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MALDIVES HEALTH STATISTICS 2020

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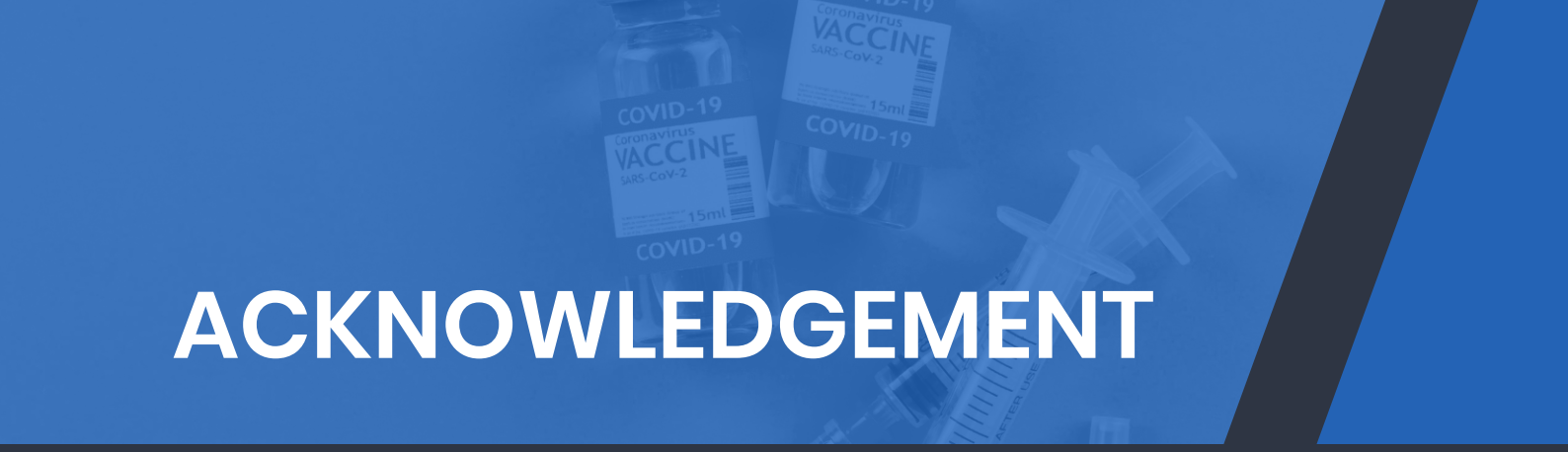

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Further, a good amount of information contained in this publication was taken from the National Vital Statistics System (VSS) and the newly developed Population Module - GEMEN. The data for this book was obtained from the National Vital Registration System (VRS) managed by DNR and National Center for Information Technology (NCIT). This data was compiled, collated, cleaned by Ministry of Health staff, specifically on births and deaths. We gratefully acknowledge the support provided by VRS staff at the DNR and NCIT team. Lastly, our sincere appreciation goes to the all the staff of Health Information Management and Research division, specifically dedicated staff of Health Statistics and Publication Section, Ministry of Health for compiling the data, and making this publication possible.

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EXECUTIVE SUMMARY

The eleventh series of Maldives Health Statistics book is published with the objective of providing easy access to up-to-date comprehensive statistics and information on various aspects of health. Apart from key health indicators, this book contains 6 chapters; Health Systems, Natality, Morbidity, Mortality with a sub-section on Analysis of Cause of Death, Public Health and a chapter focused on Covid-19 in the Maldives. A summary of the key areas discussed in each chapter is provided below:

Chapter 1 Health System: This chapter covers the main 6 building blocks of the Maldivian Health System - service, health workforce, health information systems, access to essential medicines, financing, and governance. Health services and resources is normally measured by the load of patients a facility delivers its service. This chapter covers the human resources and medical staff in all hospitals and public health facilities in all cadres. Most of the data representations are disaggregated by geographic location, gender and skill mix.

Chapter 2 Natality: This chapter covers life expectancy over the years from 1990 to 2014, for males and females. Additionally, fertility rates with date data on births, birth outcomes, birth weight, birth attendants and age of mother/father are from the vital registration system (the current population module – GEMEN) of the Maldives.

Chapter 3 Morbidity: The second chapter covers total inpatients by age-sex disaggregation, location, burden of diseases by principal diagnosis of admissions from

all the public health facilities and hospitals of Maldives. The top most conditions for admissions are covered in this chapter as well.

Chapter 4 Mortality: This chapter uses information from the vital registration system of the Maldives. This chapter includes crude death rates, under 5 deaths, infant deaths, neonatal deaths, maternal deaths, age specific mortality and leading causes of deaths for 2020. The top conditions for cause of death are also covered in this chapter as well. Analysis of cause of death: This section looks into age specific mortality rates, completeness of mortality data, broad classification of deaths and quality of cause of death data.

Chapter 5 Public Health: This chapter presents data on programmatic data from Health Protection Agency, namely on Extended Programme on Immunization (EPI), Nutrition programme - deworming and vitamin A, Tuberculosis, HIV/AIDS, Sexually Transmitted Diseases and disease surveillance. In addition, data on Thalassemia prevalence details from Maldives Blood Service is also presented in this chapter.

Chapter 6 Covid-19 in the Maldives: With over a year to the Covid-19 pandemic, this chapter is dedicated to present data on epidemiology, surveillance and health system monitoring indicators during Covid-19 pandemic in 2020. Trends over the year and indicators regularly monitored for pandemic ease measures are also presented.

KEY HEALTH INDICATORS

VITAL STATISTICS INDICATORS	2016	2017	2018	2019	2020
Crude Birth Rate (CBR)/'000 population	19	19	18	17	17
Crude Death Rate (CDR)/'000 population	4	3	3	3	3
Infant Mortality Rate (IMR)/'000 live births	9	10	7	6	6
<5 Mortality Rate (<5MR) /'000 live births	11	11	9	8	7
Maternal Mortality Ratio (MMR)/100,000 live births	44	103	61	-	32
Still Birth Rate (SBR)/'000 live births	5	5	3	4	5
Neonatal Mortality Rate (NMR)/'000 live births	7	8	5	4	5

SDG	SDG targets	Indicator	Indicator Value	Source	Year
3.1.1	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal mortality ratio	32	VRS	2020
			0	VRS	2019
			61	VRS	2018
			103	VRS	2017
			44	VRS	2016
			99	VRS	2015
			41	VRS	2014
3.1.2		3.1.2 Proportion of births attended by skilled health personnel	95.8%	VRS	2018
			94.9%	VRS	2017
			94.9%	VRS	2016
			94.5%	VRS	2015
			95.6%	VRS	2014
3.2.1	3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3. Neonatal mortality rate (per 1000 live births)	5	VRS	2020
			4	VRS	2019
			5	VRS	2018
			8	VRS	2017
			7	VRS	2016
			6	VRS	2015
			6	VRS	2014
		4. Under-five mortality rate (per 1000 live births)	7	VRS	2020
			8	VRS	2019
			9	VRS	2018
			11	VRS	2017
			11	VRS	2016
			12	VRS	2015
			11	VRS	2014
3.3.2	3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations (proxy: AIDS prevalence rate)	0.001	HPA	2017
		3.3.2 Tuberculosis incidence per 1,000 population	49	HPA	2016
		3.3.3 Malaria incidence per 1,000 population	Eliminated	HPA	2015
		3.3.5 Number of people requiring interventions against neglected		HPA	2018

		tropical diseases (proxy: Number of Dengue cases reported)	998	HPA	2017
3.4.1	3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	10. Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70 (%) (proxy: Percent of mortality from CVD, cancer, diabetes, CRD between age 30 and exact age 70)	9.34%	VRS and NBS	2018
			9.34%		2018
			10.10%		2017
			9.81%		2016
			9.93%		2015
			10.69%		2014
3.4.2		11. Suicide mortality rate (per 100 000 population)	2.33	Maldives Police Service and NBS	2020
			3.37		2019
			2.93		2018
			3.46		2017
			3.60		2016
			2.86		2015
3.6.1	3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	13. Road traffic mortality rate (per 100 000 population)	0.54	VRS and NBS	2020
			1.12		2019
			1.17		2018
			1.83		2017
			0.85		2016
			2.86		2015
3.7.1	3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes	3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods	29.40%	MDHS	2016-2017
		20. Density of psychiatrists (per 100,000 resident population)	1.61	HI records and NBS	2020
			1.87		2019
			1.37		2018
			1.83		2017
		21. Density of surgeons (per 100,000 resident population)	4.66		2020
			5.62		2019
			4.30		2018
			4.27		2017
		22. Hospital beds per 10000 population (admission beds)	50.41		2020
			63.57		2019
			49.54		2018
			49.41		2017

			39.84		2016
		29. Population with household expenditures on health > 25% of total household expenditure or income (%)	6%	HIES, NBS	2016
3.a.1		33. Age-standardized prevalence of tobacco smoking among persons 15 years and older (%)	22.50%	MDHS	2016-2017
3.b.1		34. Diphtheria-tetanus-pertussis (DTP3) immunization coverage among 1-year-olds (%) (Proxy: Coverage of DPT containing vaccine (3rd dose)	85.0		2016-2017
		35. Measles-containing-vaccine second-dose (MCV2) immunization coverage by the nationally recommended age (%)	75.3		2016-2017
3.c.1		38. Density of dentistry personnel (per 1000 population)	0.07	HI records and NBS	2020
			0.07		2019
			0.04		2018
			0.03		2017
		39. Density of nursing and midwifery personnel (per 1000 population)	5.53		2018
			5.60		2017
		40. Density of pharmaceutical personnel (per 1000 population)	1.36		2018
			1.00		2017
		41. Density of physicians (per 1000 population)	1.01		2018
			1.02		2017
	2.2 By 2030, end all forms of malnutrition,	2.2.1 Prevalence of stunting among	15.3	MDHS	2016-2017

	including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons	children under 5 years of age			
		2.2.2 Prevalence of malnutrition among children under 5 years of age[1]	14.1		2016-2017
2.2.2		a. Prevalence of overweight among children under 5 years of age	4.9		2016-2017
		b. Prevalence of wasting among children under 5 years of age	9.1		2016-2017
6.1.1	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of the population using safely managed drinking water services[14]	98.6		2016-2017
6.2.1		6.2.1 Proportion of the population using safely managed sanitation services, including a handwashing facility with soap and water[15]	98.3	MDHS	2016-2017
7.1.2	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	99.8	MDHS	2016-2017
		7.1.2 Proportion of population with primary reliance on clean fuels and technology[16]	99	MDHS	2016-2017
	8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider[17]	68.5[a]	MDHS	2016-2017
16.1.1		Mortality rate due to homicide (per 100 000 population)	0.20	Maldives Police Service and NBS	2018
			2.03		2017
			1.06		2016
			2.42		2015

	16.9 By 2030, provide legal identity for all, including birth registration	16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority	98.8	MDHS	2016-2017
	17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology	17.8.1 Proportion of individuals using the Internet[20]	82.6	MDHS	2016-2017

na = Not applicable

[1] Defined as the sum of the prevalence of wasting and the prevalence of overweight

[2] Expressed in terms of deaths per 1,000 live births for the 5-year period preceding the survey

[3] Age-specific fertility rate for girls age 10-14 for the 3-year period preceding the survey, expressed in terms of births per 1,000 girls age 10-14

[4] Age-specific fertility rate for women age 15-19 for the 3-year period preceding the survey, expressed in terms of births per 1,000 women age 15-19

[5] Data are not age-standardised and are available for women and men age 15-49 only.

[6] Percentage of children age 12-23 months who received BCG, hepatitis B (birth dose), three doses of Pentavalent, three doses of polio vaccine, and one dose of measles

[7] Percentage of children age 12-23 months who received three doses of DPT containing vaccine (Pentavalent)

[8] Percentage of children age 24-35 months who received two doses of measles containing vaccine

[9] Measured for children age 36-59 months

[10] Data are available for women age 15-49 who have ever been in union only.

[11] In the DHS, psychological violence is termed emotional violence.

[12] Data are available for currently married women who are not pregnant only.

[13] Data are available for women and men age 15-49 only.

[14] Measured as the percentage of de jure population using an improved water source, i.e., whose main source of drinking water is a household connection (piped), public tap or standpipe, tubewell or borehole, protected dug well, protected spring, or rainwater collection. Households using bottled water for drinking

are classified as using an improved or unimproved source according to their water source for cooking and handwashing.

[15] Measured as the percentage of de jure population using an improved sanitation facility, i.e., whose household has a flush or pour flush toilet to a piped water system, septic tank or pit latrine; ventilated improved pit latrine; pit latrine with a slab; or composting toilet and does not share this facility with other households.

[16] Measured as the percentage of the population using clean fuel for cooking.

[17] Data refer to women and men age 15-49 who have and use an account at a bank or other financial institution; information on use of a mobile-money-service provider is not available

[18] Data are available for women and men age 15-49 who have used the internet in the past 12 months.

[a] The total is calculated as the simple arithmetic mean of the percentages in the columns for males and females

HEALTH SYSTEM

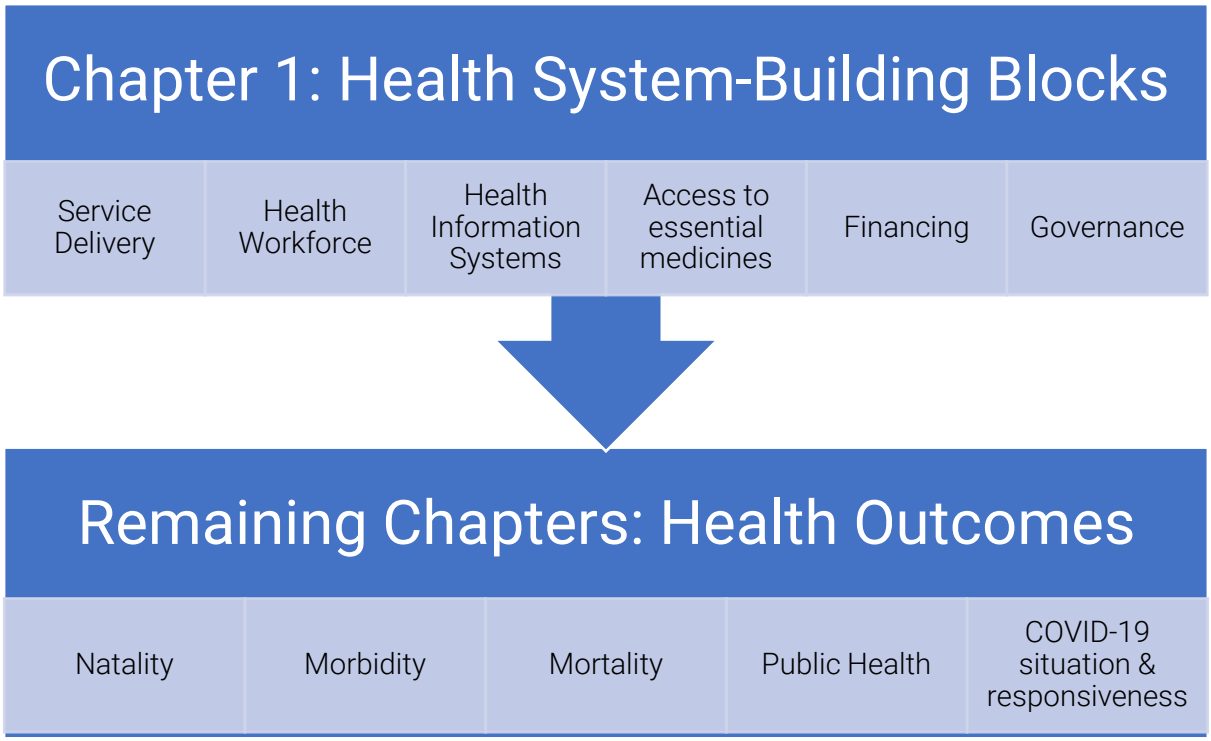
HEALTH SYSTEM

The Maldivian health system consists of many organizations, institutions, resources and people whose primary purpose is to improve health. These include institutional and civil society efforts to influence determinants of health as well as more direct health-improvement activities. The health system delivers preventive, promotive, curative and rehabilitative interventions through a combination of public health actions and the pyramid of health care facilities on personal health care — by both government, private sector and civil society organizations (CSOs)

Six Core Components

WHO framework of "building blocks":

(i) service delivery,
(ii) health workforce,
(iii) health information systems,
(iv) access to essential medicines,
(v) financing, and
(vi) leadership/governance



Thus, this chapter covers the status of the Maldivian health system in terms of the six building blocks. The six building blocks contribute to strengthening of health system in different ways. Some cross-cutting components, such as leadership/governance and health information systems, provide the basis for the overall policy and regulation of all other health system blocks. Key input components to the health system include specifically, financing and the health workforce. Medicines, medical products, technologies and facilities for service delivery, reflects the immediate outputs of the health system, i.e., the availability and geographic distribution of care (World Health Organisation 2010).

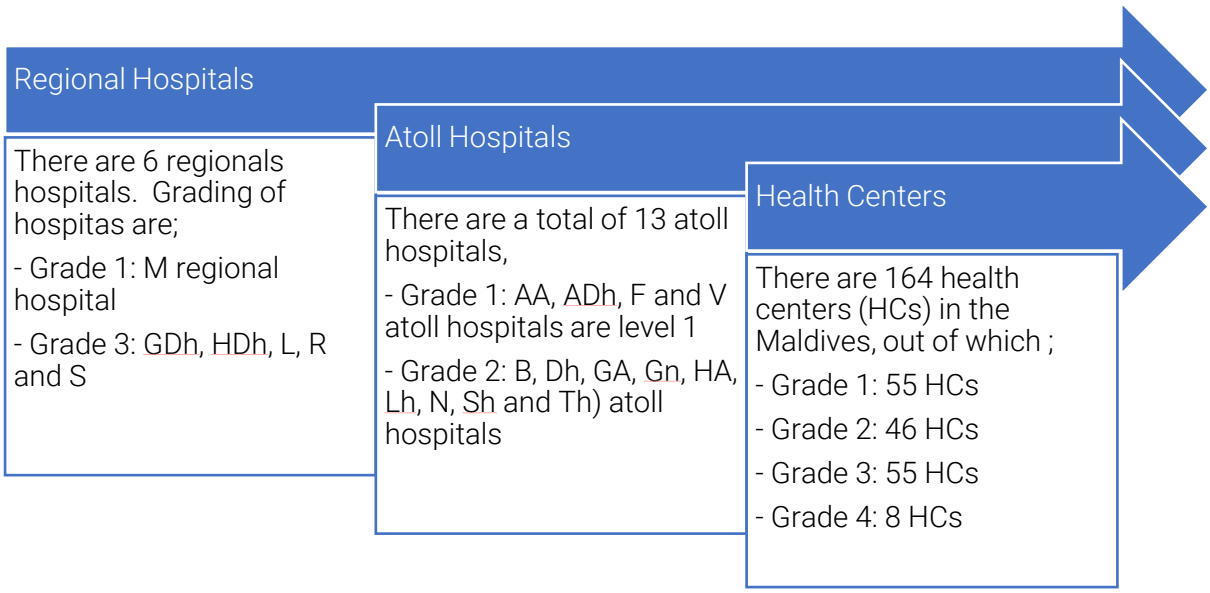
1.1 SERVICE DELIVERY

Service delivery is an important component of health system. To capture availability, access and distribution of health service delivery, a range of indicators or a composite indicator is needed. In this section, we look in to health statistics such as the number of health facilities, outpatient facilities, bed, and specialist services such as surgeries available in the Maldives.

1.1.1 HEALTH FACILITIES

Data from a total of 192 government health facilities are considered here, out of which 184 facilities are located in atolls and rest in Greater Male' Region (GMR). Ministry of Health had adopted a grading system for all health facilities located in the atolls. The grading system is used as an indicator for the level of services that will be provided from the facilities. For instance, as the grading goes up the health/specialist services rendered increased.

Figure 1-1: Public health facilities in the atolls and its grading, 2020



The health care delivery system of Maldives is organized into a three-tier system with island level primary care centers, a higher level of health facilities with respect to provision of maternal, newborn care and specialty care at an atoll/regional level and tertiary care at a central/regional level. Depending on the grading of the health facility, specialty care is provided.

Health policies with regard to public service delivery include, establishing a public health facility either a hospital or health center in each inhabited island, for which the service level would be decided depending on the level of population, patient load, and distance to nearest hospital. Each atoll excluding K atoll, has a hospital catering to the population of that atoll. Even though hospitals are called regional or atoll hospitals, the grading criteria for hospitals, contains three levels. Administratively, the regional or atoll hospital in each atoll acts as the main coordinating body in providing general and specialty health care in that atoll with each atoll covering a population of 5,000 to 15,000 people. The following table depicts the 3 tiers of Maldivian Health System.

Table 1-1: Health system entities, 2020

<table>
<tr><th></th><th>Government Health Services</th><th colspan="2">Business and Civil Services</th></tr>
<tr><td rowspan="8">Tier 3: Tertiary

Tier 2: Secondary

Tier 1: Primary</td><td>National referral hospital – 1- IGMH</td><td rowspan="3">Private Hospitals in GMR (2 - ADK, Treetop)</td><td rowspan="8">State (STO) and private pharmacies and health suppliers</td></tr>
<tr><td>Regional Hospitals (2 - KRH, AEH)</td></tr>
<tr><td>National Thalassaemia Centre</td></tr>
<tr><td>Other public hospitals (3- Hulhumale, Villimale, Senahiya)</td><td rowspan="3">Private Hospitals (2- Medica and IMDC)
Private Clinics</td></tr>
<tr><td>Regional hospitals (4-URH, GRH, ASMH, MRH)</td></tr>
<tr><td>Atoll hospitals (13)</td></tr>
<tr><td>Health Centers (164)</td><td rowspan="2">Health focussed civil society organisations; youth and women's groups</td></tr>
<tr><td>Dhamanaveshi</td></tr>
</table>

A further division is also made in the National Spatial Plan (Ministry of National Planning Housing and Infrastructure 2020), where the health facilities are divided based on the geographic location to major 3 regions and 6 zones of Maldives. Zone 1-6 is arranged from north to south and is shown on the map below.

Table 1-2: Number of facilities by zones, 2020[1]

Category	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Total
Private	9	33	158	12	12	16	240
Resort Clinic	5	27	44	7	8	1	92
Allopathic Clinic	3	4	61	4	3	11	86
Alternative Clinic			16				16
Dental Clinic			10	1			11
Optical Clinic	1		7			2	10
Laboratory		2	6		1		9
Psychotherapy & Social Service Center			7				7
Hospital			5			1	6
E.N.T Clinic			1			1	2
Physiotherapy Clinic			1				1
Public	41	46	38	42	18	5	190
Health Centre	38	41	31	37	16	3	166
Hospital	3	4	6	5	2	2	22
Allopathic Clinic		1	1				2
Total	**50**	**79**	**196**	**54**	**30**	**21**	**430**

[1]Data source: Quality Assurance and Regulations Department (QARD), Ministry of Health

In each of the zone a referral health facility is identified – either a tertiary or regional hospital. The division of atolls and distribution of the health facilities in the zones are as below.

Figure 1-2: Number of facilities and zones, 2020

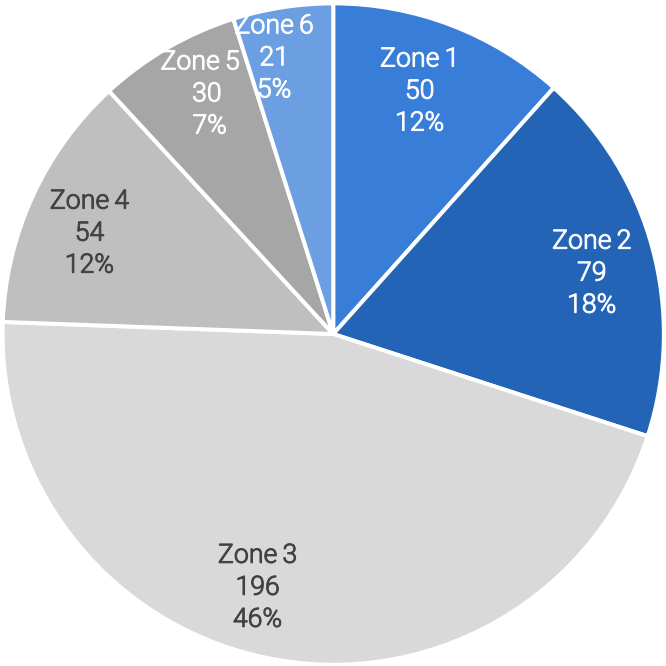
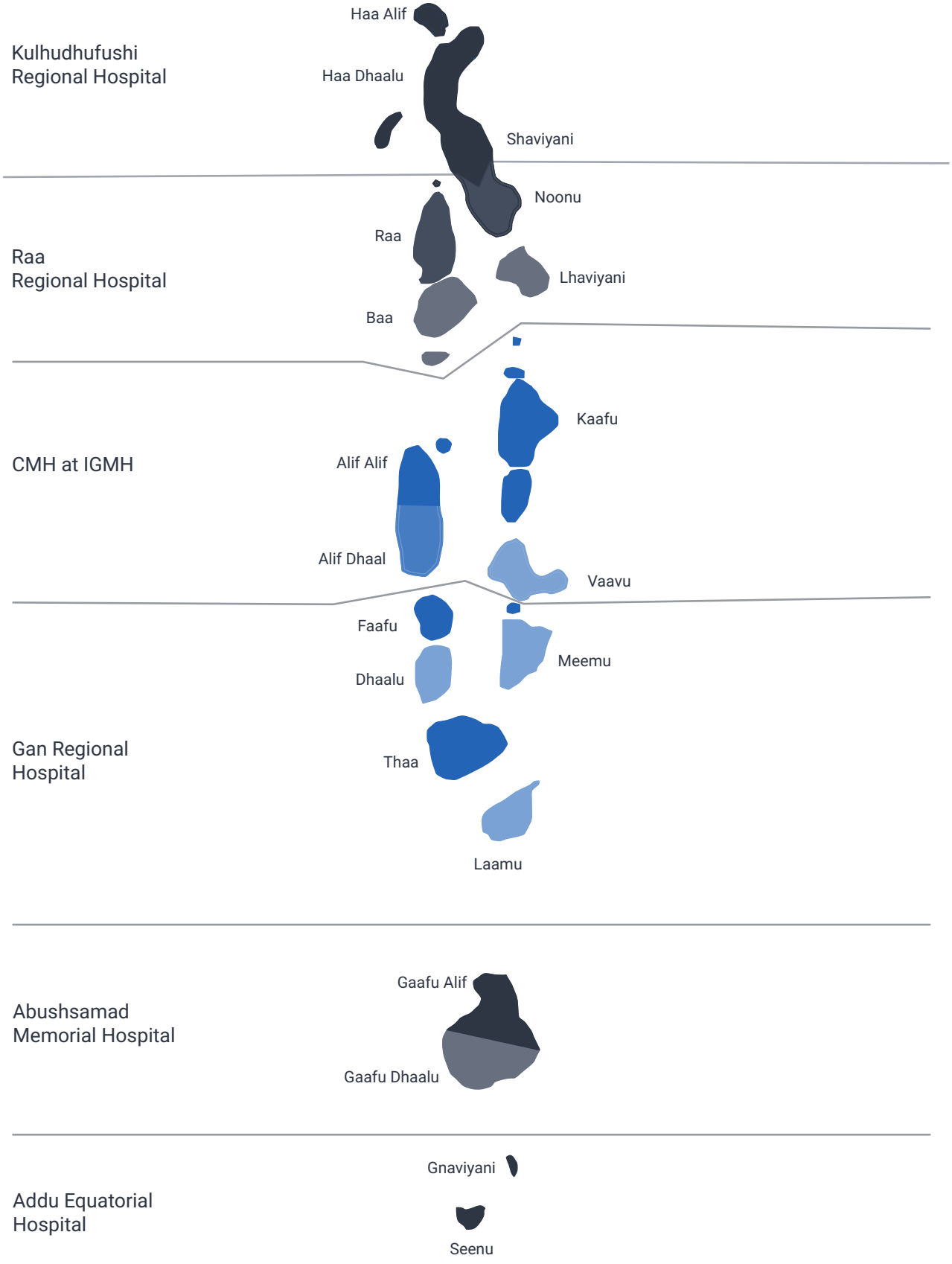


Figure 1 3: Regional and main referral facility based on NSP, 2020



1.1.2 OUTPATIENTS

The total outpatient visits to 192 government health facilities in Maldives are 2,00,929 in 2020, from which 63% were from Atolls.

Figure 1-4: Total outpatients from GMR and atoll, 2020

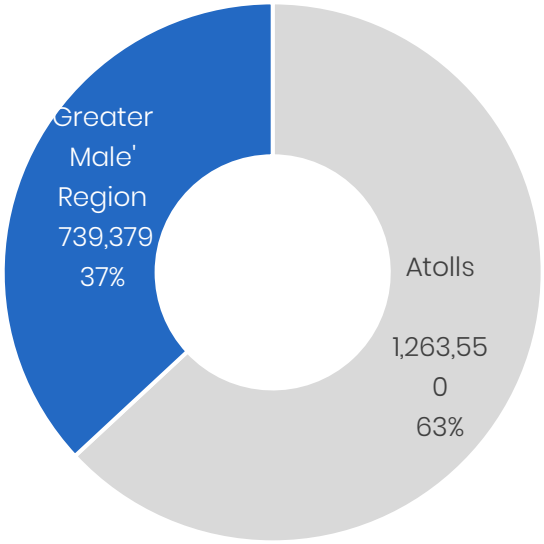
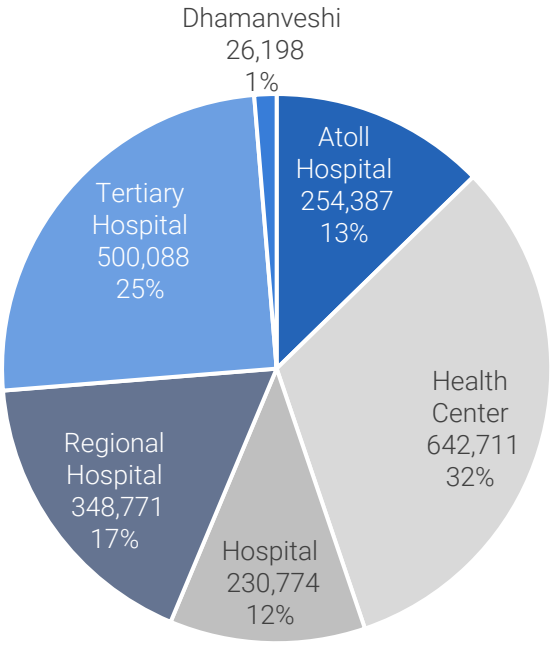
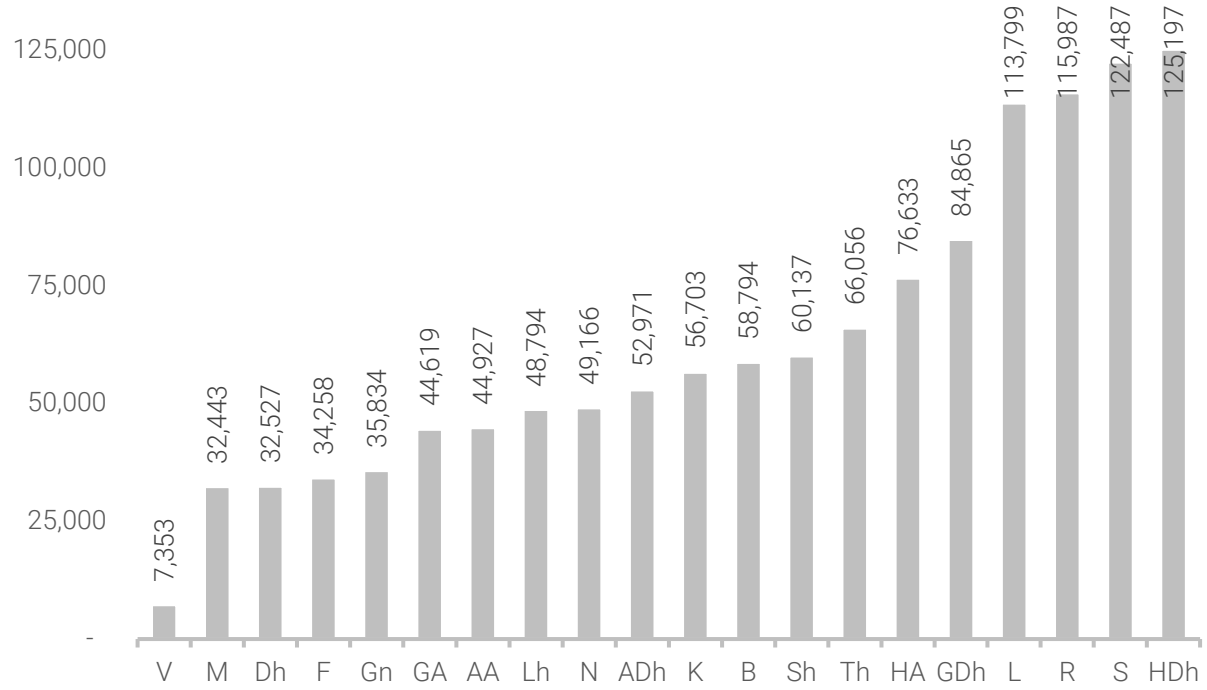


Figure 1-5: Outpatients at different categories of health facilities, 2020



Looking at the disaggregation of the outpatients by location in the Atolls, we can see those facilities in HDh atoll had the maximum outpatients followed by health facilities in S and R.

Figure 1-6: Total outpatients by atoll, 2020

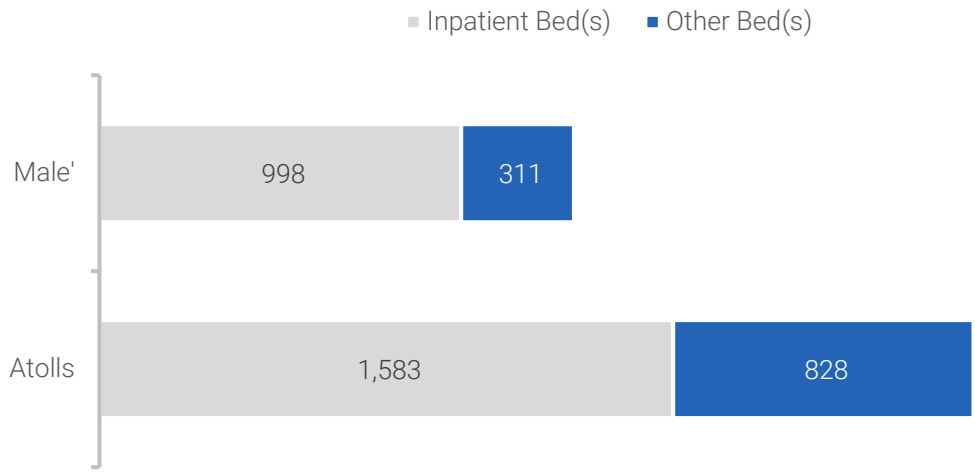


Most of the outpatients (32%) visited health centers followed by tertiary hospitals (25%).

1.1.3 BEDS

In Maldives there were a total of 3,720 facility beds, out of which 2,581 was inpatient beds. The total number of inpatient beds were 2,411 in 184 atolls health facilities, while GMR had 1,309 beds in 8 health facilities.

