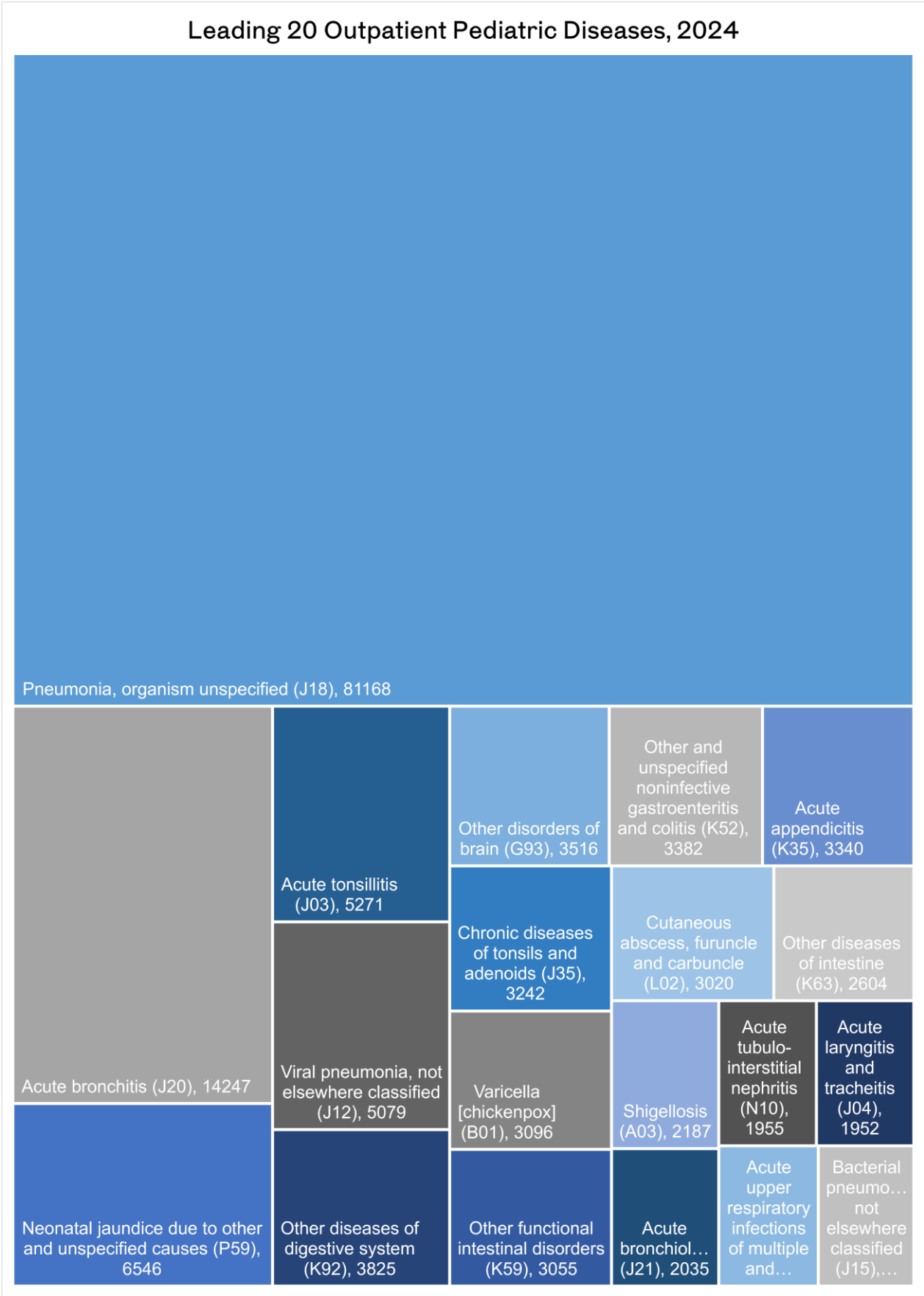
Leading 20 Inpatient Pediatric Diseases, 2024

ICD-10	Cases
Pneumonia, organism unspecified (J18)	81,168
Acute bronchitis (J20)	14,247
Neonatal jaundice due to other and unspecified causes (P59)	6,546
Acute tonsillitis (J03)	5,271
Viral pneumonia, not elsewhere classified (J12)	5,079
Other diseases of digestive system (K92)	3,825
Other disorders of brain (G93)	3,516
Other and unspecified noninfective gastroenteritis and colitis (K52)	3,382
Acute appendicitis (K35)	3,340
Chronic diseases of tonsils and adenoids (J35)	3,242
Varicella [chickenpox] (B01)	3,096
Other functional intestinal disorders (K59)	3,055
Cutaneous abscess, furuncle and carbuncle (L02)	3,020
Other diseases of intestine (K63)	2,604
Shigellosis (A03)	2,187
Acute bronchiolitis (J21)	2,035
Acute tubulo-interstitial nephritis (N10)	1,955
Acute laryngitis and tracheitis (J04)	1,952
Acute upper respiratory infections of multiple and unspecified sites (J06)	1,923
Bacterial pneumonia, not elsewhere classified (J15)	1,852

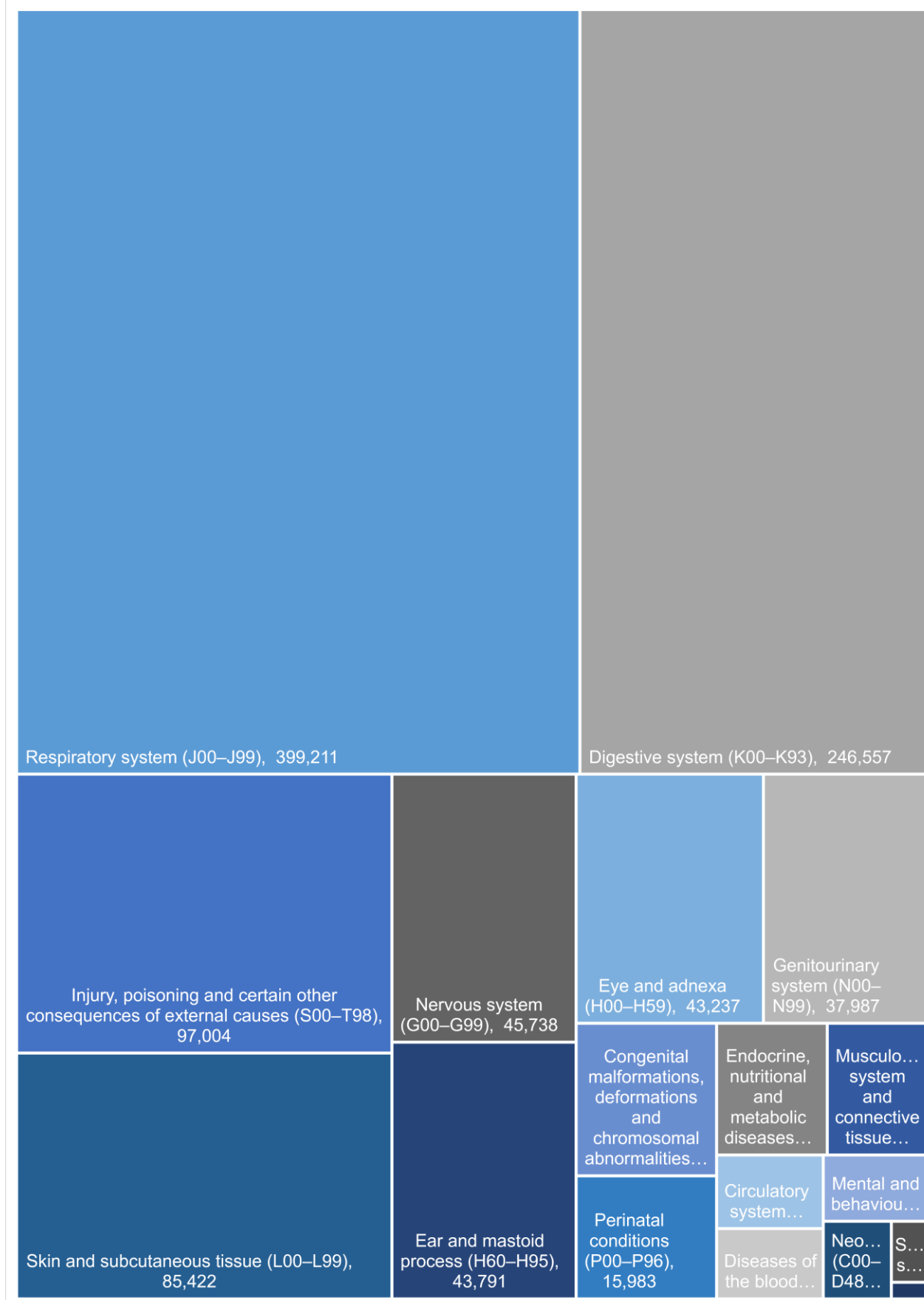
Inpatient Pediatric Diseases by disease group, 2024

ICD-10	Cases
Respiratory system (J00–J99)	121,534
Digestive system (K00–K93)	22,518
Perinatal conditions (P00–P96)	10,965
Certain infectious and parasitic diseases (A00–B99)	10,079
Injury, poisoning and certain other consequences of external causes (S00–T98)	9,602
Skin and subcutaneous tissue (L00–L99)	8,810
Nervous system (G00–G99)	8,349
Genitourinary system (N00–N99)	6,064
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2,722
Musculoskeletal system and connective tissue (M00–M99)	2,222
Neoplasms (C00–D48)	1,699
Endocrine, nutritional and metabolic diseases (E00–E90)	1,670
Eye and adnexa (H00–H59)	1,506
Ear and mastoid process (H60–H95)	1,492
Mental and behavioural disorders (F00–F99)	1,373
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	1,326
Circulatory system (I00–I99)	1,231
Factors influencing health status and contact with health services (Z00–Z99)	932
Pregnancy, childbirth and puerperium (O00–O99)	818
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	400
Codes for special purposes (U00–U85)	39

10. Outpatient Pediatric Diseases



Outpatient pediatric Diseases by disease group, 2024



Outpatient Pediatric Diseases – Methodology

Definition

The *Outpatient Pediatric Diseases* indicator visualizes the distribution of morbidity reports among children aged **0–17 years**.

Each rectangle in the treemap represents one **ICD-10 diagnostic category or disease group**, and its area is proportional to the **number of outpatient pediatric cases** recorded in a given year.

This indicator reflects the **leading causes of outpatient visits** among children.

Data Source and Number of Cases

Outpatient morbidity data are collected and compiled by the **Health Development Center (HDC)** from reports submitted by all **public and private health facilities** nationwide.

Data include all **outpatient visits of children aged 0–17 years** in 2024, classified by **primary diagnosis** according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.

Each record represents **one outpatient consultation**. Repeat visits by the same child for the same condition are counted separately, following national morbidity reporting standards.

Data Quality

Outpatient data are routinely reviewed for completeness and consistency before national aggregation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.
- **Verification:** Diagnosis codes are validated at the facility level by statisticians and checked by the HDC Morbidity Statistics Unit.
- **Classification:** Coding follows WHO ICD-10 guidelines and the *Outpatient Morbidity Coding Manual (HDC, 2020)*.
- **Reporting Compliance (2024):** 100% (621/621) of public facilities and 86% (1,912/2,230) of private facilities submitted complete data.

Calculation

All **outpatient diagnoses** among children aged **0–17 years** in the reference year (2024) were **counted and sorted by frequency (number of visits)** according to their **ICD-10 primary diagnosis codes**.

The **top diagnostic categories** were then ranked in descending order and **visualized using a treemap**, where each rectangle's size represents the **relative number of cases**.

Calculation data:

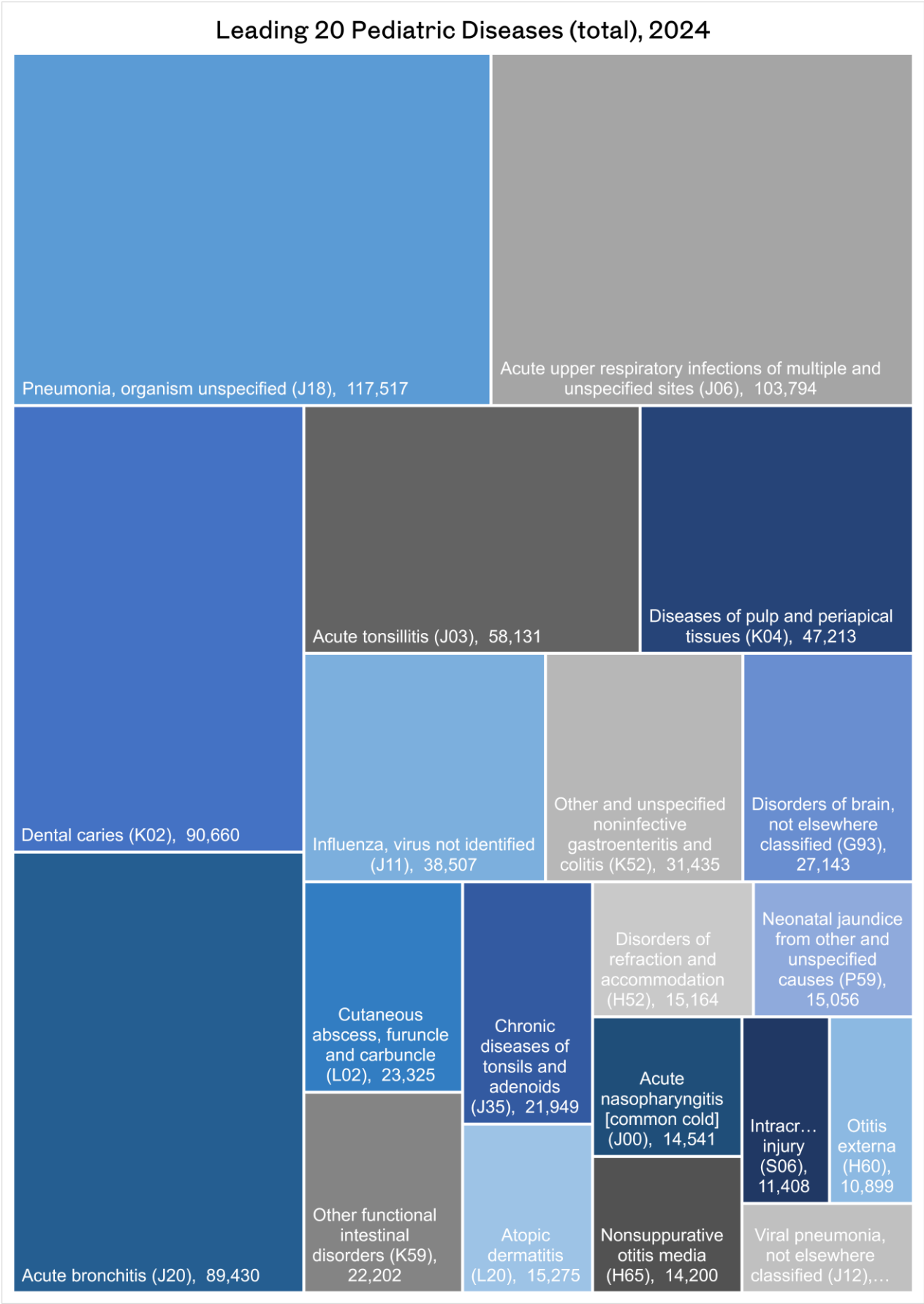
Leading 20 Outpatient Pediatric Diseases, 2024

