



PHARMACEUTICAL SECTOR INDICATORS-2021



Approved by: Dr.Narantuya.D Director of the Medicine and Medical

devices Regulatory Agency

Translated by: B.Temuulen, Specialist in charge of foreign cooperation

and agreements

Compiled by:

B.Temuulen, Specialist in charge of foreign cooperation

and agreements

Design and layout by:

N.Munkhzaya Officer of medicines supply department

Information collected by:

T.Munkhtuul, Head of medicines registration division
Sh.Enkhzaya, Head of medicine quality control laboratory
Sh.Ariunzaya, Officer of medicines supply department
E.Gerelt-erdene, Officer of medicines registration division
R.Enkhsuren, Senior officer of medical equipment

department

B.Sanj-Ochir, Officer of medical equipment department

E.Odbayar, Senior officer of pharmaceutical

manufacturing division

Ch.Bayar Senior officer of medicines registration

division

A.Nomindari, Officer of license and permit regulatory

department

E.Myadagmaa, Officer of medicines supply department

MEDICINE AND MEDICAL DEVICES REGULATORY AGENCY

Address: UBH center, 8th floor, 1st khoroo, Sukhbaatar districtь Ulaanbaatar, Mongolia

Fax:

Tel: 260182

E-mail: info@.mmra.gov.mn

www.mmra.gov.mn



FOREWORD



We are very glad that the Government Implementing Agency-Medicine and medical devices regulatory agency is presenting you the Pharmaceutical Sector Indicators-2021.

Compiling the key performance indicators for the pharmaceutical sector and making them available to policymakers, decision makers and other users is significant importance to strengthen the transparency and accountability of the entire health sector.

We are offering the respected readers the statistical data on human resources, medicine suppliers, economic quantitative data, medicine regulation quality and safety of the pharmaceutical sector compared to the previous years' data.

The establishment of legal and regulatory environment for medicines' quality and safety is a matter of absolute priority to reach sustainable development goals and universal health coverage.

Every year we will deliver you the updated series of Pharmaceutical sector indicators. The next version shall reflect many measures that will be taken in the future to reach the sustainable development goals.

D.Narantuya, Ph.D.

Director of the Medicine and Medical Devices Regulatory Agency

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LIST OF ACRONYMS

NDC National Dermatology Center

MC Medical College

MNUMS Mongolian National University of Medical Sciences

RDTC Regional diagnostic and treatment centres

RI Republic of India

GASI General Agency for Specialized Inspection

CCHD Capital City Health Department

NMHC National Mental Health Center

FCHM The First State Central Hospital of Mongolia
SCHM The Second State Central Hospital of Mongolia
NCCD National Center for Communicable Diseases

NCC National Oncology Center

UPS University of Pharmaceutical Sciences
HSUM Health Sciences University of Mongolia

HD Health Department

NCMCH National Center for Mother and Child Health
ATC code Anatomical Therapeutical and Chemical code

MNS Mongolian national standard

LOJSC Locally owned joint stock company

NMU New Medicine University



DEMOGRAPHIC AND HEALTH INDICATORS

DEMOGRAPHIC AND HEALTH INDICATORS

1.1 POPULATION

By the end of 2021, the total population of Mongolia was 3'409'939, increase by 2'76 million for last 100 years. Out of the total population 69.4% live in cities and the remaining 30.6% reside in rural areas. 49.1% of population is male while 51% is female.

In 2020, about 32.1% of the population was under 15 years old. The 15-64 age group constituted 63.4% of the population whereas population ages 65 plus was 4.5%.

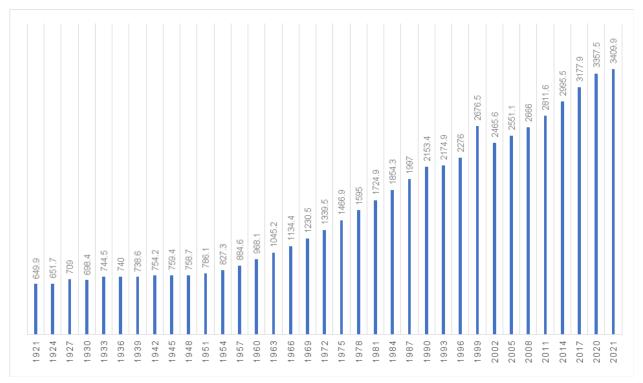


Figure 1. Number and annual average growth rate of population, /1921-2021/

The life expectancy for Mongolia in 2021 was 71.01 years, 0.3 years increase from 2021. The statistic shows that life expectancy for women was 76.47 years and for men 67.05 years.

The life expectancy is based on current age, gender and lifestyle. Over the past five decades, the total life expectancy increased by 5 years to 71.01 years compared to 65.5 years in 1965.





Figure 2. Life expectancy, in years

The life expectancy at birth shows by provinces, where Dundgobi province has a relatively higher by 2.5 years, in Khuvsgul province lower by 3.9 years, in comparison with the national level.

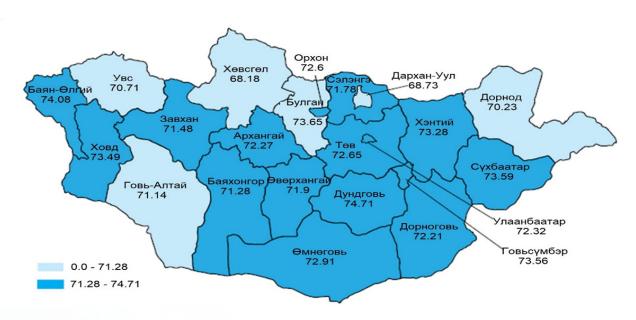


Figure 3. Life expectancy, by provinces and capital city, /2021/

There are differences in the total life expectancy among provinces and regions, in Khangai region has the lowest 71.65 but in Central region has the highest 72.37.

Table 1. The total life expectancy, by regions and provinces, /2021/

Region, Capital city	Total	Male	Female	
Total	70.01	67.05	76.47	
Western region	72.18	68.42	75.43	
Bayan-Ulgii	74.08	71.09	76.52	
Gobi-Altai	71.14	66.04	75.77	
Zavkhan	71.48	68.84	73.88	
Uvs	70.71	66.03	74.48	
Khovd	73.49	70.12	76.67	
Khangai region	71.65	68.89	75.67	
Arkhangai	72.27	69.64	73.88	
Bayankhongor	71.28	68.17	73.21	
Bulgan	73.65	69.16	76.39	
Orkhon	72.6	71.49	83.18	
Uvurkhangai	71.9	69.67	74.47	
Khuvsgul	68.18	65.22	72.88	
Central region	72.36	69.05	76.94	
Gobisumber	73.56	72.89	75.72	
Darkhan-Uul	68.73	64.5	74.45	
Dornogobi	72.21	67.59	78.14	
Dundgobi	74.71	71.54	79.51	
Umnugobi	72.91	68.96	77.46	
Selenge	71.78	67.34	78.1	
Tuv	72.65	70.56	75.2	
Eastern region	72.37	68.23	76.86	
Dornod	70.23	66.07	74.73	
Sukhbaatar	73.59	68.15	78.94	
Khentii	73.28	70.47	76.9	
Ulaanbaatar	72.32	67.67	75.55	



1.2 HEALTH INDICATORS

1.2.1 LEADING CAUSES OF MORBIDITY

In 2021, the leading causes of population morbidity are diseases of the digestive, respiratory, cardiovascular, genitourinary systems, injuries, poisoning, other externally caused diseases and neurological diseases. Respiratory system diseases were the leading cause of morbidity in 2020.

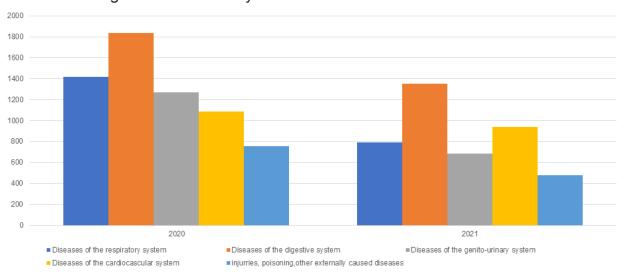


Figure 4. Leading causes of population morbidity per 10.000 population, /2020-2021/

1.2.2 LEADING CAUSES OF MORTALITY

Diseases of the respiratory system, cancer, cardiovascular system were leading causes of population mortality in 1990. However, since 1995 until now, diseases of the cardiovascular system, cancer, injuries, poisoning and external causes have been the leading causes of mortality.