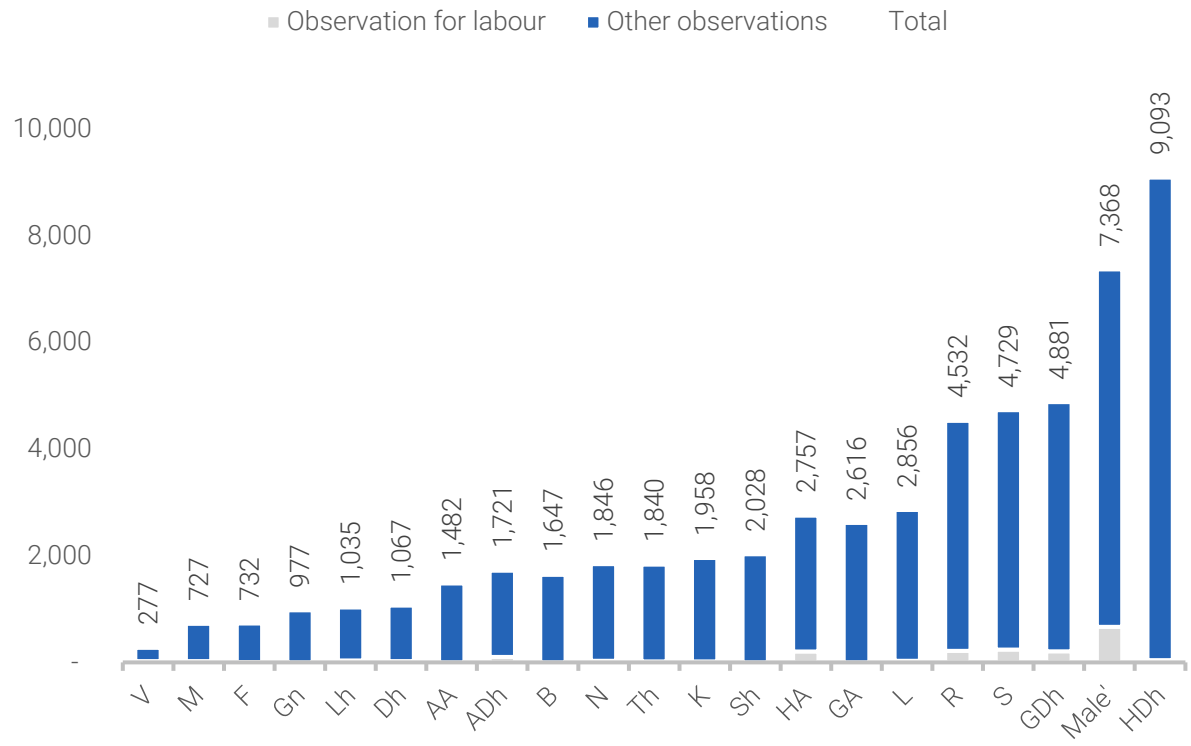
Figure 1-7: Total bed(s), 2020



1.1.4 OBSERVATIONS

In this report observations are defined as paients kept at health facilies for clinical observation for less than 6 hours. The number of observations in HDh preceded GMR in 2020. This is the first time in history that observations in atolls were more than that of the GMR. This is an effect of the COVD-19 pandemic spread in the GMR forcing diverting care to the atolls.

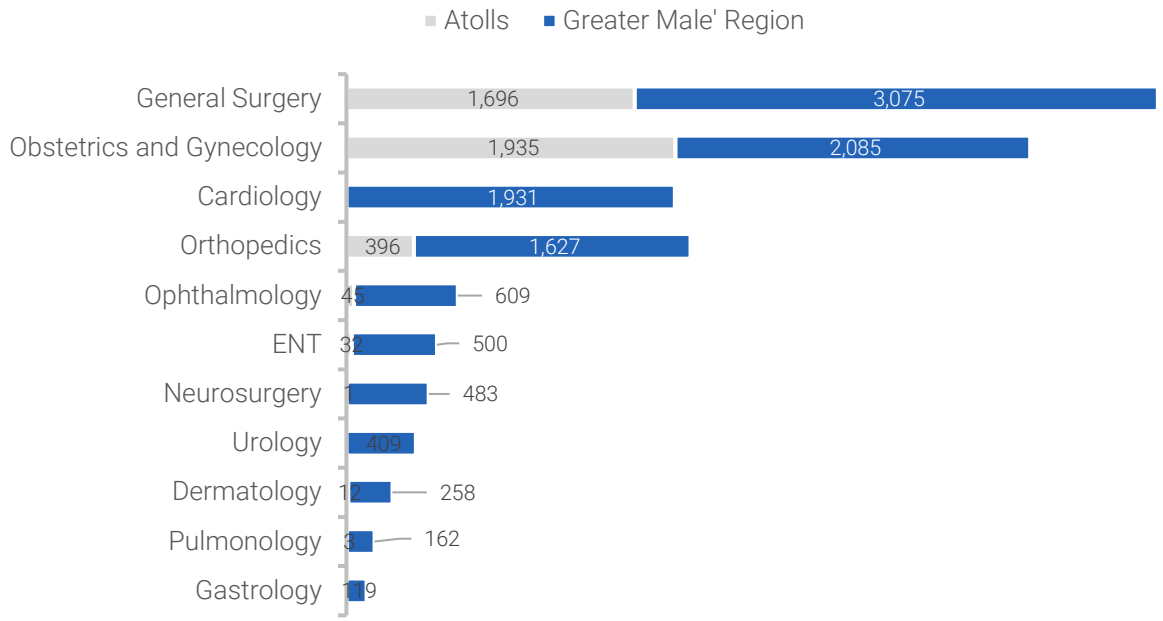
Figure 1-8: Total observation in the Maldives, 2020



1.1.5 SURGERIES AND OTHER PROCEDURES

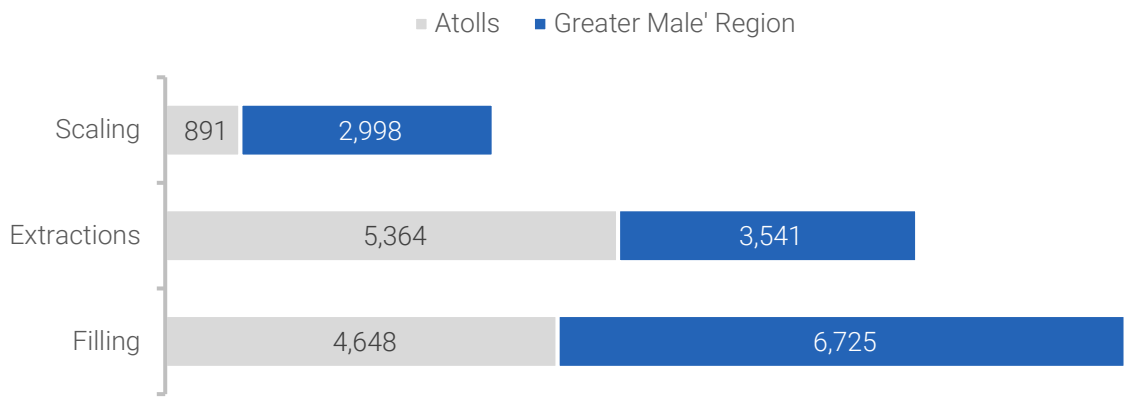
The general surgeries topped the list of surgeries in 2020, followed by surgeries related to obstetrics and gynecology. Even with the COVID-19 spread in the GMR, it can be seen that most surgeries occurred in GMR.

Figure 1-9: Top 11 surgeries in 2020



When we look at other procedures, dental procedures had the top number of procedures in 2020.

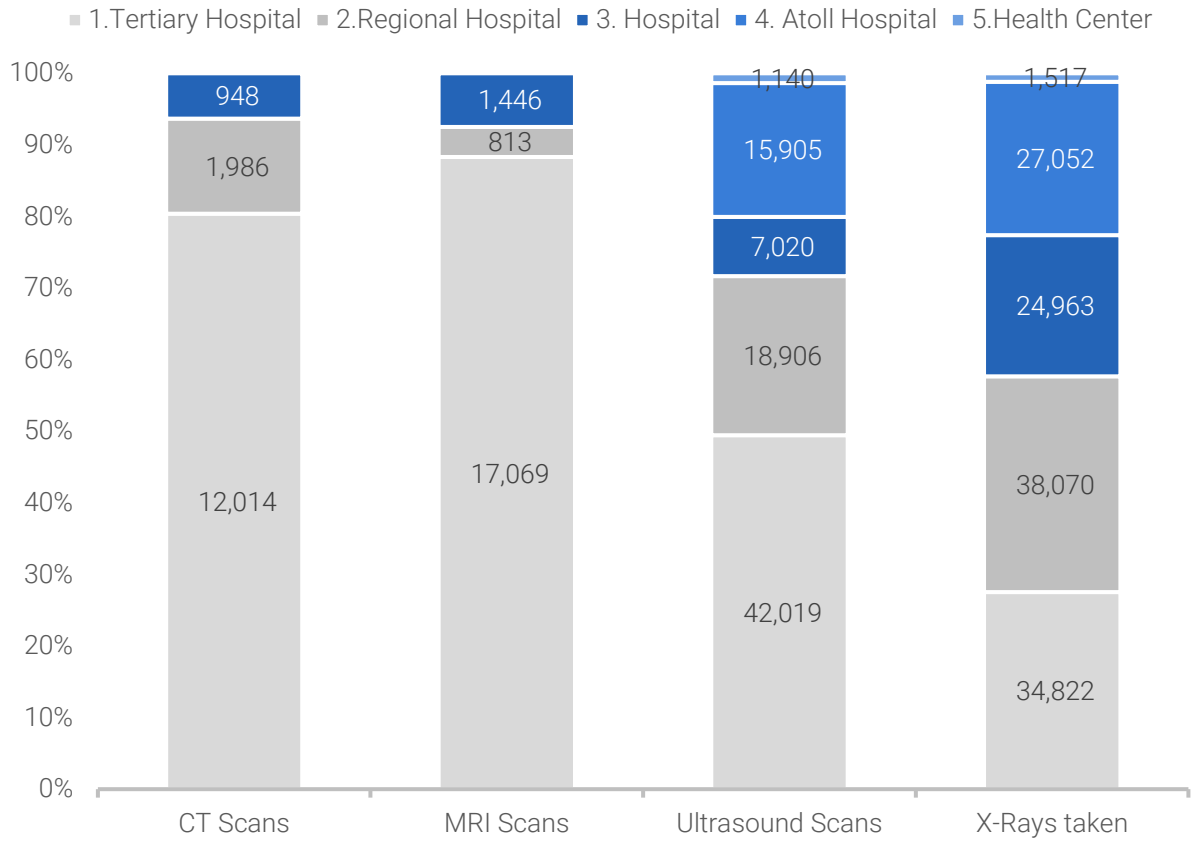
Figure 1-10: Dental procedures, 2020



1.1.6 DIAGNOSTICS

Different tiers of of health facilities offered different radiology services. Thus, it can be seen that MRI and CT scans were not reported/done in any health centres and atoll hospitals, whie ultrasound scans and x-ray services are available across most of the health facilities.

Figure 1-11: Radiological services, 2020



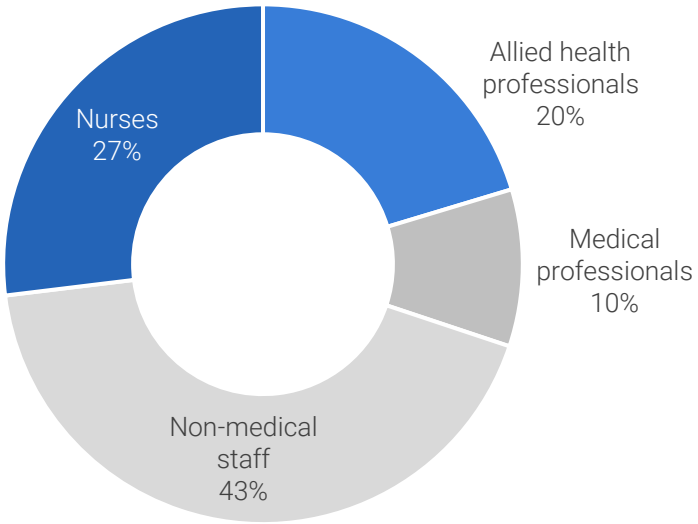
1.2 HEATH WORKFORCE

This section is a presentation of the health workforce (World Health Organisation 2010) as of 31 December 2020 covering the following areas: staff profile; staff category; distribution of staff by gender; geographical representation; nationality; category of staff; distribution of staff in professional and higher category posts across the main occupational groups.

What is Health Workforce?

The health workforce can be defined as "all people engaged in actions whose primary intent is to enhance health"

Figure 1-12: Distribution of health professionals, 2020



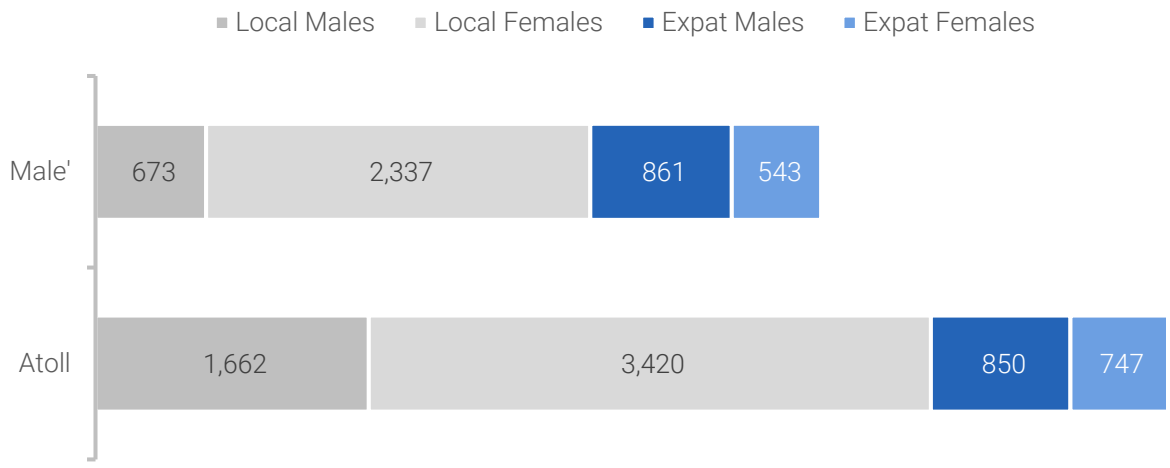
The disaggregation by location shows that almost 56% of the health professionals resides in the atolls, where almost 32% is non-medical staff.

Table 1-3: Health professionals by category, region and gender, 2020

	Local		Expat		
Category	Male	Female	Male	Female	Total
Atoll	1,616	3,049	784	740	6,189
Allied health professionals	169	410	178	83	840
Medical professionals	17	20	444	84	565
Non-medical staff	1,402	1,617	6	39	3,064
Nurses	28	1,002	156	534	1,720
GMR	719	2,708	927	550	4,904
Allied health professionals	137	841	351	88	1,417
Medical professionals	131	228	120	40	519
Non-medical staff	443	913	315	30	1,701
Nurses	8	726	141	392	1,267
Grand Total	**2,335**	**5,757**	**1,711**	**1,290**	**11,093**

More than 73% of health professionals account for locals.

Figure 1-13: health professional by origin and location, 2020



The disaggregation by region and gender shows that there are more females in all the categories except medical professionals.

Table 1-4: Health workforce by category, gender and location, 2020

Category	Atoll		GMR		Total
	Male	Female	Male	Female	
Allied health professionals	459	871	376	551	2,257
Clinical and Physical Therapists	13	5	20	13	51
Community health professionals	146	310	20	23	499
Dentists	21	16	17	42	96
Medical Laboratory Professionals	123	106	60	160	449
Pharmacy professionals	119	389	205	277	990
Professionals of Behavioral Sciences	1	1	2	16	20
Professionals of Traditional, alternative and complementary medicine	-	35			35
Radiographers	36	9	52	20	117
Medical professionals	461	104	251	268	1,084
General Doctors	301	74	89	187	651
Specialists	160	30	162	81	433
Non-medical staff	1,408	1,656	758	943	4,765
Non-medical staff	1,408	1,656	758	943	4,765
Nurses	184	1,536	149	1,118	2,987
Nurses	184	1,536	149	1,118	2,987
Grand Total	**2,512**	**4,167**	**1,534**	**2,880**	**11,093**

1.2.1 MEDICAL PROFESSIONALS

In this section, medical professionals are referred to people registered at the Maldives Medical and Dental Council and is a practicing doctor/specialist. A total of 1,084 medical professionals practiced in 2020, of which 66% (712) were males and 63% were expatriates (688).

Table 1-5: Medical professionals by gender, 2020

Category	Males	Females	Totals
General Doctors	390	261	651
Specialists	322	111	433
Grand Total	**712**	**372**	**1,084**

It can be seen that out of the total medical professionals, 40% are specialists. Disaggregation by region shows that most of the medical professionals are based in atolls.

Figure 1-14: Medical professionals by category

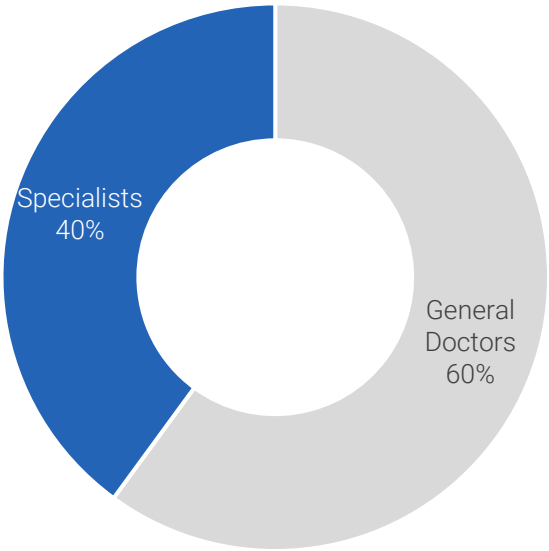


Table 1-6:Medical professionals by gender and region, 2020

Category	Local Males	Expat Males	Local Females	Expat Females
Atoll	17	444	20	84
General Doctors	9	292	15	59
Specialists	8	152	5	25
GMR	131	120	228	40
General Doctors	49	40	168	19
Specialists	82	80	60	21
Grand Total	**148**	**564**	**248**	**124**

1.2.2 NURSES

In this section, nurses are referred to people registered at the Maldives Nursing and Midwifery Council and is a practicing nurse in the Maldives. A total of 2,987 nurses practiced in 2020, of which 89% (2,654) were females and 41% (1223) were expatriates.

Figure 1-15: Nurses by region, 2020

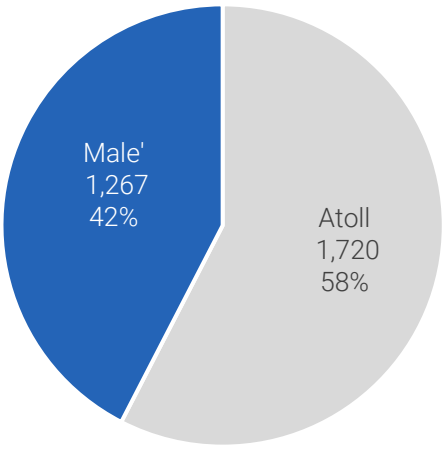
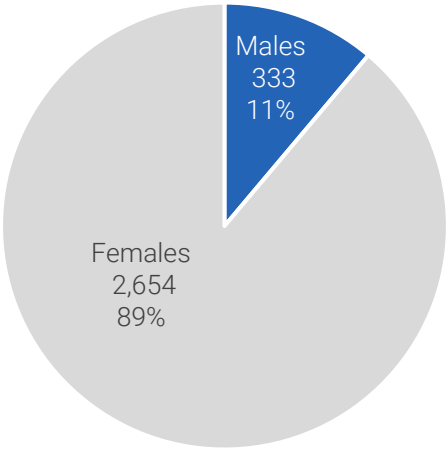


Figure 1-16: Nurses by gender, 2020



It can be seen that out of the total nurses, 58% resides in atolls and are mostly local females.

Table 1-7:Nurses by nationality, gender and cadre, 2020

	Local		Expat		
Category	Male	Female	Male	Female	Total
Atoll	28	1,002	156	534	1,720
Enrolled Nurse	7	324	-	4	335
Enrolled Nurse Midwife	-	30	-	-	30
Registered Nurse	15	583	95	302	995
Registered Nurse Midwife	6	65	61	228	360
GMR	8	726	141	392	1,267
Enrolled Nurse	3	84	-	1	88
Enrolled Nurse Midwife	-	9	-	-	9
Registered Nurse	5	563	132	362	1,062
Registered Nurse Midwife	-	70	9	29	108
Grand Total	**36**	**1,728**	**297**	**926**	**2,987**

1.2.3 ALLIED HEALTH PROFESSIONALS

A total of 2,257 allied health professionals were there in 2020, of which 37% (835) were in atolls.

Figure 1-17: Allied health professionals by region, 2020

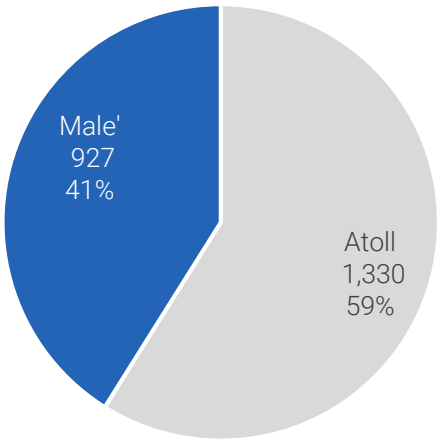
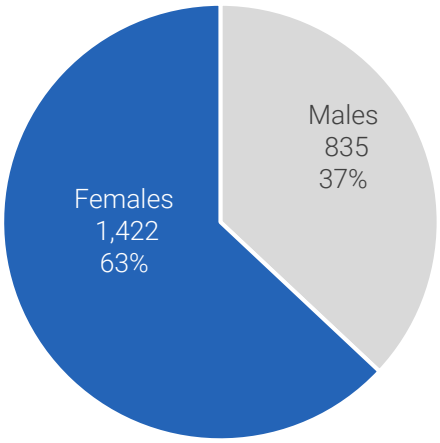


Figure 1-18: Allied health professionals by gender, 2020



It can be seen that out of the total allied health professionals, 59% resides in atolls of which most are local females.

Table 1-8: Allied health professionals by nationality, gender and cadre, 2020

	Local		Expat		
Category	Male	Female	Male	Female	Total
Atoll	215	781	244	90	1,330
Clinical and Physical Therapists	-	1	13	4	18
Community health professionals	142	307	4	3	456
Dentists	-	9	21	7	37
Medical Laboratory Professionals	21	46	102	60	229
Pharmacy professionals	47	379	72	10	508
Professionals of Behavioral Sciences	-	-	1	1	2
Professionals of Traditional, alternative and complementary medicine	-	35	-	-	35
Radiographers	5	4	31	5	45
GMR	91	470	285	81	927
Clinical and Physical Therapists	3	7	17	6	33
Community health professionals	7	22	13	1	43
Dentists	6	40	11	2	59
Medical Laboratory Professionals	22	140	38	20	220
Pharmacy professionals	44	239	161	38	482
Professionals of Behavioral Sciences	2	13	-	3	18
Radiographers	7	9	45	11	72
Grand Total	**306**	**1,251**	**529**	**171**	**2,257**

1.2.4 NON-MEDICAL STAFF

Non-medical staff are defined as those staff engaged in health care delivery that do not belong to medical, nursing or allied health professional categories. A total of 4,765 non-medical staff were there in 2020, of which 64% (3,064) were in atolls. Similar to nurses, more females worked as non-medical staff.

Figure 1-19: Non-medical staff by region, 2020

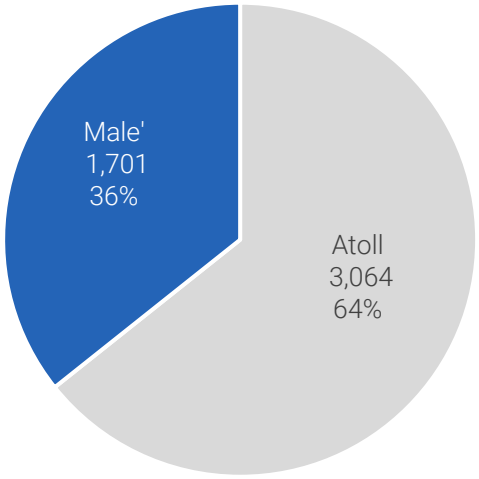
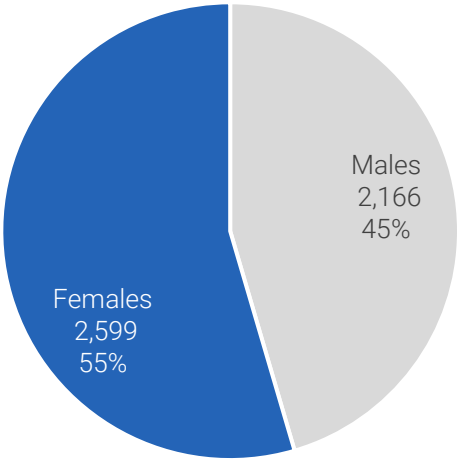


Figure 1-20: Non-medical staff by gender, 2020



It can be seen that more non-medical staff reside in the atolls.

Table 1-9:Non-medical staff by nationality, gender and cadre, 2020

	Local		Expat		
Category	Male	Female	Male	Female	Total
Atoll	1,402	1,617	6	39	3,064
Health Management	64	11	-	-	75
Support Staff	1,338	1,606	6	39	2,989
GMR	443	913	315	30	1,701
Health Management	20	18	5	10	53
Support Staff	423	895	310	20	1,648
Grand Total	**1,845**	**2,530**	**321**	**69**	**4,765**

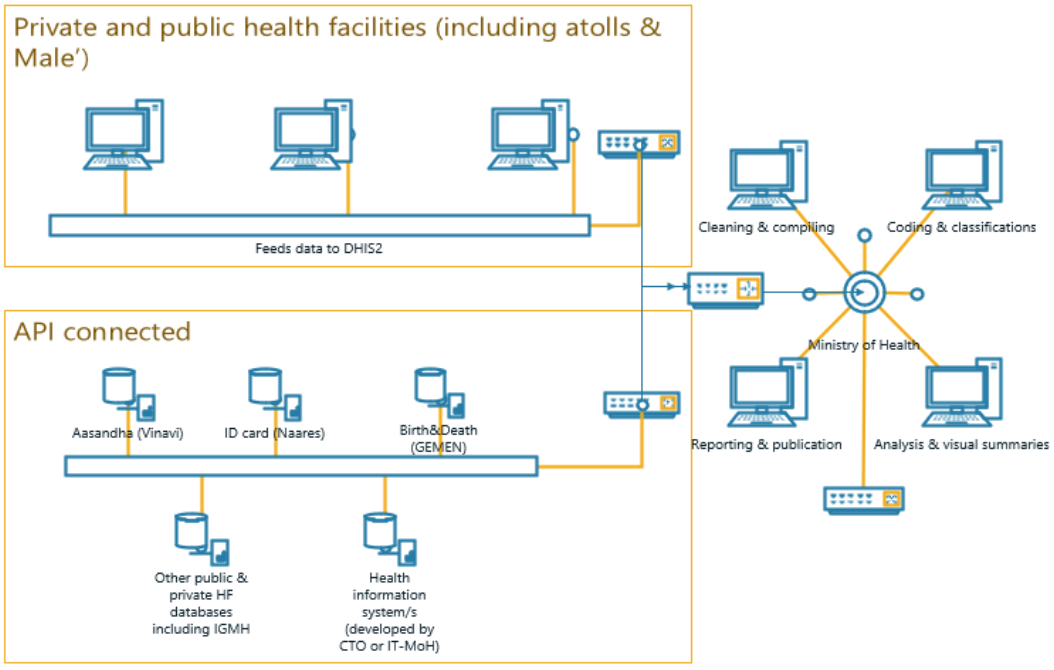
A detailed list of health workforce by individual atolls, cadres, gender and nationality is attached with the Annex.

1.3 HEALTH INFORMATION SYSTEM

District Health Information Software Version 2 (DHIS2) was introduced as a statistical software in 2017 as a collaborative effort between Ministry of Health (MoH) and the World Health Organization (WHO). However, the roll out of this system started in July 1, 2019 and 2020 saw a full roll out of the system in the country, enjoying some of the benefits it offered. It has been envisaged that DHIS2 would assist in better data management, analysis, monitoring & evaluation of key health indicators for informed and/or evidence-based decision making.

The introduction of DHIS2 to Maldives was carried out in a phased approach. As part of phase 4 activities, since July 2019, DHIS2 has been rolled out at a national level in all public health facilities and private hospitals. Currently only limited routine information is collected which does not include public health data in 2020. However, work is currently ongoing to further strengthen the data collection mechanism via DHIS2. This includes further emphasis on integration with other existing systems and also the introduction of specific modules related to immunization and reproductive health to capture relevant routinely collected data from health facilities.

Figure 1-21: Visualization of DHIS2 envisioned for the future, 2020



Ministry of Health is committed to ensure the effective utilization of DHIS2 in order to strengthen the national health information management system of the country. Apart from DHIS2, there are numerus health information systems that are fragmented and working individually in the country. In this situation, data generated from the following systems are used in this report.

- DHIS2 – Data on number of outpatients, bed, health workforce, surgeries and observations
- GEMEN – Population module which captures all the births and deaths of the country
- Online/excel based information sheets collated by the departments of Ministry of Health: surveillance, mainly pharmacy, pharmacists, thalassemia and public health data.
- Other specific health related information systems used by stakeholders (eg: Aasandha – Vinavi system).

However, there are other systems used such as SEARO Integrated Disease Analysis System (SIDAS) for communicable disease surveillance from the atolls.

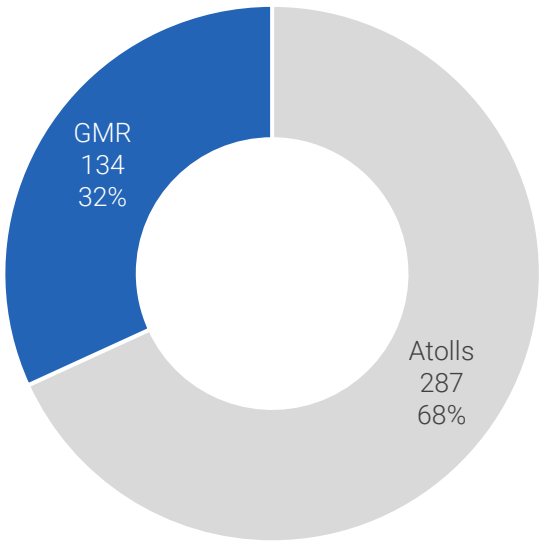
1.4 ACCESS TO MEDICINE

Access to Medical products/technologies[2] is one of the main building blocks of health systems (World Health Organisation 2010). Thus, in this chapter statistics relating to medicines, pharmacies and pharmacists are considered.

1.4.1 PHARMACIES

In 2020, there were a total of 421 registered pharmacies in Maldives, out of which 287 pharmacies were in the atolls

Figure 1-22: Registered pharmacies by region, 2020



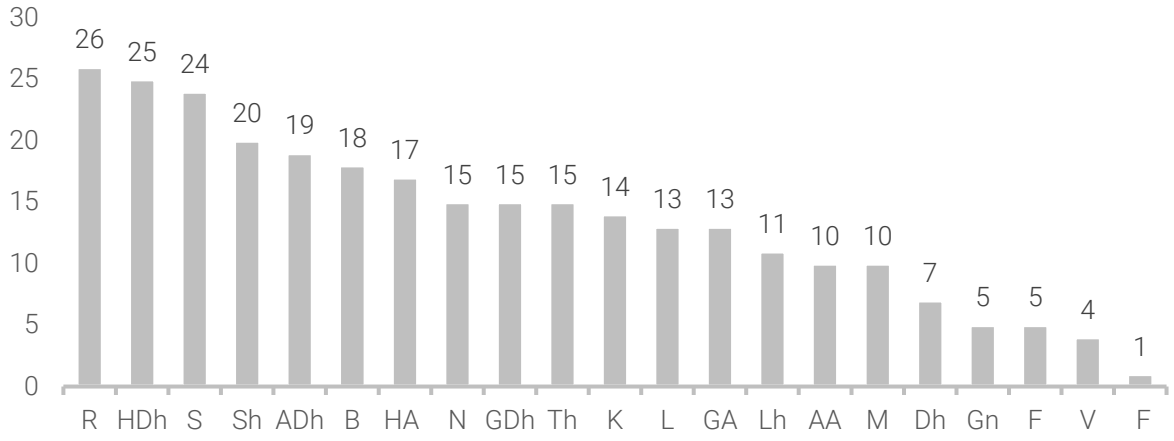
What is Access to Medicine?

Access has been defined as "having medicines continuously available and affordable at public or private health facilities or medicine outlets that are within one hour's walk of the population"

Disaggregation within the atolls (excluding GMR), showed that the maximum number of pharmacies were present in R, HDh and S atoll.

1Data source for this section is Maldives Food and Drug Authority (MFDA), Ministry of Health

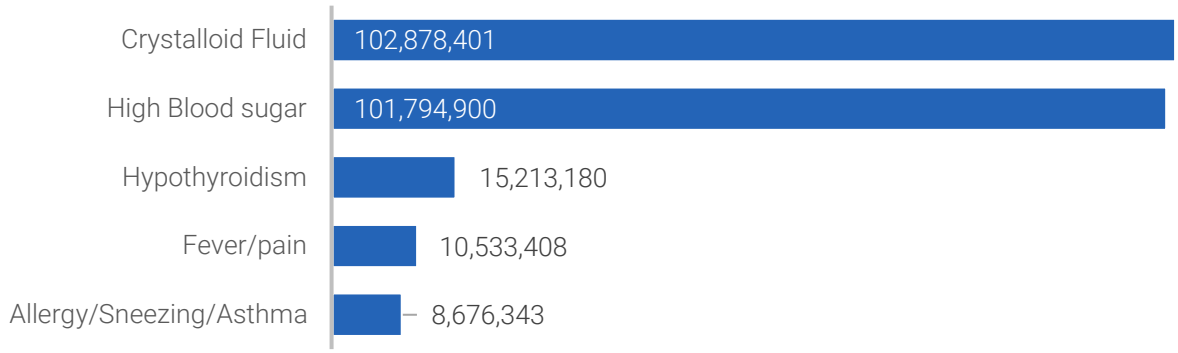
Figure 1-23: Pharmacies registered in atoll, 2020



1.4.2 MEDICINE

When we have a look at the number of medicines imported to the country, at the top are products categorized under Crystalloid Fluid. The higher imports are preparations used for dehydration, blood loss, burn, high blood pressure and thyroid hormone replacements (hypothyroidism). The top 20 imported drugs are presented in the Annex.

Figure 1-24: Top 5 indications based on maximum number of drugs imported, 2020



According to NHA (Ministry of Health 2019), the acceleration of government budget is particularly profound from the year 2014, owing largely to rise in medicines spending. It shows that drugs as a percentage of total expenditure was increased from 18.2% in 2014 to 32% in 2017. In terms of the product name, the top product imported is Diabetmin which is used for high blood pressure.