IDC-10	Cases
Pneumonia, organism unspecified (J18)	81168
Acute bronchitis (J20)	14247
Neonatal jaundice due to other and unspecified causes (P59)	6546
Acute tonsillitis (J03)	5271
Viral pneumonia, not elsewhere classified (J12)	5079
Other diseases of digestive system (K92)	3825
Other disorders of brain (G93)	3516
Other and unspecified noninfective gastroenteritis and colitis (K52)	3382
Acute appendicitis (K35)	3340
Chronic diseases of tonsils and adenoids (J35)	3242
Varicella [chickenpox] (B01)	3096
Other functional intestinal disorders (K59)	3055
Cutaneous abscess, furuncle and carbuncle (L02)	3020
Other diseases of intestine (K63)	2604
Shigellosis (A03)	2187
Acute bronchiolitis (J21)	2035
Acute tubulo-interstitial nephritis (N10)	1955
Acute laryngitis and tracheitis (J04)	1952
Acute upper respiratory infections of multiple and unspecified sites (J06)	1923
Bacterial pneumonia, not elsewhere classified (J15)	1852

Outpatient pediatric Diseases by disease group, 2024

ICD-10	Cases
Respiratory system (J00–J99)	399,211
Digestive system (K00–K93)	246,557
Injury, poisoning and certain other consequences of external causes (S00–T98)	97,004
Skin and subcutaneous tissue (L00–L99)	85,422
Nervous system (G00–G99)	45,738
Ear and mastoid process (H60–H95)	43,791
Eye and adnexa (H00–H59)	43,237
Genitourinary system (N00–N99)	37,987
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	19,837
Perinatal conditions (P00–P96)	15,983
Endocrine, nutritional and metabolic diseases (E00–E90)	13,495
Musculoskeletal system and connective tissue (M00–M99)	12,292
Circulatory system (I00–I99)	7,285
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	6,944
Mental and behavioural disorders (F00–F99)	6,432
Neoplasms (C00–D48)	4,883
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	2,071
Pregnancy, childbirth and the puerperium (O00–O99)	557
Certain infectious and parasitic diseases (A00–B99)	0
External causes (V01–Y98)	0
Factors influencing health status... (Z00–Z99)	0
Codes for special purposes (U00–U99)	0

11. Total Pediatric Diseases



Total Pediatric Diseases – Methodology

Definition

The *Total Pediatric Diseases* indicator visualizes the **overall distribution of morbidity among children aged 0–17 years**, combining both **inpatient and outpatient reports** from all health facilities.

Each rectangle in the treemap represents one **ICD-10 diagnostic category or disease group**, and its area is proportional to the **total number of reported pediatric cases** (inpatient + outpatient) during the year.

This indicator provides a comprehensive overview of the **most common diseases and conditions affecting children** in Mongolia.

Data Source and Number of Cases

Morbidity data are collected and compiled by the **Health Development Center (HDC)** from reports submitted by **all public and private health facilities** nationwide.

Data include both **inpatient discharges** and **outpatient consultations** of children aged 0–17 years in 2024, classified by **primary diagnosis** according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.

Each record represents one consultation or hospital admission. Duplicate encounters for the same patient are counted separately, in accordance with national morbidity reporting standards.

Data Quality

All morbidity data undergo routine verification for completeness, consistency, and coding accuracy before national aggregation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.
- **Verification:** Diagnosis codes are validated at the facility level by statisticians and checked by the HDC Morbidity Statistics Unit.
- **Classification:** Coding follows WHO ICD-10 guidelines and the *Morbidity Coding Manual (HDC, 2020)*.
- **Reporting Compliance (2024):** 100% (621/621) public facilities and 86% (1,912/2,230) private facilities submitted complete data.

Calculation

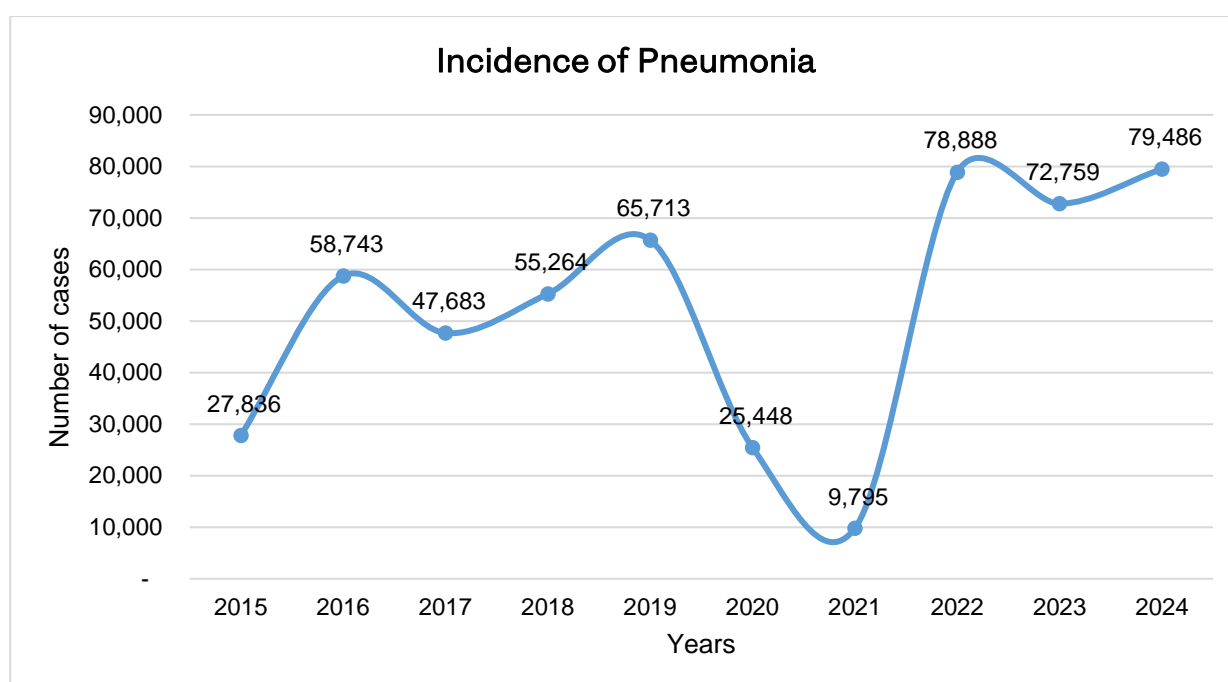
All **pediatric morbidity records (ages 0–17 years)** from both inpatient and outpatient datasets in 2024 were **combined, counted, and sorted by frequency (number of cases)** according to their **ICD-10 primary diagnosis codes**.

The **most frequent diagnostic categories** were then ranked in descending order and **visualized as a treemap**, where each rectangle's size represents the **relative number of cases**.

Calculation data:

ICD10	Cases
Pneumonia, organism unspecified (J18)	117,517
Acute upper respiratory infections of multiple and unspecified sites (J06)	103,794
Dental caries (K02)	90,660
Acute bronchitis (J20)	89,430
Acute tonsillitis (J03)	58,131
Diseases of pulp and periapical tissues (K04)	47,213
Influenza, virus not identified (J11)	38,507
Other and unspecified noninfective gastroenteritis and colitis (K52)	31,435
Disorders of brain, not elsewhere classified (G93)	27,143
Cutaneous abscess, furuncle and carbuncle (L02)	23,325
Other functional intestinal disorders (K59)	22,202
Chronic diseases of tonsils and adenoids (J35)	21,949
Atopic dermatitis (L20)	15,275
Disorders of refraction and accommodation (H52)	15,164
Neonatal jaundice from other and unspecified causes (P59)	15,056
Acute nasopharyngitis [common cold] (J00)	14,541
Nonsuppurative otitis media (H65)	14,200
Intracranial injury (S06)	11,408
Otitis externa (H60)	10,899
Viral pneumonia, not elsewhere classified (J12)	10,634

12. Pneumonia Incidence



Incidence of Pneumonia – Methodology

Definition

The *Incidence of Pneumonia* indicator measures the **number of newly identified pneumonia cases** within a given year among ages 0-17. It represents the **annual occurrence of new cases** identified through both inpatient and outpatient services and excludes repeated visits or duplicate records of the same individual.

This indicator reflects the **epidemiological trend and annual disease burden** of pneumonia in Mongolia.

Data Source and Number of Cases

Data were compiled by the **Health Development Center (HDC)** integrating both **inpatient** and **outpatient** data reported by public and private health facilities nationwide.

Each record corresponds to a **unique individual diagnosed with pneumonia** (ICD-10 code J18 and related subcategories) in the reference year. Cases were identified using **individual patient IDs** to ensure accurate deduplication across all reporting facilities.

Data Quality

Rigorous quality control procedures were applied to ensure completeness and accuracy of incidence estimation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.

- **Verification:** Facility-level statisticians and HDC analysts verified diagnostic coding and data integrity prior to aggregation.
- **Classification:** Pneumonia diagnoses were coded according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.
- **Deduplication Procedures:** ID-based linkage was used to remove duplicate cases within and across years, and to eliminate overlaps with mortality records.
- **Reporting Compliance (2024):** 100% (621/621) of public and 86% (1,912/2,230) of private facilities submitted data.

Calculation

All individual pneumonia cases (inpatient and outpatient) were **counted once per person per year** using ID-based matching.

Duplicate records were systematically removed in three sequential steps:

1. **Within-year deduplication:** All repeated inpatient and outpatient entries with the same ID in the same year were merged into a single record.
2. **Cross-year deduplication:** Each year's dataset was compared with previous years (e.g., 2015 vs 2014; 2016 vs 2015–2014; ...; 2024 vs all prior years) to exclude individuals already counted previously.
3. **Mortality linkage:** IDs were cross-checked with the **mortality database** to exclude individuals who died in the same year to avoid double counting.

The resulting dataset represented **unique new pneumonia cases per year**.

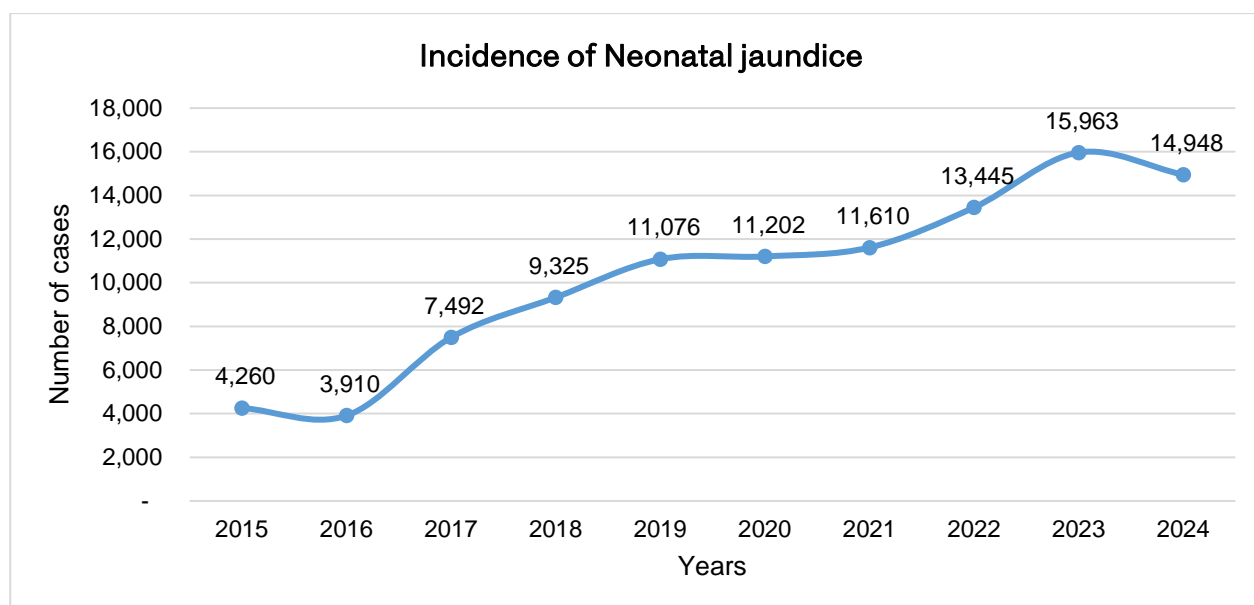
Stratification

In this report, incidence of pneumonia among ages of 0-17 for 2015–2024 are presented.