As of 2021, the five leading causes of mortality per 10 000 population were:

 Diseases of the cardiovascular system 	18.9
Cancer	12.9
 Injuries, poisoning and other external causes 	9.2
Diseases of the digestive system	3.5
 Diseases of the respiratory system 	2.9



Figure 5. Five leading causes of mortality per 10.000 population, /2011-2021/



PHARMACEUTICAL SECTOR INDICATORS

PHARMACEUTICAL SECTOR INDICATORS

2.1 LEGISLATION

The following policy, laws and regulations are implemented in the pharmaceutical sector of Mongolia in 2020.

LAWS (IN ALPHABETICAL ORDER)

- Anti-corruption law (6 July, 2006)
- Law on Auditing /Revised version/ (19 June, 2015)
- Law on archiving and recording of official correspondence / Revised version / 24 April 2020
- Law on fighting alcoholism / Revised version / 28 Jan 2000
- Law on organizational secrets (16 May 1995)
- Law on customs tax exemption (24 January, 2014)
- Law on Disaster Protection /Revised version/ (2 February, 2017)
- Law on trademarks and geographical indications (10 June, 2010)
- Law on customs (20 May, 2008)
- Law on Prevention of Crimes and Offences /Revised version/ (6 June, 2019)
- Law on Immunization (20 April, 2000)
- Law on donors (19 January, 2018)
- Law on gender equality (02 February 2011)
- Law of Advertising (28 June 2007)
- Law on Government agency, its legal status (15 February 2004)
- General Administrative Law (19 June, 2015)
- Law on offences (11 May 2017)
- Law on resolving petitions and complaints of citizens to state organizations and public officials (17 April, 1995)
- Law on prevention and fighting against COVID-19 pandemic and mitigation of socio-economic negative consequences (29 April, 2020)
- Amendment to the law on prevention and fighting against COVID-19 pandemic and mitigation of socio-economic negative consequences (31 December, 2020)
- Law on control circulation of narcotics and psychotropic substances (2002)
- Amendment of the law on control of narcotics and psychotropic substances (2011)
- Law on Government (06 May, 1993)
- Constitution of Mongolia (13 January, 1992)
- Law on transparency and rights to information access (16 June, 2011)
- Law on regulation of public and private interests and prevention of conflict of interest in public service (19 January, 2012)
- Law on standardization, technical regulation and accreditation of conformity assessment (21 December, 2017)
- Law on public service /Revised version/ (07 December 2017)

- Law on state and official secrets (01 December, 2016)
- Law on procurement of goods and services with state and local funds (2005)
- Law on national security (27 December, 2001)
- Law on occupational safety, hygiene (22 May, 2008)
- Law on labor (14 May, 1999)
- Law on personal secrecy (21 April, 1995)
- Law on medicine and medical devices (27 May, 2010)
- Law on health (05 May, 2011)

INTERNATIONAL CONVENTION FOR MONGOLIA

- United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances
- Single Convention on Narcotic Drugs

PARLIAMENTARY RESOLUTION

- "VISION- 2050" Mongolia's long-term development policy
- The approval of Development Priorities of Mongolia in 2021-2025
- Government action plan for 2020-2024

GOVERNMENT RESOLUTION

- Establishing Government agency Medicine and medical devices regulatory agency, resolution #222 dated 16 Dec 2020
- Approval of code of ethics of public administration and service staff #33 (2019)
- Approval for regulation of recording of official correspondences #246 (2020)
- Approval of revision of procedures on the development of institutions' performance planning, setting performance targets and indicators and reporting #217 dated 16 Dec 2020
- Approval for revision of common procedures on monitoring and evaluation of implementation of policy documents and performance of public administration entities #206 dated 06 Dec 2020
- Approval for regulation for organizing "Open door day" #190 dated 01 Aug 2008
- Approval for regulation for developing, approving and implementing of a strategic plan #216 dated 16 Dec 2020
- Some measures to implement the Law on Control of Circulation of Narcotics and Psychotropic substances (List of narcotic medicines and psychotropic substances to be used for research) #196 dated 2003
- Approval of common procedures of internal auditing for business entities #311 dated 09 Nov 2011
- Regulation for issuing export and import license for goods crossing border under the supervision of the government #219 dated 2002
- State policy on health #24 dated 18 Jan 2017
- Procedure on development of approval of performance plan and evaluation of work



- performance, results and specialty level of civil servants' professional level of civil servants #218 dated 16 Dec 2020
- Determining the border crossing points medicines and medical devices #73 dated 2011

MINISTERIAL ORDER

- Regulation of supplies of vital medicines and medical devices (Ministerial order 388 dated 2009)
- Procedures on GMP expert and registration for evaluators (Ministerial order 225 dated 2015)
- Operational procedures of representative's office of foreign and domestic medicine manufacturers (Ministerial order 284 dated 2015)
- Amendment to the procedures of registering and surveillance for reporting Adverse events following immunization (AEFI) (Ministerial order A/278 dated 2016)
- Approval of 9th essential medicine list, 2nd pediatric essential medicine list (Ministerial order A/625 dated 2020)
- Approval of list of narcotic and psychotropics to be used for the treatment of Mongolian population (Ministerial order A/184 dated 2016)
- Approval of procedures on importation, manufacturing and supply of narcotics and psychotropic medicines (Ministerial order 68 dated 2015)
- Amendment to list of narcotic and psychotropic medicines (Ministerial order A/28 dated 2016)
- Amendment to Mongolia's national pharmacopoeia (Ministerial order A/219 dated 2017)
- Approval of list of orphan medicines (Ministerial order 271 dated 2015)
- Addition to the list of orphan medicines (Ministerial order A/30 dated 2016)
- Amendment to the list of orphan medicines (Ministerial order 211 dated 2017)
- Addition to the list of orphan medicines (Ministerial order 301 dated 2017)
- Approval of procedures on supply, receipt and use of donated of medicines and medical devices (Ministerial order A/232 dated 2016)
- Approval of procedure on dispensing medicines to be fully paid by the government (Ministerial order 129/100 dated 2012)
- Approval of the plan intersectoral collaboration plan for prevention of antimicrobials resistance, Joint ministerial order by the Health A/191 and the Food, Agriculture and light industry's minister A/64 dated 2017
- Approval of plan-action plan on improving the transparency and responsibility of pharmaceutical sector 2017-2020 (Ministerial order A/345 dated 2017)
- Approval of action plan on implementing state policy on health (Ministerial order A/103 dated 2020)
- Approval of action plan-National program to combat illicit circulation of narcotics and psychotropic substances (Ministerial order A/289 dated 2017)
- · Approval for regulation on development, approval and numbering pharmaco-

- peia monographs, and composition members and procedure of Pharmacopoeia Committee (Ministerial order 132 dated 2014)
- MNS 5763:2015 Methodology for developing a pharmacopoeia monograph
- Suspension of registration of inhalation medicines containing chlorofluorocarbons (Joint Ministerial order of Nature, environment and tourism and Health, No 217/259, 2009)
- Approval of working procedure and members of human medicine council (Ministerial order A/127 dated 2016)
- Re-approval of payment for metrological work and services (Deputy Prime Ministerial order 117 dated 2015)
- Approval for instruction for prescribing and dispensing medicines using electronic prescriptions (Ministerial order A/262 dated 2018)
- Approval for regulation of operating procedures for medicines revolving fund (Ministerial order 297 dated 2011)
- Approval of procedures on recording and reporting adverse drug reactions and medicine safety (Ministerial order 415 dated 2013)
- Approval of regulation of post-market surveillance of pharmaceuticals (Ministerial order 33 dated 2014)
- Amendment to the operating procedures for post-market surveillance of pharmaceuticals (Ministerial order 88 dated 2015)
- Amendment to the operating procedures of registering and reporting adverse drug reactions and safety of medicines (Ministerial order 89 dated 2015)
- Approval of the plan for stakeholders' collaboration for assuring quality in medicines (Ministerial order A/286 dated 2015)
- Approval of code of ethics and rights and responsibilities of pharmacist and pharmacy technicians (Ministerial order 32 dated 2016)
- Approval of procedure to conduct clinical trials (Ministerial order A/56 dated 2016)
- Approval of guideline for good governance in pharmaceutical sector (Ministerial order A/190 dated 2016)
- Approval of procedure introducing medicine and medical devices' safety program (Ministerial order A/19 dated 2017)
- Approval of procedure on issuance of Good manufacturing practice certificates (Ministerial order A/348 dated 2017)
- Approval of procedure on issuance of import and export licenses to medicines and medical devices (Ministerial order A/407 dated 2017)
- Approval of model rules for operation of hospital pharmaceutical department (Ministerial order A/180 dated 2016)
- Approval of procedures for calibration of medical equipment (Ministerial order 249 dated 2015)
- Approval of procedures for compiling and using a database of medical equipment (Ministerial order A/493 dated 2017)
- · Approval of procedures for ensuring the normal operation and maintenance of