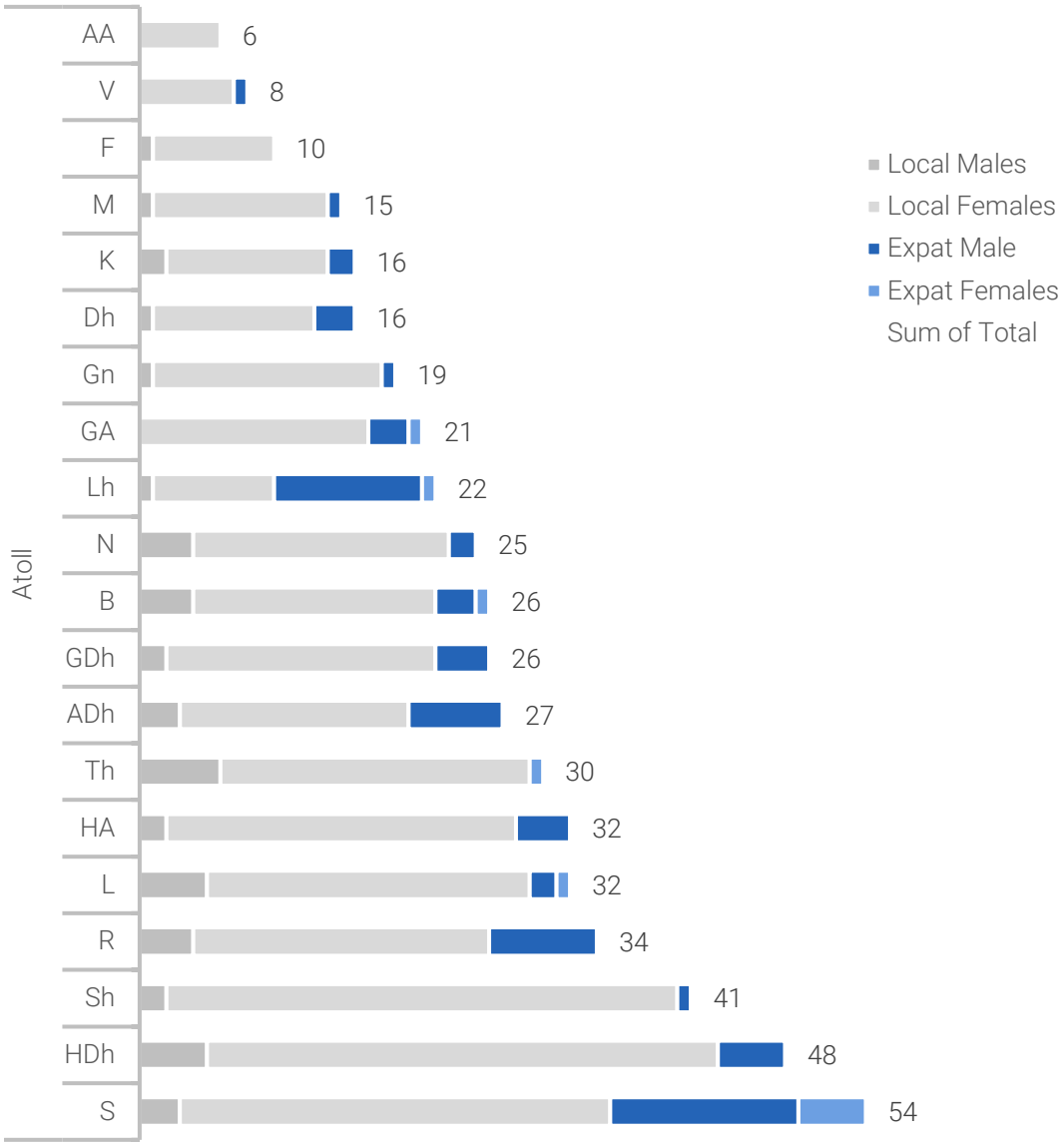
Table 1-10: Top 5 medicine by quantity imported, 2020

#	Product name	Generic Name	Category	Dosage Form	Strength	Quantity (Units)	Indication
1	Diabetmin	Metformin Hcl	Antidiabetic	Tablet	500mg BP	101,794,900	High Blood sugar
2	RL (Ringer's Lactate)	Compound Sodium Lactate Intravenous Infusion	Electrolytes	Injection	500ml	82,182,708	Crystalloid Fluid: used for dehydration, blood loss, burn
3	NS (Normal Saline)	Sodium Chloride	Electrolytes	Injection	0.9%w/ v in 500 ml	20,695,693	Crystalloid Fluid: used for dehydration, blood loss, burn
4	Panadol	N-acetyl-P-aminophenol (Paracetamol Ph.Eur)	Antipyretic	Tablet	500mg	8,372,868	Fever/pain
5	Uphamol	Paracetamol	Antipyretic	Tablet	650 mg	2,160,540	Fever/pain

1.4.3 PHARMACY PROFESSIONALS

In Maldives, there is a pharmacy in each inhabited island operated by State Trading Organization (STO) (State Trading Organisation 2021), that requires a pharmacy professional be present in each of the inhabited island. According to Maldives Food and Drug Authority (MFDA) administrative data, there were a total of 990 pharmacy professionals practicing in 2020, of which S and HDh had the highest numbers.

Figure 1-25: Total pharmacy professionals in atolls, 2020



It can be noted that GMR had more pharmacists compared to the atolls combined.

Table 1-11: Total number of pharmacy professionals by origin, gender, location and cadre, 2020

	Locals		Expats		
Category	Males	Females	Male	Females	Total
Atoll	47	379	72	10	508
Dispenser	20	182	-	1	203
Pharmaceutical Technicians/Assistants	23	171	1	-	195
Pharmacists	4	26	71	9	110
GMR	44	239	161	38	482
Pharmacists	12	33	161	36	242
Pharmaceutical Technicians/Assistants	25	170	-	2	197
Dispenser	7	36	-	-	43
Grand Total	**91**	**618**	**233**	**48**	**990**

1.5 FINANCING

The government's commitment for improving the health services is evident by the government's expenditure on health. Currently all Maldivians enjoy a universal health insurance scheme fully financed by the government.

1.5.1 NATIONAL HEALTH INSURANCE SCHEME

The following gives the timeline of introduction of first Health Insurance Scheme and it's evolution to a full insurance coverage for Maldivians by 2014.

Figure 1-26: Progression of health insurance scheme of Maldives, 2010 – 2014

1.5.2 HEALTH EXPENDITURE

It can be clearly seen that the government health spending skyrocketed in 2020 due to COVID-19 pandemic, thus in total more than 16% of the government expenditure was on health.

Table 1-12: Government expenditure, 2019-2020

	2019		2020	
	Actual (in MVR million)	Percent	Revised (in MVR million)	Percent
Total Budget	30,128.20	100.00	31,787.10	100.00
Health	3,372.30	11.20	5,243.90	16.50
Hospital Services	2,894.90	9.60	3,208.70	10.10
Public Health Services	477.30	1.60	2,035.20	6.40
health NEC	0.10	-		
Social Protection	4,451.10	14.80	4,278.40	13.50
Sickness and Disability	1,616.60	5.40	1,317.70	4.10

NEC= not elsewhere classified

Reference: (Ministry of Finance 2021)

The key findings National Health Accounts (NHA 2011-2017) (Ministry of Health 2019) shows that there is an increase in current health expenditure on health (percentage of GDP) from 9.2% (2011) to 10.2% (2016), while a significant decrease can be seen in household out of pocket expenditure (percentage of total expenditure), from 49.0 (2011) to 20.6 (2017).

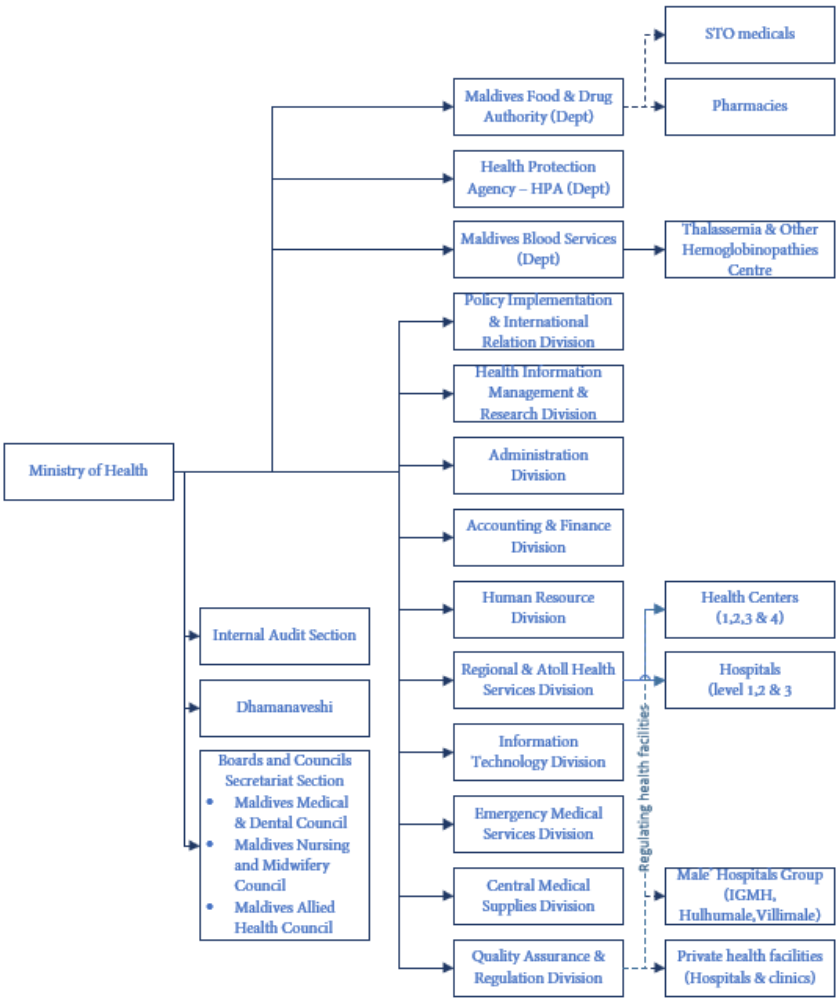
Table 1-13: Key Summary of National Health Accounts, 2011 to 2017

Description of Indicators	2011	2014	2015	2016	2017
Total Govt. Expenditure (MVR Million)	12,824	13,960	16,734	16,141	14,955
Govt. Expenditure on Heath (MVR Million)	1,217	2,834	3,959	5,478	4,832
Current Health Expenditure (MVR Million)	2,766	4,287	5,489	6,919	6,760
Govt. Expenditure on Health (% of Total Govt. Expenditure)	9.5	15.8	18.5	33.9	32.3
Govt. Expenditure on Health (% of Total Health Exp.)	44.0	66.0	72.1	79.2	71.5
GDP Estimates (MVR Millions)	29,936	56,867	63,147	67,837	74,866
GDP Per Capita (in Rufiyaa)	93,550	136,974	138,957	143,934	155,767
Current Health Expenditure (% of GDP)	9.2	9.1	8.7	10.2	9.03
Govt. Expenditure on Health (% of GDP)	4.4	6.2	6.3	8.1	6.5
Private Expenditure on Health (% of GDP)	4.8	2.9	1.8	2.1	2.0
MoH Expenditure (% of Govt. Expenditure)	3.3	9.4	14.8	19.9	19.6
Households Out-Of-Pocket Expenditure (% of Total Health Expenditure)	49.0	29.5	19.5	18.9	20.6
Drugs as a % of Total Health Expenditure (Percent)	17.0	18.2	21.9	21.1	32.0

1.6 GOVERNANCE

The backbone of the health system is the governance and leadership building block. According to WHO (World Health Organisation 2021), leadership and governance involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system-design and accountability. Thus, the organizational structure[3] of the Ministry of Health provides the linkages between the policy, health service delivery and the population.

Figure 1-27: Organizational Structure of Ministry of Health with linkages to other health service providers, 2020[4]



[3]Author developed based on MoH organization structure and health system structure proposed by president office

[4]Quality Assurance & Regulation Division regulates all the health facilities in the country.

1.6.1 LAWS

The health sector is governed by specific laws and regulations. There were 6 acts (Presidents Office 2021) that were enacted by the parliament of Maldives and ratified by the President in the last decade (2010-2020).

Figure 1-28: Ratified acts and regulations enacted in the last decade implemented by Ministry of Health as of 2020

1.7 ANNEXES

Table 1-14: Location and category of public health facilities with grading, 2020

Location	Island	Category	1	2	3	4	No Grade	Total
R	Alifiushi	Health Center			1			1
R	Angolhitheemu	Health Center	1					1
R	Dhuvaafaru	Health Center				1		1
R	Fainu	Health Center	1					1
R	Hulhuduffaaru	Health Center			1			1
R	Inguraidhoo	Health Center			1			1
R	Innamaadhoo	Health Center	1					1
R	Kinolhas	Health Center	1					1
R	Maakurathu	Health Center		1				1
R	Maduvvari	Health Center			1			1
R	Meedhoo	Health Center			1			1
R	Rasgetheemu	Health Center		1				1
R	Rasmaadhoo	Health Center	1					1
R	Ungoofaaru	Regional Hospital			1			1
R	Vaadhoo	Health Center	1					1
Sh	Bileiyfahi	Health Center	1					1
Sh	Feevah	Health Center		1				1
Sh	Feydhoo	Health Center		1				1
Sh	Foakaidhoo	Health Center			1			1
Sh	Funadhoo	Atoll Hospital		1				1
Sh	Goidhoo	Health Center	1					1
Sh	Kanditheemu	Health Center		1				1
Sh	Komandoo	Health Center			1			1
Sh	Lhaimagu	Health Center	1					1
Sh	Maaungoodhoo	Health Center		1				1
Sh	Maroshi	Health Center		1				1

Location	Island	Category	1	2	3	4	No Grade	Total
Sh	Milandhoo	Health Center				1		1
Sh	Narudhoo	Health Center	1					1
Sh	Noomaraa	Health Center	1					1
HA	Baarah	Health Center			1			1
HA	Dhidhoo	Atoll Hospital		1				1
HA	Filladhoo	Health Center		1				1
HA	Hoarafushi	Health Center				1		1
HA	Ihavandhoo	Health Center			1			1
HA	Kelaa	Health Center			1			1
HA	Maarandhoo	Health Center		1				1
HA	Molhadhoo	Health Center	1					1
HA	Muraidhoo	Health Center	1					1
HA	Thakandhoo	Health Center		1				1
HA	Thuraakunu	Health Center	1					1
HA	Uligamu	Health Center		1				1
HA	Utheemu	Health Center		1				1
HA	Vashafaru	Health Center		1				1
B	Dharavandhoo	Health Center			1			1
B	Dhonfanu	Health Center	1					1
B	Eydhafushi	Atoll Hospital		1				1
B	Fehendhoo	Health Center	1					1
B	Fulhadhoo	Health Center	1					1
B	Goidhoo	Health Center			1			1
B	Hithaadhoo	Health Center		1				1
B	Kamadhoo	Health Center	1					1
B	Kendhoo	Health Center			1			1
B	Kihaadhoo	Health Center	1					1
B	Kudarikilu	Health Center	1					1
B	Maalhohu	Health Center	1					1
B	Thulhaadhoo	Health Center			1			1
N	Fodhdhoo	Health Center	1					1
N	Henbadhoo	Health Center	1					1
N	Holhudhoo	Health Center			1			1

Location	Island	Category	1	2	3	4	No Grade	Total
N	Kendhikulhudhoo	Health Center			1			1
N	Kudafari	Health Center	1					1
N	Landhoo	Health Center		1				1
N	Lhohi	Health Center			1			1
N	Maafaru	Health Center	1					1
N	Maalhendhoo	Health Center	1					1
N	Magoodhoo	Health Center	1					1
N	Manadhoo	Atoll Hospital		1				1
N	Miladhoo	Health Center		1				1
N	Velidhoo	Health Center			1			1
Th	Buruni	Health Center		1				1
Th	Dhiyamigili	Health Center		1				1
Th	Gaadhiffushi	Health Center	1					1
Th	Guraidhoo	Health Center			1			1
Th	Hirilandhoo	Health Center			1			1
Th	Kandoodhoo	Health Center	1					1
Th	Kinbidhoo	Health Center		1				1
Th	Madifushi	Health Center			1			1
Th	Omadhoo	Health Center		1				1
Th	Thimarafushi	Health Center			1			1
Th	Vandhoo	Health Center	1					1
Th	Veymadoo	Atoll Hospital		1				1
Th	Vilufushi	Health Center			1			1
HDh	Finey	Health Center	1					1
HDh	Hanimaadhoo	Health Center			1			1
HDh	Hirimaradhoo	Health Center	1					1
HDh	Kulhuduffushi	Regional Hospital			1			1
HDh	Kumundhoo	Health Center		1				1
HDh	Kurinbee	Health Center	1					1
HDh	Makunudhoo	Health Center			1			1
HDh	Naavaidhoo	Health Center	1					1
HDh	Nellaidhoo	Health Center		1				1
HDh	Neykurendhoo	Health Center			1			1

Location	Island	Category	1	2	3	4	No Grade	Total
HDh	Nolhivaramu	Health Center			1			1
HDh	Nolhivaranfaru	Health Center			1			1
HDh	Vaikaradhoo	Health Center			1			1
ADh	Dhangethi	Health Center			1			1
ADh	Dhidhoo	Health Center	1					1
ADh	Dhigurah	Health Center		1				1
ADh	Fenfushi	Health Center		1				1
ADh	Hangnaameedhoo	Health Center	1					1
ADh	Kunburudhoo	Health Center	1					1
ADh	Maamigili	Health Center				1		1
ADh	Mahibadhoo	Atoll Hospital	1					1
ADh	Mandhoo	Health Center	1					1
ADh	Omadhoo	Health Center		1				1
L	Dhanbidhoo	Health Center		1				1
L	Fonadhoo	Health Center			1			1
L	Gan	Regional Hospital			1			1
L	Hithadhoo	Health Center			1			1
L	Isdhoo	Health Center			1			1
L	Kunahandhoo	Health Center	1					1
L	Maabaidhoo	Health Center		1				1
L	Maamendhoo	Health Center		1				1
L	Maavah	Health Center			1			1
L	Mundoo	Health Center	1					1
GA	Dhaandhoo	Health Center			1			1
GA	Dhevvadhoo	Health Center			1			1
GA	Gemanafushi	Health Center			1			1
GA	Kanduhulhudhoo	Health Center		1				1
GA	Kolamaafushi	Health Center			1			1
GA	Kondey	Health Center	1					1
GA	Maamendhoo	Health Center		1				1
GA	Nilandhoo	Health Center	1					1
GA	Villingili	Atoll Hospital		1				1
GDh	Fares-Maathodaa	Health Center			1			1

Location	Island	Category	1	2	3	4	No Grade	Total
GDh	Fiyoari	Health Center		1				1
GDh	Gadhdhoo	Health Center				1		1
GDh	Hoadedhdhoo	Health Center		1				1
GDh	Madaveli	Health Center			1			1
GDh	Nadellaa	Health Center		1				1
GDh	Rathafandhoo	Health Center		1				1
GDh	Thinadhoo	Regional Hospital			1			1
GDh	Vaadhoo	Health Center			1			1
K	Dhiffushi	Health Center		1				1
K	Gaafaru	Health Center		1				1
K	Gulhi	Health Center		1				1
K	Guraidhoo	Health Center			1			1
K	Hinmafushi	Health Center			1			1
K	Huraa	Health Center			1			1
K	Kaashidhoo	Health Center			1			1
K	Maafushi	Health Center				1		1
K	Thulusdhoo	Health Center			1			1
M	Dhiggaru	Health Center			1			1
M	Kolhufushi	Health Center			1			1
M	Maduvvari	Health Center		1				1
M	Mulah	Health Center			1			1
M	Muli	Regional Hospital	1					1
M	Naalaafushi	Health Center	1					1
M	Raiymandhoo	Health Center	1					1
M	Veyvah	Health Center	1					1
AA	Bodufolhudhoo	Health Center	1					1
AA	Feridhoo	Health Center		1				1
AA	Himandhoo	Health Center	1					1
AA	Maalhos	Health Center	1					1
AA	Mathiveri	Health Center		1				1
AA	Rasdhoo	Atoll Hospital	1					1
AA	Thoddoo	Health Center			1			1
AA	Ukulhas	Health Center			1			1

Location	Island	Category	1	2	3	4	No Grade	Total
GMR	GMR	Dhamanaveshi					1	1
GMR	GMR	Hospital					4	4
GMR	GMR	Tertiary Hospital					3	3
Dh	Bandidhoo	Health Center		1				1
Dh	Hulhudhelli	Health Center		1				1
Dh	Kudahuvadhoo	Atoll Hospital		1				1
Dh	Maaenboodhoo	Health Center	1					1
Dh	Meedhoo	Health Center			1			1
Dh	Rinbudhoo	Health Center	1					1
V	Felidhoo	Atoll Hospital	1					1
V	Fulidhoo	Health Center	1					1
V	Keyodhoo	Health Center		1				1
V	Rakeedhoo	Health Center	1					1
V	Thinadhoo	Health Center	1					1
S	Feydhoo	Health Center			1			1
S	Hithadhoo	Hospital					1	1
S	Hithadhoo	Regional Hospital			1			1
S	Hulhumeedhoo	Health Center				1		1
S	Maradhoo	Health Center			1			1
F	Bilehdhoo	Health Center		1				1
F	Dharanboodhoo	Health Center	1					1
F	Feeali	Health Center		1				1
F	Magoodhoo	Health Center		1				1
F	Nilandhoo	Atoll Hospital	1					1
Lh	Hinnavaru	Health Center				1		1
Lh	Kurendhoo	Health Center			1			1
Lh	Naifaru	Atoll Hospital		1				1
Lh	Olhuvelifushi	Health Center	1					1
Gn	Fuvahmulah	Atoll Hospital		1				1
Total			60	55	60	8	9	192

Table 1-15: Location and category of all health facilities, 2020

Category	Private	Public	Total
Zone 1	9	41	50
HA	3	14	17
Health Centre		13	13
Resort Clinic	3		3
Hospital		1	1
HDh	4	13	17
Health Centre		12	12
Allopathic Clinic	3		3
Optical Clinic	1		1
Hospital		1	1
Sh	2	14	16
Health Centre		13	13
Resort Clinic	2		2
Hospital		1	1
Zone 2	33	46	79
B	13	13	26
Health Centre		12	12
Resort Clinic	10		10
Allopathic Clinic	3		3
Hospital		1	1
Lh	7	5	12
Resort Clinic	6		6
Health Centre		3	3
Allopathic Clinic	1	1	2
Hospital		1	1
N	6	13	19
Health Centre		12	12
Resort Clinic	5		5
Laboratory	1		1
Hospital		1	1
R	7	15	22
Health Centre		14	14
Resort Clinic	6		6
Laboratory	1		1
Hospital		1	1

Category	Private	Public	Total
Zone 3	158	38	196
AA	6	8	14
Health Centre		7	7
Resort Clinic	6		6
Hospital		1	1
ADh	14	10	24
Resort Clinic	12		12
Health Centre		9	9
Allopathic Clinic	2		2
Hospital		1	1
GMR	108	6	114
Allopathic Clinic	56	1	57
Alternative Clinic	15		15
Dental Clinic	10		10
Hospital	5	3	8
Optical Clinic	7		7
Psychotherapy & Social Service Center	7		7
Laboratory	6		6
Health Centre		2	2
E.N.T Clinic	1		1
Physiotherapy Clinic	1		1
K	29	9	38
Resort Clinic	25		25
Health Centre		9	9
Allopathic Clinic	3		3
Alternative Clinic	1		1
V	1	5	6
Health Centre		4	4
Resort Clinic	1		1
Hospital		1	1
Zone 4	12	42	54
Dh	5	6	11
Health Centre		5	5
Resort Clinic	4		4
Allopathic Clinic	1		1
Hospital		1	1

Category	Private	Public	Total
F	1	5	6
Health Centre		4	4
Hospital		1	1
Allopathic Clinic	1		1
L	3	10	13
Health Centre		9	9
Allopathic Clinic	2		2
Resort Clinic	1		1
Hospital		1	1
M	1	8	9
Health Centre		7	7
Resort Clinic	1		1
Hospital		1	1
Th	2	13	15
Health Centre		12	12
Dental Clinic	1		1
Resort Clinic	1		1
Hospital		1	1
Zone 5	12	18	30
GA	8	9	17
Health Centre		8	8
Resort Clinic	6		6
Allopathic Clinic	2		2
Hospital		1	1
GDh	4	9	13
Health Centre		8	8
Resort Clinic	2		2
Laboratory	1		1
Allopathic Clinic	1		1
Hospital		1	1
Zone 6	16	5	21
Gn	2	1	3
Allopathic Clinic	1		1
Optical Clinic	1		1
Hospital		1	1
S	14	4	18

Category	Private	Public	Total
Allopathic Clinic	10		10
Health Centre		3	3
Hospital	1	1	2
E.N.T Clinic	1		1
Resort Clinic	1		1
Optical Clinic	1		1
Total	240	190	430

Table 1-16: Health workforce by atoll, gender, origin and category, 2020

	Local		Expat		
Category	Male	Female	Male	Female	Total
AA	38	96	33	44	211
Support Staff	34	51	-	27	112
Registered Nurse	-	20	9	8	37
General Doctors	-	-	15	-	15
Registered Nurse Midwife	-	1	-	7	8
Enrolled Nurse	-	7	-	-	7
Family Health Workers	3	4	-	-	7
Laboratory Technicians/Assistants	-	1	4	2	7
Community Health Workers	1	4	-	-	5
Dispenser	-	4	-	-	4
Internal medicine (Physicians)	-	-	1	-	1
Obstetricians and Gynecologists	-	-	1	-	1
Radiographers	-	-	1	-	1
Enrolled Nurse Midwife	-	1	-	-	1
Anesthesiology	-	-	1	-	1
Pediatricians	-	-	1	-	1
Traditional birth attendants	-	1	-	-	1
Pharmaceutical Technicians/Assistants	-	1	-	-	1
Pharmacists	-	1	-	-	1
ADh	60	192	28	23	303
Support Staff	44	93	-	-	137

	Local		Expat		
Category	Male	Female	Male	Female	Total
Enrolled Nurse	-	29	-	-	29
Registered Nurse Midwife	-	5	1	16	22
Registered Nurse	-	21	-	-	21
General Doctors	1	-	13	3	17
Dispenser	2	15	-	-	17
Community Health Workers	4	12	-	-	16
Family Health Workers	2	7	-	-	9
Laboratory Technicians/Assistants	-	2	3	4	9
Pharmacists	1	-	7	-	8
Health Management	6	1	-	-	7
Traditional birth attendants	-	4	-	-	4
Pharmaceutical Technicians/Assistants	-	2	-	-	2
Radiographers	-	1	1	-	2
Anesthesiology	-	-	1	-	1
Pediatricians	-	-	1	-	1
Obstetricians and Gynecologists	-	-	1	-	1
B	69	184	42	35	330
Support Staff	51	89	5	9	154
Registered Nurse	-	15	3	11	29
Enrolled Nurse	-	25	-	-	25
General Doctors	1	1	15	2	19
Community Health Workers	8	10	-	-	18
Registered Nurse Midwife	-	6	2	9	17
Pharmaceutical Technicians/Assistants	3	10	-	-	13
Family Health Workers	-	13	-	-	13
Dispenser	1	7	-	-	8
Laboratory Technicians/Assistants	1	-	4	3	8
Pharmacists	-	1	3	1	5
Traditional birth attendants	-	4	-	-	4
Health Management	3	-	-	-	3
Obstetricians and Gynecologists	-	-	2	-	2

	Local		Expat		
Category	Male	Female	Male	Female	Total
Radiographers	-	-	2	-	2
Enrolled Nurse Midwife	-	2	-	-	2
Anesthesiology	-	-	1	-	1
Orthopedic Doctors	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Other Health Workers	-	1	-	-	1
Surgeons	-	-	1	-	1
Pediatricians	-	-	1	-	1
Laboratory Scientists	1	-	-	-	1
Dental Technicians/Assistants	-	-	1	-	1
Dh	38	119	23	11	191
Support Staff	29	59	-	-	88
Registered Nurse	-	23	4	7	34
General Doctors	-	2	8	-	10
Community Health Workers	5	4	-	-	9
Dispenser	-	8	-	-	8
Laboratory Technicians/Assistants	1	3	1	3	8
Family Health Workers	2	5	-	-	7
Enrolled Nurse Midwife	-	5	-	-	5
Pharmaceutical Technicians/Assistants	1	4	-	-	5
Enrolled Nurse	-	3	-	-	3
Pharmacists	-	-	3	-	3
Registered Nurse Midwife	-	1	-	1	2
Traditional birth attendants	-	2	-	-	2
Dentists	-	-	1	-	1
Obstetricians and Gynecologists	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Surgeons	-	-	1	-	1
Pediatricians	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Radiographers	-	-	1	-	1
F	56	122	16	12	206
Support Staff	43	55	-	-	98

	Local		Expat		
Category	Male	Female	Male	Female	Total
Registered Nurse	-	28	-	4	32
Enrolled Nurse	-	11	-	3	14
General Doctors	-	1	9	-	10
Family Health Workers	-	9	-	-	9
Community Health Workers	7	-	-	-	7
Registered Nurse Midwife	-	4	-	2	6
Laboratory Technicians/Assistants	1	-	3	2	6
Pharmaceutical Technicians/Assistants	1	5	-	-	6
Dispenser	-	4	-	-	4
Health Management	3	-	-	-	3
Traditional birth attendants	-	2	-	-	2
Radiographers	-	1	1	-	2
Pediatricians	1	-	-	-	1
Dentists	-	-	-	1	1
Dental Technicians/Assistants	-	1	-	-	1
Obstetricians and Gynecologists	-	-	1	-	1
Surgeons	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Internal medicine (Physicians)	-	1	-	-	1
GA	68	182	52	55	357
Support Staff	55	98	-	-	153
Registered Nurse	-	29	5	27	61
Registered Nurse Midwife	-	4	4	18	26
General Doctors	1	-	20	4	25
Laboratory Technicians/Assistants	-	3	7	4	14
Enrolled Nurse	-	14	-	-	14
Dispenser	-	9	-	-	9
Health Management	9	-	-	-	9
Community Health Workers	3	5	-	-	8
Family Health Workers	-	7	-	-	7
Pharmaceutical Technicians/Assistants	-	7	-	-	7

	Local		Expat		
Category	Male	Female	Male	Female	Total
Pharmacists	-	1	3	1	5
Pediatricians	-	-	3	-	3
Traditional birth attendants	-	3	-	-	3
Dentists	-	-	1	1	2
Radiographers	-	-	2	-	2
Enrolled Nurse Midwife	-	2	-	-	2
Obstetricians and Gynecologists	-	-	2	-	2
Surgeons	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Orthopedic Doctors	-	-	1	-	1
Physiotherapists	-	-	1	-	1
GDh	131	237	53	71	492
Support Staff	116	123	-	-	239
Registered Nurse	-	52	6	30	88
Registered Nurse Midwife	-	5	-	22	27
Enrolled Nurse	-	23	-	-	23
General Doctors	1	-	15	6	22
Laboratory Technicians/Assistants	1	-	12	8	21
Dispenser	2	9	-	-	11
Community Health Workers	2	8	-	-	10
Family Health Workers	4	5	-	-	9
Pharmaceutical Technicians/Assistants	-	9	-	-	9
Pharmacists	-	2	4	-	6
Health Management	3	-	-	-	3
Pediatricians	-	-	2	1	3
Physiotherapists	-	-	2	1	3
Radiographers	-	-	2	1	3
Obstetricians and Gynecologists	-	-	3	-	3
Pulmonologists	-	-	2	-	2
Dentists	-	-	-	2	2
Surgeons	-	-	2	-	2
Anesthesiology	-	-	2	-	2

	Local		Expat		
Category	Male	Female	Male	Female	Total
Orthopedic Doctors	1	-	1	-	2
Traditional birth attendants	-	1	-	-	1
ENT Doctors (Otorhinolaryngologists)	1	-	-	-	1
Gn	33	100	15	6	154
Support Staff	26	37	-	-	63
Registered Nurse	-	19	-	-	19
Enrolled Nurse	-	12	-	-	12
Pharmaceutical Technicians/Assistants	1	9	-	-	10
General Doctors	1	-	6	1	8
Dispenser	-	7	-	-	7
Laboratory Technicians/Assistants	-	3	1	1	5
Registered Nurse Midwife	-	5	-	-	5
Community Health Workers	2	2	-	-	4
Family Health Workers	1	2	-	-	3
Radiographers	1	-	1	-	2
Pediatricians	-	-	-	2	2
Pharmacists	-	1	1	-	2
Health Management	1	1	-	-	2
Obstetricians and Gynecologists	-	-	1	1	2
Surgeons	-	-	1	-	1
Orthopedic Doctors	-	-	1	-	1
Ophthalmologists	-	1	-	-	1
Enrolled Nurse Midwife	-	1	-	-	1
Dentists	-	-	1	-	1
Physiotherapists	-	-	1	-	1
Internal medicine (Physicians)	-	-	-	1	1
Anesthesiology	-	-	1	-	1
HA	109	171	59	51	390
Support Staff	84	83	-	3	170
Registered Nurse	-	30	5	18	53
Registered Nurse Midwife	1	-	7	25	33
General Doctors	1	-	23	1	25

	Local		Expat		
Category	Male	Female	Male	Female	Total
Dispenser	1	15	-	-	16
Community Health Workers	8	7	-	-	15
Laboratory Technicians/Assistants	3	1	9	2	15
Family Health Workers	3	11	-	-	14
Pharmaceutical Technicians/Assistants	1	9	-	-	10
Enrolled Nurse	1	7	-	1	9
Health Management	6	-	-	-	6
Pharmacists	-	2	4	-	6
Other Health Workers	-	4	-	-	4
Pediatricians	-	-	1	1	2
Traditional birth attendants	-	2	-	-	2
Radiographers	-	-	2	-	2
Obstetricians and Gynecologists	-	-	2	-	2
Physiotherapists	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Surgeons	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Dentists	-	-	1	-	1
Orthopedic Doctors	-	-	1	-	1
HDh	151	318	78	58	605
Support Staff	131	152	-	-	283
Registered Nurse	1	49	12	23	85
General Doctors	-	1	27	6	34
Enrolled Nurse	1	29	-	-	30
Family Health Workers	2	24	-	-	26
Pharmaceutical Technicians/Assistants	4	21	-	-	25
Laboratory Technicians/Assistants	2	6	10	6	24
Registered Nurse Midwife	1	6	-	12	19
Dispenser	-	14	-	-	14
Community Health Workers	4	9	-	-	13
Pharmacists	1	3	5	-	9

	Local		Expat		
Category	Male	Female	Male	Female	Total
Other Health Workers	-	-	3	1	4
Pediatricians	1	-	2	1	4
Obstetricians and Gynecologists	-	-	2	2	4
Surgeons	-	1	1	1	3
Radiographers	1	-	1	1	3
Anesthesiology	-	-	3	-	3
Dentists	-	1	2	-	3
Physiotherapists	-	-	2	1	3
Dermatologists	-	-	1	1	2
Psychiatrists	-	-	1	1	2
Orthopedic Doctors	-	-	2	-	2
Health Management	1	1	-	-	2
ENT Doctors (Otorhinolaryngologists)	-	-	2	-	2
Ophthalmologists	-	-	1	1	2
Urologists	-	-	1	-	1
Dental Technicians/Assistants	-	1	-	-	1
Speech Pathologists	-	-	-	1	1
Internal medicine (Physicians)	1	-	-	-	1
K	65	151	26	34	276
Support Staff	47	85	-	-	132
Registered Nurse	1	15	4	23	43
General Doctors	1	-	13	1	15
Community Health Workers	9	6	-	-	15
Enrolled Nurse	-	12	-	-	12
Family Health Workers	1	9	-	-	10
Registered Nurse Midwife	-	1	-	8	9
Pharmaceutical Technicians/Assistants	1	7	-	-	8
Enrolled Nurse Midwife	-	7	-	-	7
Dispenser	1	4	-	-	5
Health Management	3	1	-	-	4
Laboratory Scientists	-	1	3	-	4
Pharmacists	-	1	2	-	3
Traditional birth attendants	-	2	-	-	2