Calculation data:

Years	Incidence of Pneumonia
2015	27,836
2016	58,743
2017	47,683
2018	55,264
2019	65,713
2020	25,448
2021	9,795
2022	78,888
2023	72,759
2024	79,486
Total	521,615

13. Neonatal Jaundice Incidence



Incidence of Neonatal Jaundice – Methodology

Definition

The *Incidence of Neonatal Jaundice* indicator measures the number of newly diagnosed cases of neonatal jaundice among live-born infants within a given year. It reflects the annual occurrence of new cases (ICD-10 code P59 and related subcategories) identified from both inpatient and outpatient reports. This indicator represents the morbidity burden of neonatal jaundice in Mongolia and is used to monitor the quality of newborn care and early postnatal health outcomes.

Data Source and Number of Cases

Data were compiled by the Health Development Center (HDC) by integrating both inpatient discharge and outpatient consultation data reported by public and private health facilities across the country.

Each record corresponds to a unique live-born infant diagnosed with neonatal jaundice during the reference year.

Cases were identified using individual patient IDs to ensure that each child was counted only once per year across all health facilities.

Data Quality

All neonatal data were validated for completeness, consistency, and coding accuracy prior to aggregation.

- Coverage: Includes reports from all licensed health facilities nationwide.

- Verification: Data were reviewed by facility statisticians and verified by the HDC Morbidity Statistics Unit.
- Classification: Diagnoses were coded according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.
- Deduplication: Individual patient IDs were used to remove duplicate records within the same year.
- Reporting Compliance (2024): 100% (621/621) of public facilities and 86% (1,912/2,230) of private facilities submitted complete data.

Calculation

All neonatal jaundice cases (P59) were counted once per unique live-born infant per year after removing duplicate entries from both inpatient and outpatient data. The resulting dataset represents newly diagnosed neonatal jaundice cases per year between 2015 and 2024.

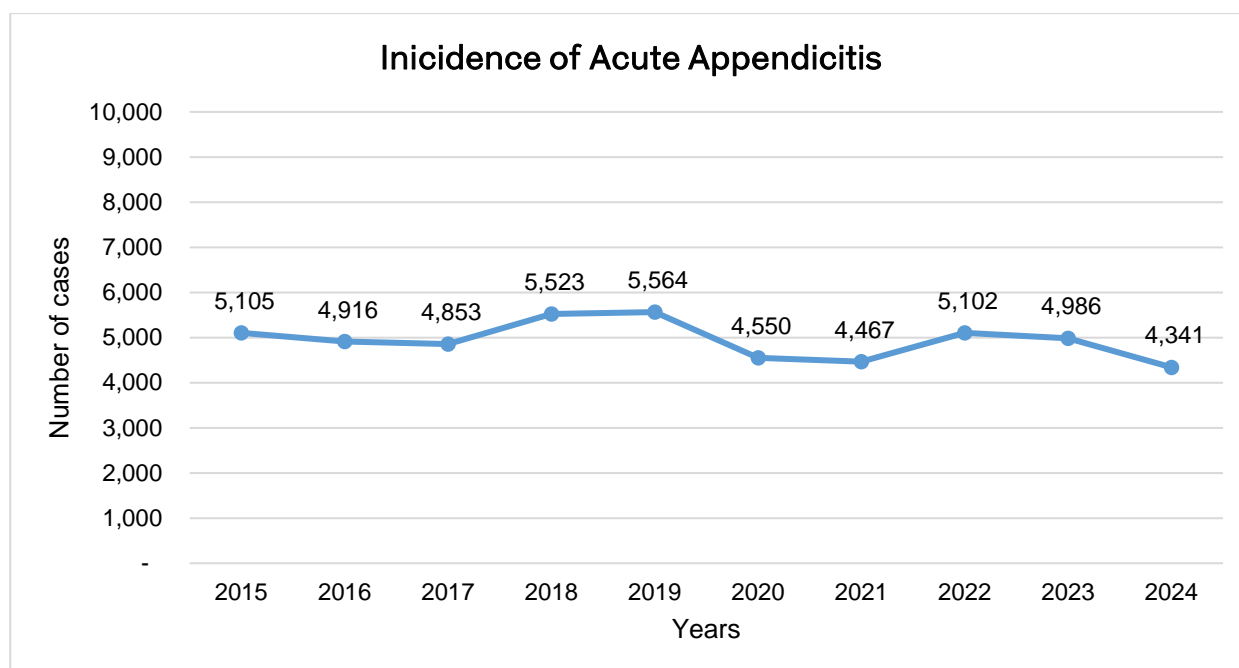
Stratification

In this report, incidence of neonatal jaundice among ages of 0-17 for 2015–2024 are presented.

Calculation data:

Years	Incidence of Neonatal jaundice
2,015	4,260
2016	3,910
2017	7,492
2018	9,325
2019	11,076
2020	11,202
2021	11,610
2022	13,445
2023	15,963
2024	14,948
Total	103,231

14. Acute Appendicitis Incidence



Incidence of Acute Appendicitis – Methodology

Definition

The *Incidence of Acute Appendicitis* indicator measures the **number of newly identified cases of acute appendicitis** within a given year among the total population. It represents the **annual occurrence of first-time diagnoses** of acute appendicitis (ICD-10 code K35 and related subcategories) captured from both inpatient and outpatient reports.

This indicator reflects the **morbidity trend and healthcare burden** of acute appendicitis in Mongolia.

Data Source and Number of Cases

Data were compiled by the **Health Development Center (HDC)** using the **National Health Information System (H-info 3.0)**, which consolidates both **inpatient discharge** and **outpatient consultation** records from all public and private health facilities nationwide.

Each record corresponds to a **unique individual diagnosed with acute appendicitis** during the reference year.

Cases were identified using **individual ID-based records**, ensuring that each person was counted only once per year across all healthcare facilities.

Data Quality

Hospital and outpatient data were systematically reviewed for completeness, coding accuracy, and consistency before national aggregation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.
- **Verification:** Diagnosis codes were verified at the facility level by statisticians and reviewed by the HDC Morbidity Statistics Unit.
- **Classification:** Diagnoses were coded according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.
- **Deduplication:** Patient IDs were used to remove repeated records within the same year across inpatient and outpatient datasets.
- **Reporting Compliance (2024):** 100% (621/621) of public facilities and 86% (1,912/2,230) of private facilities submitted complete morbidity data.

Calculation

All **acute appendicitis cases (K35)** were counted **once per person per year** after removing duplicate records from both inpatient and outpatient datasets. The resulting dataset represents the **total number of newly diagnosed appendicitis cases** per year from 2015 to 2024.

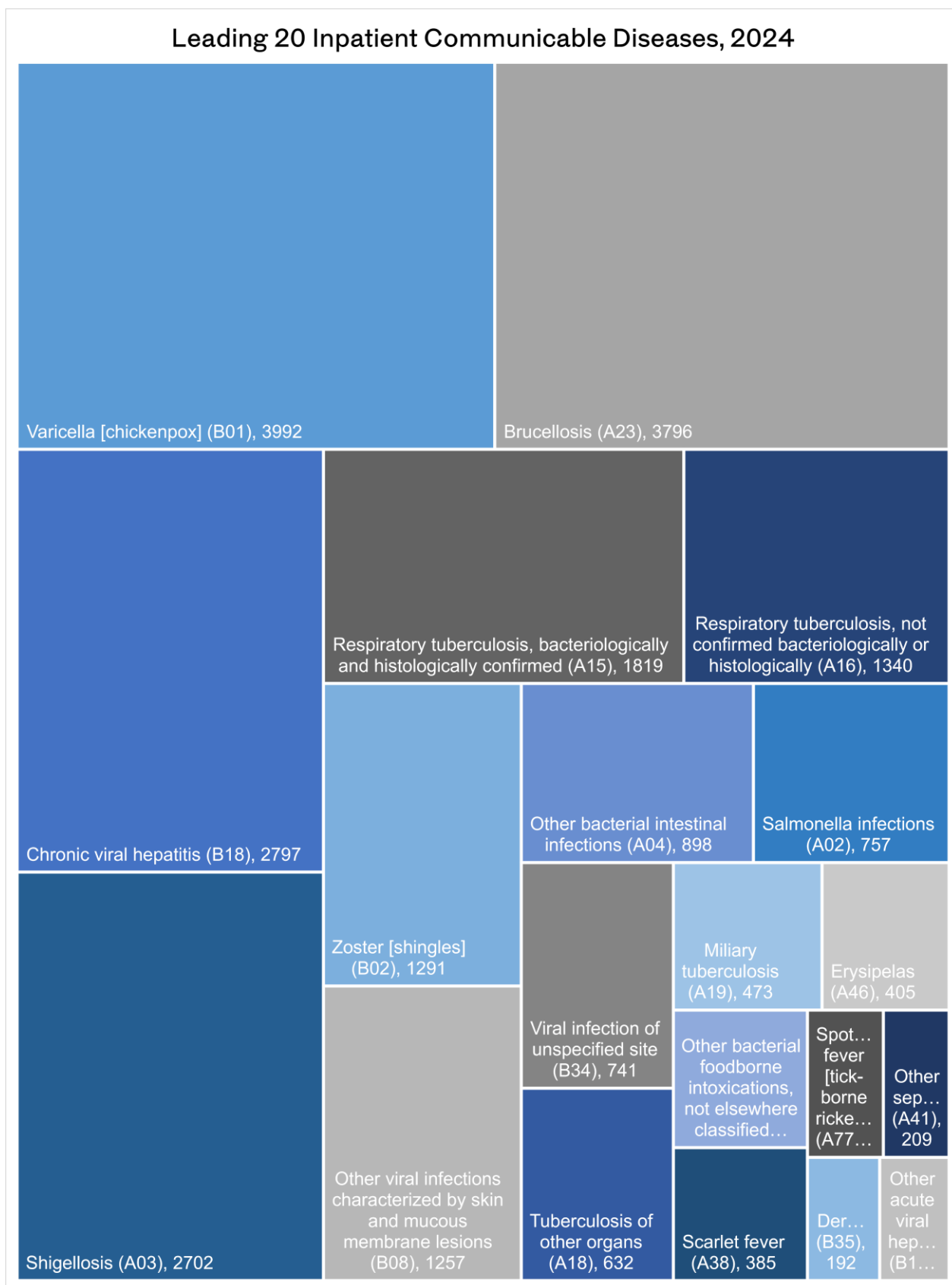
Calculation data:

Years	Incidence of Acute Appendicitis
2015	5,105
2016	4,916
2017	4,853
2018	5,523
2019	5,564
2020	4,550
2021	4,467
2022	5,102
2023	4,986
2024	4,341
Total	49,407

COMMUNICABLE DISEASES

1. Inpatient Communicable Diseases

Leading 20 Inpatient Communicable Diseases, 2024



Inpatient Communicable Diseases – Methodology

Definition

The *Inpatient Communicable Diseases* indicator visualizes the distribution of infectious disease hospitalizations among all reported inpatient cases during the year. Each rectangle in the treemap represents one ICD-10 diagnostic category or pathogen-related disease group, and its area is proportional to the number of inpatient cases recorded.

This indicator highlights the leading causes of hospital admissions due to communicable diseases in Mongolia.

Data Source and Number of Cases

Hospital morbidity data are collected and compiled by the Health Development Center (HDC) from reports submitted by all public and private hospitals through the Health Information System (H-info 3.0) and the National Communicable Disease Surveillance Subsystem.

Data include all inpatient discharges of patients diagnosed with communicable diseases in 2024, classified by primary diagnosis according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*. Each record represents one hospital admission for a confirmed or clinically diagnosed communicable disease.

Data Quality

Hospital discharge data are systematically reviewed for completeness, accuracy, and proper classification before national aggregation.

- Coverage: Includes reports from all licensed health facilities nationwide.
- Verification: Diagnosis codes are validated at the hospital level by statisticians and checked by the HDC Morbidity Statistics and Surveillance Units.
- Classification: Coding follows WHO ICD-10 guidelines and the *Hospital Morbidity Coding Manual (HDC, 2020)*.
- Reporting Compliance (2024): 100% (621/621) of public hospitals and 86% (1,912/2,230) of private hospitals submitted complete data.

Calculation

All inpatient discharge records with communicable disease diagnoses in 2024 were counted and sorted by frequency (number of cases) according to their ICD-10 primary diagnosis codes.