- medical equipment (Ministerial order A/344 dated 2018)
- Approval of methods for calibrating medical equipment (Ministerial order A/345 dated 2021)
- Approval of methods for calibrating medical equipment (Ministerial order A/464 dated 2021)
- Approval of procedure on medicine and therapeutics committee (Ministerial order A/414 dated 2019)
- Approval of product registration procedures of medicines, raw materials and biological active products (Ministerial order A/295 dated 2019)
- Approval of guidelines for classification, collection, storage, transportation, processing and disposal of medical waste (Ministerial order 505 dated 2017)
- Requirements for obtaining a license to conduct business in the field of health (Ministerial order 145 dated 2013)
- Approval of criteria for accreditation of medical institutions (Ministerial order A/554 dated 2019)

MONGOLIAN NATIONAL STANDARDS

- MNS 5524-2:2014 Good manufacturing practices for biological products
- MNS 6396:2013 General requirements for suppliers of biological active products wholesalers
- MNS 5524-3:2015 Good manufacturing practices for traditional medicines
- MNS 6622-2016 General requirements on primary packaging material for pharmaceuticals
- MNS 5376:2016 Medicines prescription and prescribing practice
- MNS 6439:2014 General requirements for stability testing of active pharmaceutical ingredients and finished pharmaceutical products
- MNS 5524-1:2014 Good manufacturing practices for pharmaceutical products
- MNS 5530:2014 Health care technology General requirement for storage and distribution for medicines and medical devices
- MNS 5260:2015 General requirement for pharmacy
- MNS 6621-2016 General requirements for pharmaceutical quality control laboratory
- Indicators of pharmaceutical organizations
- Indicators for pharmaceutical organizations were developed in the following directions.
- Medicines and medical devices' manufacturers
- Medicines and medical devices' suppliers
- Pharmacies
- As of 2021, the total of 2822 pharmaceutical organizations were operating, out of which 82.74% were pharmacies, 15.74% were medicines and medical devices' suppliers, 1.52% were medicines and medical devices' manufacturers.

2.2 INDICATORS OF PHARMACEUTICAL ORGANIZATIONS

Indicators for pharmaceutical organizations were developed in the following directions:

- Medicines and medical devices manufacturers
- Medicines and medical devices suppliers
- Pharmacies

As of 2021, the total of 1967 pharmaceutical organizations were operating, out of which 82.74 percent were pharmacies, 16 percent were medicines and medical devices suppliers; 1.52 percent were medicines and medical devices' manufacturers.

	3												
Nº		maceutical 2017		2018		2019		2020		2021			
	organizations	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
1	Medicines and medical devices' manufacturers	46	1.9%	41	1.6%	59	2.4%	38	1.4%	43	1.52%		
2	Medicines and medical devices' suppliers	384	16%	360	14.2%	357	14.7%	384	13.9%	336	15.74%		
3	Pharmacies	1967	82.1%	2128	84.1%	2015	82.9%	2343	84.7%	2335	82.74%		
	Total	2397	100%	2529	100%	2431	100%	2765	100%	2714	100%		

Table 2. Number of Pharmaceutical organizations, 2021

2.2.1 MEDICINES AND MEDICAL DEVICES' MANUFACTURERS

As of 2021, 43 manufacturers and 444 suppliers operated in Mongolia.

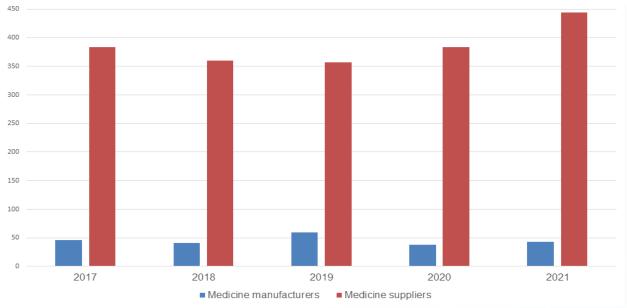


Figure 6. Total number of medicines and medical devices' manufacturers and suppliers /2017-2021/

In total, 38 licensed manufacturers operated on the country level including manufactures of medicines and medical devices, biological active products and disinfectants. Some of the manufacturers obtained license of produce more than 1 type of products.



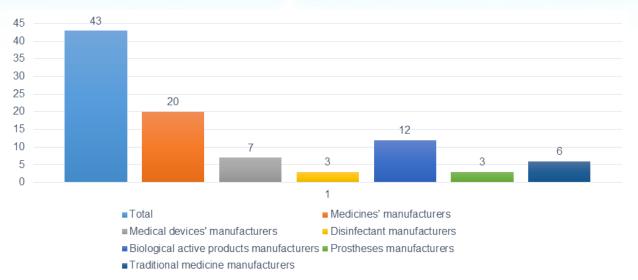


Figure 7. Operational area of all medicines and medical devices' manufacturers,/ 2021/

2.2.2 MEDICINES AND MEDICAL DEVICES' SUPPLIERS

In 2021, a total of 444 suppliers (overlapped) operated in the following areas:

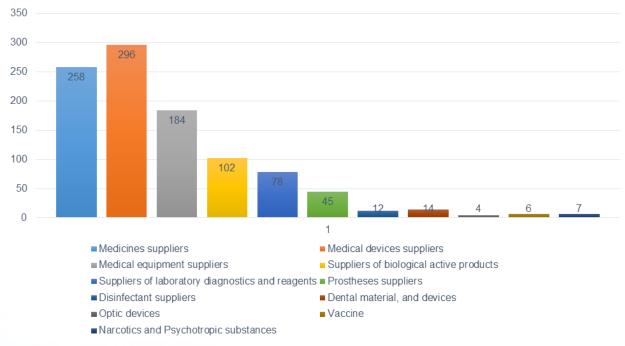


Figure 8. Operational area of suppliers, /2021/

2.2.3 PHARMACIES

According to the MNS 5260:2015 "General requirement for pharmacy", the pharmacies are classified into the first and second category pharmacies according to their types of operation.

In 2021, a total of 2335 pharmacies were operating nationwide, of which 217 (9.35%) were the first category pharmacies, 1806 (77.34%) were the second category pharmacies and 312 (13.36%) were medicines revolving fund.

In the capital city, 1325 (56.75%) pharmacies operated while 1010 (43.25%) pharmacies operated in the local areas. Out of the pharmacies in the capital city 89 pharmacies were the first category, and 1249 pharmacies were the second category respectively.

Table 3. Pharmacies, by location, 2016-2021

Nº	Name of provinces and cities	NUMBER OF FIRST CATEGORY PHARMACIES					NUMBER OF SECOND CAT- EGORY PHARMACIES					Medi- revolvii	Total	
		2017	2018	2019	2020	2021	2017	2018	2019	2020	2021	2021	private 2021	
1	Arkhangai	4	4	4	4	4	39	39	54	54	56	-	18	60
2	Bayan-Ulgii	2	2	2	2	2	26	27	37	37	49	14	-	51
3	Bayankhon- gor	5	6	7	10	11	13	15	14	13	35	-	20	46
4	Bulgan	2	2	3	3	2	22	19	35	24	27	-	13	29
5	Gobi-Altai	4	1	-	1	2	10	14	31	12	33	-	19	35
6	Gobisumber	1	-	-	-	-	8	10	10	7	10	-	-	10
7	Darkhan-Uul	11	8	10	7	6	43	52	48	53	57	-	-	63
8	Dornogobi	11	11	11	10	10	10	16	17	15	37	17	-	47
9	Dornod	8	9	8	11	11	12	24	18	22	44	13	-	55
10	Dundgobi	3	3	4	5	5	15	6	7	7	22	15	-	27
11	Zavkhan	4	4	2	2	2	19	21	26	24	44	17	-	46
12	Orkhon	37	36	39	48	50	20	21	19	18	27	-	-	77
13	Uvurkhangai	5	5	4	4	3	26	30	55	55	60	-	18	63
14	Umnugobi	3	3	2	2	2	23	24	28	30	46	14	-	48
15	Sukhbaatar	3	3	3	4	4	12	13	12	10	23	12	-	27
16	Selenge	7	9	9	9	7	35	35	47	26	46	20	-	53
17	Tuv	1	1	-	-	-	26	29	29	29	59	26	-	59
18	Uvs	5	9	7	6	6	18	13	20	21	46	18	-	52
19	Khovd	11	12	11	11	11	21	12	14	14	29	16	-	40
20	Khuvsgul	2	2	2	2	2	23	46	45	49	71	-	23	73
21	Khentii	4	4	4	4	1	22	24	24	24	48	3	16	49
Loc	al level	133	134	135	145	141	433	490	594	544	869	185	127	1010
Ula	anbaatar	190	190	129	89	76	747	914	1075	1210	1249	-	-	1325
Nat	ional level	319	323	263	224	217	1114	1347	1565	1672	2118	207	104	2335