	Local		Expat		
Category	Male	Female	Male	Female	Total
Dentists	-	-	1	1	2
Radiographers	1	-	1	-	2
Laboratory Technicians/Assistants	-	-	2	-	2
Internal medicine (Physicians)	-	-	-	1	1
L	119	228	52	56	455
Support Staff	100	107	-	-	207
Registered Nurse	-	40	7	32	79
General Doctors	-	2	17	7	26
Enrolled Nurse	-	21	-	-	21
Dispenser	5	14	-	-	19
Family Health Workers	5	11	-	-	16
Laboratory Technicians/Assistants	1	8	2	4	15
Registered Nurse Midwife	-	4	2	8	14
Community Health Workers	4	8	-	-	12
Pharmaceutical Technicians/Assistants	-	9	1	-	10
Health Management	4	-	-	-	4
Pharmacists	-	1	1	1	3
Dentists	-	-	3	-	3
Enrolled Nurse Midwife	-	3	-	-	3
Obstetricians and Gynecologists	-	-	2	1	3
Pediatricians	-	-	2	1	3
Anesthesiology	-	-	2	-	2
Radiographers	-	-	1	1	2
Surgeons	-	-	2	-	2
Orthopedic Doctors	-	-	2	-	2
Psychiatrists	-	-	2	-	2
ENT Doctors (Otorhinolaryngologists)	-	-	1	-	1
Ophthalmologists	-	-	1	-	1
Dermatologists	-	-	1	-	1
Psychologists	-	-	1	-	1
Physiotherapists	-	-	-	1	1

	Local		Expat		
Category	Male	Female	Male	Female	Total
Internal medicine (Physicians)	-	-	1	-	1
Laboratory Scientists	-	-	1	-	1
Lh	49	127	43	19	238
Support Staff	41	73	-	-	114
Registered Nurse Midwife	-	2	8	15	25
Registered Nurse	-	15	-	-	15
Pharmacists	-	-	11	1	12
General Doctors	-	1	10	1	12
Enrolled Nurse	-	8	-	-	8
Laboratory Technicians/Assistants	-	2	3	2	7
Community Health Workers	2	4	-	-	6
Dispenser	1	5	-	-	6
Family Health Workers	2	4	-	-	6
Enrolled Nurse Midwife	-	4	-	-	4
Pharmaceutical Technicians/Assistants	-	4	-	-	4
Health Management	3	1	-	-	4
Traditional birth attendants	-	3	-	-	3
Radiographers	-	-	2	-	2
Pediatricians	-	-	2	-	2
Obstetricians and Gynecologists	-	-	2	-	2
Anesthesiology	-	-	1	-	1
Physiotherapists	-	1	-	-	1
Surgeons	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Orthopedic Doctors	-	-	1	-	1
Dentists	-	-	1	-	1
M	56	99	27	32	214
Support Staff	44	42	-	-	86
Registered Nurse	-	9	-	13	22
Enrolled Nurse	-	19	-	-	19
Registered Nurse Midwife	-	1	2	15	18
General Doctors	-	-	12	1	13
Family Health Workers	3	9	-	-	12

	Local		Expat		
Category	Male	Female	Male	Female	Total
Pharmaceutical Technicians/Assistants	1	8	-	-	9
Community Health Workers	5	4	-	-	9
Laboratory Technicians/Assistants	-	-	5	1	6
Dispenser	-	4	-	-	4
Radiographers	1	-	-	1	2
Traditional birth attendants	-	2	-	-	2
Health Management	2	-	-	-	2
Pharmacists	-	1	1	-	2
Physiotherapists	-	-	2	-	2
Internal medicine (Physicians)	-	-	-	1	1
Pediatricians	-	-	1	-	1
Surgeons	-	-	1	-	1
Dentists	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Obstetricians and Gynecologists	-	-	1	-	1
GMR	673	2,337	861	543	4,414
Support Staff	423	895	310	20	1,648
Registered Nurse	5	563	132	362	1,062
General Doctors	49	168	40	19	276
Pharmacists	12	33	161	36	242
Laboratory Technicians/Assistants	22	129	36	17	204
Pharmaceutical Technicians/Assistants	25	170	-	2	197
Registered Nurse Midwife	-	70	9	29	108
Enrolled Nurse	3	84	-	1	88
Radiographers	7	3	41	10	61
Health Management	20	18	5	10	53
Dispenser	7	36	-	-	43
Dental Technicians/Assistants	3	30	3	-	36
Obstetricians and Gynecologists	8	21	2	5	36
Other Health Workers	6	15	13	1	35
Internal medicine (Physicians)	21	2	10	-	33

	Local		Expat		
Category	Male	Female	Male	Female	Total
Physiotherapists	3	7	17	6	33
Pediatricians	5	10	12	3	30
Anesthesiology	1	4	15	5	25
Dentists	3	10	8	2	23
Surgeons	8	1	8	-	17
Ophthalmologists	4	6	3	4	17
Orthopedic Doctors	8	1	7	-	16
ENT Doctors (Otorhinolaryngologists)	3	2	6	2	13
Dermatologists	2	9	-	2	13
Laboratory Scientists	-	9	2	1	12
Cardiologists	8	-	4	-	12
Radiologists	-	6	4	1	11
Enrolled Nurse Midwife	-	9	-	-	9
Community Health Workers	1	7	-	-	8
Neurosurgeons/Neurologists	3	-	4	-	7
Psychologists	2	5	-	-	7
Speech Pathologists	-	3	-	3	6
Pulmonologists	4	-	2	-	6
Psychiatrists	1	2	3	-	6
Urologists	2	-	2	-	4
Pathologist	-	2	-	2	4
Counsellors	-	3	-	-	3
Oral & Maxillo Facial Surgery	1	-	1	-	2
Neurology	1	-	1	-	2
Social Workers	-	2	-	-	2
Nephrologist	1	-	-	-	1
Onco Surgery	1	-	-	-	1
Pediatric Cardiology	-	1	-	-	1
Orthodontist	-	1	-	-	1
N	91	131	46	27	295
Support Staff	65	70	-	-	135
Registered Nurse	-	17	3	19	39
Registered Nurse Midwife	3	1	11	5	20
General Doctors	-	-	15	3	18

	Local		Expat		
Category	Male	Female	Male	Female	Total
Community Health Workers	7	8	-	-	15
Dispenser	2	11	-	-	13
Family Health Workers	3	8	-	-	11
Laboratory Technicians/Assistants	3	1	7	-	11
Pharmaceutical Technicians/Assistants	2	5	-	-	7
Health Management	6	-	-	-	6
Pharmacists	-	3	2	-	5
Enrolled Nurse	-	4	-	-	4
Obstetricians and Gynecologists	-	-	2	-	2
Internal medicine (Physicians)	-	-	2	-	2
Enrolled Nurse Midwife	-	1	-	-	1
Surgeons	-	-	1	-	1
Pediatricians	-	-	1	-	1
Anesthesiology	-	-	1	-	1
Traditional birth attendants	-	1	-	-	1
Dental Technicians/Assistants	-	1	-	-	1
Dentists	-	-	1	-	1
R	125	202	76	78	481
Support Staff	96	70	-	-	166
Registered Nurse	4	44	5	22	75
Registered Nurse Midwife	-	4	16	38	58
General Doctors	-	-	18	5	23
Community Health Workers	10	12	-	-	22
Enrolled Nurse	1	19	-	-	20
Laboratory Technicians/Assistants	-	5	7	6	18
Family Health Workers	3	13	-	-	16
Pharmacists	1	5	8	-	14
Health Management	7	6	-	-	13
Dispenser	1	11	-	-	12
Pharmaceutical Technicians/Assistants	2	6	-	-	8
Radiographers	-	1	3	1	5

	Local		Expat		
Category	Male	Female	Male	Female	Total
Enrolled Nurse Midwife	-	4	-	-	4
Pediatricians	-	-	2	1	3
Dentists	-	-	3	-	3
Obstetricians and Gynecologists	-	-	2	1	3
Surgeons	-	-	2	-	2
Orthopedic Doctors	-	-	2	-	2
Ophthalmologists	-	-	2	-	2
Physiotherapists	-	-	1	1	2
Dermatologists	-	-	1	1	2
Psychiatrists	-	-	2	-	2
Traditional birth attendants	-	2	-	-	2
Internal medicine (Physicians)	-	-	1	1	2
ENT Doctors (Otorhinolaryngologists)	-	-	-	1	1
Anesthesiology	-	-	1	-	1
S	154	304	75	40	573
Support Staff	128	96	1	-	225
Registered Nurse	4	98	16	20	138
Enrolled Nurse	3	44	-	-	47
General Doctors	2	7	11	7	27
Pharmaceutical Technicians/Assistants	2	23	-	-	25
Pharmacists	1	1	14	5	21
Laboratory Technicians/Assistants	2	3	7	4	16
Family Health Workers	3	12	-	-	15
Dispenser	-	8	-	-	8
Community Health Workers	3	5	-	-	8
Radiographers	-	1	5	-	6
Dentists	-	1	2	1	4
Physiotherapists	-	-	3	-	3
Registered Nurse Midwife	1	1	-	1	3
Obstetricians and Gynecologists	-	-	2	1	3
Orthopedic Doctors	1	-	2	-	3
Pediatricians	-	1	2	-	3

	Local		Expat		
Category	Male	Female	Male	Female	Total
Anesthesiology	-	-	2	-	2
Health Management	2	-	-	-	2
Dermatologists	-	-	2	-	2
Dental Technicians/Assistants	-	2	-	-	2
Surgeons	-	-	2	-	2
Internal medicine (Physicians)	1	-	1	-	2
Psychiatrists	-	-	2	-	2
Ophthalmologists	-	-	-	1	1
Urologists	1	-	-	-	1
Cardiologists	-	-	1	-	1
ENT Doctors (Otorhinolaryngologists)	-	1	-	-	1
Sh	126	227	47	36	436
Support Staff	102	107	-	-	209
Registered Nurse	5	30	9	16	60
General Doctors	-	-	18	8	26
Dispenser	2	21	-	-	23
Enrolled Nurse	1	22	-	-	23
Family Health Workers	4	13	1	2	20
Laboratory Technicians/Assistants	2	3	5	6	16
Pharmaceutical Technicians/Assistants	-	14	-	-	14
Registered Nurse Midwife	-	7	1	4	12
Community Health Workers	7	3	-	-	10
Pharmacists	-	3	1	-	4
Health Management	3	-	-	-	3
Obstetricians and Gynecologists	-	-	3	-	3
Pediatricians	-	-	3	-	3
Traditional birth attendants	-	2	-	-	2
Radiographers	-	-	2	-	2
Surgeons	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
Traditional Medicine Practitioners	-	1	-	-	1
Anesthesiology	-	-	1	-	1

	Local		Expat		
Category	Male	Female	Male	Female	Total
Dentists	-	-	1	-	1
Dental Technicians/Assistants	-	1	-	-	1
Th	109	204	44	40	397
Support Staff	91	105	-	-	196
Registered Nurse	-	26	4	12	42
Registered Nurse Midwife	-	7	7	22	36
General Doctors	-	-	20	2	22
Pharmaceutical Technicians/Assistants	4	15	-	-	19
Family Health Workers	2	12	-	-	14
Enrolled Nurse	-	13	-	-	13
Laboratory Technicians/Assistants	3	3	5	1	12
Community Health Workers	3	9	-	-	12
Dispenser	2	8	-	1	11
Environmental and Public Health Workers	1	2	-	-	3
Radiographers	1	-	2	-	3
Traditional birth attendants	-	3	-	-	3
Obstetricians and Gynecologists	-	-	1	1	2
Dental Technicians/Assistants	-	1	1	-	2
Other Health Workers	1	-	-	-	1
Dentists	-	-	-	1	1
Pediatricians	-	-	1	-	1
Surgeons	-	-	1	-	1
Health Management	1	-	-	-	1
Anesthesiology	-	-	1	-	1
Internal medicine (Physicians)	-	-	1	-	1
V	15	26	15	19	75
Registered Nurse	-	3	3	17	23
Support Staff	11	11	-	-	22
General Doctors	-	-	7	1	8
Dispenser	-	4	-	-	4
Pharmaceutical Technicians/Assistants	-	3	-	-	3

	Local		Expat		
Category	Male	Female	Male	Female	Total
Family Health Workers	1	2	-	-	3
Laboratory Technicians/Assistants	-	1	1	1	3
Community Health Workers	2	-	-	-	2
Enrolled Nurse	-	2	-	-	2
Health Management	1	-	-	-	1
Radiographers	-	-	1	-	1
Pediatricians	-	-	1	-	1
Obstetricians and Gynecologists	-	-	1	-	1
Pharmacists	-	-	1	-	1
Grand Total	**2,335**	**5,757**	**1,711**	**1,290**	**11,093**

Table 1-17: Health professionals employed by public or private sector (excluding pharmacists), 2020

Location/profession	Private	Public	Total
AA		205	205
Allied health professionals		21	21
Community Health Workers		5	5
Family Health Workers		7	7
Traditional birth attendants		1	1
Laboratory Technicians/Assistants		7	7
Radiographers		1	1
Medical professionals		19	19
Internal medicine (Physicians)		1	1
Anesthesiology		1	1
General Doctors		15	15
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		112	112
Support Staff		112	112
Nurses		53	53
Enrolled Nurse		7	7
Enrolled Nurse Midwife		1	1
Registered Nurse		37	37

Location/profession	Private	Public	Total
Registered Nurse Midwife		8	8
ADh		276	276
Allied health professionals		40	40
Community Health Workers		16	16
Family Health Workers		9	9
Traditional birth attendants		4	4
Laboratory Technicians/Assistants		9	9
Radiographers		2	2
Medical professionals		20	20
Anesthesiology		1	1
General Doctors		17	17
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		144	144
Health Management		7	7
Support Staff		137	137
Nurses		72	72
Enrolled Nurse		29	29
Registered Nurse		21	21
Registered Nurse Midwife		22	22
B		306	306
Allied health professionals		50	50
Community Health Workers		18	18
Dental Technicians/Assistants		1	1
Family Health Workers		13	13
Laboratory Scientists		1	1
Pharmaceutical Technicians/Assistants		2	2
Traditional birth attendants		4	4
Laboratory Technicians/Assistants		8	8
Other Health Workers		1	1
Radiographers		2	2
Medical professionals		26	26
Internal medicine (Physicians)		1	1
Orthopedic Doctors		1	1
Surgeons		1	1
Anesthesiology		1	1

Location/profession	Private	Public	Total
General Doctors		19	19
Obstetricians and Gynaecologists		2	2
Pediatricians		1	1
Non-medical staff		157	157
Health Management		3	3
Support Staff		154	154
Nurses		73	73
Enrolled Nurse		25	25
Enrolled Nurse Midwife		2	2
Registered Nurse		29	29
Registered Nurse Midwife		17	17
Dh		175	175
Allied health professionals		28	28
Community Health Workers		9	9
Family Health Workers		7	7
Traditional birth attendants		2	2
Dentists		1	1
Laboratory Technicians/Assistants		8	8
Radiographers		1	1
Medical professionals		15	15
Internal medicine (Physicians)		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		10	10
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		88	88
Support Staff		88	88
Nurses		44	44
Enrolled Nurse		3	3
Enrolled Nurse Midwife		5	5
Registered Nurse		34	34
Registered Nurse Midwife		2	2
F		196	196
Allied health professionals		28	28
Community Health Workers		7	7

Location/profession	Private	Public	Total
Dental Technicians/Assistants		1	1
Family Health Workers		9	9
Traditional birth attendants		2	2
Dentists		1	1
Laboratory Technicians/Assistants		6	6
Radiographers		2	2
Medical professionals		15	15
Internal medicine (Physicians)		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		10	10
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		101	101
Health Management		3	3
Support Staff		98	98
Nurses		52	52
Enrolled Nurse		14	14
Registered Nurse		32	32
Registered Nurse Midwife		6	6
GA		336	336
Allied health professionals		37	37
Community Health Workers		8	8
Family Health Workers		7	7
Traditional birth attendants		3	3
Dentists		2	2
Laboratory Technicians/Assistants		14	14
Physiotherapists		1	1
Radiographers		2	2
Medical professionals		34	34
Internal medicine (Physicians)		1	1
Orthopedic Doctors		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		25	25
Obstetricians and Gynaecologists		2	2

Location/profession	Private	Public	Total
Pediatricians		3	3
Non-medical staff		162	162
Health Management		9	9
Support Staff		153	153
Nurses		103	103
Enrolled Nurse		14	14
Enrolled Nurse Midwife		2	2
Registered Nurse		61	61
Registered Nurse Midwife		26	26
GDh		467	467
Allied health professionals		50	50
Community Health Workers		10	10
Family Health Workers		9	9
Pharmacists		1	1
Traditional birth attendants		1	1
Dentists		2	2
Laboratory Technicians/Assistants		21	21
Physiotherapists		3	3
Radiographers		3	3
Medical professionals		37	37
Orthopedic Doctors		2	2
Pulmonologists		2	2
Surgeons		2	2
Anesthesiology		2	2
ENT Doctors (Otorhinolaryngologists)		1	1
General Doctors		22	22
Obstetricians and Gynaecologists		3	3
Pediatricians		3	3
Non-medical staff		242	242
Health Management		3	3
Support Staff		239	239
Nurses		138	138
Enrolled Nurse		23	23
Registered Nurse		88	88
Registered Nurse Midwife		27	27
Gn		135	135

Location/profession	Private	Public	Total
Allied health professionals		16	16
Community Health Workers		4	4
Family Health Workers		3	3
Dentists		1	1
Laboratory Technicians/Assistants		5	5
Physiotherapists		1	1
Radiographers		2	2
Medical professionals		17	17
Internal medicine (Physicians)		1	1
Ophthalmologists		1	1
Orthopedic Doctors		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		8	8
Obstetricians and Gynaecologists		2	2
Pediatricians		2	2
Non-medical staff		65	65
Health Management		2	2
Support Staff		63	63
Nurses		37	37
Enrolled Nurse		12	12
Enrolled Nurse Midwife		1	1
Registered Nurse		19	19
Registered Nurse Midwife		5	5
HA		358	358
Allied health professionals		54	54
Community Health Workers		15	15
Family Health Workers		14	14
Traditional birth attendants		2	2
Dentists		1	1
Laboratory Technicians/Assistants		15	15
Other Health Workers		4	4
Physiotherapists		1	1
Radiographers		2	2
Medical professionals		33	33
Internal medicine (Physicians)		1	1

Location/profession	Private	Public	Total
Orthopedic Doctors		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		25	25
Obstetricians and Gynaecologists		2	2
Pediatricians		2	2
Non-medical staff		176	176
Health Management		6	6
Support Staff		170	170
Nurses		95	95
Enrolled Nurse		9	9
Registered Nurse		53	53
Registered Nurse Midwife		33	33
HDh		561	561
Allied health professionals		82	82
Community Health Workers		13	13
Dental Technicians/Assistants		1	1
Family Health Workers		26	26
Pharmaceutical Technicians/Assistants		1	1
Pharmacists		3	3
Speech Pathologists		1	1
Dentists		3	3
Laboratory Technicians/Assistants		24	24
Other Health Workers		4	4
Physiotherapists		3	3
Radiographers		3	3
Medical professionals		60	60
Internal medicine (Physicians)		1	1
Ophthalmologists		2	2
Orthopedic Doctors		2	2
Psychiatrists		2	2
Surgeons		3	3
Urologists		1	1
Anesthesiology		3	3
Dermatologists		2	2
ENT Doctors (Otorhinolaryngologists)		2	2

Location/profession	Private	Public	Total
General Doctors		34	34
Obstetricians and Gynaecologists		4	4
Pediatricians		4	4
Non-medical staff		285	285
Health Management		2	2
Support Staff		283	283
Nurses		134	134
Enrolled Nurse		30	30
Registered Nurse		85	85
Registered Nurse Midwife		19	19
K		260	260
Allied health professionals		37	37
Community Health Workers		15	15
Family Health Workers		10	10
Laboratory Scientists		4	4
Traditional birth attendants		2	2
Dentists		2	2
Laboratory Technicians/Assistants		2	2
Radiographers		2	2
Medical professionals		16	16
Internal medicine (Physicians)		1	1
General Doctors		15	15
Non-medical staff		136	136
Health Management		4	4
Support Staff		132	132
Nurses		71	71
Enrolled Nurse		12	12
Enrolled Nurse Midwife		7	7
Registered Nurse		43	43
Registered Nurse Midwife		9	9
L		425	425
Allied health professionals		53	53
Community Health Workers		12	12
Family Health Workers		16	16
Laboratory Scientists		1	1
Pharmaceutical Technicians/Assistants		1	1

Location/profession	Private	Public	Total
Pharmacists		1	1
Psychologists		1	1
Dentists		3	3
Laboratory Technicians/Assistants		15	15
Physiotherapists		1	1
Radiographers		2	2
Medical professionals		44	44
Internal medicine (Physicians)		1	1
Ophthalmologists		1	1
Orthopedic Doctors		2	2
Psychiatrists		2	2
Surgeons		2	2
Anesthesiology		2	2
Dermatologists		1	1
ENT Doctors (Otorhinolaryngologists)		1	1
General Doctors		26	26
Obstetricians and Gynaecologists		3	3
Pediatricians		3	3
Non-medical staff		211	211
Health Management		4	4
Support Staff		207	207
Nurses		117	117
Enrolled Nurse		21	21
Enrolled Nurse Midwife		3	3
Registered Nurse		79	79
Registered Nurse Midwife		14	14
Lh		216	216
Allied health professionals		26	26
Community Health Workers		6	6
Family Health Workers		6	6
Traditional birth attendants		3	3
Dentists		1	1
Laboratory Technicians/Assistants		7	7
Physiotherapists		1	1
Radiographers		2	2
Medical professionals		20	20

Location/profession	Private	Public	Total
Internal medicine (Physicians)		1	1
Orthopedic Doctors		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		12	12
Obstetricians and Gynaecologists		2	2
Pediatricians		2	2
Non-medical staff		118	118
Health Management		4	4
Support Staff		114	114
Nurses		52	52
Enrolled Nurse		8	8
Enrolled Nurse Midwife		4	4
Registered Nurse		15	15
Registered Nurse Midwife		25	25
M		199	199
Allied health professionals		34	34
Community Health Workers		9	9
Family Health Workers		12	12
Traditional birth attendants		2	2
Dentists		1	1
Laboratory Technicians/Assistants		6	6
Physiotherapists		2	2
Radiographers		2	2
Medical professionals		18	18
Internal medicine (Physicians)		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		13	13
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		88	88
Health Management		2	2
Support Staff		86	86
Nurses		59	59
Enrolled Nurse		19	19

Location/profession	Private	Public	Total
Registered Nurse		22	22
Registered Nurse Midwife		18	18
GMR	1,215	2,747	3,962
Allied health professionals	168	307	475
Community Health Workers		8	8
Dental Technicians/Assistants	11	25	36
Laboratory Scientists	1	11	12
Pharmacists	19	11	30
Psychologists		7	7
Speech Pathologists	2	4	6
Dentists	6	17	23
Laboratory Technicians/Assistants	78	126	204
Other Health Workers	17	18	35
Physiotherapists	10	23	33
Radiographers	24	37	61
Pathologist		4	4
Counsellors		3	3
Social Workers		2	2
Radiologists		11	11
Medical professionals	125	394	519
Internal medicine (Physicians)	7	26	33
Neurosurgeons/Neurologists	5	2	7
Ophthalmologists	4	13	17
Orthopedic Doctors	4	12	16
Psychiatrists		6	6
Pulmonologists	2	4	6
Surgeons	5	12	17
Urologists	2	2	4
Anesthesiology	10	15	25
Cardiologists	6	6	12
Dermatologists	4	9	13
ENT Doctors (Otorhinolaryngologists)	3	10	13
General Doctors	54	222	276
Obstetricians and Gynaecologists	10	26	36
Pediatricians	9	21	30
Onco Surgery		1	1

Location/profession	Private	Public	Total
Nephrologist		1	1
Neurology		2	2
Oral & Maxillo Facial Surgery		2	2
Peadiatric Cardiology		1	1
Orthodontistry		1	1
Non-medical staff	625	1,076	1,701
Health Management	24	29	53
Support Staff	601	1,047	1,648
Nurses	297	970	1,267
Enrolled Nurse	15	73	88
Enrolled Nurse Midwife	1	8	9
Registered Nurse	273	789	1,062
Registered Nurse Midwife	8	100	108
N		272	272
Allied health professionals		42	42
Community Health Workers		15	15
Dental Technicians/Assistants		1	1
Family Health Workers		11	11
Pharmacists		2	2
Traditional birth attendants		1	1
Dentists		1	1
Laboratory Technicians/Assistants		11	11
Medical professionals		25	25
Internal medicine (Physicians)		2	2
Surgeons		1	1
Anesthesiology		1	1
General Doctors		18	18
Obstetricians and Gynaecologists		2	2
Pediatricians		1	1
Non-medical staff		141	141
Health Management		6	6
Support Staff		135	135
Nurses		64	64
Enrolled Nurse		4	4
Enrolled Nurse Midwife		1	1
Registered Nurse		39	39

Location/profession	Private	Public	Total
Registered Nurse Midwife		20	20
R		448	448
Allied health professionals		69	69
Community Health Workers		22	22
Family Health Workers		16	16
Pharmacists		1	1
Traditional birth attendants		2	2
Dentists		3	3
Laboratory Technicians/Assistants		18	18
Physiotherapists		2	2
Radiographers		5	5
Medical professionals		43	43
Internal medicine (Physicians)		2	2
Ophthalmologists		2	2
Orthopedic Doctors		2	2
Psychiatrists		2	2
Surgeons		2	2
Anesthesiology		1	1
Dermatologists		2	2
ENT Doctors (Otorhinolaryngologists)		1	1
General Doctors		23	23
Obstetricians and Gynaecologists		3	3
Pediatricians		3	3
Non-medical staff		179	179
Health Management		13	13
Support Staff		166	166
Nurses		157	157
Enrolled Nurse		20	20
Enrolled Nurse Midwife		4	4
Registered Nurse		75	75
Registered Nurse Midwife		58	58
S	30	493	523
Allied health professionals	7	51	58
Community Health Workers		8	8
Dental Technicians/Assistants	1	1	2
Family Health Workers		15	15

Location/profession	Private	Public	Total
Pharmaceutical Technicians/Assistants	1		1
Pharmacists	1	2	3
Dentists	1	3	4
Laboratory Technicians/Assistants	2	14	16
Physiotherapists		3	3
Radiographers	1	5	6
Medical professionals	5	45	50
Internal medicine (Physicians)	1	1	2
Ophthalmologists		1	1
Orthopedic Doctors		3	3
Psychiatrists		2	2
Surgeons		2	2
Urologists		1	1
Anesthesiology	1	1	2
Cardiologists		1	1
Dermatologists		2	2
ENT Doctors (Otorhinolaryngologists)		1	1
General Doctors	1	26	27
Obstetricians and Gynaecologists	1	2	3
Pediatricians	1	2	3
Non-medical staff	6	221	227
Health Management		2	2
Support Staff	6	219	225
Nurses	12	176	188
Enrolled Nurse	3	44	47
Registered Nurse	8	130	138
Registered Nurse Midwife	1	2	3
Sh		395	395
Allied health professionals		53	53
Community Health Workers		10	10
Dental Technicians/Assistants		1	1
Family Health Workers		20	20
Traditional birth attendants		2	2
Traditional Medicine Practitioners		1	1
Dentists		1	1
Laboratory Technicians/Assistants		16	16

Location/profession	Private	Public	Total
Radiographers		2	2
Medical professionals		35	35
Internal medicine (Physicians)		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		26	26
Obstetricians and Gynaecologists		3	3
Pediatricians		3	3
Non-medical staff		212	212
Health Management		3	3
Support Staff		209	209
Nurses		95	95
Enrolled Nurse		23	23
Registered Nurse		60	60
Registered Nurse Midwife		12	12
Th		369	369
Allied health professionals		53	53
Community Health Workers		12	12
Dental Technicians/Assistants		2	2
Environmental and Public Health Workers		3	3
Family Health Workers		14	14
Pharmaceutical Technicians/Assistants		2	2
Traditional birth attendants		3	3
Dentists		1	1
Laboratory Technicians/Assistants		12	12
Other Health Workers		1	1
Radiographers		3	3
Medical professionals		28	28
Internal medicine (Physicians)		1	1
Surgeons		1	1
Anesthesiology		1	1
General Doctors		22	22
Obstetricians and Gynaecologists		2	2
Pediatricians		1	1
Non-medical staff		197	197
Health Management		1	1

Location/profession	Private	Public	Total
Support Staff		196	196
Nurses		91	91
Enrolled Nurse		13	13
Registered Nurse		42	42
Registered Nurse Midwife		36	36
V		67	67
Allied health professionals		9	9
Community Health Workers		2	2
Family Health Workers		3	3
Laboratory Technicians/Assistants		3	3
Radiographers		1	1
Medical professionals		10	10
General Doctors		8	8
Obstetricians and Gynaecologists		1	1
Pediatricians		1	1
Non-medical staff		23	23
Health Management		1	1
Support Staff		22	22
Nurses		25	25
Enrolled Nurse		2	2
Registered Nurse		23	23
Grand Total	**1,245**	**8,906**	**10,151**

Table 1-18: Top 20 in terms of quantity (units) imported drugs, 2020

#	Product name	Generic Name	Category	Dosage Form	Strength	Quantity (Units)	Indication
1	Diabetmin	Metformin Hcl	Antidiabetic	Tablet	500mg BP	101,794,900	High Blood sugar
2	RL (Ringer's Lactate)	Compound Sodium Lactate Intravenous Infusion	Electrolytes	Injection	500ml	82,182,708	Crystalloid Fluid: used for dehydration, blood loss, burn
3	NS (Normal Saline)	Sodium Chloride	Electrolytes	Injection	0.9%w/v in 500 ml	20,695,693	Crystalloid Fluid: used for dehydration, blood loss, burn
4	Panadol	N-acetyl-P-aminophenol (Paracetamol Ph.Eur)	Antipyretic	Tablet	500mg	8,372,868	Fever/pain
5	Uphamol	Paracetamol	Antipyretic	Tablet	650 mg	2,160,540	Fever/pain
6	Thyronorm	Thyroxine	Hypothyroidism	Tablet	100mcg	7,964,920	Replacing thyroid hormone (hypothyroidism)
7	Thyronorm 50 mcg	Thyroxine	Antipyretic	Tablet	50mcg	3,829,490	Replacing thyroid hormone (hypothyroidism)
8	Thyronorm 25 mcg	Thyroxine	Antipyretic	Tablet	25 mcg	3,418,770	Replacing thyroid hormone (hypothyroidism)
9	Montef	Montelukast	leukotriene receptor antagonists (LTRAs) /Antihistamine	Tablet	10mg	6,222,688	Sneezing/Asthma/ Runny nose
10	Valparin	Sodium Valporate	Anticonvulsant	Tablet	200mg BP	4,727,040	generalized epilepsy/seizures
11	Neurovit Fofrte	Vitamin B1 + Vitamin B6 + Vitamin B12	Cyanocobalamin and analogues	Tablet	242.5 mg+250 mg+ 1 mg	4,500,000	Nutritional vitamin B1, B6 and B12 deficiencies

#	Product name	Generic Name	Category	Dosage Form	Strength	Quantity (Units)	Indication
12	Neurobion Forte	Thiamine Mononitrate IP + Riboflavine IP + Pyridoxine Hydrochloride IP + Cyanocobalamin Triturate in Gelatine EQV. Cyanocobalamin IP + Nicotinamide IP + Calcium Pantothenate IP	Multivitamin supplement	Tablet	10mg + 10mg + 3mg + 15mcg + 45mg + 50mg	3,827,763	Vitamin B deficiency treatment.
13	Ultigra 180	Fexofenadine	Antihistamine	Tablet	180mg	3,288,116	Allergies, runny nose/itching/sneezing
14	Ecosprin 75	Acetylsalicylic Acid (Aspirin)	NSAID	Extended-Release Tablet	75mg	3,138,562	Heart attack/stroke/pain & inflammation
15	Dompan OD	Domperidone Bp + Pantoprazole Usp	Proton Pump inhibitor	Tablet	30 mg (in SR form) (BP) + 40 mg (USP)	2,746,330	Stomach ulcer/heart burn
16	Wysolone	Prednisolone	Corticosteroids	Tablet (Dispersible)	20 mg	2,453,655	Allergies, joint inflammation (arthritis), breathing problems (e.g., asthma)
17	Evion 400	Tocopheryl Acetate (Vitamin E)	Antioxidant	Capsule	400mg	2,415,430	Low weight/Osteoarthritis
18	Levipil	Levipil	Anticonvulsant	Tablet	500mg	2,363,620	seizures (fit)
19	Pantaz	Pantoprazole	Proton Pump inhibitor	Tablet	40mg	2,289,304	Stomach ulcer/heart burn/indigestion
20	Fludac	Fluoxetine	Antidepressant	Capsule	20mg	1,943,700	Panic disorder/dizziness /obsessive-compulsive disorder (OCD)/bulimia nervosa (eating disorder)/major depressive disorder

NATALITY

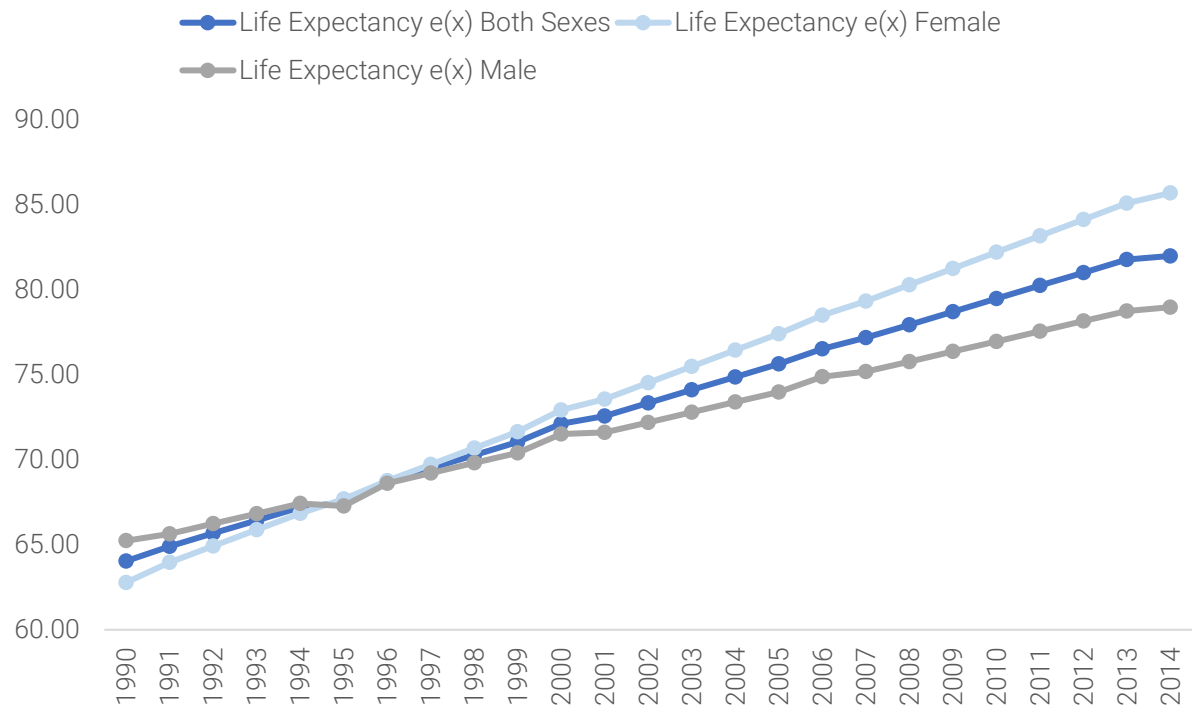
2.1 LIFE EXPECTANCY AT BIRTH

Applying the WHO definition of life expectancy at birth (World Health Organisation 2021), a Maldivian born in 2014 can be expected to live around 82 years, while girl who was born in the year 2014 can be expected to live to around 85-86 years and a Maldivian boy who was born in the same year can be expected to live to around 79 years.