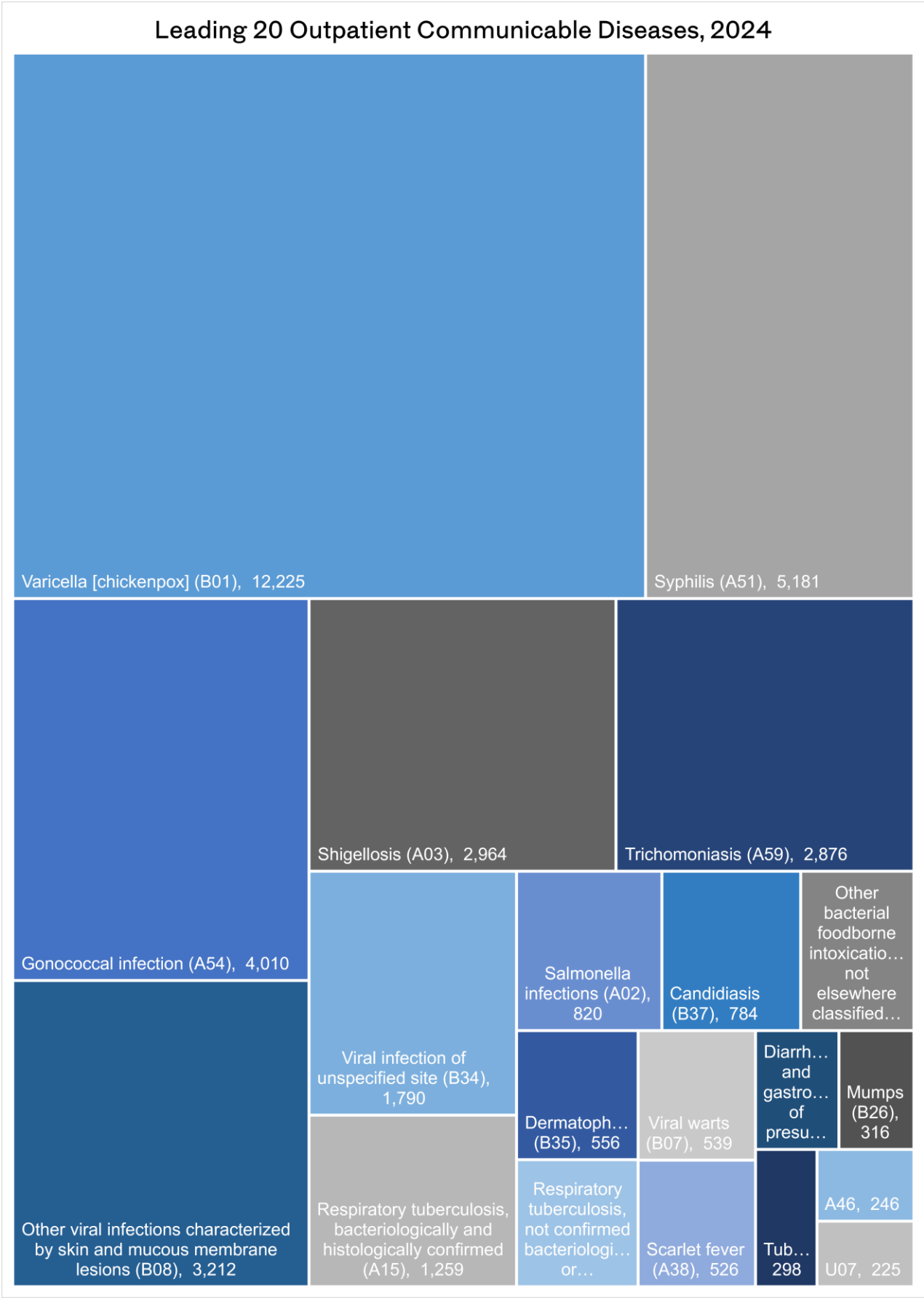
The most frequent communicable diseases were then ranked in descending order

and visualized as a treemap, where each rectangle's size represents the relative number of cases.

Calculation data:

ICD10	Cases
Varicella [chickenpox] (B01)	3992
Brucellosis (A23)	3796
Chronic viral hepatitis (B18)	2797
Shigellosis (A03)	2702
Respiratory tuberculosis, bacteriologically and histologically confirmed (A15)	1819
Respiratory tuberculosis, not confirmed bacteriologically or histologically (A16)	1340
Zoster [shingles] (B02)	1291
Other viral infections characterized by skin and mucous membrane lesions (B08)	1257
Other bacterial intestinal infections (A04)	898
Salmonella infections (A02)	757
Viral infection of unspecified site (B34)	741
Tuberculosis of other organs (A18)	632
Miliary tuberculosis (A19)	473
Erysipelas (A46)	405
Other bacterial foodborne intoxications, not elsewhere classified (A05)	398
Scarlet fever (A38)	385
Spotted fever [tick-borne rickettsioses] (A77)	241
Other sepsis (A41)	209
Dermatophytosis (B35)	192
Other acute viral hepatitis (B17)	185

2. Outpatient Communicable Disease



Outpatient Communicable Diseases – Methodology

Definition

The *Outpatient Communicable Diseases* indicator visualizes the distribution of infectious diseases among outpatient visits reported during the year. Each rectangle in the treemap represents one ICD-10 diagnostic category or pathogen-related disease group, and its area is proportional to the number of outpatient communicable disease cases.

This indicator reflects the most common causes of infection-related consultations in outpatient settings across Mongolia.

Data Source and Number of Cases

Outpatient communicable disease data are collected and compiled by the Health Development Center (HDC) from reports submitted by all public and private health facilities through the Health Information System (H-info 3.0) and the National Communicable Disease Surveillance Subsystem.

Data include all outpatient consultations with a primary diagnosis of communicable disease in 2024, classified according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*. Each record represents one outpatient consultation, regardless of follow-up visits for the same illness.

Data Quality

All outpatient data are routinely reviewed for completeness, consistency, and accuracy before national aggregation.

- Coverage: Includes reports from all licensed health facilities nationwide.
- Verification: Reported cases are validated at the facility level by statisticians and epidemiologists and rechecked by the HDC Surveillance and Statistics Units.
- Classification: Coding follows WHO ICD-10 standards and the *Outpatient Morbidity Coding Manual (HDC, 2020)*.
- Reporting Compliance (2024): 100% (621/621) of public facilities and 85% (1,912/2,230) of private facilities submitted complete outpatient communicable disease data.

Calculation

All outpatient records with communicable disease diagnoses in 2024 were counted and sorted by frequency (number of cases) according to their ICD-10 primary diagnosis codes.

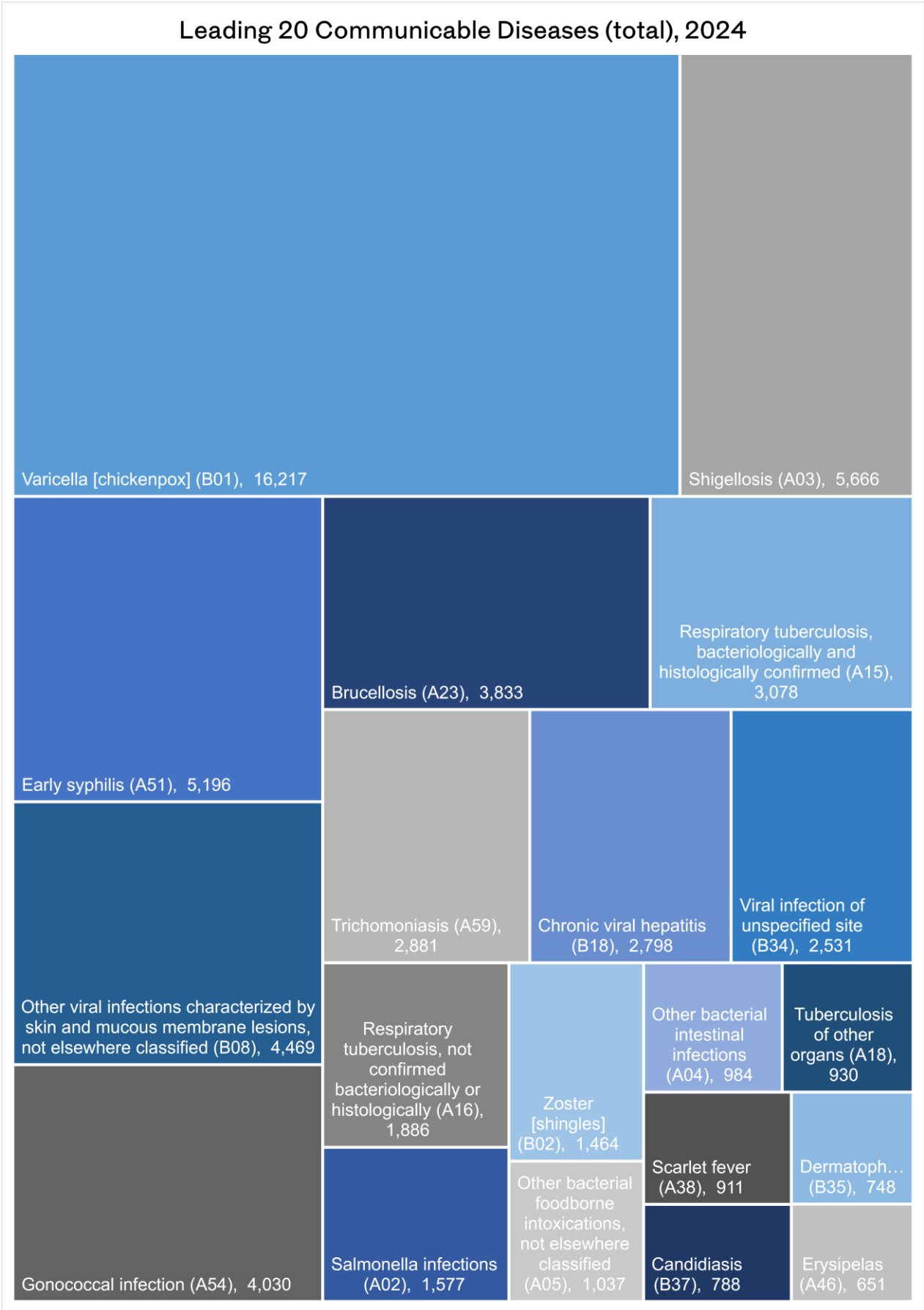
The most frequent infectious diseases were then ranked in descending order and

visualized as a treemap, where each rectangle's size represents the relative number of cases.

Calculation data:

ICD10	Cases
Varicella [chickenpox] (B01)	12,225
Syphilis (A51)	5,181
Gonococcal infection (A54)	4,010
Other viral infections characterized by skin and mucous membrane lesions (B08)	3,212
Shigellosis (A03)	2,964
Trichomoniasis (A59)	2,876
Viral infection of unspecified site (B34)	1,790
Respiratory tuberculosis, bacteriologically and histologically confirmed (A15)	1,259
Salmonella infections (A02)	820
Candidiasis (B37)	784
Other bacterial foodborne intoxications, not elsewhere classified (A05)	639
Dermatophytosis (B35)	556
Respiratory tuberculosis, not confirmed bacteriologically or histologically (A16)	546
Viral warts (B07)	539
Scarlet fever (A38)	526
Diarrhoea and gastroenteritis of presumed infectious origin (A09)	350
Mumps (B26)	316
Tuberc	298
A46	246
U07	225

3. Total Communicable Diseases



Total Communicable Diseases – Methodology

Definition

The *Total Communicable Diseases* indicator visualizes the **overall distribution of infectious disease morbidity** in a given year, combining both **inpatient and outpatient reports** from all health facilities.

Each rectangle in the treemap represents one **ICD-10 diagnostic category or pathogen-related disease group**, and its area is proportional to the **total number of reported cases** (inpatient + outpatient).

This indicator provides a comprehensive overview of the **most common communicable diseases** affecting the population in Mongolia.

Data Source and Number of Cases

Communicable disease data are collected and compiled by the **Health Development Center (HDC)** from reports submitted by all **public and private health facilities** through the **Health Information System (H-info 3.0)** and the **National Communicable Disease Surveillance Subsystem**.

Data include both **inpatient discharges** and **outpatient consultations** of patients diagnosed with communicable diseases in 2024, classified by **primary diagnosis** according to the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)*.

Each record represents one **confirmed or clinically diagnosed case** reported during the year.

Data Quality

All communicable disease data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

- **Coverage:** Includes reports from all licensed health facilities nationwide.
- **Verification:** Reported cases are validated at the facility level by epidemiologists and rechecked by the HDC Surveillance and Statistics Units.
- **Classification:** Coding follows WHO ICD-10 standards and the *National Communicable Disease Reporting Manual (HDC, 2020)*.
- **Reporting Compliance (2024):** 100% (621/621) public facilities and 85% (1,912/2,230) private facilities submitted complete data.

Calculation

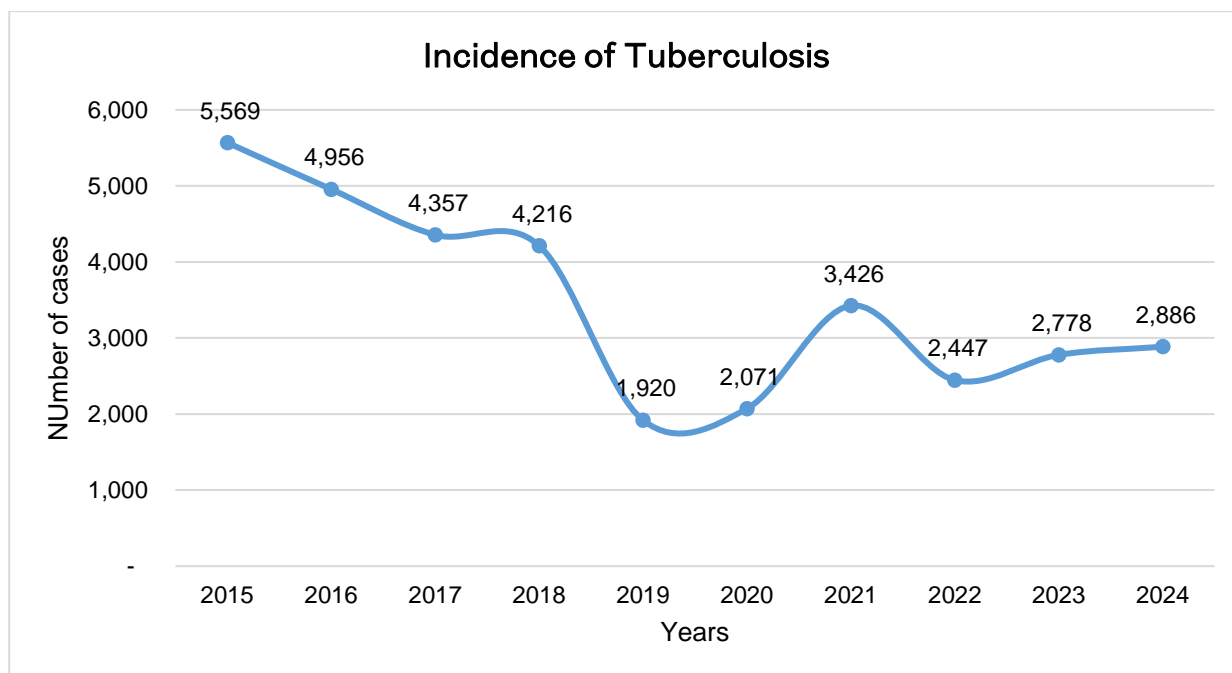
All communicable disease records (inpatient and outpatient) reported in 2024 were combined, counted, and sorted by frequency (number of cases) according to their ICD-10 primary diagnosis codes.