Table 4. Number of operational pharmacies by locations in 2021

Name of		Number of the		of the second catego-	-				
Nº	provinces and cities	first category pharmacies	Private	Medicines revolving fund	Total				
		2021	2021	2021	2021				
	Western region								
1	Bayan-Ulgii	2	35	14	51				
2	Gobi-Altai	2	14	19	35				
3	Zavkhan	2	27	17	46				
4	Uvs	6	28	18	52				
5	Khovd	11	13	16	40				
		Khang	ai region						
6	Arkhangai	4	38	18	60				
7	Bayankhongor	11	15	20	46				
8	Bulgan	2	14	13	29				
9	Orkhon	50	27	-	77				
10	Uvurkhangai	3	42	18	63				
11	Khuvsgul	2	48	48 23					
		Centra	al region						
12	Gobisumber	-	10	-	10				
13	Darkhan-Uul	6	57	-	63				
14	Dornogobi	10	20	17	47				
15	Dundgobi	5	7	15	27				
16	Umnugobi	2	32	14	48				
17	Selenge	7	26	20	53				
18	Tuv	-	33	26	59				
		Easter	n region						
19	Dornod	11	31	13	55				
20	Sukhbaatar	4	11	12	27				
21	Khentii	1	32	16	49				
Loca	al level	141	560	309	1010				
Ulaa	nbaatar	76	1249	-	1325				
Natio	onal level	217	1809	309	2335				

In 2021, a total of 134 pharmacies were newly licensed at the national level, of which 49 pharmacies obtained their licenses from the Capital City Health Department whereas 85 pharmacies obtained their licenses from the local municipal offices.

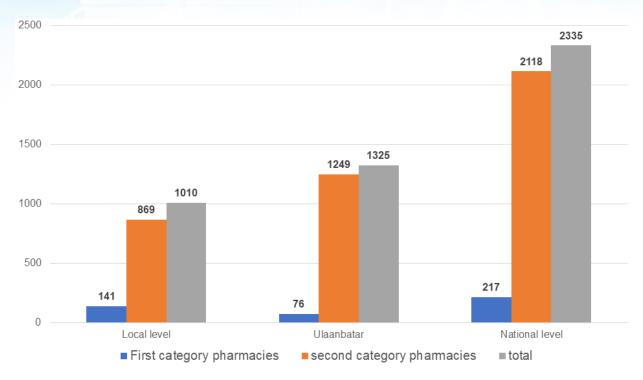


Figure 9. Number of operational pharmacies, /2021/



2.3 HUMAN RESOURCE INDICATORS

In 2021, a total of 2913 pharmacists and 2010 pharmacy technicians worked nationwide. Compared to the previous year, the number of pharmacists increased by 0.8% percent while the number of pharmacy technicians decreased by 13% percent.

Table 5. Number of Pharmacists and pharmacy technicians, by health care level, /2016-2021/

HEALTH CARE PROVIDERS		PHARMACISTS						PHARM	MACY 1	ECHN	ICIANS	5
State owned health organizations	2016	2017	2018	2019	2020	2021	2016	2017	2018	2019	2020	2021
Village hospitals	1	1	1	5	1	0	11	12	11	18	5	0
Soum health centers	14	19	26	35	43	47	166	134	141	265	148	141
Inter-soum hospitals	2	4	4	10	0	0	24	20	18	25	0	0
Subtotal	17	24	31	50	44	47	201	166	170	308	153	141
District hospitals	25	29	33	35	41	18	18	21	20	18	19	9
Province general hospitals	25	33	37	39	31	32	38	40	48	45	38	43
Subtotal	50	62	70	74	72	50	56	61	68	63	57	52
Regional Diagnostic Treatment centres	16	17	20	25	22	25	14	12	13	10	6	4
Specialized Centers and central hospitals	84	84	89	80	103	0	30	26	24	25	20	0
Subtotal	100	101	109	105	125	25	44	38	37	35	26	4
Maternity hospitals	9	9	9	9	10	10	2	3	3	4	2	2
Private inpatient hospitals	54	58	10	25	75	89	34	33	12	12	27	35
Private clinics for outpatients	18	14	10	10	22	22	4	6	10	10	10	6
Ministry of Health and Agency	14	13	14	14	0	0	0	0	0	0	0	0
Research institutions	0	0	5	5	0	0	0	0	0	0	0	0
Health Department	18	16	2	1	11	8	4	3	0	0	4	7
Emergency center and district branches	1	1	1	27	1	1	9	9	10	10	11	11
Sanatorium	2	3	2	5	2	1	1	1	1	5	2	3
Medicines' Suppliers	81	107	107	251	117	135	92	109	115	103	137	117
Medicines' manufacturers	93	108	100	123	0	0	25	21	46	46	0	0
Private pharmacies	1124	1473	1699	1702	2112	2332	1224	1521	1538	1700	1556	1577
Subtotal (Health sector)	1414	1802	1959	2172	2597	2871	1395	1706	1735	1890	1992	1994
State Medical University, College	27	29	40	45	15	11	1	1	1	1	3	6
Private medical schools, colleges	34	38	35	38	0	0	0	1	0	0	0	0
Other medical/border guards and prison hospi- tal, defense, law enforce- ment officials Hospital, Railway Hospital	19	18	20	25	27	25	12	13	11	11	14	8
Subtotal (Other sector)	80	85	95	108	42	42	13	15	12	12	17	16
Total	1581	1989	2169	2509	2639	2949	1696	1971	2010	2308	2009	2024

The number of pharmacists and pharmacy technicians in the local health sector is shown in the following table by regions.

Table 6. Number of pharmacists and pharmacy technicians, by provinces, /2019-2021/

Nº	PROVINCES	PHARM	ACISTS	PHAR TECHN		
		2020	2021	2020	2021	
NA	TIONAL AVERAGE		2949		2024	
		WESTERN	REGION			
1	Bayan-Ulgii	48	57	65	57	
2	Gobi-Altai	34	5	55	53	
3	Zavkhan	28	32	46	44	
4	Uvs	53	57	39	43	
5	Khovd	54	38	56	45	
		KHANGAI	REGION			
1	Arkhangai	36	26	64	50	
2	Bayankhongor	47	53	55	61	
3	Bulgan	25	8	39	22	
4	Orkhon	101	97	140	87	
5	Uvurkhangai	36	57	50	54	
6	Khuvsgul	43	43 40 81		66	
		CENTRAL	REGION			
1	Gobisumber	12	9	10	14	
2	Darkhan-Uul	61	74	92	109	
3	Dornogobi	41	38	77	64	
4	Dundgobi	22	27	25	23	
5	Umnugobi	48	42	49	33	
6	Selenge	26	26	83	82	
7	Tuv	17	30	31	50	
		EASTERN	REGION			
1	Dornod	33	37	45	45	
2	Sukhbaatar	22	18	32	36	
3	Khentii	21	31	68	46	
UL	AANBAATAR	1831	1660	807	723	
TO	TAL	2639	2949	2009	2024	



Pharmacists and pharmacy technicians graduated from State and private universities and colleges. In 2021, 676 pharmacists and 67 pharmacy technicians graduated.

In comparison to 2021, number of graduated pharmacists declined by 35%, whereas number of graduated pharmacy technicians increased by 32%.

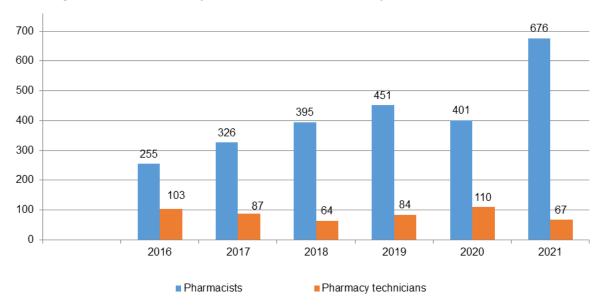


Figure 10. Number of graduating pharmacists and pharmacy technicians, /2016-2021/

In 2021, 81 pharmacists have graduated from School of Pharmacy, Mongolian National University of Medical Sciences (formerly known as HSUM), others have graduated from private universities such as: 249 pharmacists from University of Pharmaceutical Sciences (formerly known as Monos university),158 pharmacists from "Etugen" University and 70 pharmacists from "New Medicine" University.