Life Expectancy at Birth

The average number of years that a newborn could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area.

Figure 2-1: Life expectancy at birth 1990-2014



Although in 1990[5], a Maldivian boy who was born that year was expected to live 2.5 years longer than a Maldivian girl born in the same year, a change in this trend can be observed over the years that followed. At present, a Maldivian girl born in a particular year can be expected to live 6-7 years longer than a Maldivian boy born in the same year.

[5]Data source: Maldives Bureau of Statistics (MBS).

2.2 BIRTHS

2.2.1 CRUDE BIRTHTH RATE

Over the past 10 years, Maldives has experienced a declining Crude Birth Rate (CBR) (World Health Organisation 2018), from 2012 with 23 live births per 1000 population and since then started declining with the lowest being in 17 live births per 1000 population in 2019 and in 2020

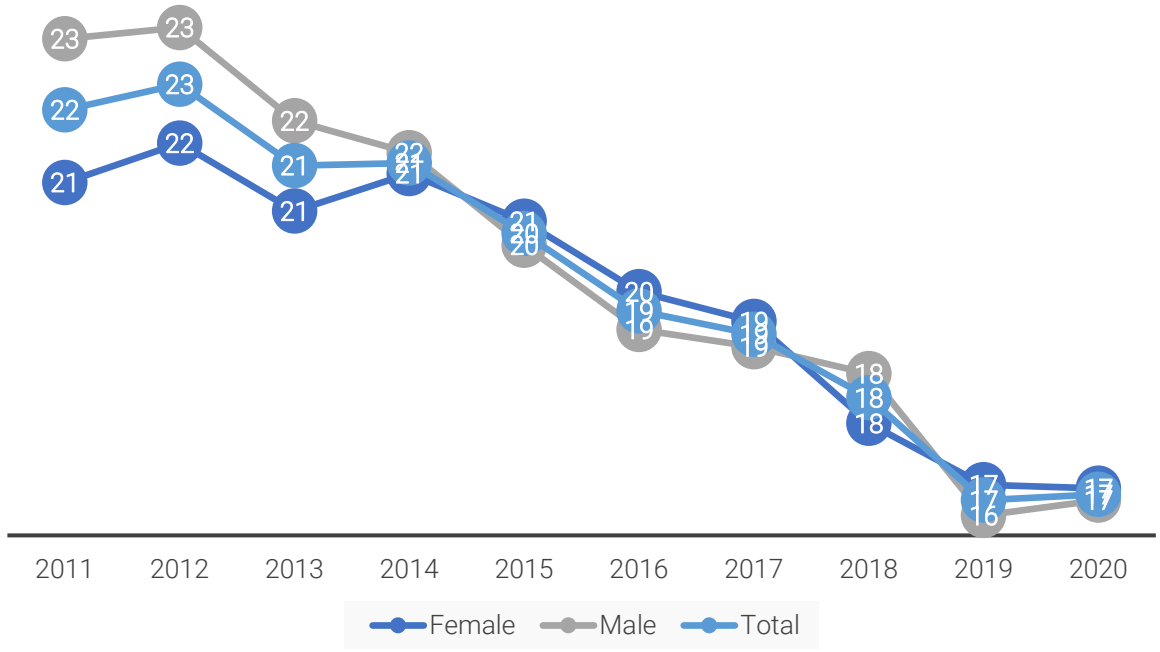
Crude Birth Rate (CBR)

The crude birth rate is the annual number of live births per 1,000 population. The crude birth rate is generally computed as a ratio

Equation 2-1: Crude Birth Rate

$$CBR = \frac{Total\ number\ of\ live\ births\ in\ a\ given\ year}{Mid\ year\ population\ for\ the\ same\ year}\ x\ 1{,}000$$

Figure 2-2: CBR for 2011 – 2020

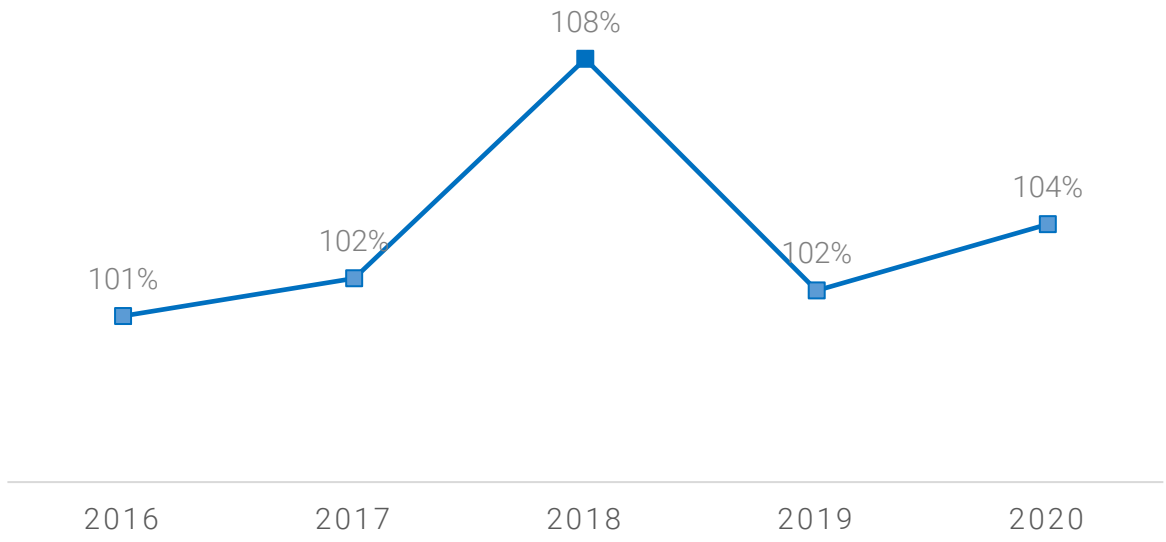


2.2.2 SEX RATIO AT BIRTH

The sex ratio is the ratio of males to females in a given population (World Health Organisation 2021), expressed as the number of males for every 100 females. The sex ratio at birth is the ratio of male to female babies born. Sex ratios over 100 indicate that there are more males than females, and sex ratios under 100 indicate more females than males. Thus, we see than almost every year the sex ratio is higher than 100, proving that there are more males in our population than females.

$$Sex\ ratio = \frac{Number\ of\ male\ births}{Number\ of\ femal\ births}\ x\ 100$$

Figure 2-3: Sex Ratio at Birth, 2016-2020



2.2.3 TOTAL BIRTHS

The total births over the years have been reducing.

Table 2-1: Total births by type from 2016 - 2020

Location	2016	2017	2018	2019	2020
Maldives	6,723	6,681	6,549	6,318	6,438
GMR	4,369	4,302	4,364	4,359	3,203
Atolls	2,354	2,379	2,185	1,959	3,235
Abroad	338	349	259	32	78
Abroad	338	349	259	32	78
Grand Total	**7,061**	**7,030**	**6,808**	**6,350**	**6,516**

2.2.3.1 LIVE BIRTHS

Over the last 5 years it can be seen that almost 97% of births were livebirths (World Health Organisation 2021) in Maldives.

Table 2-2: Number of livebirths, 2016-2020

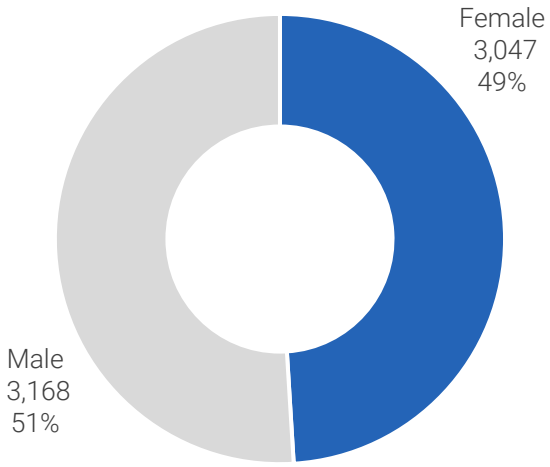
Live Births	In Numbers	In Per cent
2016	6,792	96%
2017	6,798	97%
2018	6,586	97%
2019	6,153	97%
2020	6,293	97%

Live Birth

The WHO defines a live birth as the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g., beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

Out of total livebirths (6,293), 6,215 livebirths occurred in Maldives, and can be seen that almost 51% were males in 2020.

Figure 2-4: Live births in Maldives by gender, 2020



2.2.3.2 ABORTIONS/ MISCARRIAGES

Over the last 5 years it can be seen that less than 3% of births were abortions or miscarriages (Department of National Registration 2013, Department of National Registration 2013) in Maldives.

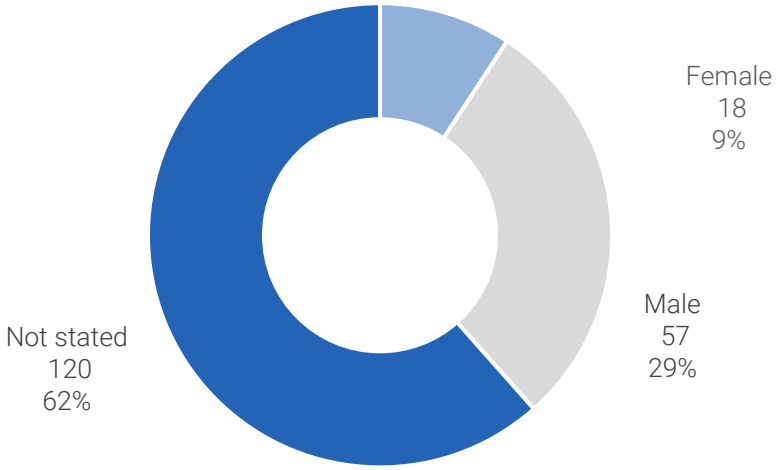
Abortions/ Miscarriages

A baby born with less than 28 weeks of gestation (born with no sign of life).

Table 2-3: Number of livebirths, 2016-2020

Abortions/ Miscarriages	In Numbers	In Per cent
2016	228	3.2%
2017	201	2.9%
2018	199	2.9%
2019	158	2.5%
2020	194	3.0%

Figure 2-5: Abortions/miscarriages in Maldives by gender, 2020



Out of total miscarriage/abortions, in 62% gender of the foetus were not identified in 2020.

2.2.3.3 STILLBIRTHS

Over the last 5 years it can be seen that less than 1% of births were stillbirths (World Health Organisation 2021) in Maldives.

Stillbirths

A baby who dies after 28 weeks of pregnancy, but before or during birth, is classified as a stillbirth.

Table 2-4: Number of livebirths, 2016-2020

Stillbirths	In Numbers	In Per cent
2016	41	0.6%
2017	31	0.4%
2018	23	0.3%
2019	39	0.6%
2020	29	0.5%

Figure 2-6: Stillbirths in Maldives by gender, 2020

Out of total stillbirths, 52% of babies were females in 2020.

2.2.4 GEOGRAPHIC LOCATION

There were almost equal number of births in GMR (50%) and in atolls (49%) with 1% of livebirths occurring abroad. However, it can be seen that highest number of abortions (149) and stillbirths (17) occurred in atolls in 2020.

Figure 2-7: Livebirths by location, 2020

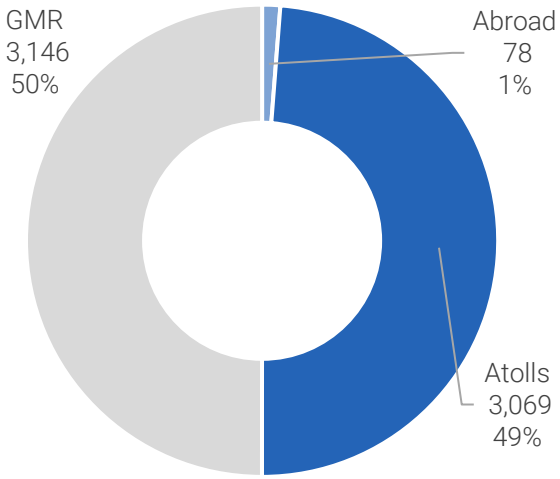
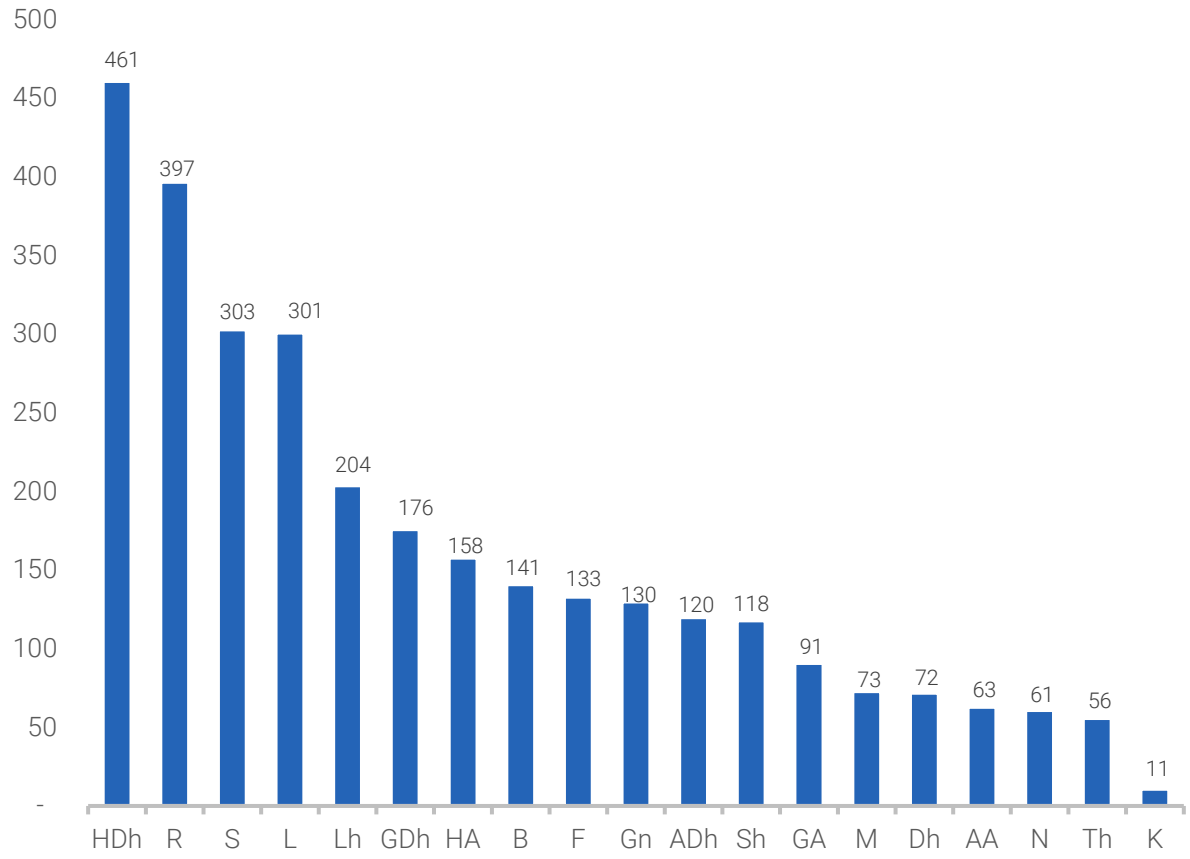


Table 2-5: Births by type and location, 2020

Birth Type	Abroad	Atolls	GMR	Total
a. Live Birth	78	3,069	3,146	6,293
b. Abortion		149	45	194
c. Stillbirth		17	12	29
Total	**78**	**3,235**	**3,203**	**6,516**

Excluding GMR and births that happened abroad, it can be seen that the highest number of livebirths occurred in HDh, R and S atoll.

Figure 2-8: Livebirths by atolls, 2020



2.3 MODE OF DELIVERY

For all types of births (live births, stillbirths and abortions/miscarriages), half of the deliveries were caesarian section (50.3%) followed by vaginal deliveries (49.5%) in the Maldives in 2020.

Table 2-6: Mode of delivery by type of birth, 2020

Delivery Mode	a. Live Birth	b. Abortion	c. Stillbirth	Grand Total
Caesarian	3,225	1	15	3,241
Emergency	1,810	1	10	1,821
Elective	1,415		5	1,420
Vaginal Delivery	2,990	183	14	3,187
Spontaneous	2,477	140	8	2,625
Assisted	513	43	6	562
Not stated		10		10
Not stated		10		10
Grand Total	**6,215**	**194**	**29**	**6,438**

Cesarean birth increased over the years from 46% in 2016 to 52% in 2020 in Maldives (excluding births abroad). Of this 52%, about half (23% in 2020) women underwent elective caesarean.

- had elective caesarean (23%)
- required an emergency caesarean section (29%)

More than half of live births in Maldives are delivered by Cesarean section in 2020.

Figure 2-9: Livebirths by type of delivery, 2020

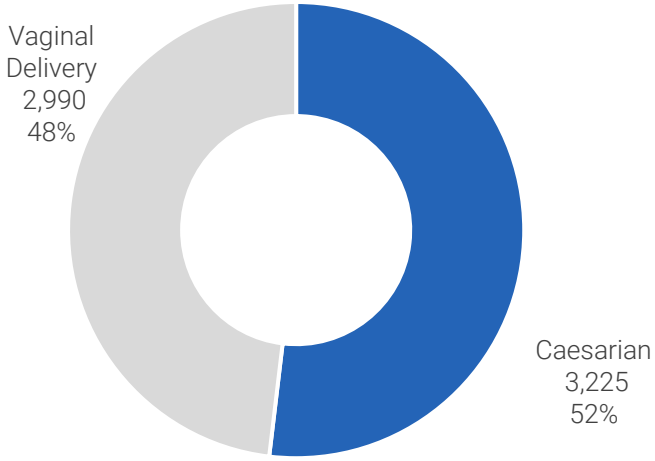
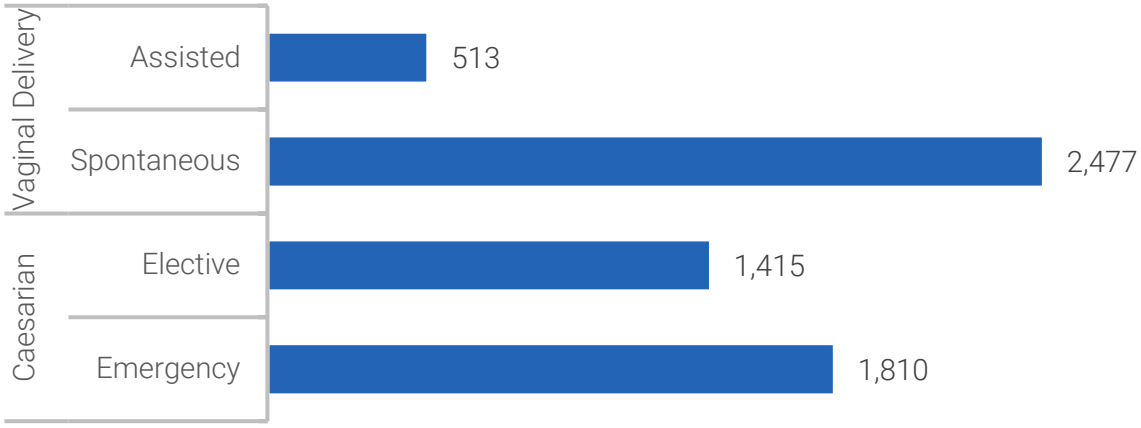


Figure 2-10: Livebirths by delivery mode, 2020



2.3.1 BY PLACE/FACILITY OF BIRTH

More than 99% of the births occurred at a health facility in the Maldives irrespective of type of birth or location of birth. For all live births it can be seen that over the years, vaginal deliveries in health facilities decreased as caesarian section deliveries increased over the years.

Table 2-7: Type of delivery by location of delivery, 2016-2020

Row Labels	2016	2017	2018	2019	2020
Health Facility	100%	100%	100%	100%	100%
Vaginal Delivery	55%	53%	53%	50%	48%
Caesarian	45%	47%	47%	50%	52%
Not stated	0%	0%	0%	0%	0%
Outside a Health Facility	0%	0%	0%	0%	0%
Vaginal Delivery	0%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Although, a quarter of livebirths occurred in private health facilities in 2020, it can be seen the two private tertiary hospitals in Maldives took the second highest number (1,552) of live births in 2020.

1 in 4 livebirths occurred in a private health facility

Figure 2-11: Livebirths occurred in a health facility by location, type of facility and type of delivery in Maldives, 2020

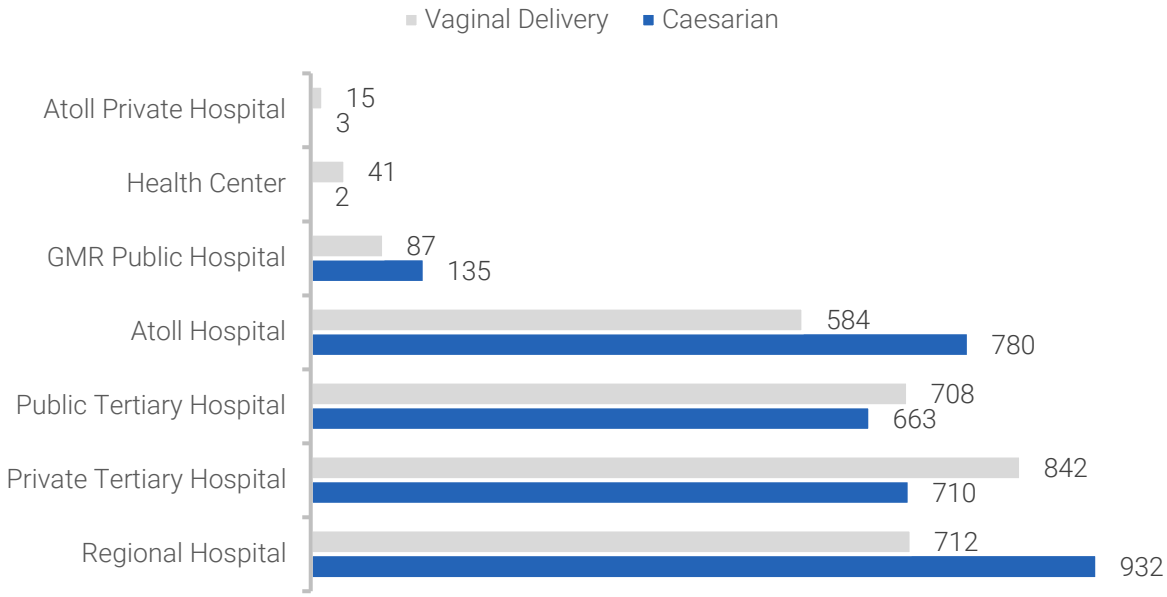
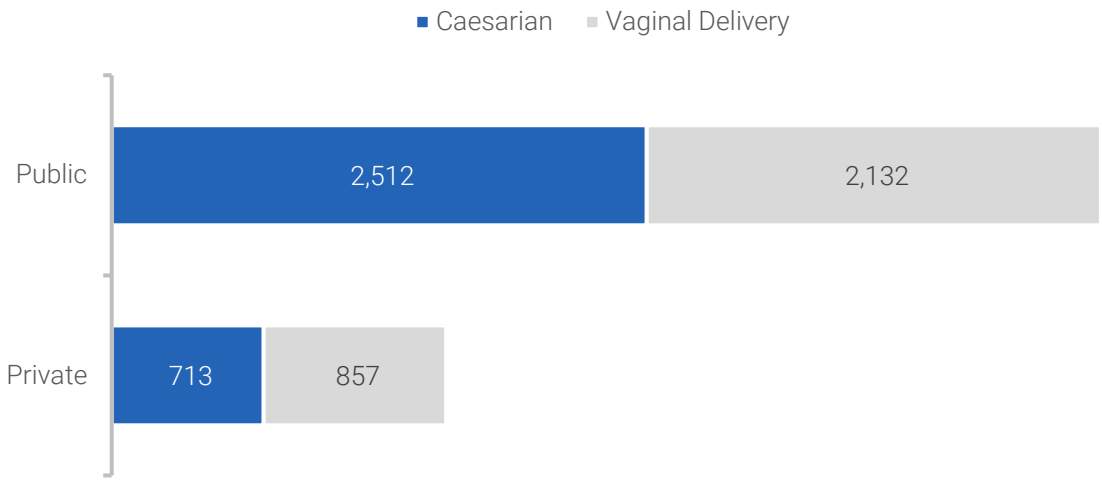


Figure 2-12: Livebirths by type of delivery and type of health facility, 2020



2.3.2 BIRTH ATTENDANT

Maternal and newborn health professionals are an important cadre in health service. The 'proportion of births delivered by skilled birth attendants' is a key indicator for achieving SDG targets 3.1.(By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births) (Maldives Bureau of Statistics 2018). In the measurement of skilled birth attendants' attendants who are able to correctly manage common obstetric and neonatal complications is selected and includes medical doctors, nurses and community health workers who have had midwifery training in preservice training. In Maldives (excluding births abroad), the percentage of birth attendants trained in midwifery has been above 99% for all types of birth outcomes in the past 5 years.

SDG Indicator 3.1.2: Proportion of births attended by skilled health personnel

Proportion of births attended by skilled health personnel (generally doctors, nurses or midwives but can refer to other health professionals providing childbirth care) is the proportion of childbirths attended by professional health personnel.

Figure 2-13: Birth attendants with midwifery training status for live births in Maldives, 2020

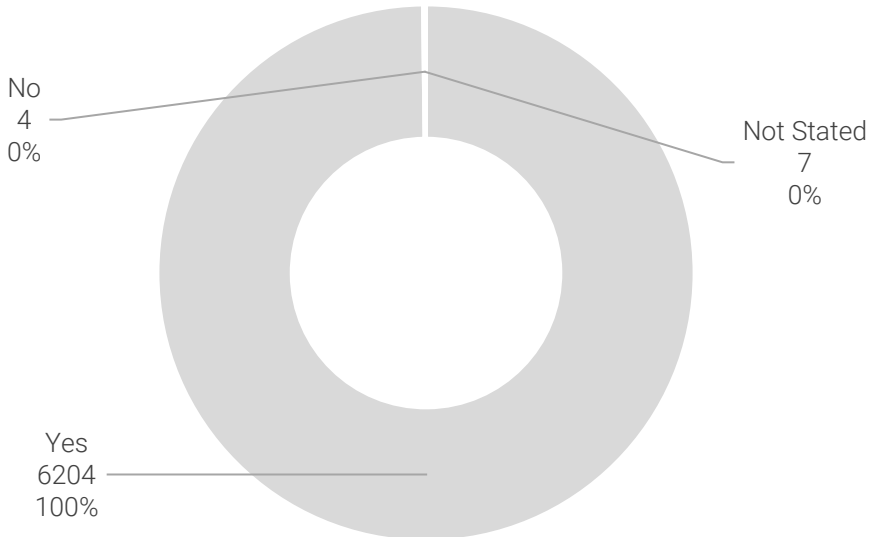
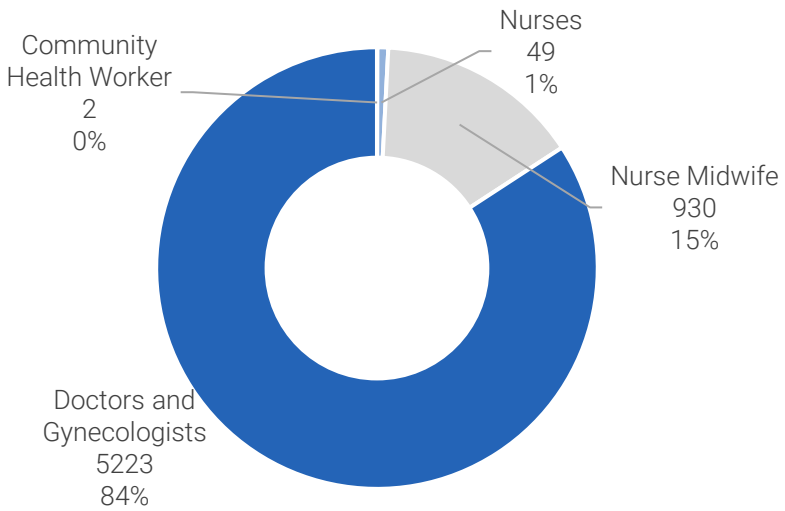


Table 2-8: Attendants midwifery training status for ALL birth outcomes in Maldives, 2016-2020

Year	Yes	Not Stated	No	Total
2016	99.8%	0%	0%	100%
2017	99.8%	0%	0%	100%
2018	99.6%	0%	0%	100%
2019	99.8%	0%	0%	100%
2020	99.7%	0%	0%	100%
Total	**99.8%**	**0.2%**	**0.0%**	**100.0%**

From the total trained birth attendants, it can be seen that 84% are doctors and gynecologists in 2020, this is an increase of 10% from 2018 (74%).

Figure 2-14: Number live birth by trained birth attendants/vocation, 2020



2.4 FERTILITY

2.4.1 TOTAL FERTILITY RATE

Total fertility rate (TFR) is directly calculated as the sum of age-specific fertility rates (usually referring to women aged 15 to 49 years) (World Health Organisation 2018).

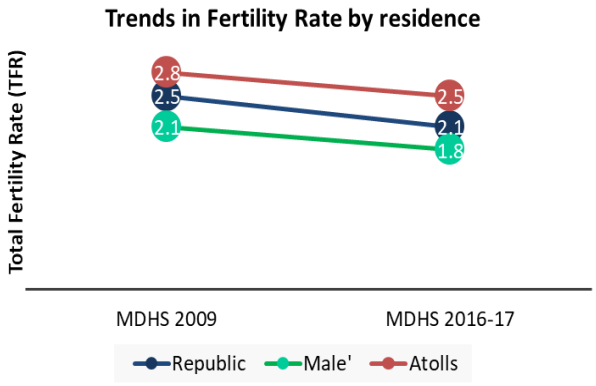
Table 2-9: TFR by location, 2016-17

	Republic	GMR	Atolls
Total Fertility Rate	2.10	1.80	2.5

Total Fertility Rate (TFR)

The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and if they were not subject to mortality. It is expressed as children per woman.

Figure 2-15: Total fertility rate in Maldives, 2016-2017



Fertility is lower in Malé region than in other atolls; on average, women in other atolls will give birth to 2.5 children in their lifetime compared with 1.8 children in Malé region (Ministry of Health [Maldives] and ICF 2018). The TFR has markedly declined in the Maldives in the last 7-8 years.

2.4.2 GENERAL FERTILITY RATE

One the simplest measure of fertility is the general fertility rate (GFR[6]) (DHS Program 2018).

General Fertility Rate (GFR)

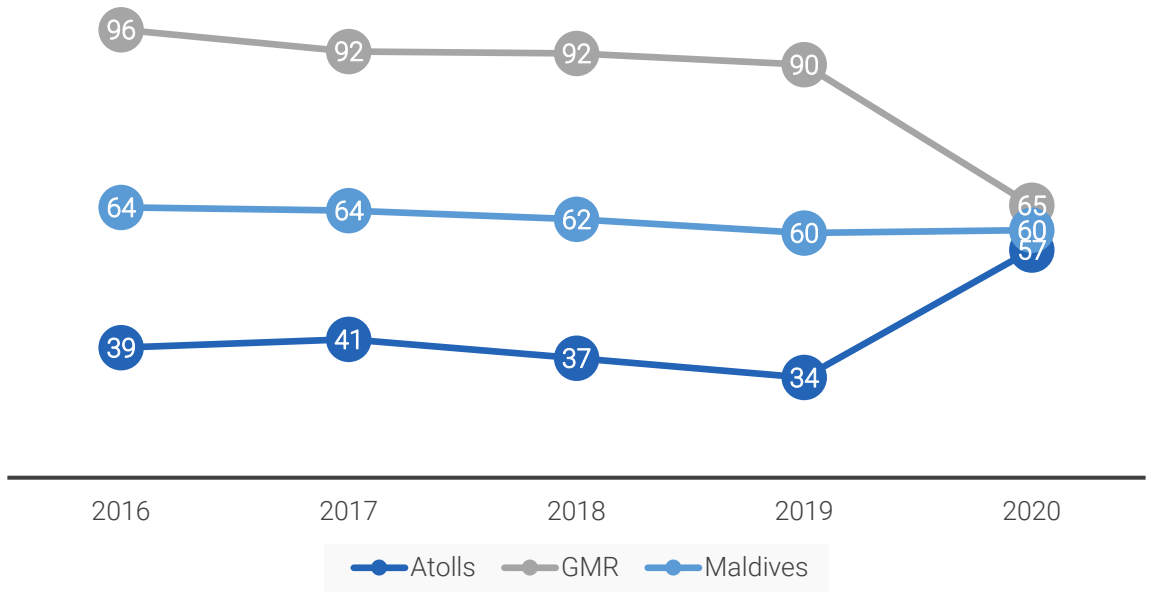
It is the number of births per year per thousand mid-year woman of the child bearing age. Where the total number of women of child bearing age is 15-49 years at the midpoint of the year in a given geographic area.

Equation 2-2: General Fertility Rate

$$GFR = \frac{Live\ Births}{Women_{\ 15-49\ years}}\ x\ 1000$$

It can be seen that the GFR was fairly constant from 2016 – 2019 years, for GMR and Atolls respectively. However, the GFR for atolls increased and GFR for GMR decreased in 2020, showing that people did not move to GMR for birthing in 2020.This could be an effect of the COVID-19 pandemic spread in the GMR in 2020 and movement restrictions enforced resulting in more live births in the atolls compared to previous years.

Figure 2-16: GFR by location, 2016 – 2020



[6] GFR is calculated based on the location of birth (numerator) while the denominator is projected resident population of the place for women aged 15 – 49 years.

2.5 OTHER RISK FACTORS

2.5.1 GESTATIONAL AGE

The average gestational age for all live births was 38 weeks in 2020. This varied in relation to birth status (for example, liveborn or stillbirth) and multiple pregnancies (for example, twins and triplets). Still births had an average gestational age of 35 weeks while abortions/miscarriages had an average of 12 weeks gestation in 2020.