The most frequent infectious diseases were then ranked in descending order and visualized as a treemap, where each rectangle's size represents the relative number of cases.

Calculation data:

ICD10	Cases
Varicella [chickenpox] (B01)	16,217
Shigellosis (A03)	5,666
Early syphilis (A51)	5,196
Other viral infections characterized by skin and mucous membrane lesions, not elsewhere classified (B08)	4,469
Gonococcal infection (A54)	4,030
Brucellosis (A23)	3,833
Respiratory tuberculosis, bacteriologically and histologically confirmed (A15)	3,078
Trichomoniasis (A59)	2,881
Chronic viral hepatitis (B18)	2,798
Viral infection of unspecified site (B34)	2,531
Respiratory tuberculosis, not confirmed bacteriologically or histologically (A16)	1,886
Salmonella infections (A02)	1,577
Zoster [shingles] (B02)	1,464
Other bacterial foodborne intoxications, not elsewhere classified (A05)	1,037
Other bacterial intestinal infections (A04)	984
Tuberculosis of other organs (A18)	930
Scarlet fever (A38)	911
Candidiasis (B37)	788
Dermatophytosis (B35)	748
Erysipelas (A46)	651

4. Tuberculosis Incidence



Incidence of Tuberculosis – Methodology

Definition

The *Incidence of Tuberculosis* refers to the number of newly diagnosed tuberculosis (TB) cases recorded within a given year. This indicator provides an overview of the annual occurrence of new TB cases among the population and serves as a key measure for assessing the burden and control of tuberculosis in Mongolia.

Data Source and Number of Cases

Tuberculosis incidence data are compiled by the **Health Development Center (HDC)** based on reports submitted by all public and private healthcare institutions nationwide.

The dataset includes all confirmed and clinically diagnosed tuberculosis cases that were newly registered during the reporting year.

Each case represents a unique patient, and data are derived from official morbidity reporting systems maintained by healthcare institutions.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from 621/621 public and 1,912/2,230 private facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Underreporting from rural and remote areas.
- Exclusion of cases diagnosed or treated abroad.
- Changes in diagnostic capacity or criteria over time.

Calculation

To determine the annual number of *incident tuberculosis cases*, individual patient identification numbers from both inpatient and outpatient TB databases were used to ensure person-based counting rather than case-based counting.

- **Within-year deduplication:** Duplicate entries within the same calendar year were identified and removed so that each person was counted only once, even if diagnosed or treated multiple times.
- **Cross-year deduplication:** For longitudinal accuracy, previously identified cases were excluded from subsequent years.

The final dataset therefore represents *unique individuals newly diagnosed with tuberculosis during each reference year*.

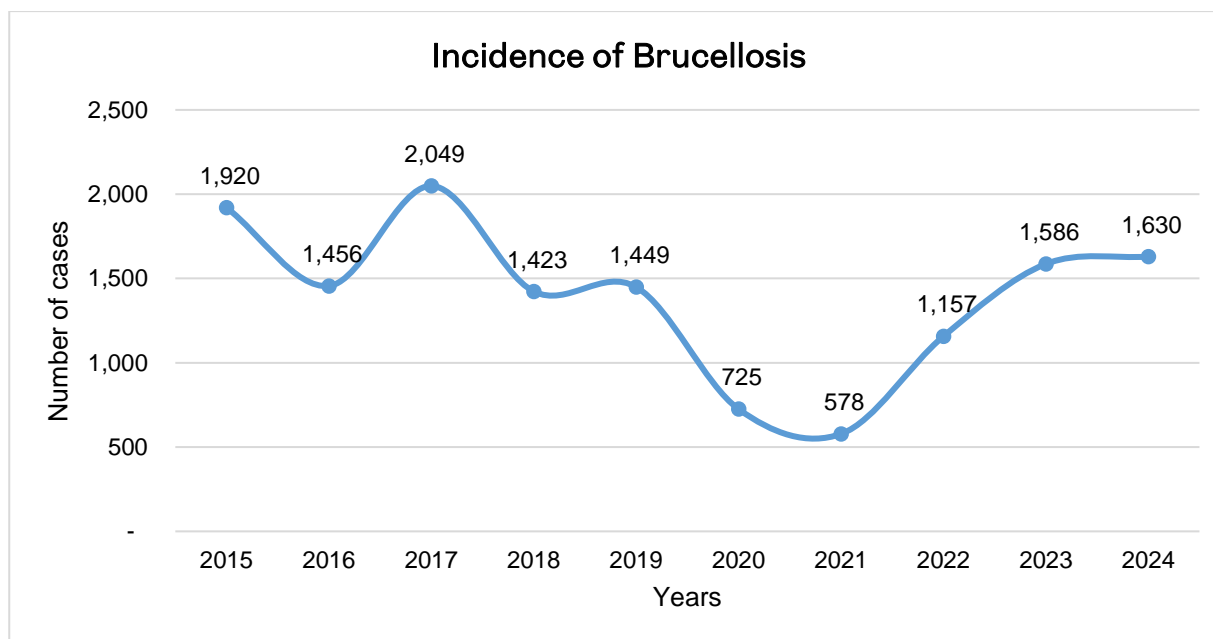
Unit of measurement: Number of new tuberculosis cases (persons).

Stratification: Years (2015–2024)

Calculation data:

Years	Incidence of Tuberculosis
2015	5,569
2016	4,956
2017	4,357
2018	4,216
2019	1,920
2020	2,071
2021	3,426
2022	2,447
2023	2,778
2024	2,886
Total	34,626

5. Brucellosis Incidence



Incidence of Brucellosis – Methodology

Definition

The *Incidence of Brucellosis* measures the total number of newly diagnosed human brucellosis cases recorded during a given year. This indicator reflects the annual occurrence of new brucellosis infections transmitted mainly from livestock to humans, serving as a key measure for zoonotic disease surveillance and control.

Data Source and Number of Cases

Brucellosis incidence data are compiled by the **Health Development Center (HDC)** from reports of all public and private healthcare institutions nationwide. The dataset includes all laboratory-confirmed and clinically diagnosed brucellosis cases newly registered during the reporting year. Each record represents a unique patient and is counted once per year, regardless of the number of medical visits or treatment episodes.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621** public and **1,912/2,230** private facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Possible underreporting in remote and herding-dominated regions.
- Seasonal variation in livestock infection rates affecting annual trends.
- Exclusion of cases diagnosed outside the national reporting system.

Calculation

To determine the annual number of *incident brucellosis cases*, individual patient identification numbers from inpatient and outpatient reports were used to ensure person-based counting.

- **Within-year deduplication:** Duplicate records within the same year were identified and removed, ensuring each patient was counted only once.
- **Cross-year deduplication:** To maintain longitudinal accuracy, previously identified cases were excluded from subsequent years.

The resulting figures represent *unique persons newly diagnosed with brucellosis during each respective year*.

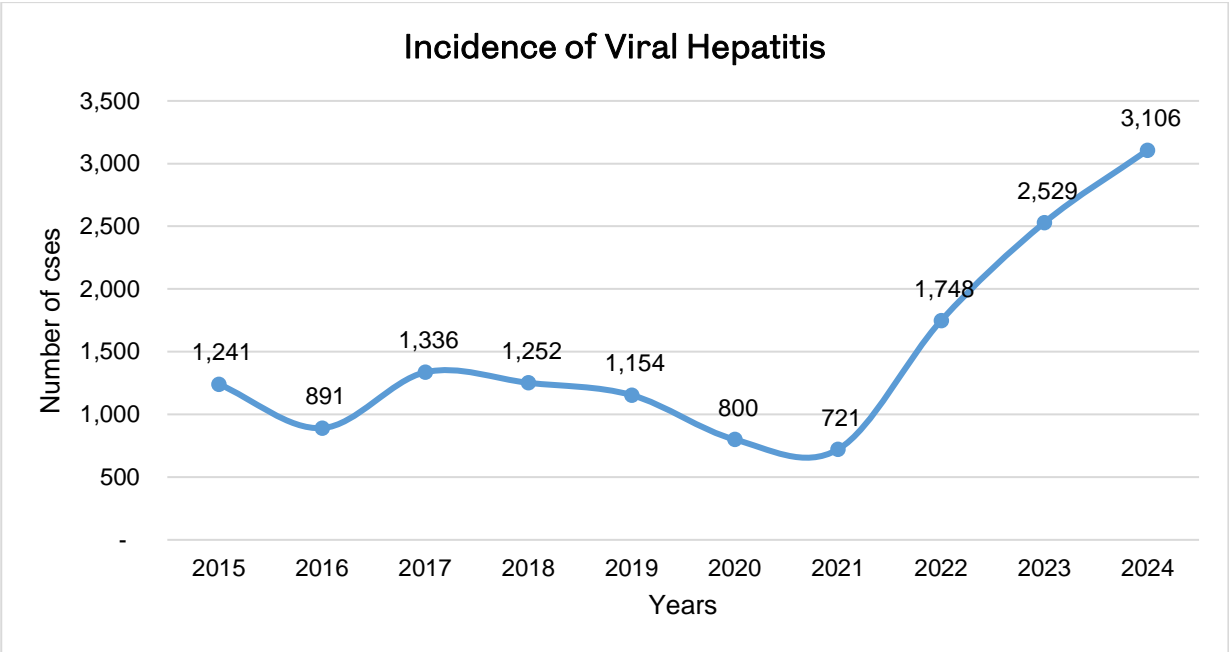
Unit of Measurement: Number of new brucellosis cases (persons).

Stratification: Year (2015–2024)

Calculation data:

Years	Incidence of Brucellosis
2015	1,920
2016	1,456
2017	2,049
2018	1,423
2019	1,449
2020	725
2021	578
2022	1,157
2023	1,586
2024	1,630
Total	13,973

6. Viral Hepatitis Incidence



Incidence of Viral Hepatitis – Methodology

Definition

The *Incidence of Viral Hepatitis* represents the total number of newly diagnosed viral hepatitis cases in a given year.

This indicator captures new infections caused by hepatitis viruses (primarily Hepatitis A, B, C, D, and E) among the population and serves as a key measure for monitoring the burden of viral liver diseases and the effectiveness of national prevention programs.

Data Source and Number of Cases

Viral hepatitis incidence data are compiled by the **Health Development Center (HDC)** from reports of all public and private healthcare institutions across Mongolia.

The dataset includes all newly confirmed and clinically diagnosed viral hepatitis cases registered during the reporting year, based on laboratory confirmation or physician diagnosis according to national case definitions.

Each case represents a unique individual and is recorded once per year.

Data

Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621** public and **1,912/2,230** private facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Underdiagnosis in mild or asymptomatic cases.
- Variation in laboratory testing and case reporting practices across regions.
- Possible exclusion of cases diagnosed abroad or outside the national surveillance system.

Calculation

To estimate the *annual number of incident viral hepatitis cases*, patient identification numbers from inpatient and outpatient records were used to establish a person-based count.

- **Within-year deduplication:** Duplicate records within the same year were removed so that each individual was counted only once, even if diagnosed or treated multiple times.
- **Cross-year deduplication:** Previously identified hepatitis cases were excluded from subsequent years to avoid double-counting.

The resulting dataset reflects *unique individuals newly diagnosed with viral hepatitis in each reference year*.

Unit of Measurement: Number of new viral hepatitis cases (persons).
Stratification: Year (2015–2024).