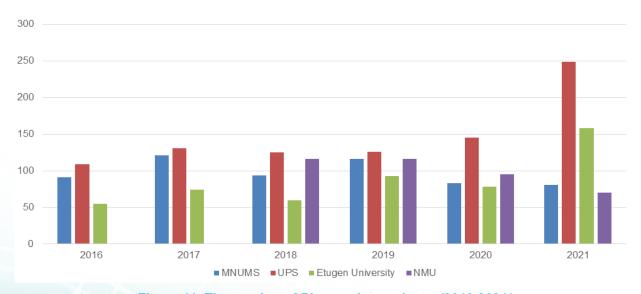


Figure 11. The number of Pharmacist graduate, /2016-2021/

In 2021, 47 pharmacy technicians graduated from School of Pharmacy, Mongolian National University of Medical Sciences, 29 pharmacy technicians from Gobi-Altai province's Medical college, 27 pharmacy technicians from Darkhan-Uul province's Medical college, 7 pharmacy technicians from Dornogovi province's Medical college.

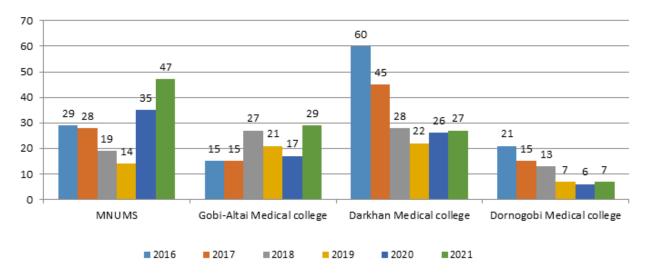


Figure 12. The number of pharmacy technician graduates, /2016-2021/

2.4 ECONOMIC INDICATORS

2.4.1 MEDICINES' FINANCING

The health sector budget reached MNT 1.69 trillion in 2021 and increased by MNT 444.6 billion (35.7%) compared to the previous year. Medicines budget was 542.2 billion MNT with 188% or 354.1 billion MNT increase.

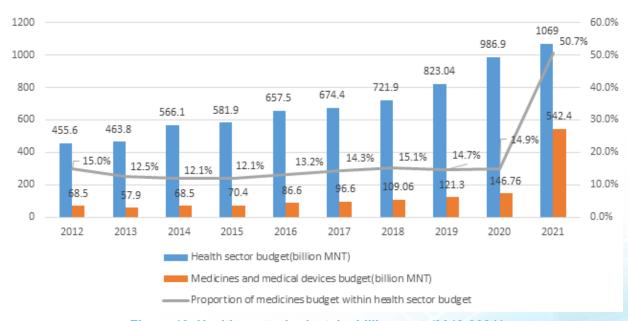


Figure 13. Health sector budget, by billion mnt, /2012-2021/



In 2021, a total of 1627 pharmacies nationwide including 867 pharmacies in the capital city, funding of 60.4 billion MNT for 510 branded medicine signed agreement with the General authority for health insurance.

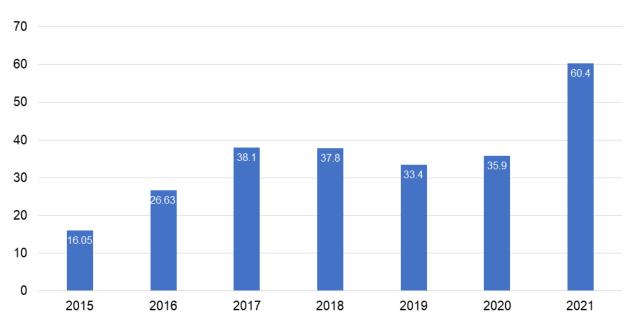


Figure 14. Medicines reimbursement from health insurance fund /Billion mnt/

Revised list of the essential medicines to be subsidized by the Health Insurance Fund, price ceiling, rebate rate was approved by National Health Insurance committee (Act#24) on 27 December, 2018. This resolution came into effect starting from 15 January 2019.

As the List of reimbursed medicines, 574 medicines of 141 generic medicines for adults reimbursed by 30-70% and 174 medicines of 59 generic medicines for children are reimbursed from the Health Insurance fund.

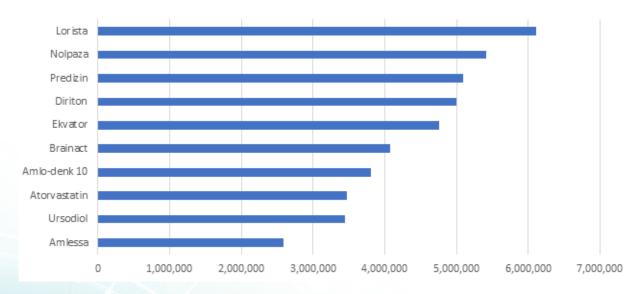


Figure 15. The 10 most commonly reimbursed medicines by HIF /by units/

2.4.2 MEDICINES IMPORT, MANUFACTURING AND SALES

2.4.2.1 MEDICINES IMPORT

In 2021, with the amount of 489.7 billion MNT medicines were imported and 431 billion MNT medicines were sold by wholesale price. Medicines, import has increased by 96.2 billion MNT (19.6%) and the sales has decreased by 62.1 billion MNT (9.5%), compared to the year of 2020.



Figure 16. Import and sales of medicines, by billion mnt, /2015-2021/

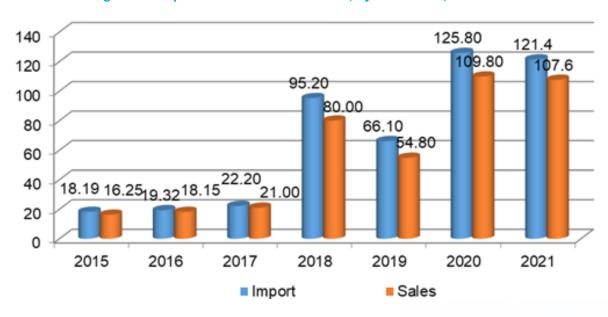


Figure 17. Import and sales of medical devices, billion mnt, /2015-2021/



In 2021, medical devices with the amount of 121.4 billion MNT were imported and medical devices with the amount of 107.6 billion MNT were sold. Medical devices import and sales decreased by 4.4 billion and 2.2 billion MNT respectively in comparison to 2020.

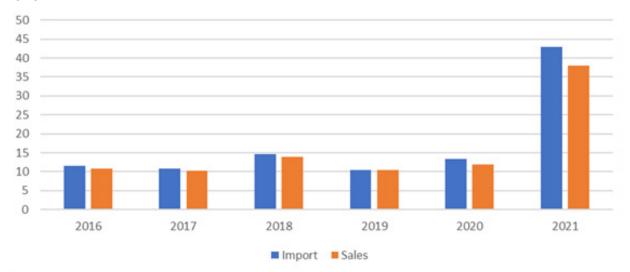


Figure 18. Import and sales of reagents and standart substances, by billion mnt /2016-2021/

In 2021, reagents with the amount of 43 billion MNT were imported and reagents with amount of 38 billion MNT were sold. Reagents' import and sales have increased by 29.7 billion MNT and 26.1 billion MNT respectively, compared to the year of 2020.

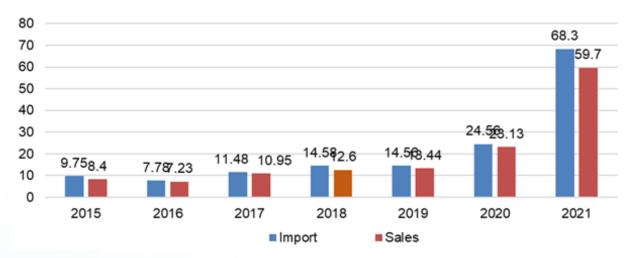


Figure 19. Import and sales of diagnostics, by billion mnt, /2015-2021/

In 2021, diagnostics with the amount of 68.3 billion MNT were imported and diagnostics with the amount of 59.7 billion MNT were sold. In comparison to the previous year, diagnostics import and sales have increased by 43.7 billion MNT and 36.5 billion MNT respectively.

Import and export licenses are issued within 1-5 working days according to the Mongolian Government resolution № 219, 2002 for goods crossing border under the supervision of the Government and Health Ministerial Order № 407, 2017 "Procedure on issuance for import and export license for medicines and medical devices" and Health and Sports' ministerial order №232, 2016 "Procedure on supply, receipt and use of donated medicines and medical devices".

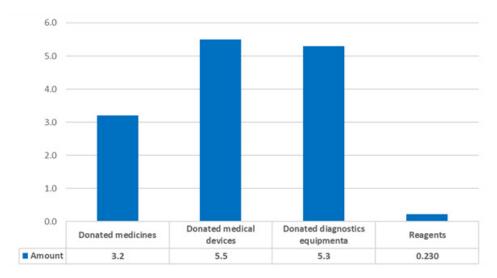


Figure 20. Import of donated products, by billion mnt /2021//

In 2021, donated medicines with the amount of 3.2 billion MNT, medical devices with the amount of 5.5 billion MNT, diagnostics with the amount of 5.3 billion MNT, Reagents with the amount of 230million were imported.