Gestational-age categorisation

Preterm (less than 37 weeks)

Extremely preterm (less than 28 weeks)

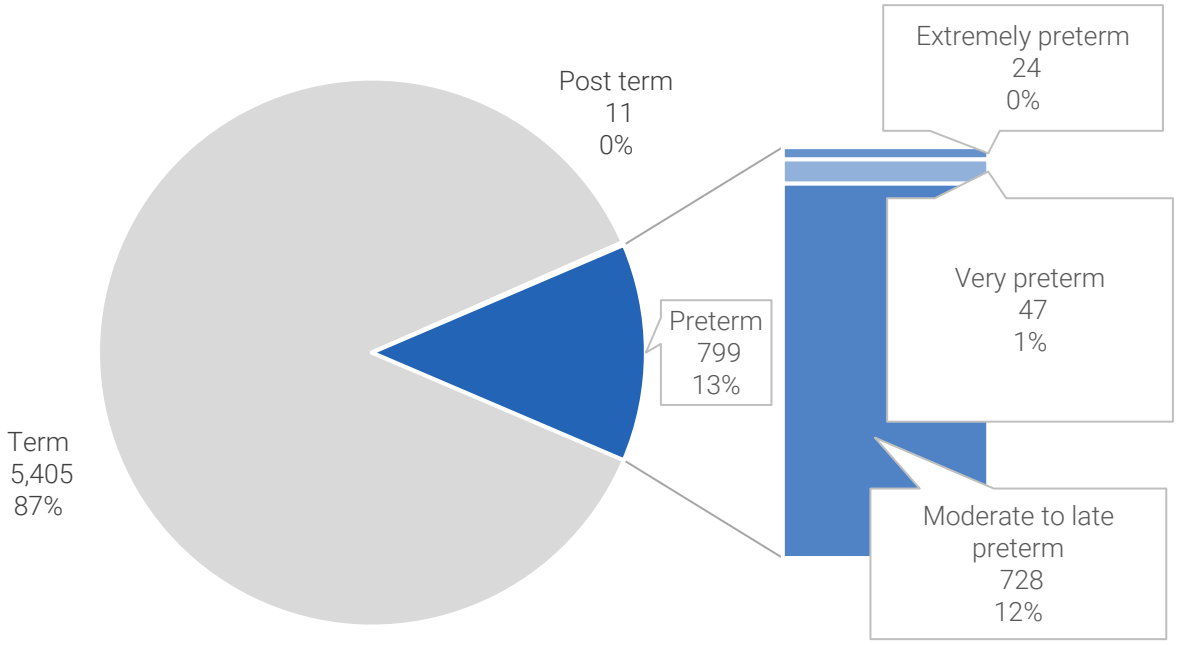
Very preterm (28 to 31 weeks)

Moderate to late preterm (32 to 36 weeks)

Term (37-41 weeks)

Post term (42+ weeks)

Figure 2-17: Live birth distribution according to gestational age of babies, 2020



Of all birth outcomes almost 85% of the livebirths were term (37-41 weeks) babies.

Table 2-10: Birth outcome by gestation and delivery type, 2020

Gestation	Caesarian	Vaginal Delivery	Not stated	Total
Live Birth	3,225	2,990		6,215
a. Preterm (less than 37 weeks)	504	295		799
b. Term (37-41 weeks)	2,713	2,692		5,405
c. Post term (42+ weeks)	8	3		11
Abortion	1	183	10	194
a. Preterm (less than 37 weeks)	1	183	10	194
Stillbirth	15	14		29
a. Preterm (less than 37 weeks)	7	9		16
b. Term (37-41 weeks)	8	5		13
Total	**3,241**	**3,187**	**10**	**6,438**

2.5.2 BIRTH WEIGHT

The (Gill, May-Benson et al. 2013) is a key indicator of infant health and a determinant of a baby's chance of survival and health later in life.

Birthweight categorisation

- High: 4,000 grams and over
- Normal: 2,500–3,999 grams
- Low: =< 2,499 grams

Incidence of babies born small for gestational age and of a low birthweight was more common among babies born to mothers who had multiple births (twins, triplets). For all live births in 2020, the average birth weight was 3 Kgs, while for stillbirths it was 2.34 Kgs.

It can be seen that most of male babies had a higher birthweight compared to female babies in 2020.

Figure 2-18: Birthweight by gender, 2020

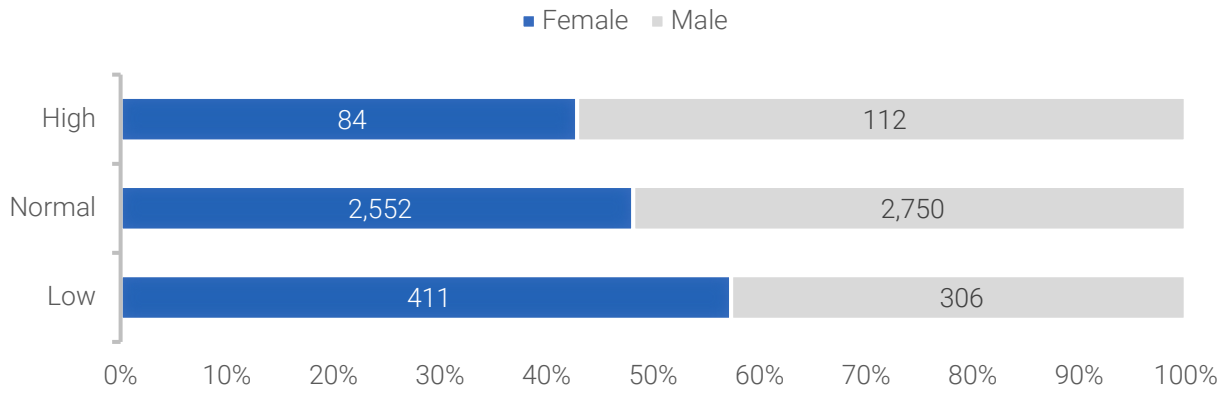


Table 2-11: Birthweight by birth outcomes in Maldives, 2020

Birthweight	Live Birth	Abortion	Stillbirth	Total
Low	717		14	925
Normal	5,302		13	5,315
High	196		2	198
Not stated		194		
Total	**6,215**	**194**	**29**	**6,438**

Similarly, more than 75% (149) of all high birthweight babies had a caesarian section where almost 40% (77) were an elective caesarian in 2020.

Figure 2-19: Birthweight by birth outcomes in Maldives, 2020

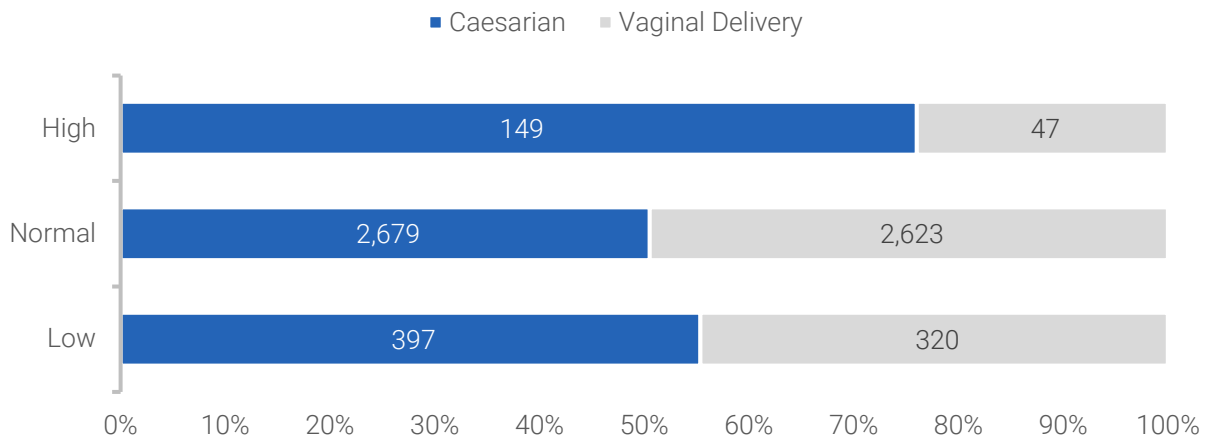


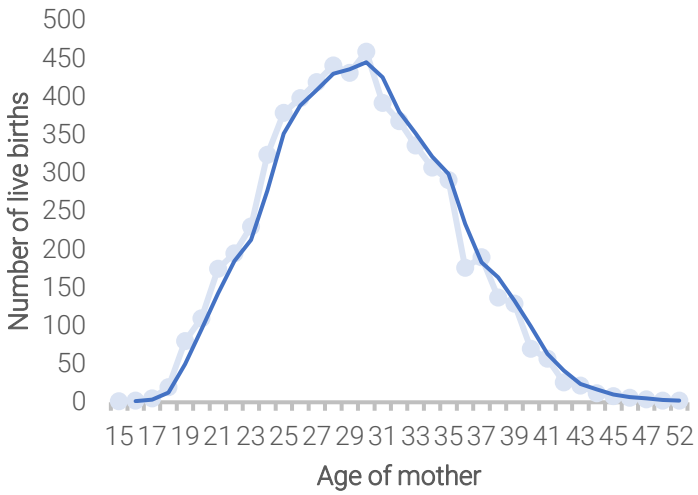
Table 2-12: Livebirths - birthweight by type of delivery & delivery mode, 2020

Birthweight	Low	Normal	High	Total
Caesarian	397	2,679	149	3,225
Emergency	289	1,449	72	1,810
Elective	108	1,230	77	1,415
Vaginal Delivery	320	2,623	47	2,990
Spontaneous	272	2,169	36	2,477
Assisted	48	454	11	513
Total	**717**	**5,302**	**196**	**6,215**

2.5.3 AGE OF MOTHER

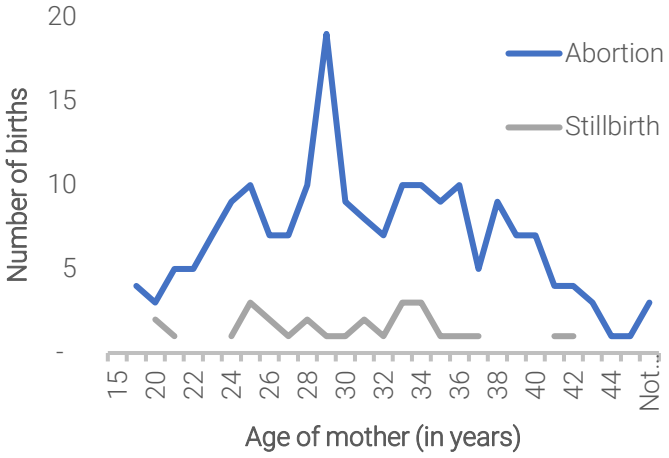
Mother's age is an indicator of healthier babies. It is also referred to as maternal age or the age of the mother at the time of delivery. Advanced maternal age is usually defined as age 35 or more at delivery. In 2020, the average maternal age for all live births were 29 years. Teenage pregnancies (maternal age 15-19 years) accounted for 1.7% (108) of live births.

Figure 2-20: Livebirths by age of mother, 2020 [7]



[7] Excluding age not stated for mothers

Figure 2-21: Stillbirth and abortion by mothers age, 2020



In 2020, the average maternal age for all stillbirths were 30 years while for abortions it is 31 years.

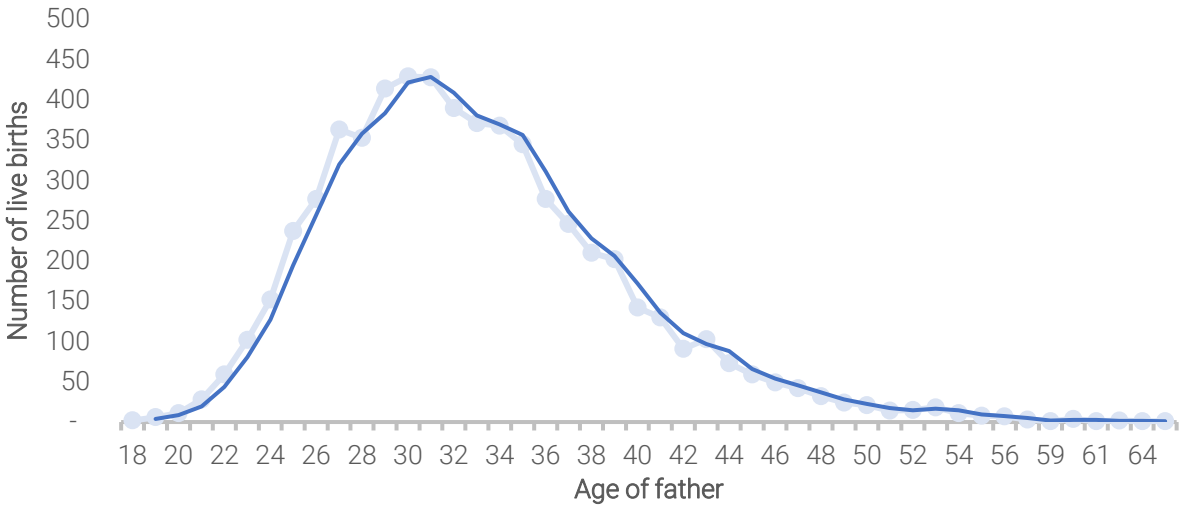
Table 2-13: Livebirth by mothers age, 2016-2020

Age of mother	2016	2017	2018	2019	2020	Total
10-14		1		2		3
15-19	50	54	33	75	108	320
20-24	1,265	1,088	940	1,064	1,034	5,391
25-29	2,293	2,242	2,108	2,034	2,068	10,745
30-34	1,810	1,825	1,905	1,835	1,862	9,237
35-39	808	931	1,039	913	923	4,614
40-44	213	284	280	177	187	1,141
45-49	14	22	22	5	20	83
50-54	1	2		1	2	6
Not stated				1	11	12
Total	**6,454**	**6,449**	**6,327**	**6,107**	**6,215**	**31,552**

2.5.4 AGE OF FATHER

Similar to mother's age, the father's age also plays an important role. In 2020, the average father's age is a bit higher than that of mothers. The average fathers age for all the live babies is 33 years in 2020.

Figure 2-22: Livebirths by age of father, 2020[8]



Similar to live babies, for abortions and stillbirths also the average age of father is 33 years.

Table 2-14: Birth type by age of father, 2020

Age of father	Live Birth	Abortion	Stillbirth	Total
15-19	8			8
20-24	352	13		365
25-29	1,644	33	5	1,682
30-34	1,986	45	13	2,044
35-39	1,280	47	3	1,330
40-44	539	26	3	568
45-49	206	14	4	224
50-54	79	6		85
55-59	19	1		20
60-64	8			8
65-70	1			1
Not stated	93	9	1	15
Total	**6,215**	**194**	**29**	**6,438**

2.6 ANNEXES

Table 2-15: Life expectancy at birth, 1990 – 2014

Year	Life Expectancy e(x)		
	Both Sexes	Female	Male
1990	64	63	65
1991	65	64	66
1992	66	65	66
1993	66	66	67
1994	67	67	67
1995	67	68	67
1996	69	69	69
1997	70	70	69
1998	70	71	70
1999	71	72	70
2000	72	73	72
2001	73	74	72
2002	73	75	72
2003	74	75	73
2004	75	76	73
2005	76	77	74
2006	77	79	75
2007	77	79	75
2008	78	80	76
2009	79	81	76
2010	79	82	77
2011	80	83	78
2012	81	84	78
2013	82	85	79
2014	82	86	79

Data source: Maldives Bureau of Statistics (MBS)

Table 2-16: Age-specific and Total Fertility Rates by residence from MDHS 2016-17

Age-group	GMR	Atolls	Republic
15-19	4	17	10
20-24	53	139	99
25-29	127	141	135
30-34	101	116	110
35-39	58	56	56
40-44	11	19	16
45-49	-	5	3
TFR	**1.8**	**2.5**	**2.1**

Table 2-17: Number of deliveries by type, gender and location, 2020

Row Labels	Female	Male	Not stated	Total
a. Live Birth	3,091	3,202		6,293
Caesarian	1,577	1,660		3,237
Abroad	5	7		12
Atolls	827	890		1,717
GMR	745	763		1,508
Vaginal Delivery	1,509	1,540		3,049
Abroad	34	25		59
Atolls	661	691		1,352
GMR	814	824		1,638
Not stated	5	2		7
Abroad	5	2		7
b. Abortion	18	56	120	194
Vaginal Delivery	15	50	118	183
Atolls	11	20	107	138
GMR	4	30	11	45
Not stated	2	6	2	10
Atolls	2	6	2	10
Caesarian	1			1
Atolls	1			1
c. Stillbirth	15	14		29
Caesarian	8	7		15
Atolls	2	7		9

GMR	6			6
Vaginal Delivery	7	7		14
Atolls	5	3		8
GMR	2	4		6
Total	**3,124**	**3,272**	**120**	**6,516**

Table 2-18: Number of deliveries by type of deliveries and gender, 2020

Row Labels	Female	Male	Not stated	Total
a. Live Birth	3,091	3,202		6,293
Caesarian	1,577	1,660		3,237
Emergency	868	946		1,814
Elective	709	714		1,423
Vaginal Delivery	1,509	1,540		3,049
Spontaneous	1,261	1,270		2,531
Assisted	248	270		518
Not stated	5	2		7
Not stated	5	2		7
b. Abortion	18	56	120	194
Vaginal Delivery	15	50	118	183
Spontaneous	9	45	86	140
Assisted	6	5	32	43
Not stated	2	6	2	10
Not stated	2	6	2	10
Caesarian	1			1
Emergency	1			1
c. Stillbirth	15	14		29
Caesarian	8	7		15
Emergency	6	4		10
Elective	2	3		5
Vaginal Delivery	7	7		14
Spontaneous	4	4		8
Assisted	3	3		6
Total	**3,124**	**3,272**	**120**	**6,516**

Table 2-19: Number of deliveries by type, birth outcome, gender and health facility, 2020

Birth outcome/health facility	Female	Male	Not stated	Total
a. Live Birth	3,091	3,202		6,293
Caesarian	1,577	1,660		3,237
Emergency CS	**868**	**946**		**1,814**
Atoll Hospital	192	207		399
Atoll Private Hospital	2	1		3
GMR Public Hospital	45	55		100
Health Center		1		1
Health Facility Abroad	3	1		4
Private Tertiary Hospital	184	199		383
Regional Hospital	240	274		514
Public Tertiary Hospital	202	208		410
Elective CS	**709**	**714**		**1,423**
Atoll Hospital	183	198		381
GMR Public Hospital	21	14		35
Health Center	1			1
Health Facility Abroad	2	6		8
Private Tertiary Hospital	162	165		327
Regional Hospital	209	209		418
Public Tertiary Hospital	131	122		253
Vaginal Delivery	1,509	1,540		3,049
Spontaneous VD	**1,261**	**1,270**		**2,531**
Atoll Hospital	174	201		375
Atoll Private Hospital	2	3		5
GMR Public Hospital	34	45		79
Health Center	15	17		32
Health Facility Abroad	32	22		54
Home		1		1

Birth outcome/health facility	Female	Male	Not stated	Total
Private Tertiary Hospital	375	359		734
Regional Hospital	287	278		565
Public Tertiary Hospital	342	344		686
Assisted VD	**248**	**270**		**518**
Atoll Hospital	98	111		209
Atoll Private Hospital	3	7		10
GMR Public Hospital	3	5		8
Health Center	5	4		9
Health Facility Abroad	2	3		5
Private Tertiary Hospital	50	58		108
Regional Hospital	77	70		147
Public Tertiary Hospital	10	12		22
Not stated	5	2		7
Not stated	**5**	**2**		**7**
Health Facility Abroad	5	2		7
b. Abortion	18	56	120	194
Vaginal Delivery	15	50	118	183
Spontaneous VD	**9**	**45**	**86**	**140**
Atoll Hospital	2	10	27	39
GMR Public Hospital	1	1		2
Home		1		1
Private Tertiary Hospital	2	8	11	21
Regional Hospital	3	8	48	59
Public Tertiary Hospital	1	17		18
Assisted VD	**6**	**5**	**32**	**43**
Atoll Hospital	3		12	15
Regional Hospital	3	2	20	25
Public Tertiary Hospital		3		3
Not stated	2	6	2	10

Birth outcome/health facility	Female	Male	Not stated	Total
Not stated	**2**	**6**	**2**	**10**
Atoll Hospital	1	5		6
Regional Hospital	1	1	2	4
Caesarian	1			1
Emergency CS	**1**			**1**
Atoll Hospital	1			1
c. Stillbirth	15	14		29
Caesarian	8	7		15
Emergency CS	**6**	**4**		**10**
Atoll Hospital		1		1
Private Tertiary Hospital	2			2
Regional Hospital		3		3
Public Tertiary Hospital	4			4
Elective CS	**2**	**3**		**5**
Atoll Hospital		1		1
Regional Hospital	2	2		4
Vaginal Delivery	7	7		14
Spontaneous VD	**4**	**4**		**8**
Atoll Hospital	1	1		2
GMR Public Hospital		2		2
Private Tertiary Hospital		1		1
Regional Hospital	2			2
Public Tertiary Hospital	1			1
Assisted VD	3	3		6
Atoll Hospital	1			1
Regional Hospital	1	2		3
Public Tertiary Hospital	1	1		2
Total	**3,124**	**3,272**	**120**	**6,516**

Table 2-20: Birth outcome by gender and location/atoll, 2020

Delivery/location	Female	Male	Not stated	Total
a. Live Birth	3,091	3,202		6,293
Caesarian	1,577	1,660		3,237
GMR	745	763		1,508
HDh	135	141		276
R	94	110		204
S	84	94		178
L	78	76		154
Lh	50	58		108
HA	48	53		101
GDh	46	54		100
B	35	46		81
Sh	35	43		78
Gn	47	29		76
F	29	43		72
ADh	28	28		56
N	24	24		48
M	23	23		46
GA	25	15		40
Th	17	20		37
Dh	18	14		32
AA	11	19		30
Abroad	5	7		12
Vaginal Delivery	1,509	1,540		3,049
GMR	814	824		1,638
R	93	100		193
HDh	90	95		185
L	89	58		147
S	53	72		125
Lh	47	49		96

Delivery/location	Female	Male	Not stated	Total
GDh	46	30		76
ADh	27	37		64
F	26	35		61
B	28	32		60
Abroad	34	25		59
HA	30	27		57
Gn	28	26		54
GA	25	26		51
Dh	22	18		40
Sh	18	22		40
AA	12	21		33
M	11	16		27
Th	6	13		19
N	5	8		13
K	5	6		11
Not stated	5	2		7
Abroad	5	2		7
b. Abortion	18	56	120	194
Vaginal Delivery	15	50	118	183
GMR	4	30	11	45
L	2		36	38
R		2	31	33
B	1	1	14	16
F	2		14	16
Gn		3	8	11
S	1	3	1	5
HDh	2	3		5
GDh	1	2		3
AA			3	3
Lh		2		2

Delivery/location	Female	Male	Not stated	Total
N	1	1		2
HA	1	1		2
Dh		1		1
GA		1		1
Not stated	2	6	2	10
Gn		4		4
Lh	1	1		2
HDh	1	1		2
R			1	1
L			1	1
Caesarian	1			1
Lh	1			1
c. Stillbirth	15	14		29
Caesarian	8	7		15
GMR	6			6
HDh	2	4		6
R		1		1
Sh		1		1
Lh		1		1
Vaginal Delivery	7	7		14
GMR	2	4		6
L	1	1		2
HDh	1	1		2
S	1			1
N	1			1
B	1			1
Dh		1		1
Total	**3,124**	**3,272**	**120**	**6,516**

Table 2-21: Number of deliveries by gestational age, birth outcome and gestational age, 2020

Gestation	Caesarian	Vaginal Delivery	Not stated	Total
Atolls	1,727	1,498	10	3,235
Live Birth	1,717	1,352		3,069
Extremely preterm (less than 28 weeks)	1	6		7
Very preterm (28 to 31 weeks)	3	6		9
Moderate to late preterm (32 to 36 weeks)	269	140		409
Term (37-41 weeks)	1,436	1,198		2,634
Post term (42+ weeks)	8	2		10
Abortion	1	138	10	149
Extremely preterm (less than 28 weeks)	1	138	10	149
Stillbirth	9	8		17
Extremely preterm (less than 28 weeks)		1		1
Very preterm (28 to 31 weeks)		2		2
Moderate to late preterm (32 to 36 weeks)	2	1		3
Term (37-41 weeks)	7	4		11
GMR	1,514	1,689		3,203
Live Birth	1,508	1,638		3,146
Extremely preterm (less than 28 weeks)	4	13		17
Very preterm (28 to 31 weeks)	26	12		38
Moderate to late preterm (32 to 36 weeks)	201	118		319
Term (37-41 weeks)	1,277	1,494		2,771
Post term (42+ weeks)		1		1
Abortion		45		45
Extremely preterm (less than 28 weeks)		45		45
Stillbirth	6	6		12
Very preterm (28 to 31 weeks)	2	3		5
Moderate to late preterm (32 to 36 weeks)	3	2		5
Term (37-41 weeks)	1	1		2
Total	**3,241**	**3,187**	**10**	**6,438**

Table 2-22: Birth outcome by delivery type, location and mothers age, 2020

Row Labels	Abroad	Atolls	GMR	Total
a. Live Birth	78	3,069	3,146	6,293
0-17		4	4	8
Vaginal Delivery		3	4	7
Caesarian		1		1
18-35	57	2,665	2,690	5,412
Caesarian	6	1,480	1,231	2,717
Vaginal Delivery	44	1,185	1,459	2,688
Not stated	7			7
36-53	20	389	452	861
Caesarian	5	230	277	512
Vaginal Delivery	15	159	175	349
>108	1	11		12
Caesarian	1	6		7
Vaginal Delivery		5		5
b. Abortion		149	45	194
0-17			1	1
Vaginal Delivery			1	1
18-35		104	35	139
Vaginal Delivery		96	35	131
Not stated		7		7
Caesarian		1		1
36-53		42	9	51
Vaginal Delivery		39	9	48
Not stated		3		3
>108		3		3
Vaginal Delivery		3		3
c. Stillbirth		17	12	29
18-35		14	10	24
Caesarian		9	5	14
Vaginal Delivery		5	5	10
36-53		3	2	5
Vaginal Delivery		3	1	4
Caesarian			1	1
Total	**78**	**3,235**	**3,203**	**6,516**

MORBIDITY

3. MORBIDITY

In this chapter burden of disease is expressed as ill state (morbidity).

Both World Health Organization [WHO] and Center for Disease Control [CDC] defines morbidity as “any departure, subjective or objective from a state of physiological or psychological wellbeing”. In other words, morbidity is a broad term used to encapsulate all types of communicable and non-communicable diseases, illnesses, sicknesses and any other condition that leads to ill health and is detrimental to the well-being of an individual.

Principle diagnosis

The principle diagnosis, considered to be the main cause or reason for the hospitalization. Diagnoses are coded according to the International Classification of Diseases, Tenth version (ICD–10).

The morbidity statistics are primarily measured in incidence and prevalence. In this report, morbidity is expressed as the number of admissions (inpatients) of the principal diagnosis by ICD 10 (World Health Organisation 2007).

A. INPATIENTS IN HOSPITALS OF MALDIVES

In this chapter, information on admissions/inpatients (World Health Organisation 2007) of 191 health facilities in all inhabited islands of Maldives are used; i.e., 27 hospitals and 164 health centers are used. Among private health facilities, information from private hospitals ADK, Treetop Hospital and IMDC at Seenu atoll is captured in this chapter.

WHO IS AN INPATIENT?

World Health Organization defines inpatient as "a patient who has been admitted to the health care facility". Inpatients usually occupy a bed in a health care facility for at least four hours to overnight".

Table 3-1: Number of health facilities used in this chapter, 2020

Location/Atolls	a. Tertiary Hospital	b. Hospital	c. Regional Hospital	d. Atoll Hospital	e. Health Center	Total
Zone 1: HA, HDh & Sh	-	-	1	2	38	41
Zone 2: N, R, B & Lh	-	-	1	3	41	45
Zone 3: K, AA, ADh & V	3[1]	4[2]	-	3	29	39
Zone 4: M, F, Dh, Th & L	-	-	2	3	37	42
Zone 5: GA & GDh	-	-	1	1	16	18
Zone 6: Gn & S	-	1[3]	1	1	3	6
Total	**3**	**5**	**6**	**13**	**164**	**191**

[1] IGMH, ADK and Treetop
[2] Hulhumale, Villimale, Medica & Senahiya
[3] IMDC

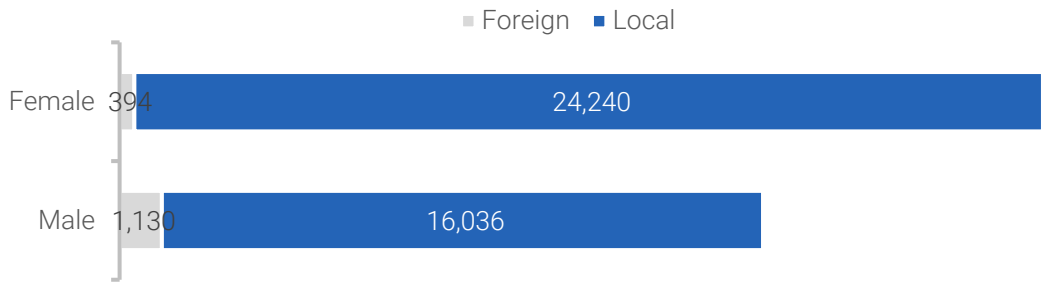
I. INPATIENTS BY GENDER

A total of 41,800 inpatients were admitted in public health facilities and hospitals of Maldives, of which 1,524 (4%) were foreigners.

Table 3-2: Inpatients by gender and ethnicity, 2020

Gender	Foreign	Local	Total
Male	1,130	16,036	17,166
Female	394	24,240	24,634
Total	**1,524**	**40,276**	**41,800**

Figure 3-1: Inpatients by gender and ethnicity, 2020



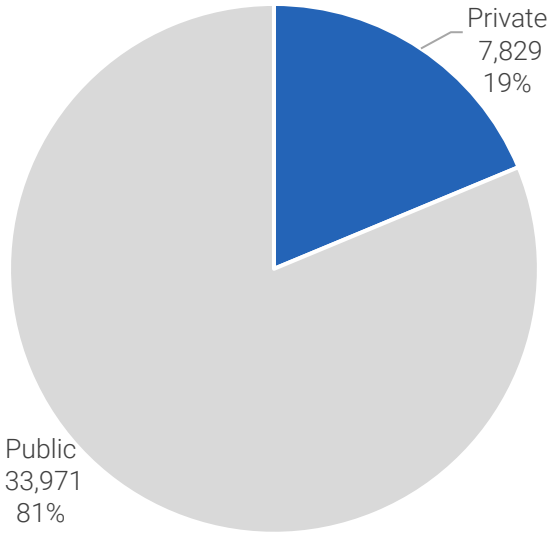
II. INPATIENTS BY TYPE OF FACILITY

Inpatient care is mainly provided by public health facilities accounting for 81% (33,971) and 52% (21,957) are provided in the atolls.

Table 3-3: Inpatients by location & type of facility, 2020

Type	Atolls	GMR	Total
Private	178	7,651	7,829
Public	21,779	12,192	33,971
Total	**21,957**	**19,843**	**41,800**

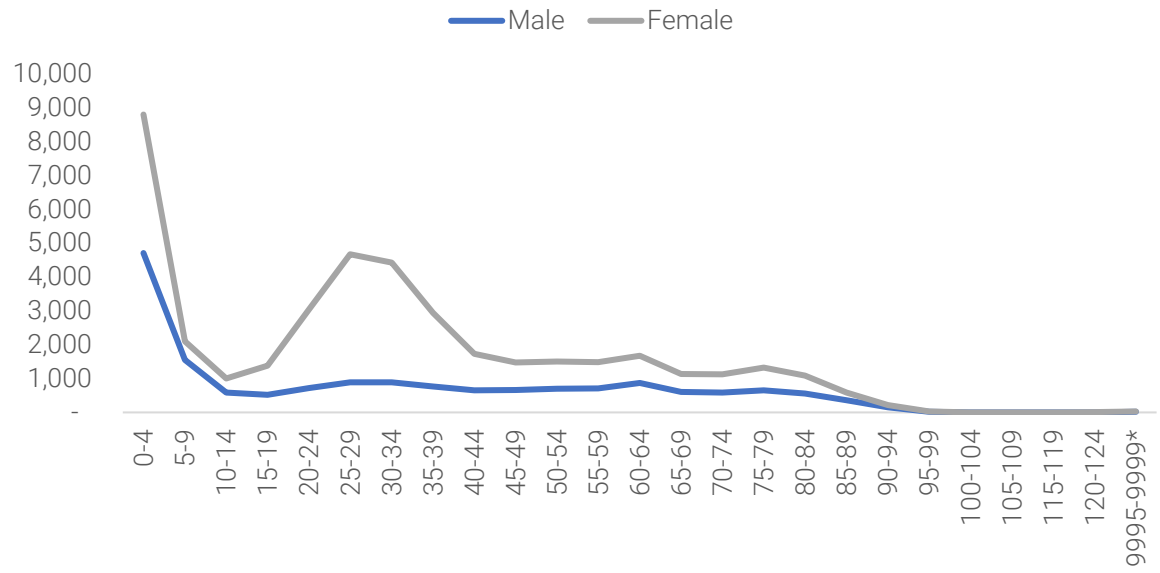
Figure 3-2: Inpatients by type of facility, 2020



III. INPATIENTS BY AGE

When we look at age, it can be seen that highest are children under 4 years of age followed by reproductive age group (20-49 years) women.

Figure 3-3: Inpatients by age, 2020[12]



[12] 9995-9999 Age not specified

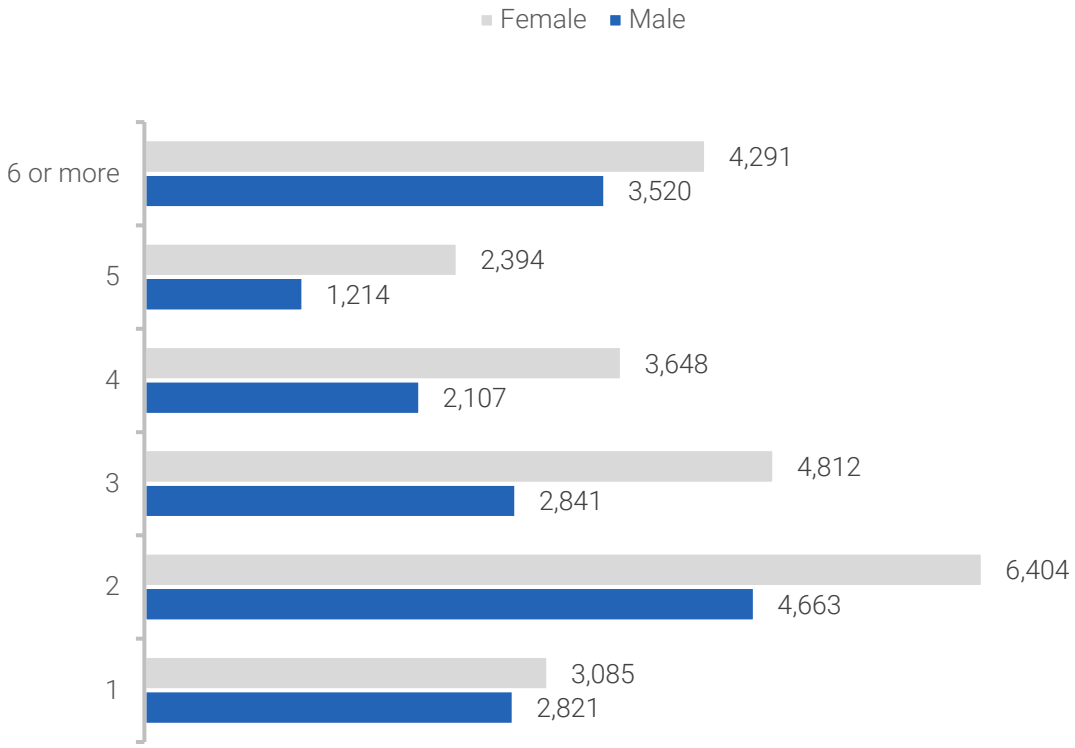
IV. DURATION OF ADMISSION

Most of the inpatients of Maldives were admitted for 2 days and it is noted that mostly females were admitted for any given number of days.