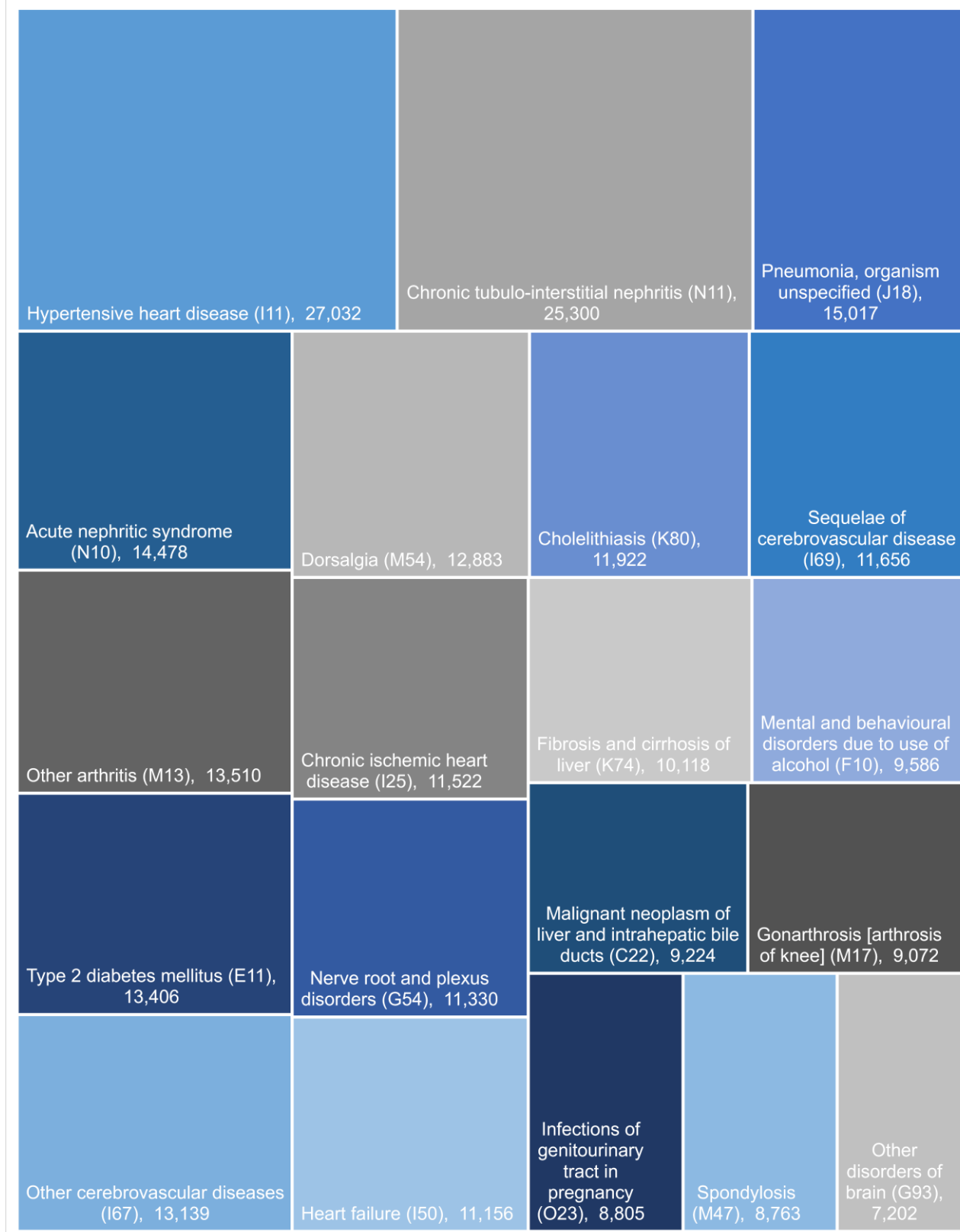
Calculation data:

Years	Incidence of Viral Hepatitis
2015	1,241
2016	891
2017	1,336
2018	1,252
2019	1,154
2020	800
2021	721
2022	1,748
2023	2,529
2024	3,106
Total	14,778

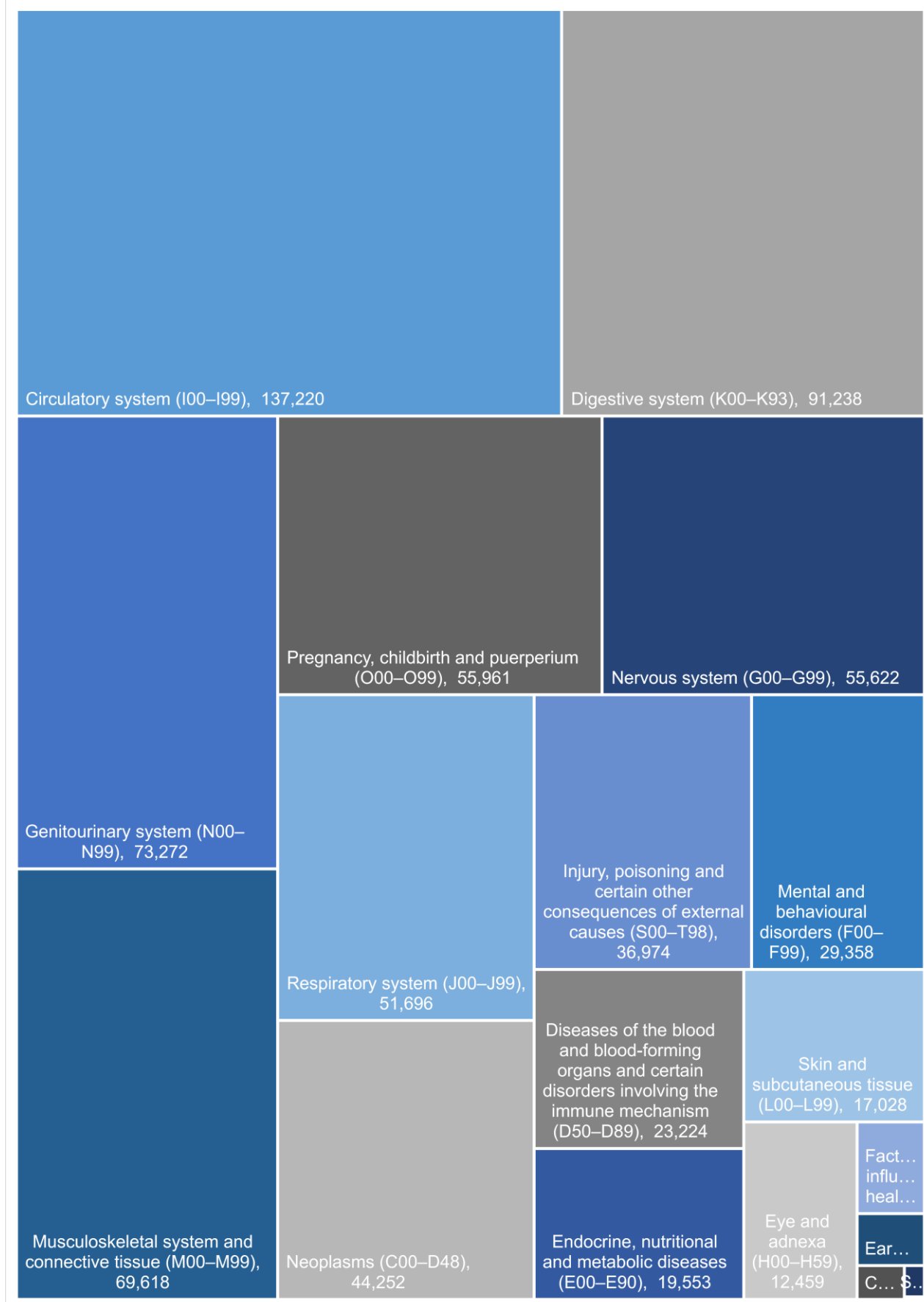
NON-COMMUNICABLE DISEASES

1. Inpatient Non-Communicable Diseases

Leading 20 Inpatient Non-Communicable Diseases, 2024



Inpatient Non-Communicable Diseases by disease group, 2024



Inpatient Non-Communicable Diseases, 2024 – Methodology

Definition

These indicators present the distribution and burden of **non-communicable diseases (NCDs)** among **inpatients** treated in all healthcare facilities during 2024. Each block in the visualization represents one ICD-10 disease group, with its area proportional to the total number of inpatient cases registered for that diagnosis. The indicator provides an overview of the most common causes of hospitalization due to NCDs in Mongolia.

Data Source and Number of Cases

Inpatient morbidity data are compiled by the **Health Development Center (HDC)** based on official health service reports submitted by all public and private hospitals across Mongolia.

Diagnoses are coded according to the **International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)**.

The dataset includes all inpatient discharges with a primary diagnosis belonging to the ICD-10 blocks for non-communicable diseases (Chapters II–XIV). Each record represents a single hospital discharge event.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621 public** and **1,912/2,230 private** facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Differences in coding accuracy across hospitals.
- Variation in diagnostic and admission practices.
- Possible underreporting from private sector facilities.

Calculation

The total number of inpatient discharges was aggregated by ICD-10 diagnostic code

for all non-communicable diseases.

Each patient record corresponds to one hospitalization with a confirmed NCD diagnosis.

Cases were grouped and summarized by major ICD-10 categories to visualize the proportional distribution of inpatient morbidity.

Stratification: Disease group (ICD-10 code), 2024.

Calculation data:

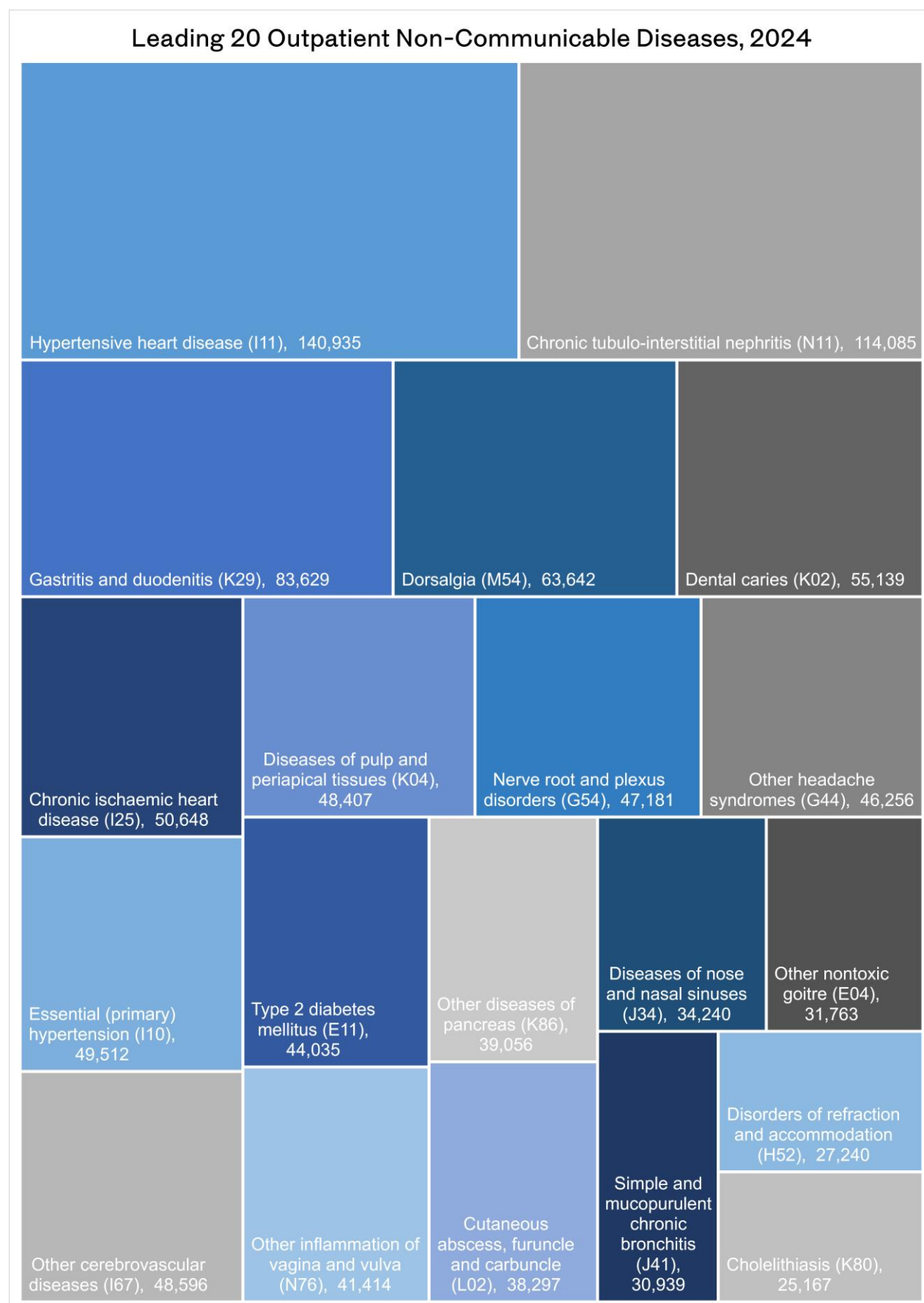
Leading 20 Inpatient Non-Communicable Diseases, 2024

ICD10	Cases
Hypertensive heart disease (I11)	27,032
Chronic tubulo-interstitial nephritis (N11)	25,300
Pneumonia, organism unspecified (J18)	15,017
Acute nephritic syndrome (N10)	14,478
Other arthritis (M13)	13,510
Type 2 diabetes mellitus (E11)	13,406
Other cerebrovascular diseases (I67)	13,139
Dorsalgia (M54)	12,883
Cholelithiasis (K80)	11,922
Sequelae of cerebrovascular disease (I69)	11,656
Chronic ischemic heart disease (I25)	11,522
Nerve root and plexus disorders (G54)	11,330
Heart failure (I50)	11,156
Fibrosis and cirrhosis of liver (K74)	10,118
Mental and behavioural disorders due to use of alcohol (F10)	9,586
Malignant neoplasm of liver and intrahepatic bile ducts (C22)	9,224
Gonarthrosis [arthrosis of knee] (M17)	9,072
Infections of genitourinary tract in pregnancy (O23)	8,805
Spondylosis (M47)	8,763
Other disorders of brain (G93)	7,202