2.4.2.2 MEDICINES' MANUFACTURING AND SALES

National production of medicines, medical devices, biological active products, traditional medicines and disinfectants have increased over the last 3 years. In 2021, national pharmaceutical manufacturing has increased by 39% compared to the previous



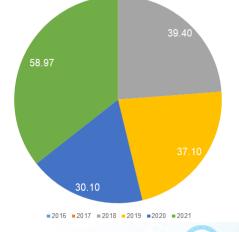


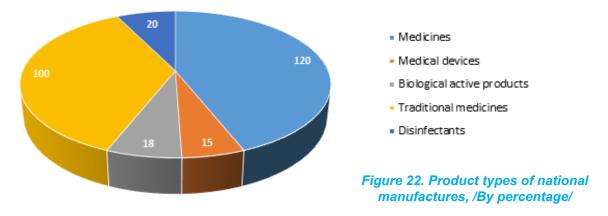
Figure 21. National Medicine manufacturing, by billion mnt, /2016-2021/



In 2021, 25 pharmaceutical manufacturers produced medicines, medical devices, biological active products, traditional medicines and disinfectants with the amount of 100.5 billion MNT and sold those products with the amount of 92.68 billion MNT.

Out of nationally produced 63.23 billion MNT products, European medicines with the amount of 58.9 billion MNT, medical devices with the amount of 25.2 billion MNT, biological active products with amount of 6.7 billion MNT, traditional medicines with the amount of 3.8 billion MNT, disinfectants with the amount of 5.72 billion MNT were produced.

European medicines with the amount of 59.4 billion, medical devices with the amount of 19.3 billion MNT, biological active products with the amount of 4.89 billion MNT, traditional medicine with the amount of 3.34 billion MNT, disinfectants with the amount of 5.73 billion MNT were sold.



2.4.3 MEDICINES' PROCUREMENT AND DISTRIBUTION

Procurement of medicines and medical devices in health organization is implemented under the "Law of Mongolia on procurement of Goods and Services with State and Local funds". On average, one health organization uses about 400 types of medicines, about 350 types of medical devices and about 500 types of reagents and diagnostics.

In 2021, accordance with the "Law on Procurement of state and local property goods, work and services" health care services purchased 437.7 billion MNT worth of medicines and medical devices.

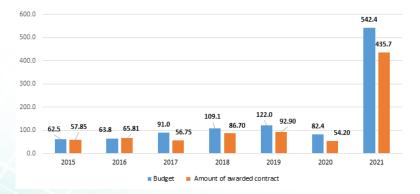


Figure 23. Medicines and Medical devices budget and amount of awarded contracts, by billion mnt, /2015-2021/

The Capital City Health Department, Central hospitals and provincial general hospitals and Regional diagnostic and treatment centers purchased medicines with the amount of 81.7 billion MNT, medical devices with the amount of 46.9 billion MNT, reagents and diagnostics with the amount of 42.6 billion MNT, vaccines and biopreparations with the amount of 13.9 billion MNT, Covid-19 vaccines with the amount of 247.7 billion MNT, disinfectants amount of 2.6 billion MNT.

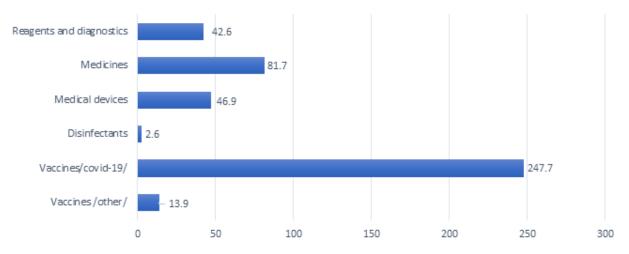


Figure 24. Purchased assortment/ billion MNT//2021/

2.5 MEDICINES' REGULATION

2.5.1 MEDICINES' REGISTRATION

Medicines registration started in Mongolia since 1994, in order to provide the population and health organizations with quality, safe and effective medicines. The registration of medicine, its raw materials and biological active products is regulated by "The registration procedures of medicines, raw materials and biological active products", approved by Health ministerial order № A/295 of 2019 based on article 22 of the Law on Medicine and Medical devices.

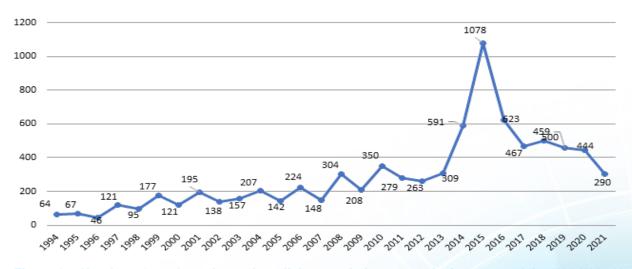


Figure 25. Number of newly registered medicines and pharmaceutical raw materials, /1994-2021/



In 2021, 290 medicines were newly registered, of which 241 were imported medicines, 38 traditional medicines, 25 domestic medicines, 23 pharmaceutical raw materials and 212 biological active products.

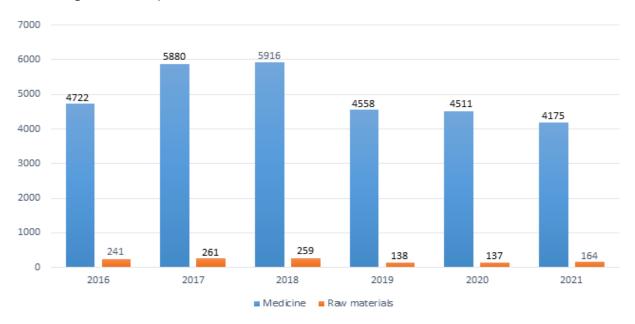


Figure 26. Total number of Medicines and Pharmaceutical raw materials registered in Mongolia, /2015-2021/

As of 2021, out of total of 4175 registered medicines, 70.23% was with prescription, 28.68% was over-the-counter medicines and 1.02% was medicines only used in hospital setting.

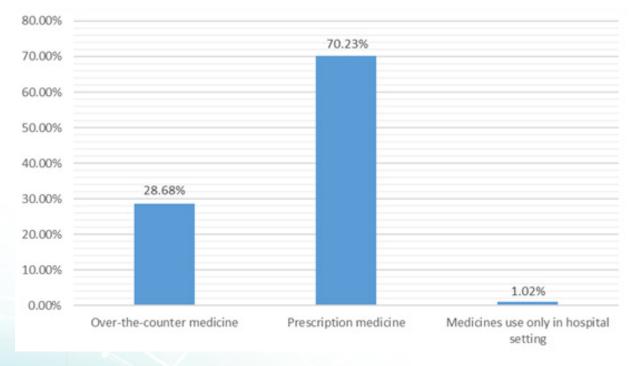


Figure 27. Dispensing condition of registered medicines, by percentage, /2021/

The followings are the top 10 listed countries with the most registered medicines in Mongolia:

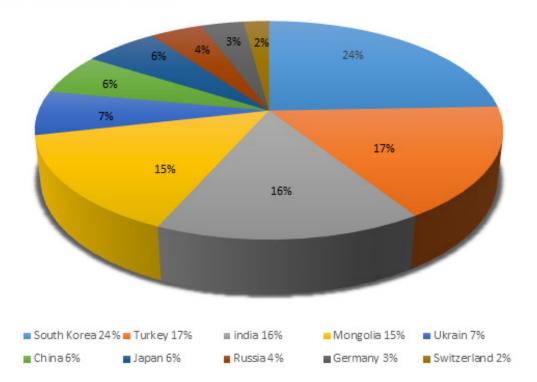


Figure 28. The top 10 countries with the biggest number of registered medicines in Mongolia, /by percentage/, /2021/

In 2021, nationally produced medicines accounted for 10.6% out of all registered medicines.