Table 3-4: Inpatients admission by the number of days admitted, 2020

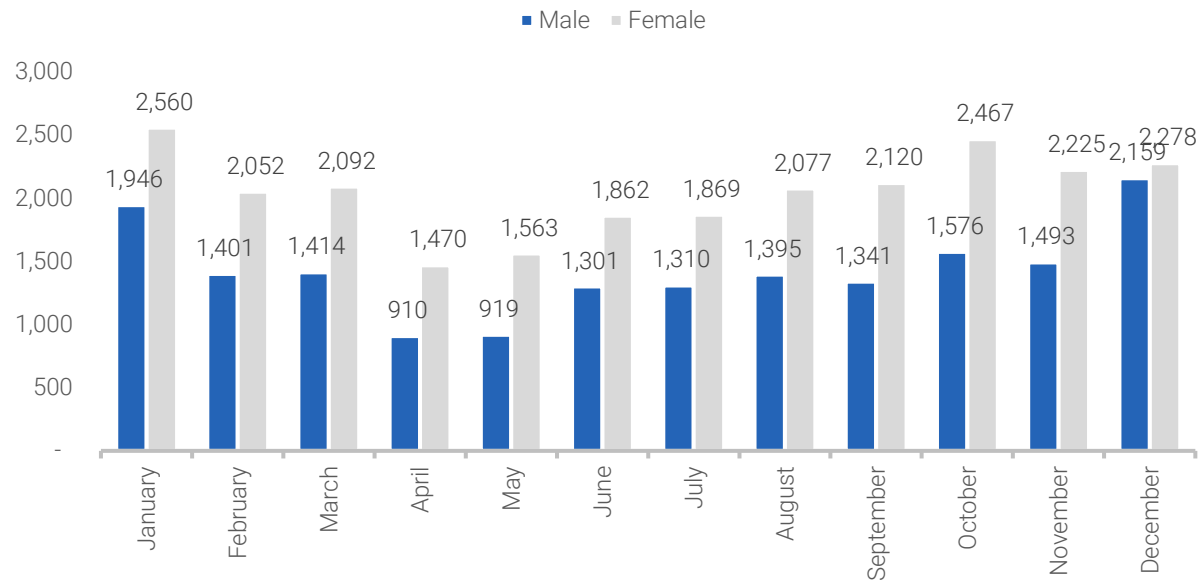
Days	Male	Female	Total
1	2,821	3,085	5,906
2	4,663	6,404	11,067
3	2,841	4,812	7,653
4	2,107	3,648	5,755
5	1,214	2,394	3,608
6 or more	3,520	4,291	7,811
Total	**17,166**	**24,634**	**41,800**

Figure 3-4: Number of days admitted, 2020



3.1.1.1 ADMISSION BY MONTH

Most of the admissions were seen in January and December of 2020 across Maldives, and lowest in April and May reflecting discontinuation of routine admissions during the COVID-19 first wave.



V. INPATIENTS BY LOCATION

There is an equal percentage division of inpatients, where female admissions are high in both GMR and Atolls.

Figure 3-5: Inpatients by location, 2020

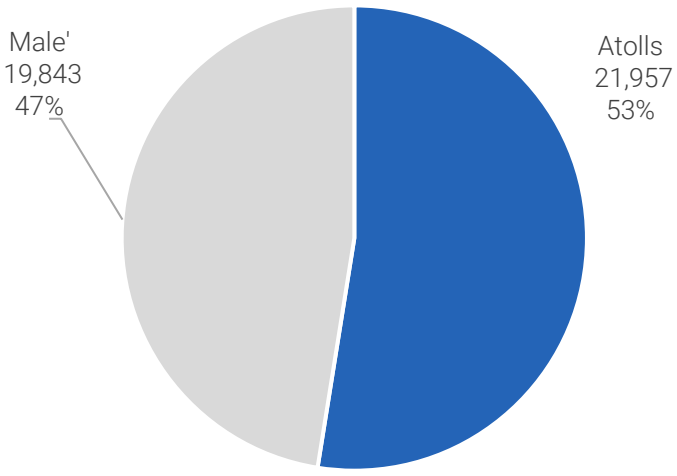
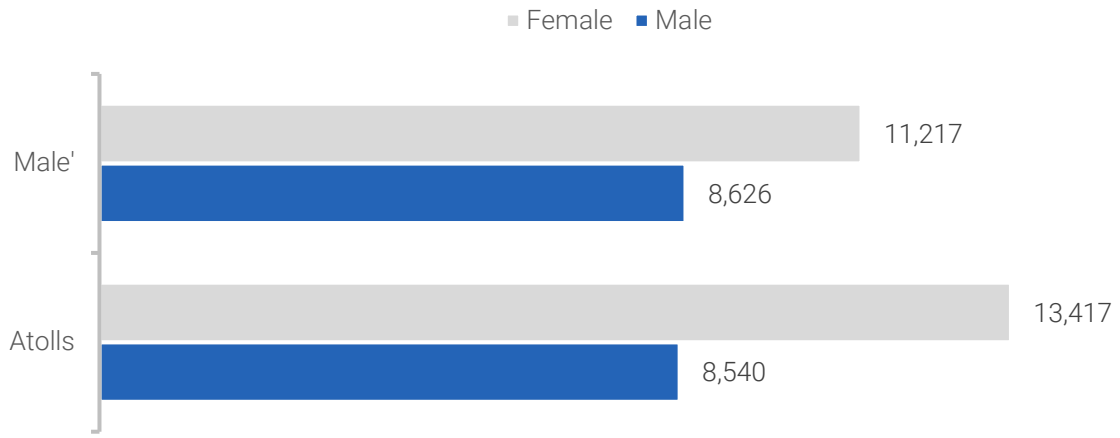


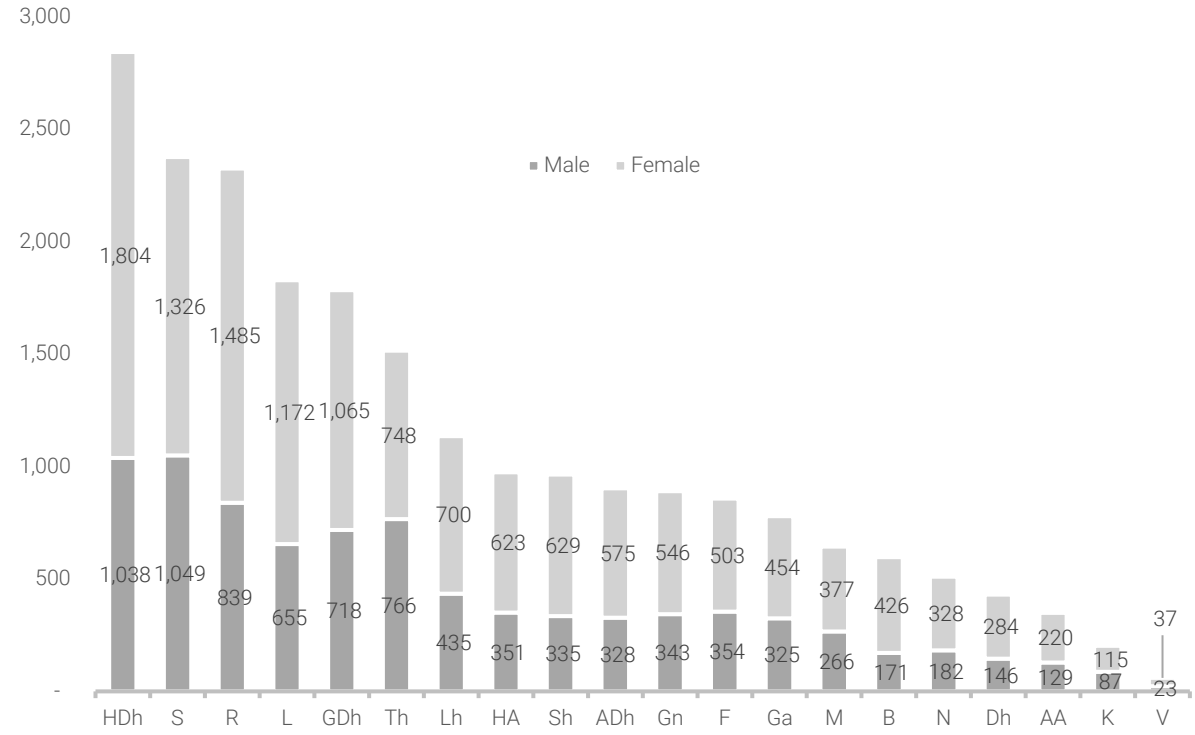
Figure 3-6: Inpatients by location and gender, 2020



3.1.1.2 INPATIENTS BY ATOLLS

When disaggregated by atolls (excluding GMR), it can be seen that Haa Dhaal and Seenu atoll had the most admissions followed by Raa and Laamu atoll.

Figure 3-7: Inpatients in the atolls, 2020



VI. INPATIENTS BY GLOBAL BURDEN OF DISEASE GROUPS

The morbidity or inpatients shows that there is a double burden of diseases in the country, showing that inpatients are high in both communicable, maternal, perinatal and nutritional conditions and non-communicable disease categories.

Table 3-5: Inpatients by disease categories, 2020

Disease Catagories	Atolls	GMR	Total
Communicable, maternal, perinatal and nutritional conditions	7,648	7,109	14,757
Noncommunicable diseases	6,787	7,944	14,731
Not categorised	3,001	2,724	5,725
Ill-defined diseases	3,237	791	4,028
Injuries	1,201	1,275	2,476
Not stated	83		83
Total	**21,957**	**19,843**	**41,800**

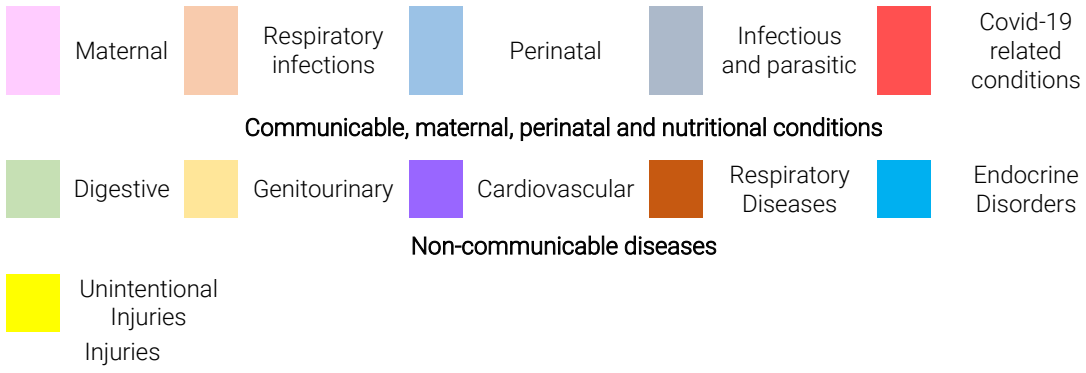
Therefore, the remaining of this chapter will be focused on communicable, maternal, perinatal & nutritional conditions and non-communicable and injuries in detail.

B. BURDEN OF DISEASE ACROSS LIFE STAGES

People experience different health problems at different times of their lives—from infancy and childhood to old age. Hence, they have different health needs at different life stages. This chapter presents the leading causes of total burden at each life stage. Burden of disease analysis is useful to measure the impact of different diseases, physiological conditions or injuries on a population. It combines the burden of living with ill health (non-fatal burden) with the burden of dying prematurely (fatal burden). In this section, burden is analyzed using non-fatal burden – inpatients from all the public health facilities and hospitals.

Figure 3-8: Top 5 leading causes of all admissions by gender, 2020

Gender	1st	2nd	3rd	4th	5th
Female	Maternal conditions 11%	Obstructed labour 9%	Genitourinary system diseases 7%	Digestive diseases 4%	Perinatal conditions 4%
Male	Unintentional injuries 9%	Digestive diseases 6%	Perinatal conditions 6%	Ischemic heart disease 5%	Genitourinary system diseases 3%
All persons	Maternal conditions 7%	Unintentional injuries 5%	Obstructed labour 5%	Genitourinary system diseases 5%	Digestive diseases 5%



I. INFANTS AND CHILDREN (AGED 0-14 YEARS)

Other perinatal conditions and low birth weight accounted for the highest burden in children aged under 5. In contrast, among children aged 5–14, unintentional injuries were the highest cause of admissions.

Figure 3-9: Top 5 leading causes of all admission for infants and children aged 0-14 years, 2020

All persons	1st	2nd	3rd	4th	5th
0-4	Perinatal conditions 21%	Low birth weight 3%	Diarrhoeal diseases 3%	Unintentional injuries 2%	Digestive diseases 2%
5-9	Unintentional injuries 6%	Diarrhoeal diseases 4%	Digestive diseases 4%	Genitourinary system diseases 3%	Dengue 2%
10-14	Unintentional injuries 12%	Genitourinary system diseases 6%	Digestive diseases 5%	Appendicitis 5%	Diarrhoeal diseases 4%

Similarly, looking at the girls, it can be seen that for children below 5 years of age, the highest burden of admission was other perinatal conditions, while for ages 5 – 9 years of age it was infectious and parasitic diseases and for age 10 - 14 years of age, it was genitourinary diseases.

Figure 3-10: Top 5 leading causes of female admission for infants and children aged 0-14 years, 2020

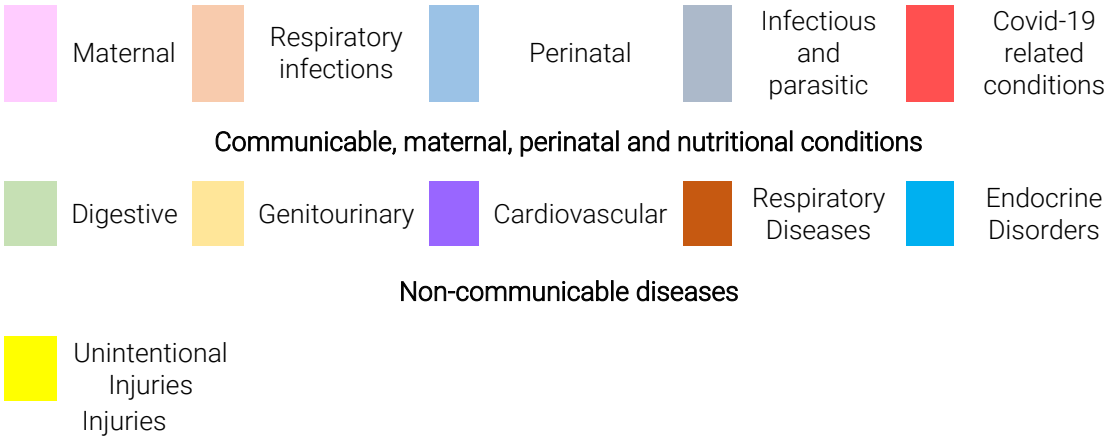
Female	1st	2nd	3rd	4th	5th
0-4	Perinatal conditions 21%	Low birth weight 3%	Diarrhoeal diseases 2%	Unintentional injuries 2%	Lower respiratory infections 2%
5-9	Diarrhoeal diseases 9%	Unintentional injuries 8%	Digestive diseases 8%	Genitourinary system diseases 8%	Dengue 4%
10-14	genitourinary system diseases 11%	Digestive diseases 7%	Unintentional injuries 7%	Diarrhoeal diseases 6%	Appendicitis 5%

For boys below 5 years of age, the highest burden of admission was also other perinatal conditions, for ages 5 – 14 years of age, unintentional injuries were the highest cause of admissions.

Figure 3-11: Top 5 leading causes of male admission for infants and children aged 0-14 years, 2020

Male	1st	2nd	3rd	4th	5th
0-4	Perinatal conditions 21%	Low birth weight 4%	Diarrhoeal diseases 3%	Unintentional injuries 3%	Digestive diseases 2%
5-9	Unintentional injuries 5%	Digestive diseases 3%	Diarrhoeal diseases 3%	Respiratory diseases 2%	Lower respiratory infections 2%
10-14	Unintentional injuries 15%	Appendicitis 5%	Digestive diseases 4%	genitourinary system diseases 3%	Respiratory diseases 3%

Legend used for the above figures;



II. YOUNG PEOPLE (AGED 15 - 34 YEARS)

Since more women had been admitted as inpatients in the hospitals, it is seen that maternal conditions were the lead cause throughout these age groups. This reflects the population dividend of the country with majority of the population in the reproductive age.

Figure 3-12: Top 5 leading causes of all admission for youth population aged 15-34 years, 2020

All persons	1st	2nd	3rd	4th	5th
15-19	Unintentional injuries 10%	Genitourinary system diseases 8%	Maternal conditions 6%	Digestive diseases 5%	Diarrhoeal diseases 3%
20-24	Maternal conditions 17%	Obstructed labour 11%	Unintentional injuries 6%	Genitourinary system diseases 5%	Digestive diseases 4%
25-29	Maternal conditions 19%	Obstructed labour 16%	Unintentional injuries 5%	Genitourinary system diseases 5%	Abortion 4%
30-34	Maternal conditions 17%	Obstructed labour 15%	Genitourinary system diseases 6%	Unintentional injuries 5%	Digestive diseases 5%

Most of the females were admitted for maternal conditions, genitourinary system diseases and digestive diseases in 2020.

Figure 3-13: Top 5 leading causes of female admission for youth population aged 15-34 years, 2020

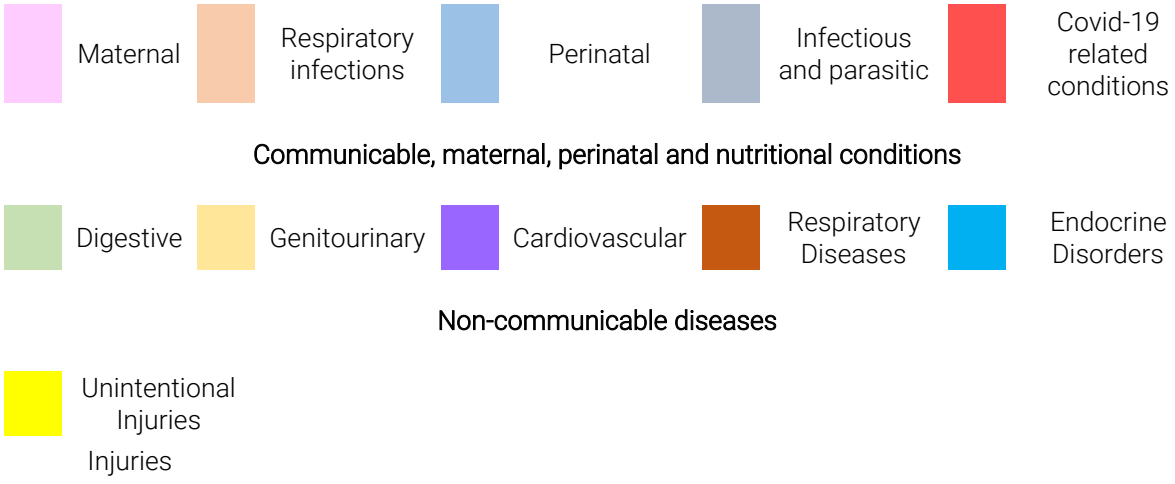
Female	1st	2nd	3rd	4th	5th
15-19	Genitourinary system diseases 11%	Maternal conditions 10%	Digestive diseases 5%	Unintentional injuries 5%	Obstructed labour 4%
20-24	Maternal conditions 23%	Obstructed labour 14%	Genitourinary system diseases 6%	Abortion 5%	Digestive diseases 4%
25-29	Maternal conditions 23%	Obstructed labour 19%	Abortion 5%	Genitourinary system diseases 5%	Digestive diseases 2%
30-34	Maternal conditions 21%	Obstructed labour 19%	Genitourinary system diseases 6%	Abortion 6%	digestive diseases 3%

Unlike females, most of the males were admitted unintentional injuries and digestive diseases for aged group 15-34 years. COVID-19 related conditions were the fifth most common cause of admission among 30-34 age group.

Figure 3-14: Top 5 leading causes of male admission for youth population aged 15-34 years, 2020

Male	1st	2nd	3rd	4th	5th
15-19	Unintentional injuries 18%	Digestive diseases 5%	Genitourinary system diseases 4%	Appendicitis 3%	musculoskeletal disorders 3%
20-24	Unintentional injuries 19%	Digestive diseases 7%	Appendicitis 5%	musculoskeletal disorders 4%	Genitourinary system diseases 3%
25-29	Unintentional injuries 21%	Digestive diseases 9%	musculoskeletal disorders 6%	Genitourinary system diseases 4%	Appendicitis 4%
30-34	Unintentional injuries 20%	Digestive diseases 11%	musculoskeletal disorders 6%	Genitourinary system diseases 5%	COVID-19 related conditions 5%

Legend used for above figures;



III. ADULTS (AGED 35 -64 YEARS)

A large proportion of adults aged between 35-64, falls into reproductive age group as well. In this sense, people aged 35-49 also falls into reproductive age group defined by MDHS 2016-17 (Ministry of Health [Maldives] and ICF 2018). Thus, it can be seen that adults, across the age groups have similar reasons for admissions as youth. In addition, COVID-19 burden was high among this age group where COVID-19 related conditions were the fifth and third most common among ages 45-54 and 55-64 respectively.

Figure 3-15: Top 5 leading causes of all admission for young adults aged 35-64 years, 2020

All persons	1st	2nd	3rd	4th	5th
35-44	Maternal conditions 12%	Obstructed labour 9%	Genitourinary system diseases 8%	Digestive diseases 7%	Unintentional injuries 6%
45-54	Genitourinary system diseases 11%	Digestive diseases 9%	Ischemic heart disease 8%	Unintentional injuries 7%	COVID-19 related conditions 5%
55-64	Ischemic heart disease 10%	Digestive diseases 9%	COVID-19 related conditions 8%	Genitourinary system diseases 6%	Unintentional injuries 6%

For females who fall under the reproductive age group 35-44 years, the main reason for admissions was maternal conditions. Genitourinary conditions followed, which also is the main cause of admission for women 45-64 years of age. For women 55-65 years, COVID-19 related conditions were the second most common burden of disease for admissions.

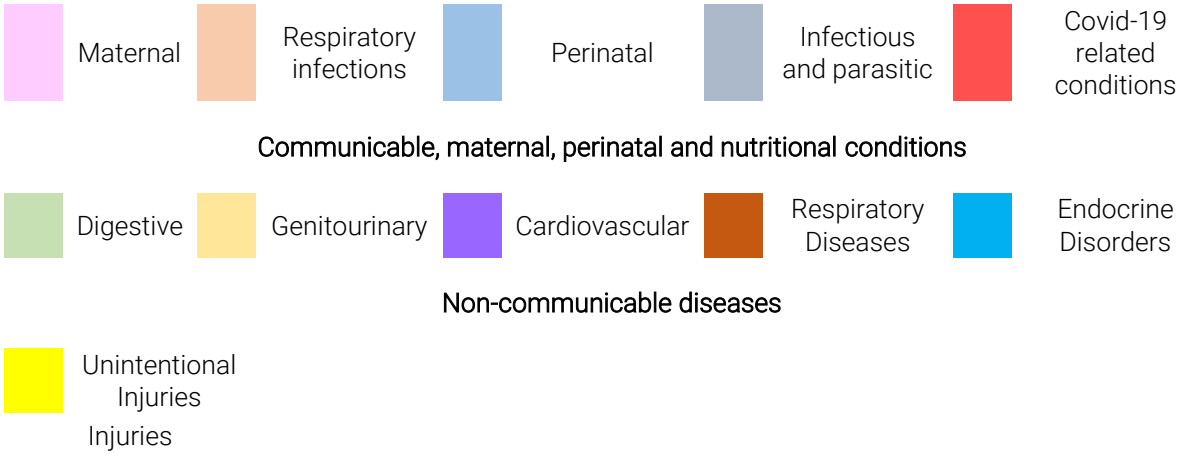
Figure 3-16: Top 5 leading causes of female admission for young adults aged 35-64 years, 2020

Female	1st	2nd	3rd	4th	5th
35-44	Maternal conditions 17%	Obstructed labour 13%	Genitourinary system diseases 9%	Abortion 7%	Digestive diseases 4%
45-54	Genitourinary system diseases 16%	Digestive diseases 8%	COVID-19 related conditions 5%	Ischemic heart disease 5%	Unintentional injuries 4%
55-64	Genitourinary system diseases 8%	COVID-19 related conditions 8%	Digestive diseases 7%	Cerebrovascular disease 5%	Unintentional injuries 5%

For young males who fall under the age group 35-44 years, the main reason for admissions was unintentional injuries while for older adults aged 45-64 ischemic heart disease is the main reason for admission. Similar to women COVI-19 related conditions was higher among men 55-65 year, being the third most common burden of disease for admissions.

Figure 3-17: Top 5 leading causes of male admission for young adults aged 35-64 years, 2020

Male	1st	2nd	3rd	4th	5th
35-44	Unintentional injuries 15%	Digestive diseases 11%	Ischemic heart disease 9%	Genitourinary system diseases 6%	COVID-19 related conditions 6%
45-54	Ischemic heart disease 13%	Unintentional injuries 9%	Digestive diseases 9%	Cerebrovascular disease 6%	COVID-19 related conditions 6%
55-64	Ischemic heart disease 16%	Digestive diseases 10%	COVID-19 related conditions 8%	Unintentional injuries 7%	Cerebrovascular disease 7%



IV.ELDERLY (AGED 65 YEARS AND ABOVE)

The burden from ischemic heart disease was highest among older people aged 65 and above for 2020. Cardiovascular diseases were the highest in this age group followed by digestive diseases. COVID-19 related conditions were the fifth most common reason for admission in this age group.

Figure 3-18: Top 5 leading causes of all admission for elderly aged 65 and above, 2020

All	1st	2nd	3rd	4th	5th
65-74	Ischemic heart disease 8%	Digestive diseases 8%	Unintentional injuries 6%	Cerebrovascular disease 5%	COVID-19 related conditions 5%
75-85	Cerebrovascular disease 7%	Chronic obstructive pulmonary disease 7%	Unintentional injuries 7%	Ischemic heart disease 6%	Digestive diseases 6%
>85	Lower respiratory infections 8%	Chronic obstructive pulmonary disease 8%	Digestive diseases 7%	Cerebrovascular disease 6%	Unintentional injuries 6%

For elderly females the condition with highest burden varied by 5-year age groups. COVID-19 related conditions were not among the top five causes of admission.

Figure 3-19: Top 5 leading causes of female admission for elderly aged 65 and above, 2020

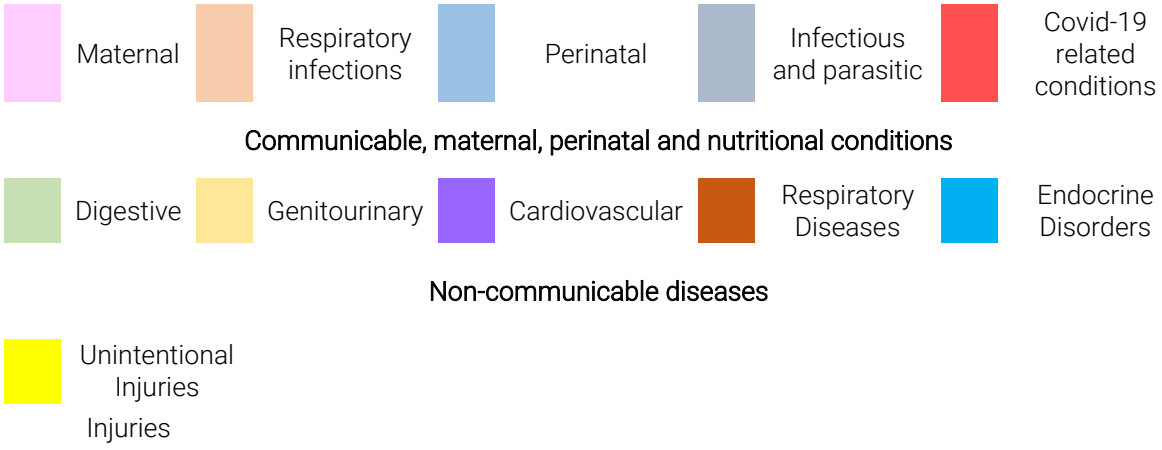
Female	1st	2nd	3rd	4th	5th
65-74	Digestive diseases 7%	Unintentional injuries 7%	Hypertensive heart disease 5%	Genitourinary system diseases 5%	Ischemic heart disease 5%
75-85	Unintentional injuries 8%	Chronic obstructive pulmonary disease 8%	Cerebrovascular disease 6%	Digestive diseases 6%	Lower respiratory infections 6%
>85	Lower respiratory infections 10%	Chronic obstructive pulmonary disease 7%	Unintentional injuries 7%	Digestive diseases 7%	Genitourinary system diseases 7%

However, for elderly males, the most common reason for admissions included cardiovascular diseases across all age groups. COVID-19 related conditions were the fourth highest for 65-74 years age group, but was not among the top five causes of admission in the age groups 75 and above.

Figure 3-20: Top 5 leading causes of male admission for elderly aged 65 and above, 2020

Males	1st	2nd	3rd	4th	5th
65-74	Ischemic heart disease 11%	Digestive diseases 8%	Cerebrovascular disease 7%	COVID-19 related conditions 6%	Unintentional injuries 6%
75-85	Cerebrovascular disease 8%	Ischemic heart disease 8%	Digestive diseases 6%	Chronic obstructive pulmonary disease 6%	Lower respiratory infections 5%
>85	Chronic obstructive pulmonary disease 8%	Cerebrovascular disease 8%	Lower respiratory infections 7%	Digestive diseases 7%	Hypertensive heart disease 5%

Legend used for the above figures:



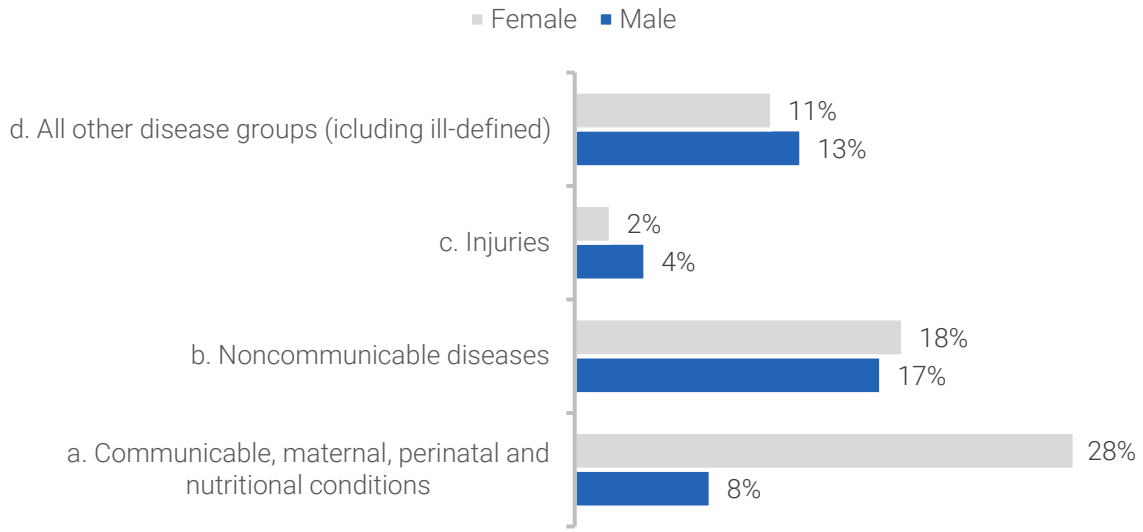
C. INPATIENTS BY MAIN DISEASE CONDITIONS

From the total of 41,800 inpatients 31,968inpatients were admitted due to either communicable, maternal, perinatal and nutritional conditions (14,777), non-communicable diseases (14,727) or injuries (2,464). It is also notable that more males were admitted due to injuries than females.

Table 3-6: Inpatients by Main Disease Conditions and Gender, 2020

GBD Main Groups	Male	Female	Total
a. Communicable, maternal, perinatal and nutritional conditions	3,158	11,599	14,757
b. Noncommunicable diseases	7,111	7,620	14,731
c. Injuries	1,638	838	2,476
d. All other disease groups (including ill-defined)	5,258	4,578	9,836
Total	**17,165**	**24,635**	**41,800**

Figure 3-21: Inpatients by Main Disease Conditions and Gender – in per cent, 2020



Similarly, when we have a look at the type of facility the patients were admitted, it can be seen that the numbers are much higher for public facilities in all categories of disease burden compared to private health care facilities. This is due to the fact that number of private facilities giving inpatient services are few in the Maldives and the need for co-pay for services as Aashaadha does not cover full cost at the private facilities.

Table 3-7: Inpatients by Main Disease Conditions, Location and Type of facility, 2020

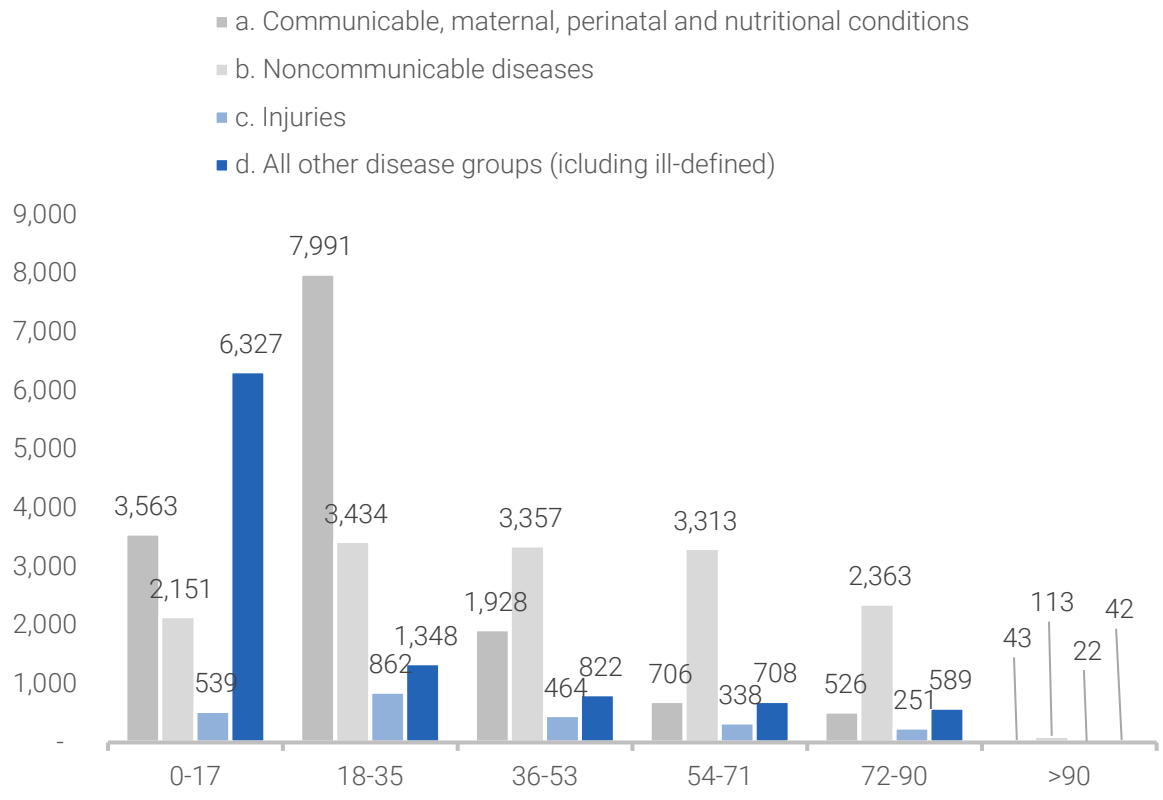
	a. Communicable, maternal, perinatal and nutritional conditions	b. Noncommunicable diseases	c. Injuries	d. All other disease groups (including ill-defined)	Total
Private	2,343	3,013	425	2,048	7,829
Male	352	1,378	299	1,093	3,122
Female	1,991	1,635	126	955	4,707
Public	12,414	11,718	2,051	7,788	33,971
Male	2,806	5,733	1,339	4,165	14,043
Female	9,608	5,985	712	3,623	19,928
Total	**14,757**	**14,731**	**2,476**	**9,836**	**41,800**

Non-communicable diseases and injuries had admissions in all age groups, while for communicable, maternal, perinatal and nutritional conditions the admissions were highest in the reproductive age groups followed by children.