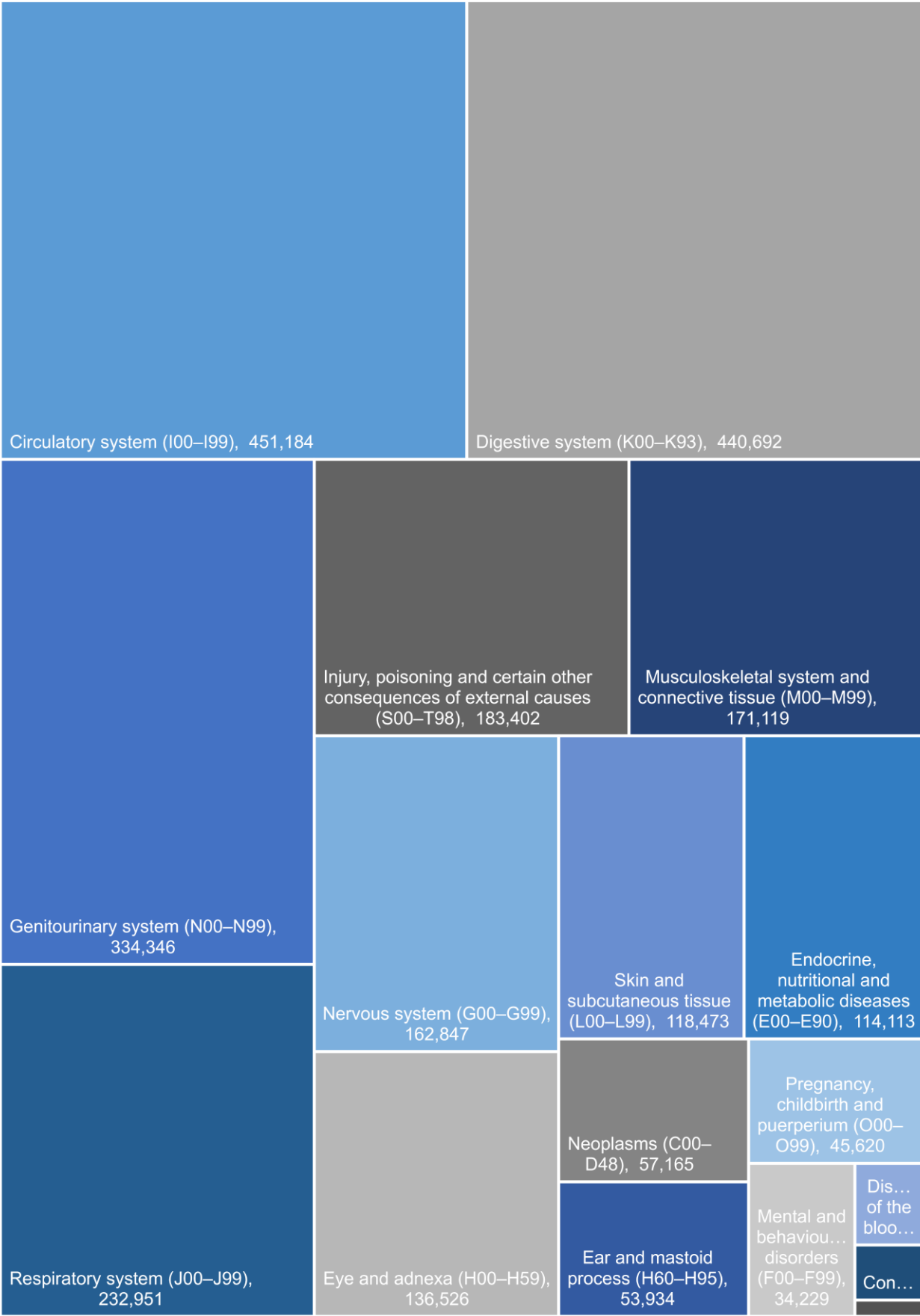
Inpatient Non-Communicable Diseases by disease group, 2024

ICD10	Cases
Circulatory system (I00–I99)	137,220
Digestive system (K00–K93)	91,238
Genitourinary system (N00–N99)	73,272
Musculoskeletal system and connective tissue (M00–M99)	69,618
Pregnancy, childbirth and puerperium (O00–O99)	55,961
Nervous system (G00–G99)	55,622
Respiratory system (J00–J99)	51,696
Neoplasms (C00–D48)	44,252
Injury, poisoning and certain other consequences of external causes (S00–T98)	36,974
Mental and behavioural disorders (F00–F99)	29,358
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	23,224
Endocrine, nutritional and metabolic diseases (E00–E90)	19,553
Skin and subcutaneous tissue (L00–L99)	17,028
Eye and adnexa (H00–H59)	12,459
Factors influencing health status and contact with health services (Z00–Z99)	3,808
Ear and mastoid process (H60–H95)	2,155
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	987
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	383
Codes for special purposes (U00–U99)	31
Perinatal conditions (P00–P96)	-
External causes of morbidity and mortality (V01–Y98)	-
Certain infectious and parasitic diseases (A00–B99)	-

2. Outpatient Non-Communicable Diseases



Outpatient Non-Communicable Diseases by categories, 2024



Outpatient Non-Communicable Diseases, 2024 – Methodology

Definition

These indicators present the distribution and burden of **non-communicable diseases (NCDs)** among **outpatients** who received medical care in healthcare facilities during 2024.

Each block in the visualization represents one ICD-10 diagnostic category, and its area is proportional to the total number of outpatient visits recorded under that disease group.

The indicator provides an overview of the most common causes of outpatient visits related to NCDs in Mongolia.

Data Source and Number of Cases

Outpatient morbidity data are compiled by the **Health Development Center (HDC)** based on official health service reports from all public and private healthcare institutions nationwide.

Diagnoses are coded according to the **International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)**.

The dataset includes all outpatient consultations with a primary diagnosis classified within ICD-10 chapters II–XIV (non-communicable diseases). Each record represents a single outpatient visit for one individual during 2024.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621 public** and **1,912/2,230 private** facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Variations in reporting completeness among private facilities.
- Differences in diagnostic and coding practices between institutions.
- Repeat visits for the same patient may occur in multiple facilities.

Calculation

The total number of outpatient visits was aggregated by ICD-10 diagnostic code for all non-communicable diseases.

Each visit corresponds to one recorded consultation with a confirmed NCD diagnosis.

Data were grouped by major ICD-10 categories to display the proportional distribution of outpatient morbidity for 2024.

Unit of Measurement: Number of outpatient visits (cases)

Stratification: Disease group (ICD-10 code), 2024

Calculation data:

Leading 20 Outpatient Non-Communicable Diseases, 2024

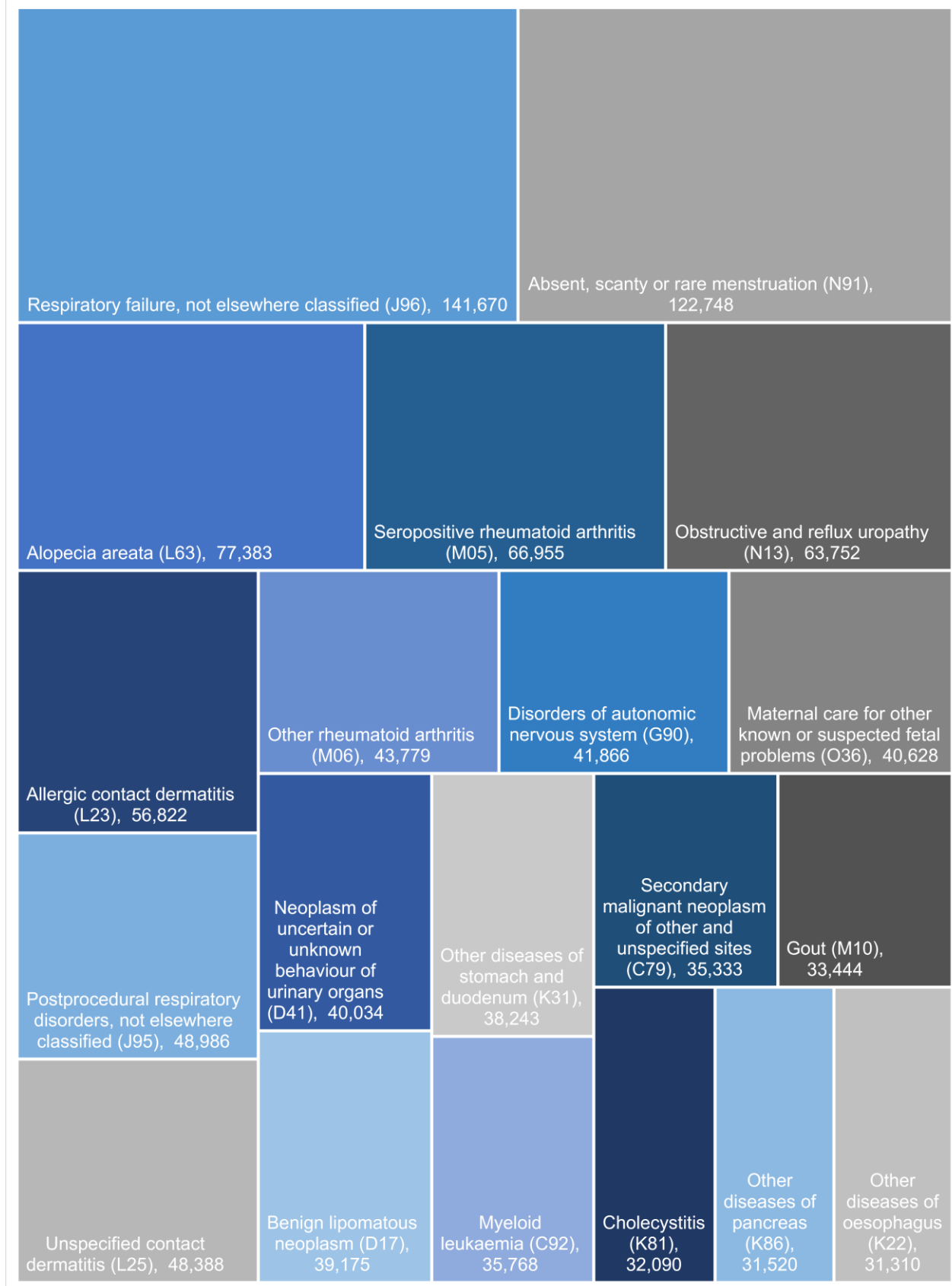
ICD	Cases
Hypertensive heart disease (I11)	140,935
Chronic tubulo-interstitial nephritis (N11)	114,085
Gastritis and duodenitis (K29)	83,629
Dorsalgia (M54)	63,642
Dental caries (K02)	55,139
Chronic ischaemic heart disease (I25)	50,648
Essential (primary) hypertension (I10)	49,512
Other cerebrovascular diseases (I67)	48,596
Diseases of pulp and periapical tissues (K04)	48,407
Nerve root and plexus disorders (G54)	47,181
Other headache syndromes (G44)	46,256
Type 2 diabetes mellitus (E11)	44,035
Other inflammation of vagina and vulva (N76)	41,414
Other diseases of pancreas (K86)	39,056
Cutaneous abscess, furuncle and carbuncle (L02)	38,297
Diseases of nose and nasal sinuses (J34)	34,240
Other nontoxic goitre (E04)	31,763
Simple and mucopurulent chronic bronchitis (J41)	30,939
Disorders of refraction and accommodation (H52)	27,240
Cholelithiasis (K80)	25,167

Outpatient Non-Communicable Diseases by categories, 2024

ICD10	Cases
Circulatory system (I00–I99)	451,184
Digestive system (K00–K93)	440,692
Genitourinary system (N00–N99)	334,346
Respiratory system (J00–J99)	232,951
Injury, poisoning and certain other consequences of external causes (S00–T98)	183,402
Musculoskeletal system and connective tissue (M00–M99)	171,119
Nervous system (G00–G99)	162,847
Eye and adnexa (H00–H59)	136,526
Skin and subcutaneous tissue (L00–L99)	118,473
Endocrine, nutritional and metabolic diseases (E00–E90)	114,113
Neoplasms (C00–D48)	57,165
Ear and mastoid process (H60–H95)	53,934
Pregnancy, childbirth and puerperium (O00–O99)	45,620
Mental and behavioural disorders (F00–F99)	34,229
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	11,673
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	7,844
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	2,349

3. Total Non-Communicable Diseases

Leading 20 Non-Communicable Diseases (total), 2024



Total Non-Communicable Diseases, 2024 – Methodology

Definition

This indicator shows the overall distribution and burden of **non-communicable diseases (NCDs)** among both **inpatients and outpatients** reported during 2024. Each block in the visualization represents one ICD-10 diagnostic category, and its area is proportional to the total number of combined inpatient and outpatient cases. The indicator provides a comprehensive overview of the most frequently diagnosed NCDs in Mongolia, highlighting their total impact on the healthcare system.

Data Source and Number of Cases

Total morbidity data for non-communicable diseases are compiled by the **Health Development Center (HDC)** using aggregated reports from all public and private healthcare institutions across Mongolia.

Diagnoses are coded according to the **International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)**.

The dataset includes all inpatient and outpatient records with a primary diagnosis classified under ICD-10 chapters II–XIV (non-communicable diseases). Each case represents a unique diagnosis event reported in 2024.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621 public** and **1,912/2,230 private** facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Differences in diagnostic coding between hospitals and outpatient clinics.
- Double-counting possible when the same patient appears in both inpatient and outpatient records.
- Variation in reporting completeness between regions and facility types.

Calculation

Data from inpatient and outpatient databases were merged and aggregated by ICD-10 code for all non-communicable diseases.

Duplicate patient records within the same year were identified and removed to ensure accurate person-level counting.

Cases were grouped by ICD-10 diagnostic categories, and the total number of unique cases was used to construct the proportional distribution of NCDs for 2024.