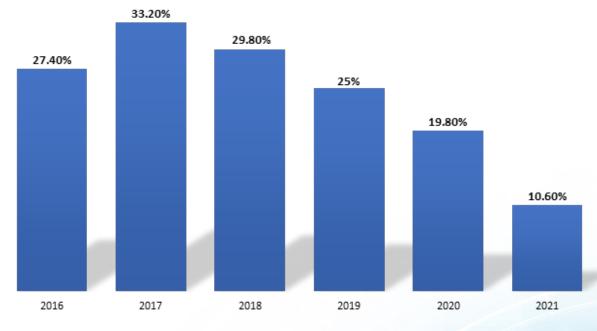


Figure 29. Percentage of Nationally manufactured pharmaceutical products within the total number of registered medicines, /2016-2021/



All registered medicines in Mongolia are classified based on the Anatomical Therapeutic Chemical (ATC) code as of 2021:

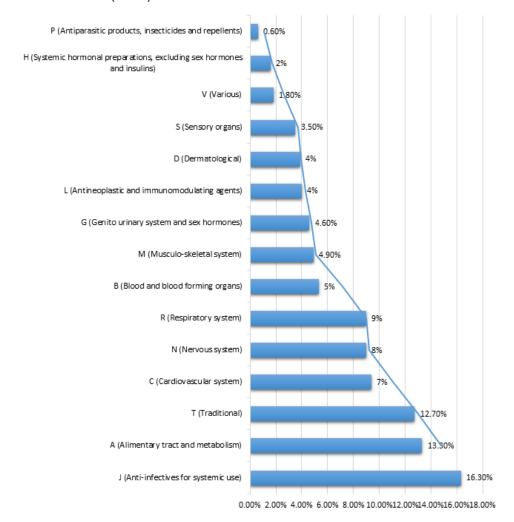


Figure 30. Registered medicines in Mongolia, By ATC classification, /2021/

The types of newly registered medicines in 2017-2021 are:

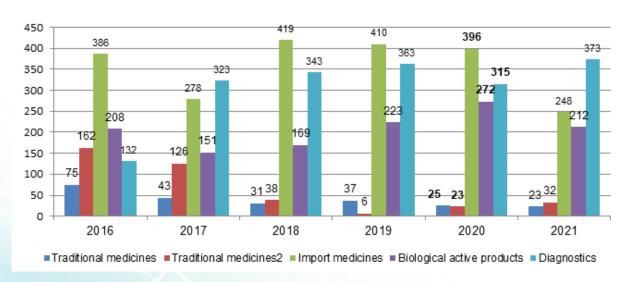


Figure 31. Registered medicines in Mongolia, /2017-2021/

The registration of medicines, raw materials, biological active products are regulated by ministerial order № A/295 of 2019.

Comparison of the number of registered diagnostics is shown from 2017 to 2021:

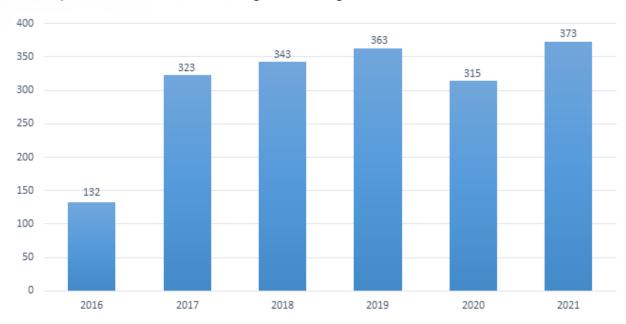


Figure 32. Number of the registered diagnostics, /2016-2021/

2.5.2 INSPECTION

Inspection of pharmaceutical organizations is carried out by the GASI in accordance to the Law on "State Inspection".

The number of inspected pharmaceutical organizations in 2015-2021 is:

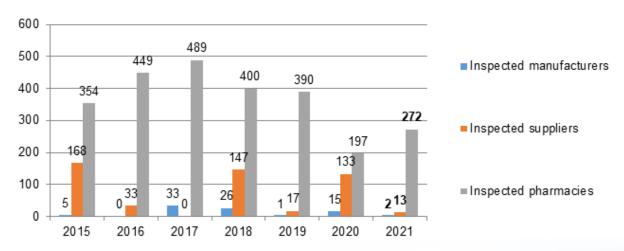


Figure 33. The number of inspected pharmaceutical organizations, /2015-2021/



In 2021, a total of 287 pharmaceutical organizations were inspected and were provided with technical support.

Percentages of inspected pharmacies, suppliers and manufacturers compared to the total number of pharmaceutical organizations inspected.

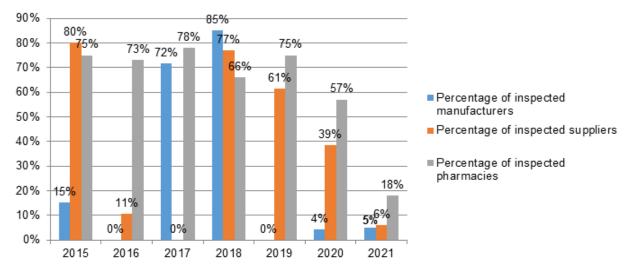


Figure 34. Percentage of inspected pharmaceutical organizations, /2015-2021/

Year	unregistered on medicines		QUALITY REQUIREMENTS NON-COMPLIANT PRODUCTS								
			expired		Labelling error		Storage non-compliance		sample sent to laboratory		
	Prod- ucts	quantity	Prod- ucts	quantity	Prod- ucts	quan- tity	Prod- ucts	quantity	Total	non-com- pliant	
2014	41	479	130	2025	59	539	58	520			
2015	129	2291	223	5275	134	6481	13	190			
2016	131	2703	420	3060	-	-	59	1370			
2017	138	13310	350	11606	32	6809	49	1205	82	15	
2018	169	44168	35	678	-	-	1	1109	73	8	
2019	316	16906	308	9272	11	122	14	180	89	17	
2020	178	12379	328	23927	65	3479	3	120	20	3	
2021	109	9287	592	19862	7	3658	61	15032	126	4	
Нийт	1211	101523	2386	75705	308	21088	258	19726	390	47	

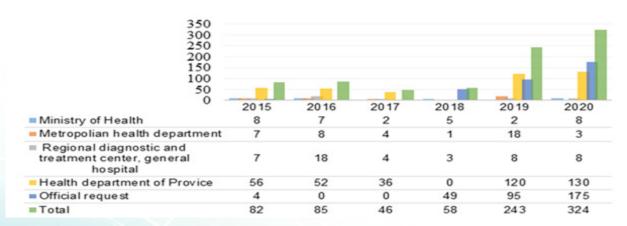


Figure 35. Health organizations which medical equipment was calibrated between /2015 – 2020/

In connection with the increase in the medical equipment to be calibrated starting from 2021, preparation is underway to update the Order No. 117 of the Deputy Prime Minister of Mongolia "On re-approval of the amount of payment for metrological work and services" in 2015, and to develop relevant methodologies.

2.5.3 MEDICINES' SAFETY

Recording and reporting of adverse drug reactions are regulated by the Order of Health Minister of 2013, No.415, "Procedure recording and reporting ADR and medicines safety", approved by Minister of Health in 2013.

In 2021, 106 cases of ADR were reported. During 2017-2021, 425 cases of ADR were reported from 125 health care organizations and those cases were discussed by the Subcommittee of Pharmacology.

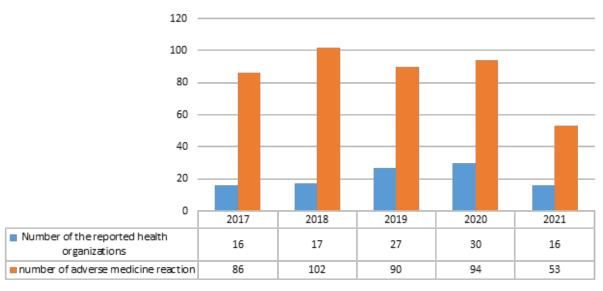


Figure 36. Reporting of adverse drug reactions, /2017-2021/

2.5.4 SELECTION AND RATIONAL USE OF MEDICINES

The 9th Essential Medicines List of Mongolia was approved in 2020 by Health Minister's Order No. A/625 in order to improve medicines availability and promote rational use of medicines on the basis of Article 24.2 of the Law on Government and Article 4.5 of the Law on Medicines and medical devices.



Table 8. National essential medicines list of Mongolia including the distribution branches /Hospitals, specialized centres, pharmacies/

Nº	EML	Feldsher branch in bag	Family hospital	Soum hospital	Inter-soum hospital	Province, district hospital	Regional diagnostic and treatment center	Clinic, specialized hospital	Community pharmacy
1	3rd list (1997)	42	-	179	-	264	-	301	-
2	4th list (2001)	56	-	420	226	295	-	319	-
3	5th list (2005)	83	116	559	236	303	-	338	-
4	6th list (2009)	105	-	596	336	398	-	419	-
5	7th list (2014)	87	-	624	353	540	589	664	499
6	8th list (2017)	77	-	260	-	535	-	709	-
7	9th list (2020)	61	-	196		437	-	565	535

2.5.5. ADVERTISEMENTS TO INTRODUCE MEDICINES TO THE MARKET AND APPROPRIATE USE

The Pharmacological subcommittee of the Human medicine's council discusses advertisement content of over-the-counter medicines and biologically active products and gives permission to advertise in the media.

In 2021, the Pharmacological subcommittee gave the total of 93 permission for advertisement out of which 78 permissions for medicines and 15 biological active products.