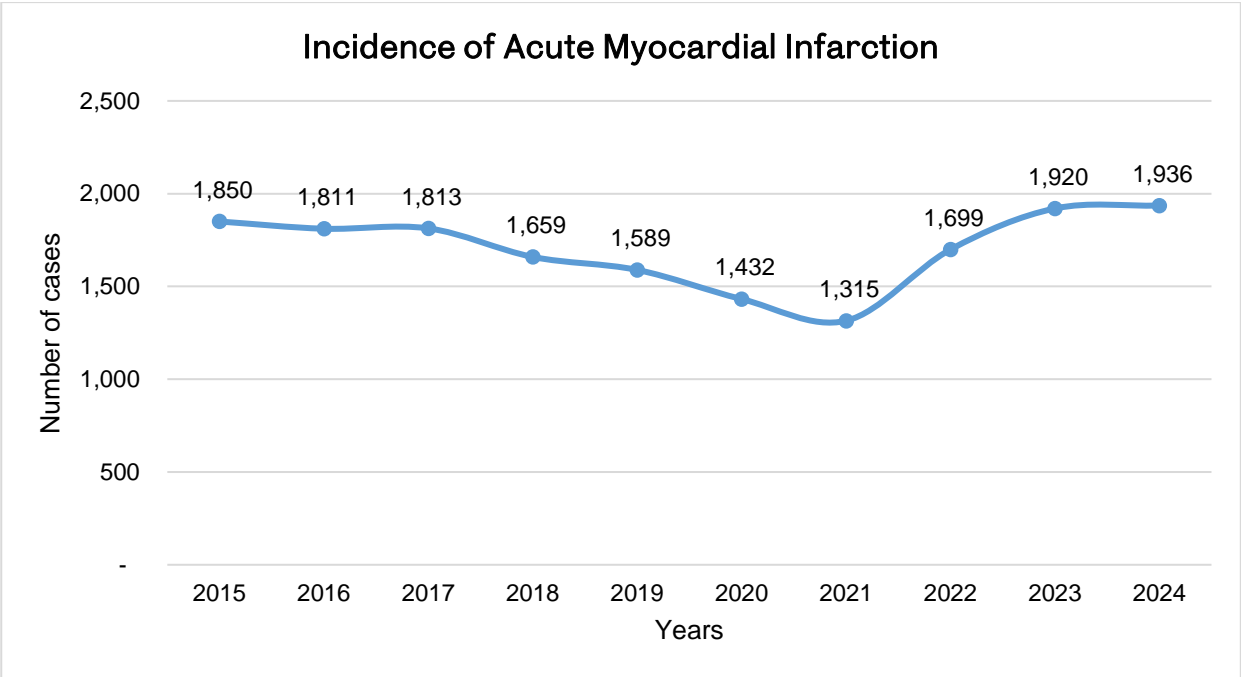
Unit of Measurement: Number of total cases (inpatient + outpatient)

Stratification: Disease group (ICD-10 code), 2024

Calculation data:

ICD10	Cases
Respiratory failure, not elsewhere classified (J96)	141,670
Absent, scanty or rare menstruation (N91)	122,748
Alopecia areata (L63)	77,383
Seropositive rheumatoid arthritis (M05)	66,955
Obstructive and reflux uropathy (N13)	63,752
Allergic contact dermatitis (L23)	56,822
Postprocedural respiratory disorders, not elsewhere classified (J95)	48,986
Unspecified contact dermatitis (L25)	48,388
Other rheumatoid arthritis (M06)	43,779
Disorders of autonomic nervous system (G90)	41,866
Maternal care for other known or suspected fetal problems (O36)	40,628
Neoplasm of uncertain or unknown behaviour of urinary organs (D41)	40,034
Benign lipomatous neoplasm (D17)	39,175
Other diseases of stomach and duodenum (K31)	38,243
Myeloid leukaemia (C92)	35,768
Secondary malignant neoplasm of other and unspecified sites (C79)	35,333
Gout (M10)	33,444
Cholecystitis (K81)	32,090
Other diseases of pancreas (K86)	31,520
Other diseases of oesophagus (K22)	31,310
Chapter XX – External causes	-
Chapter XXI – Factors influencing health status...	-

4. Acute myocardial Infarction Incidence



Incidence of Acute Myocardial Infarction – Methodology

Definition

The *Incidence of Acute Myocardial Infarction (AMI)* represents the total number of newly diagnosed cases of AMI during a given year.

This indicator measures the annual occurrence of new heart attack events among the population and serves as an essential measure for assessing cardiovascular health and monitoring trends in non-communicable diseases.

Data Source and Number of Cases

AMI incidence data are compiled by the **Health Development Center (HDC)** based on reports submitted by all public and private healthcare institutions across Mongolia. The dataset includes all newly confirmed cases of acute myocardial infarction (ICD-10 codes **I21–I22**) registered during the reporting year. Each case represents a unique patient, counted only once per year.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621** public and **1,912/2,230** private facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Underreporting of sudden or out-of-hospital AMI deaths.
- Differences in diagnostic capacity and reporting accuracy between hospitals.
- Exclusion of cases treated abroad.

Calculation

Individual patient identification numbers from inpatient and emergency databases were used to ensure person-based counting.

Duplicate records within the same year were removed so that each patient was counted only once.

Previously identified AMI cases were excluded from subsequent years to avoid double-counting.

Records of deceased individuals from the same year were also excluded from incidence counts.

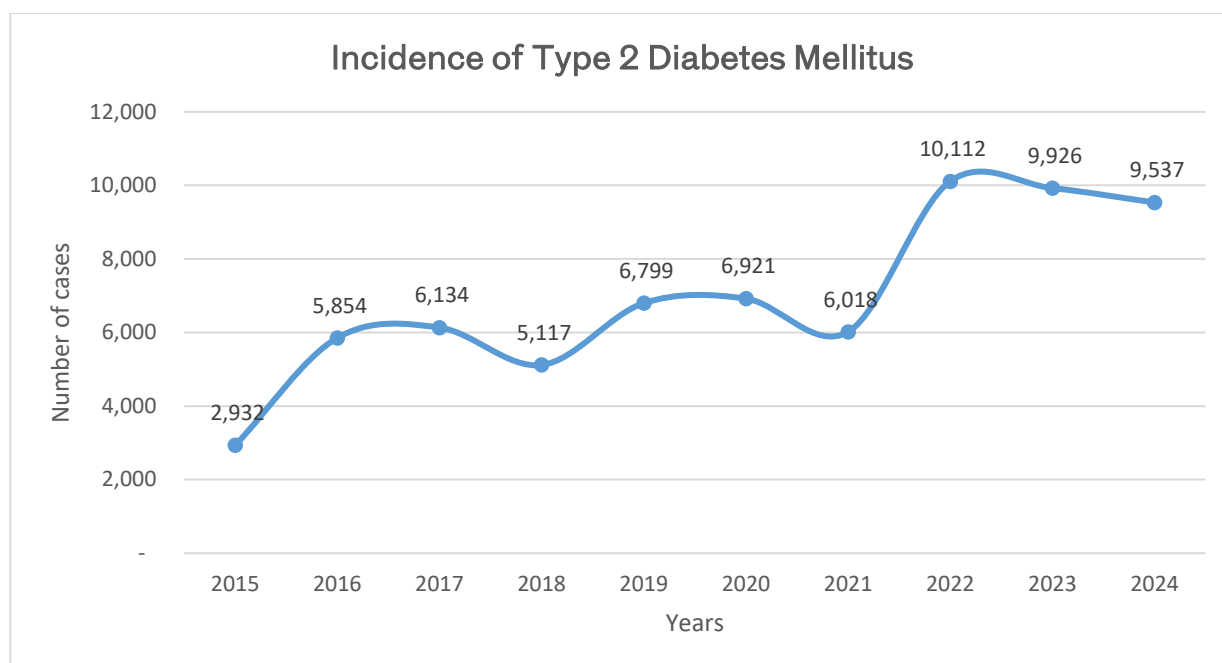
Unit of Measurement: Number of new AMI cases (persons)

Stratification: Year (2015–2024)

Calculation data:

Years	Incidence of Acute Myocardial Infarction
2015	1,850
2016	1,811
2017	1,813
2018	1,659
2019	1,589
2020	1,432
2021	1,315
2022	1,699
2023	1,920
2024	1,936
Total	17,024

5. Type 2 Diabetes Mellitus



Incidence of Type 2 Diabetes Mellitus – Methodology

Definition

The *Incidence of Type 2 Diabetes Mellitus* represents the number of newly diagnosed Type 2 diabetes (E11) cases in a given year.

This indicator measures the annual occurrence of new diabetes cases among the population and reflects trends in lifestyle-related non-communicable diseases in Mongolia.

Data Source and Number of Cases

Incidence data for Type 2 diabetes mellitus are compiled by the **Health Development Center (HDC)** from reports submitted by all public and private healthcare institutions across Mongolia.

The dataset includes all newly confirmed and clinically diagnosed cases of Type 2 diabetes (ICD-10: E11) registered during the reporting year. Each record represents a unique individual and is counted once per year.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621 public** and **1,912/2,230 private** facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Underreporting of undiagnosed or early-stage cases.
- Variation in diagnostic screening and testing practices across facilities.
- Exclusion of patients diagnosed abroad.

Calculation

Individual patient identification numbers from inpatient and outpatient records were used to ensure person-based counting.

Duplicate records within the same year were removed so that each person was counted only once.

Previously identified diabetes cases were excluded from subsequent years to avoid double-counting.

Records of deceased individuals from the same year were excluded from incidence counts.

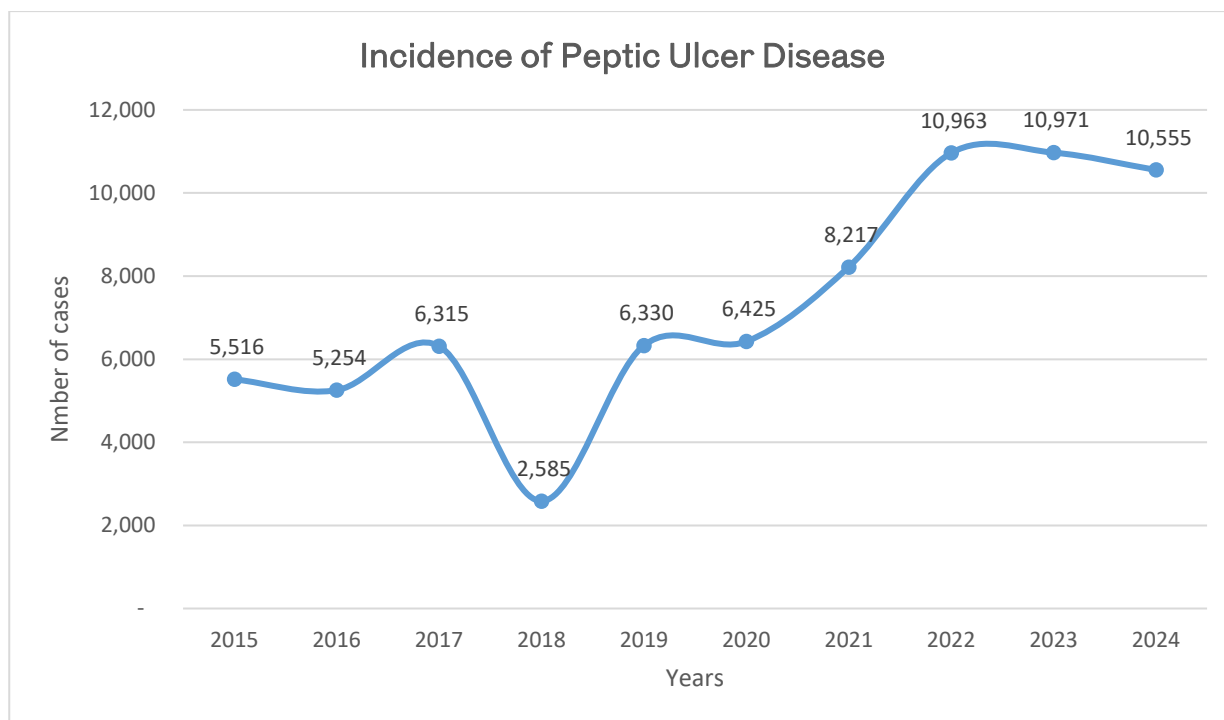
Unit of Measurement: Number of new Type 2 diabetes mellitus cases (persons)

Stratification: Year (2015–2024)

Calculation data:

Years	Incidence of Type 2 Diabetes Mellitus
2015	2,932
2016	5,854
2017	6,134
2018	5,117
2019	6,799
2020	6,921
2021	6,018
2022	10,112
2023	9,926
2024	9,537
Total	69,350

6. Peptic Ulcer Disease Incidence



Incidence of Peptic Ulcer Disease – Methodology

Definition

The *Incidence of Peptic Ulcer Disease* represents the number of newly diagnosed cases of gastric, duodenal, or unspecified peptic ulcers recorded during a given year. This indicator measures the annual occurrence of new peptic ulcer disease (K25–K27) cases and provides insight into the burden of gastrointestinal disorders among the population.

Data Source and Number of Cases

Incidence data for peptic ulcer disease are compiled by the **Health Development Center (HDC)** based on official morbidity reports submitted by all public and private healthcare institutions nationwide.

The dataset includes all newly confirmed and clinically diagnosed cases of peptic ulcer disease (ICD-10: K25–K27) during the reporting year. Each case corresponds to a unique patient and is recorded once per year.

Data Quality

All data are routinely reviewed for completeness, consistency, and coding accuracy prior to national aggregation.

Coverage: Includes reports from all licensed health facilities nationwide.

Verification: Data are reviewed and validated by statisticians at the healthcare institution level and re-verified at the central level by the HDC.

External Oversight: Periodic audits and data quality assessments may be conducted by State Statistics Inspectors.

Reporting Compliance (2024): Data were received from **621/621** public and **1,912/2,230** private facilities.

Quality assurance follows the **Law on Statistics of Mongolia (1997, revised)** and **Order No. A/611 of the Minister of Health**.

Potential limitations include:

- Underreporting of mild or unconfirmed ulcer cases.
- Diagnostic variation between primary and secondary health facilities.
- Exclusion of cases treated outside Mongolia.

Calculation

Individual patient identification numbers from inpatient and outpatient records were used to ensure person-based counting.

Duplicate records within the same year were removed so that each patient was counted only once.

Previously identified peptic ulcer disease cases were excluded from subsequent years to avoid double-counting.

Records of deceased individuals from the same year were also excluded from incidence counts.

Unit of Measurement: Number of new peptic ulcer disease cases (persons)

Stratification: Year (2015–2024)

Calculation data:

Years	Incidence of Peptic Ulcer Disease
2015	5,516
2016	5,254
2017	6,315
2018	2,585
2019	6,330
2020	6,425
2021	8,217
2022	10,963
2023	10,971
2024	10,555
Total	73,131