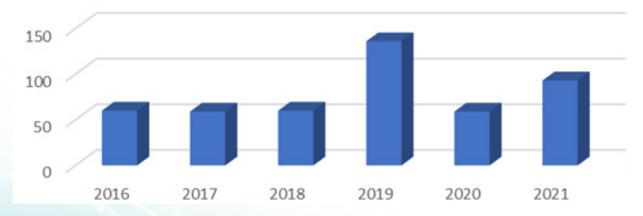


Figure 37. Number of permitted advertisements, /2016-2021/

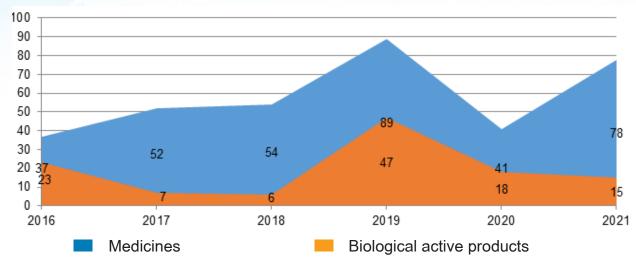


Figure 38. Number of permitted advertisements for medicines and biological active products,/ 2016-2021/

2.5.6. NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES

According to Clause 6.9 of the regulation approved by the Minister of Health and sports Order No. 68 of 2015, the department receives reports of prescriptions for narcotics and psychoactive medicines published and distributed by the provincial and capital health departments.

In 2021 a total of 21,668 prescriptions for narcotic drugs and 73,955 prescriptions for psychoactive drugs were spent in 21 provinces and in capital.

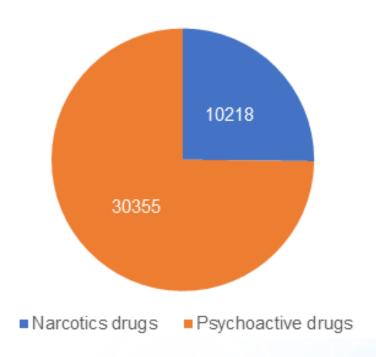


Figure 39. Narcotic drugs, psychoactive drugs prescription spending /2021/



Comparing the narcotics and psychoactive drugs by composition, single-ingredient drugs are predominating.

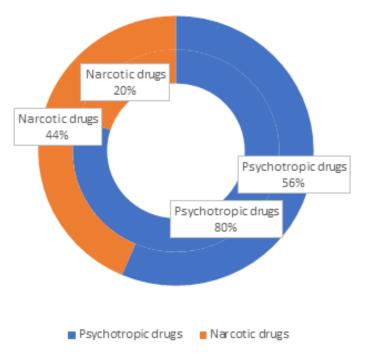


Figure 40. Single and mixed compound narcotic drugs and psychoactive drugs, /2021/

There are 7 medicine supply organizations and 2 pharmaceutical factories licensed to import and distribute narcotics and psychoactive drugs in Mongolia.

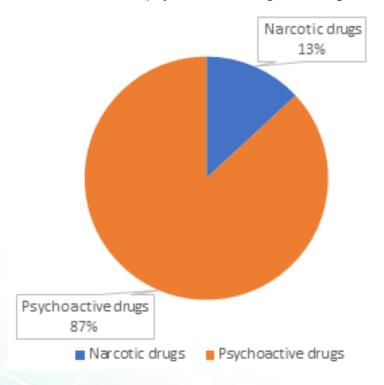


Figure 41. Imported and manufactured narcotic, psychoactive drugs, /2021/

Of the total number of narcotics and psychoactive drugs registered in Mongolia, 9 are given in medical conditions, 72 are prescribed, and 12 are given without prescription.

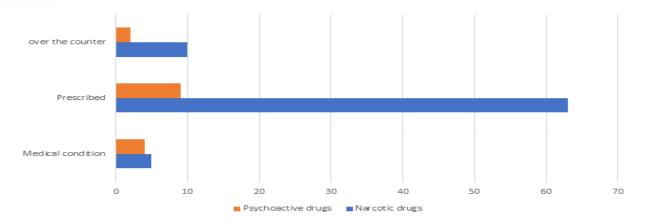


Figure 42. Conditions for providing narcotics and psychoactive drugs, /2021/

After compared the producer countries of imported narcotic drugs in Mongolian market, the Republic of Moldova accounts 33% and the Russian Federation accounts 20%, while national drug producers accounts for 27%.

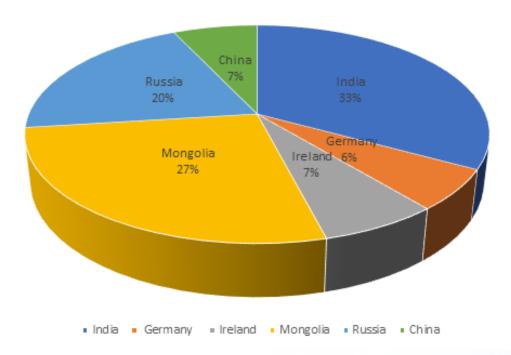


Figure 43. Registered narcotics and psychoactive drugs rate by manufactured countries /by percentage/



Compared the countries producing psychoactive drugs, therefore South Korea accounts 23%, Slovenia 17%, and the Republic of Moldova 6%.

2.6. MONITORING AND CALIBRATION OF MEDICAL EQUIPMENT

The following orders and procedures for calibration of medical equipment are used in medical institutions:

- Order No. 117 of the Deputy Prime Minister of Mongolia "On re-approval of the amount of payment for metrological work and services", in 2015.
- "Procedure for calibration of medical equipment" approved by the Order No. 249 of the Minister of Health and Sports, in 2015.
- Order No. A/345 "Procedure on approving calibration method of medical devices", in 2018.

18 types of medical devices used in medical institutions including ventilator, defibrillators, automatic infusion and syringe pumps, electrocardiography machines, anesthesia machine, infant warmer, infant incubators, patient monitor, computed tomography system, oxygen concentrators, ultrasound, electrical safety, surgical equipment, pulse oximeter, fetal monitor, UVC light and Infant phototherapy lamp, were tested by using 13 types of 29 reference analyzers and simulators in accordance with international standards and ensuring the normal operation of medical equipment.

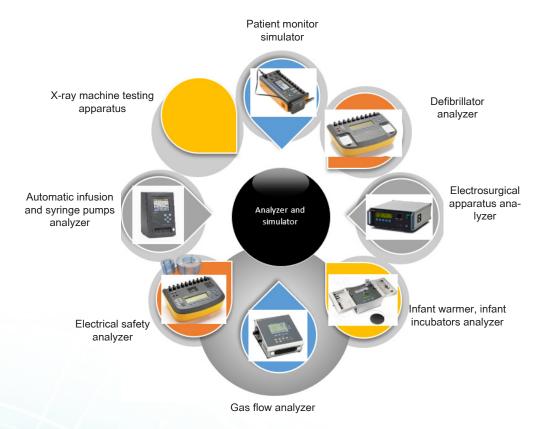


Figure 44. Names of reference calibration analyzers and simulators

The Medical Equipment Calibration Laboratory was equipped with the 10 types of the total of 22 simulators and analyzers from Fluke Biomedical Co., Ltd in 2014. Additional 3 simulators and radiometers from Fluke Biomedical Co., Ltd & Linshang technology Co., Ltd were installed in 2019.

According to the following ministerial orders, the medical devices used in a health organization must be tested and calibrated: "Requirement for documents to obtain the special permit to conduct activities in medical field" Order No. 145 of the Minister of Health, in 2013, Examination criteria of healthcare providers offering professional medical care and services" Order A / 554, in 2019. With the awareness increase of managers and doctors of health organizations about the importance of the calibration process the number of organizations involved is increasing year by year.

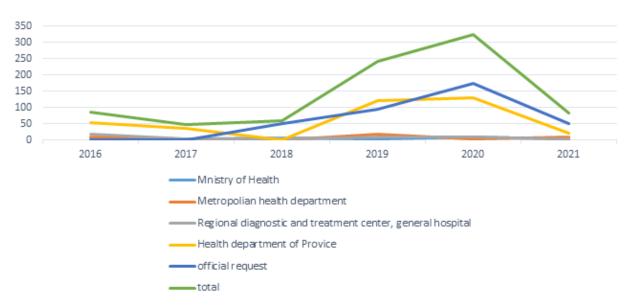


Figure 45. Health organizations which medical equipment was calibrated between /2015- 2021/

In connection with the increase in the medical equipment to be calibrated starting from 2021, preparation is underway to update the Order No. 117 of the Deputy Prime Minister of Mongolia "On re-approval of the amount of payment for metrological work and services" in 2015, and to develop relevant methodologies