Table 3-8: Inpatients by Main Disease Conditions and age groups, 2020

Age	a. Communicable, maternal, perinatal and nutritional conditions	b. Noncommunicable diseases	c. Injuries	d. All other disease groups (including ill-defined)	Total
0-17	3,563	2,151	539	6,327	12,580
18-35	7,991	3,434	862	1,348	13,635
36-53	1,928	3,357	464	822	6,571
54-71	706	3,313	338	708	5,065
72-90	526	2,363	251	589	3,729
>90	43	113	22	42	220
Total	**14,757**	**14,731**	**2,476**	**9,836**	**41,800**

Figure 3-22: Inpatients by Main Disease Conditions and age groups, 2020



In terms, of admissions for main burden of disease groups, NCDs and communicable, maternal, perinatal and nutritional conditions the admissions were more or less consistent except in April and May. This period corresponded to the lockdown and strict movement restrictions imposed across the country due to the COVID-19 pandemic that spread in the GMR.

Table 3-9: Main Disease Group inpatients by month, 2020

Months	a. Communicable, maternal, perinatal and nutritional conditions	b. NCD	c. Injuries	d. All other disease groups (including ill-defined)	Total
January	1,599	1,620	240	1,047	4,506
February	1,216	1,221	240	776	3,453
March	1,242	1,254	216	794	3,506
April	914	784	141	541	2,380
May	1,068	692	127	595	2,482
June	1,104	1,157	183	719	3,163
July	1,062	1,190	213	714	3,179
August	1,269	1,222	199	782	3,472
September	1,253	1,312	208	688	3,461
October	1,578	1,416	218	831	4,043
November	1,250	1,348	226	894	3,718
December	1,202	1,515	265	1,455	4,437
Total	**14,757**	**14,731**	**2,476**	**9,836**	**41,800**

Most inpatients stayed for 2 days across all categories of disease burden, followed by 6 or more days for injuries, NCDs, and communicable, maternal, perinatal and nutritional conditions.

Table 3-10: Number of inpatient days by disease conditions, 2020

Days	a. Communicable, maternal, perinatal and nutritional conditions	b. Noncommunicable diseases	c. Injuries	d. All other disease groups (including ill-defined)	Total
1	1,411	2,286	470	1,739	5,906
2	3,122	3,570	675	3,700	11,067
3	3,017	2,468	310	1,858	7,653
4	2,420	1,808	217	1,310	5,755
5	1,767	1,166	162	513	3,608
6 or more	3,020	3,433	642	716	7,811
Total	**14,757**	**14,731**	**2,476**	**9,836**	**41,800**

Although, the total inpatients for both diseases groups communicable, maternal, perinatal and nutritional conditions and NCDs were similar, the disease conditions within the groups shows that communicable disease burden is much smaller than NCD burden.

Table 3-11: Sub-disease groups of GBD and gender, 2020

Sub-disease groups	Male	Female	Total
Communicable, maternal, perinatal and nutritional conditions	3,158	11,599	14,757
Maternal conditions		8,551	8,551
Perinatal conditions	1,239	1,046	2,285
Infectious and parasitic diseases	736	708	1,444
Respiratory infections	586	538	1,124
Other emerging diseases	514	498	1,012
Nutritional deficiencies	83	258	341
Noncommunicable diseases	7,112	7,619	14,731
Cardiovascular diseases	1,757	1,028	2,785

Genitourinary diseases	843	1,847	2,690
Digestive diseases	1,272	1,192	2,464
Endocrine disorders	563	668	1,231
Respiratory diseases	557	670	1,227
Neuropsychiatric conditions	513	561	1,074
Musculoskeletal diseases	470	465	935
Skin diseases	352	246	598
Diabetes mellitus	223	223	446
Malignant neoplasms	218	216	434
Other neoplasms	90	224	314
Congenital anomalies	122	122	244
Sense organ diseases	76	83	159
Oral conditions	56	74	130
Not categorized	3,333	2,392	5,725
Ill-defined diseases	1,879	2,149	4,028
Injuries	1,638	838	2,476
Unintentional injuries	1,621	829	2,450
Intentional injuries	17	9	26
Not stated	46	37	83
Total	**17,166**	**24,634**	**41,800**

Therefore, the rest of this chapter will focus of the tops 5 NCDs and communicable, maternal, perinatal and nutritional conditions the conditions in detail.

I. COMMUNICABLE, MATERNAL, PERINATAL AND NUTRITIONAL CONDITIONS

Most of the inpatients were females, where highest number of admissions were from maternal conditions which was 58%. Perinatal conditions with 15%, infections 24% and 3% nutritional disorders.

Figure 3-23: Communicable, maternal, perinatal and nutritional condition admissions by region, 2020

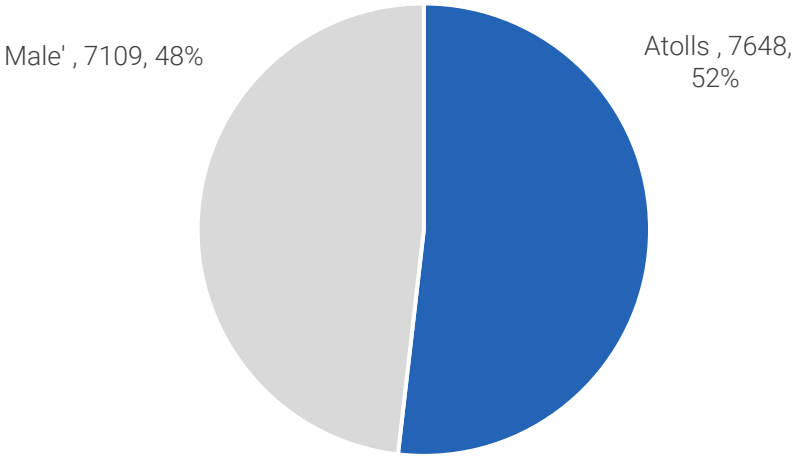
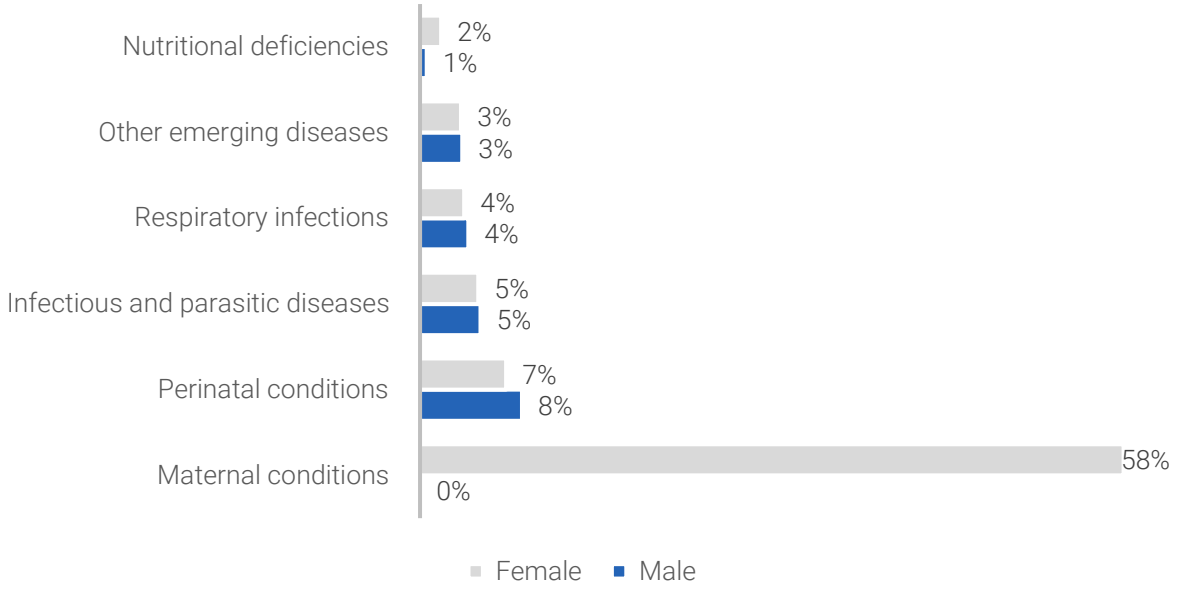
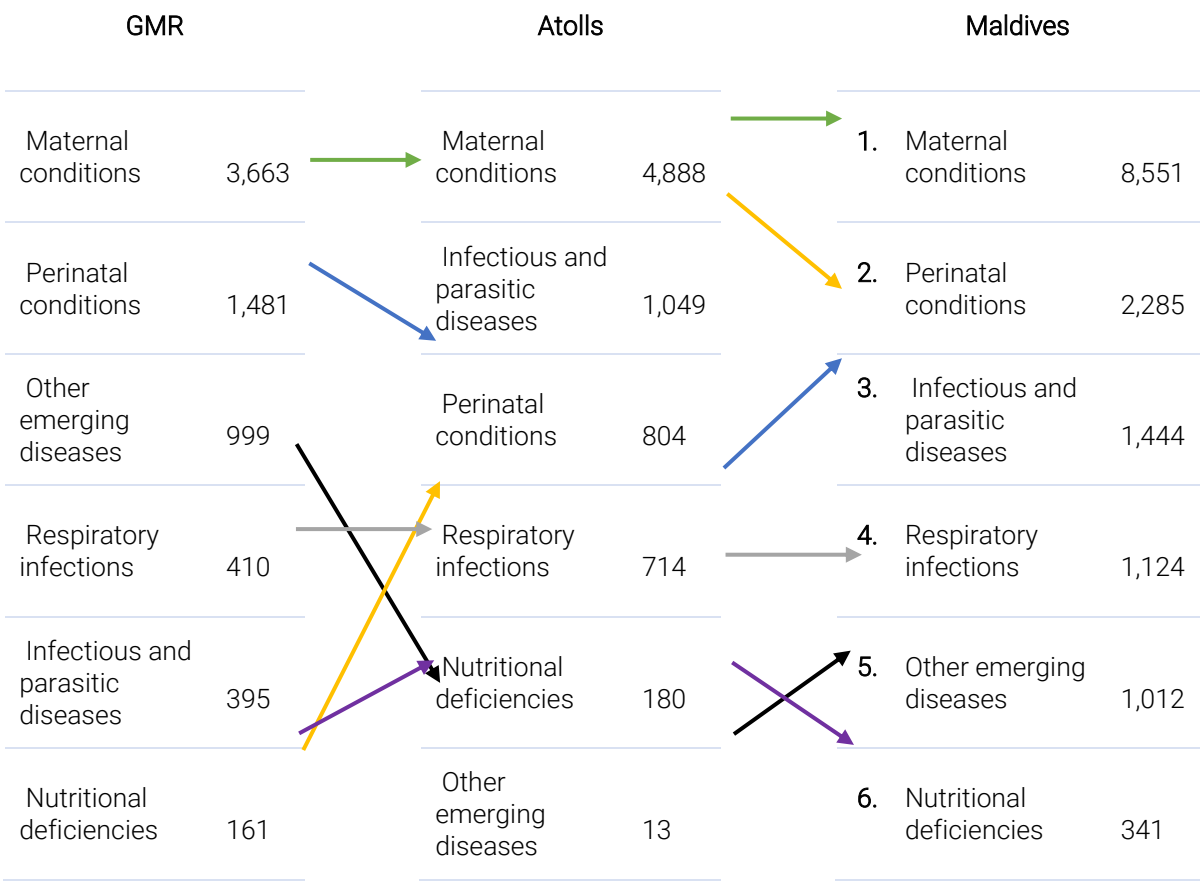


Figure 3-24: Communicable, maternal, perinatal and nutritional condition by disease group and gender, 2020



It can be also noted that the admissions in atolls and GMR differed in the disease burden category of communicable, maternal, perinatal and nutritional conditions. Thus, the top 5 communicable, maternal, perinatal and nutritional condition admissions for Maldives will be discussed in detail for this chapter.

Figure 3-25: Number of admissions for communicable, maternal, perinatal and nutritional condition by region and Maldives, 2020



1. MATERNAL CONDITIONS

Most of the women were admitted for giving birth with different modes of delivery. Multiple sub-categories with 30% included admissions for observation for labour, antenatal care and issues relating to healthcare of pregnant women. It can be seen that most women admitted for maternal conditions in 2020 were in the age group 18-35 years.

Figure 3-26: Admissions due to maternal conditions, 2020

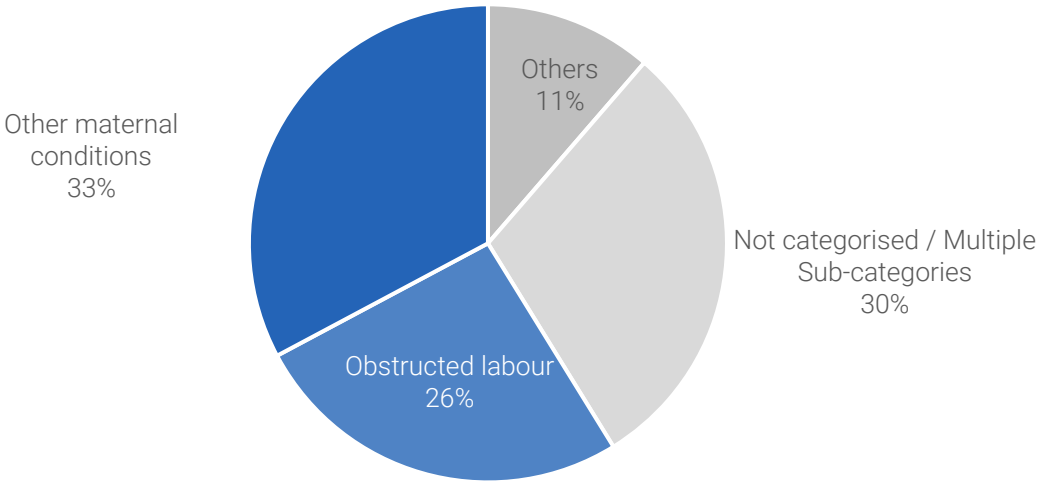
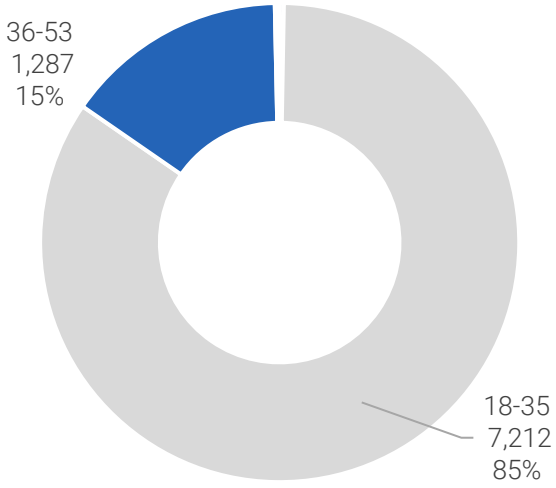


Figure 3-27: Maternal condition admissions by age, 2020



2. PERINATAL CONDITIONS

Most of the babies were admitted for other perinatal conditions which accounted for 82% followed by low birth weight 13%. More boys were admitted compared to girls for perinatal conditions.

Figure 3-28: Admissions due to perinatal conditions, 2020

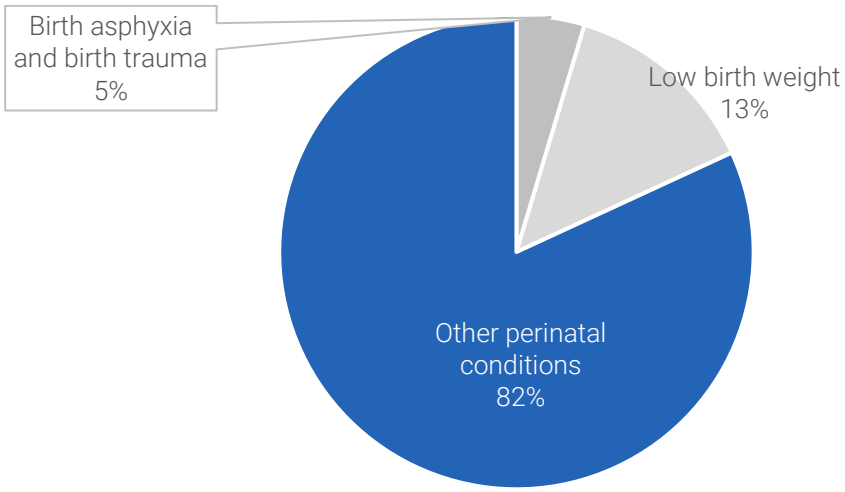
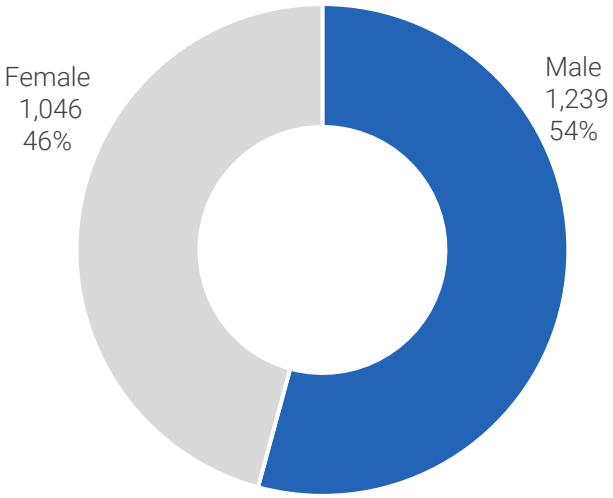


Figure 3-29: Perinatal condition admissions by gender, 2020



3. INFECTIOUS AND PARASITIC DISEASES

Admissions due to infectious and parasitic diseases were common for both males and females, while highest number admissions were for children under the age of 18 in 2020.

Figure 3-30: Admissions due to infections and parasitic diseases, 2020

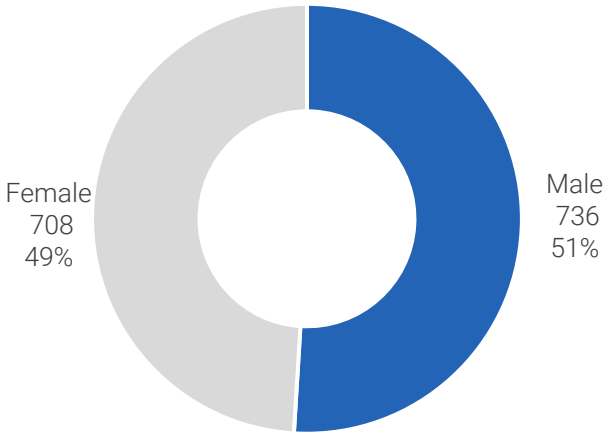
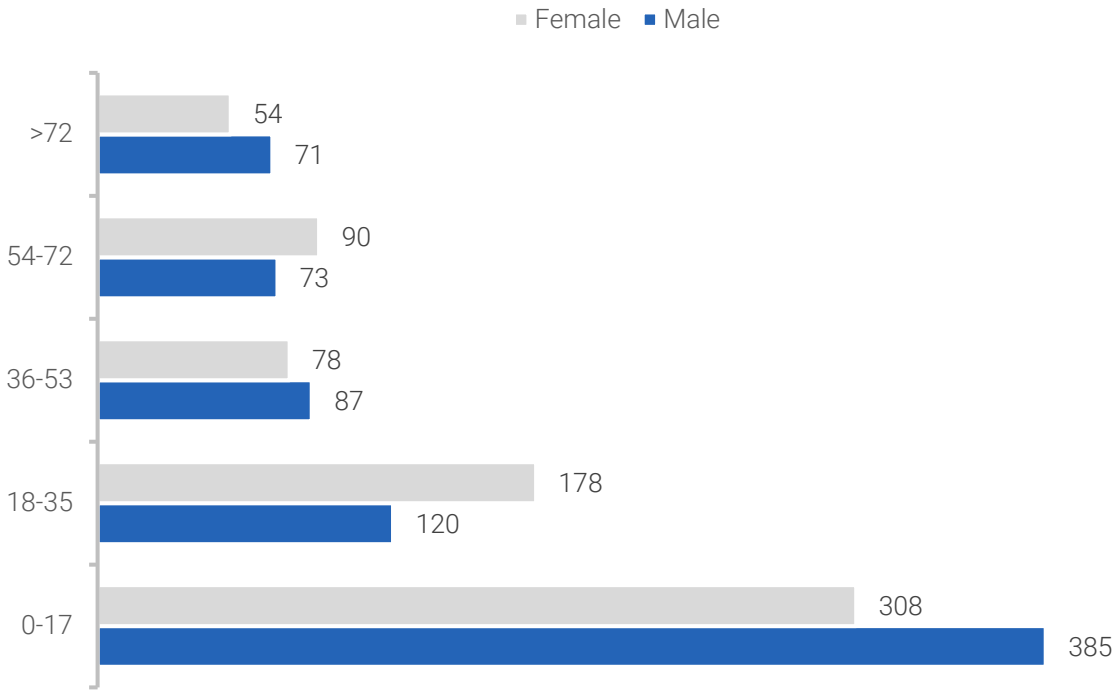


Figure 3-31: Admissions due to infection and parasitic diseases by gender, 2020



4. RESPIRATORY INFECTIONS

Lower and upper respiratory infections accounted for 97% of admissions due to infections.

Figure 3-32: Admissions due to respiratory infections, 2020

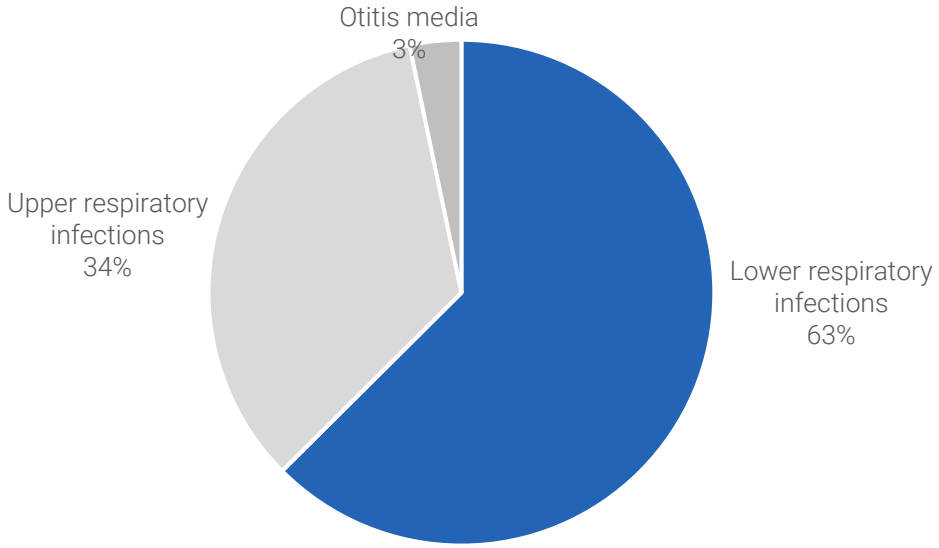
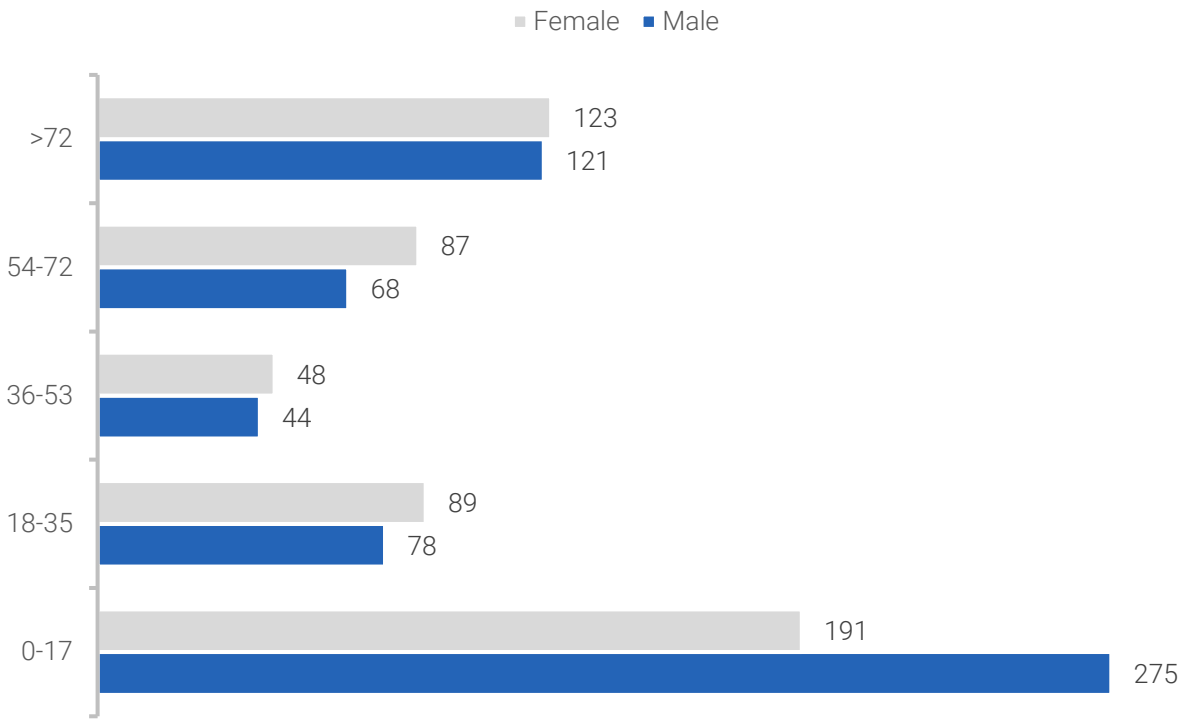


Figure 3-33: Admissions due to respiratory infection by gender, 2020



5. OTHER EMERGING DISEASES

Among other emerging diseases, COVID-19 related conditions[13] are considered in this section. It is notable that almost equal men (51%) and women (49%) were admitted during 2020, with almost equal distribution of men and women across age groups as well.

Figure 3-34: Covid-19 related admissions by gender, 2020

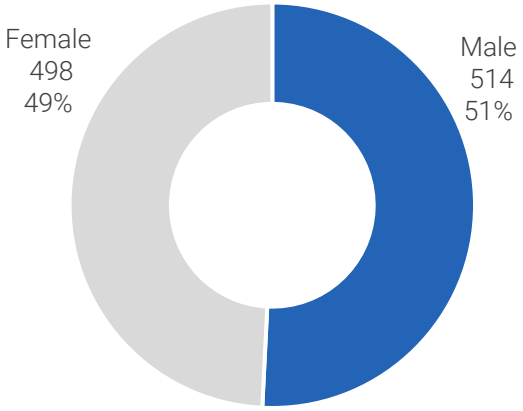
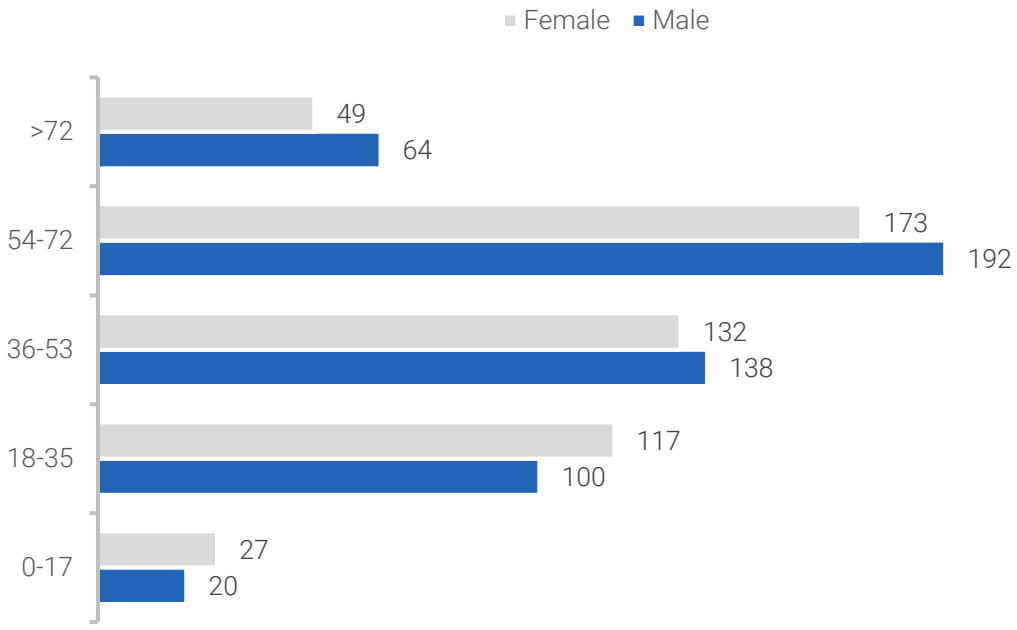


Figure 3-35: Covid-19 related admissions by gender and age, 2020



[13]Total Covid-19 related conditions were 1,350. However, detailed information on the patients aggregated and analyzed for 1,012 patients in this section.

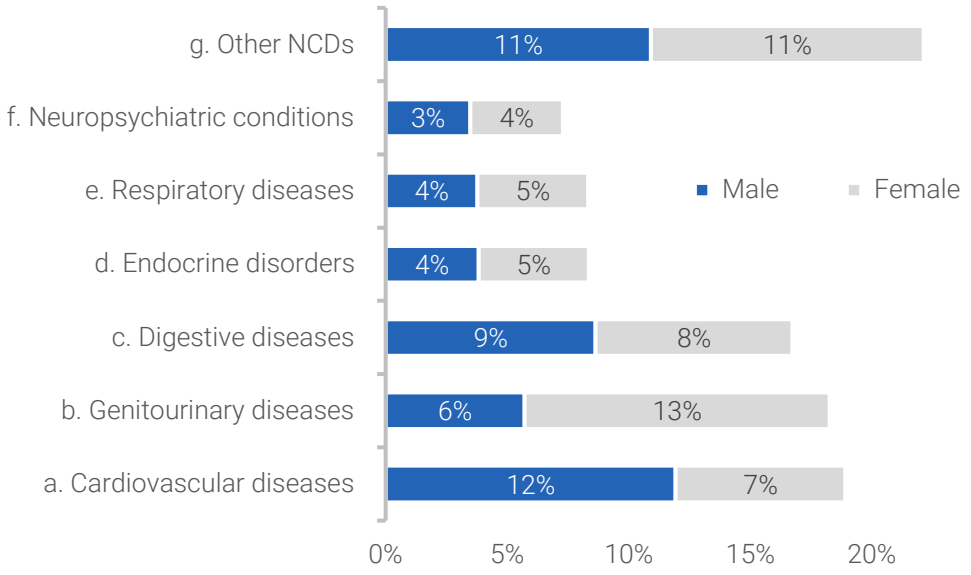
II. NON-COMMUNICABLE DISEASES

Noncommunicable diseases accounted for more than 35% of the inpatients in the country. This section will look into detail of top 5 noncommunicable disease admissions in the county as summarized below.

Table 3-12: Noncommunicable diseases in numbers, 2020

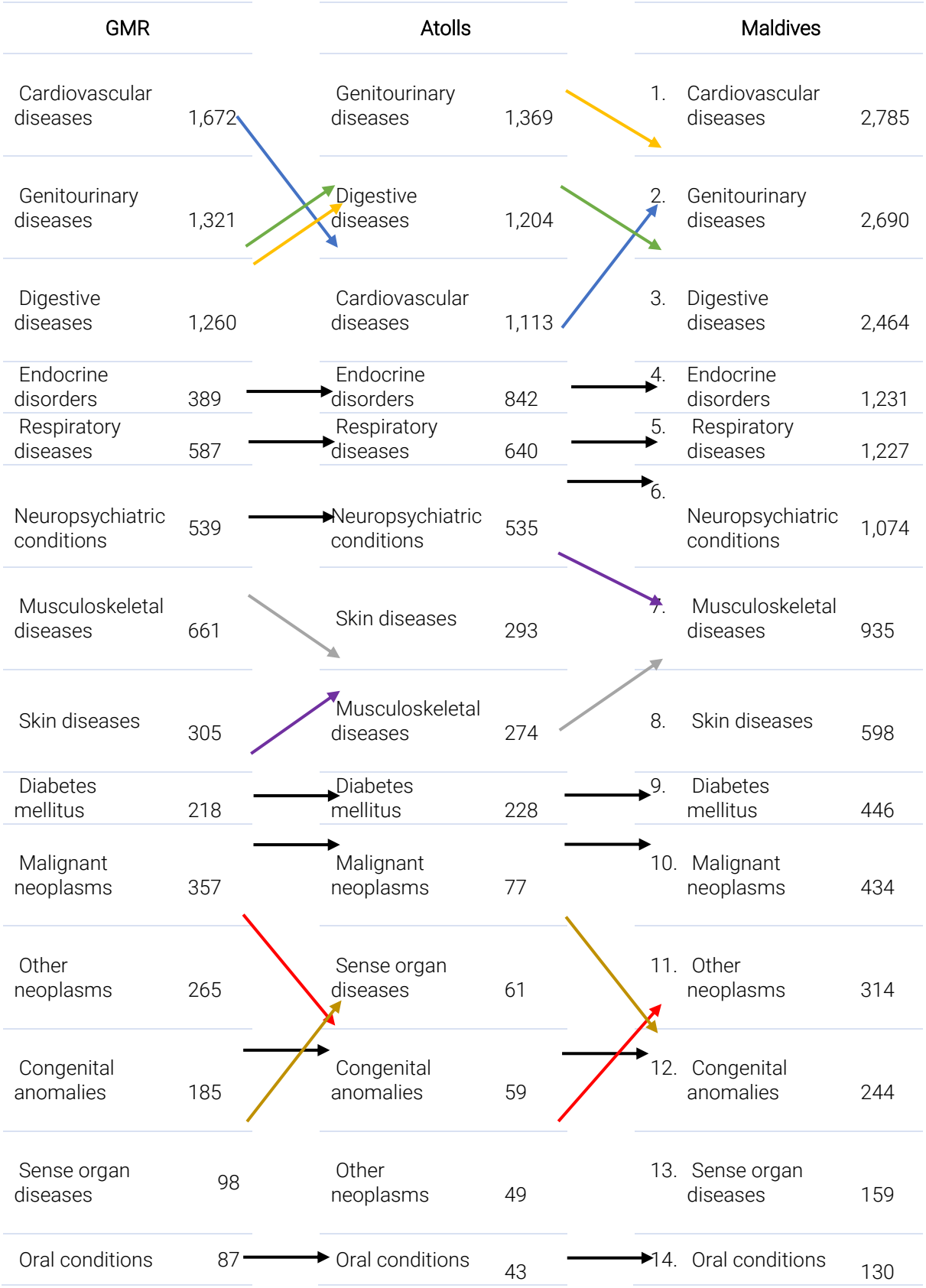
	Male	Female	Total
Noncommunicable diseases	7,111	7,620	14,731
a. Cardiovascular diseases	1,757	1,028	2,785
b. Genitourinary diseases	842	1,848	2,690
c. Digestive diseases	1,272	1,192	2,464
d. Endocrine disorders	563	668	1,231
e. Respiratory diseases	557	670	1,227
f. Neuropsychiatric conditions	513	561	1,074
g. Other NCDs	1,607	1,653	3,260

Figure 3-36: Noncommunicable diseases in percent, 2020



It is noted that the admissions in atolls and GMR varied for different NCD groups. Thus, the top 5 NCD admissions for Maldives will be discussed in detail for this chapter.

Figure 3-37: Number of admissions for NCDs by region and Maldives, 2020



1. CARDIOVASCULAR DISEASES

Cardiovascular diseases (CVDs) were the most common among NCDs inpatients, from which ischemic heart disease admissions were 41% followed by cerebrovascular diseases 27%, with majority of the inpatients being males across all age groups.

Figure 3-38: Top 5 CVD disease sub-group admissions by gender, 2020

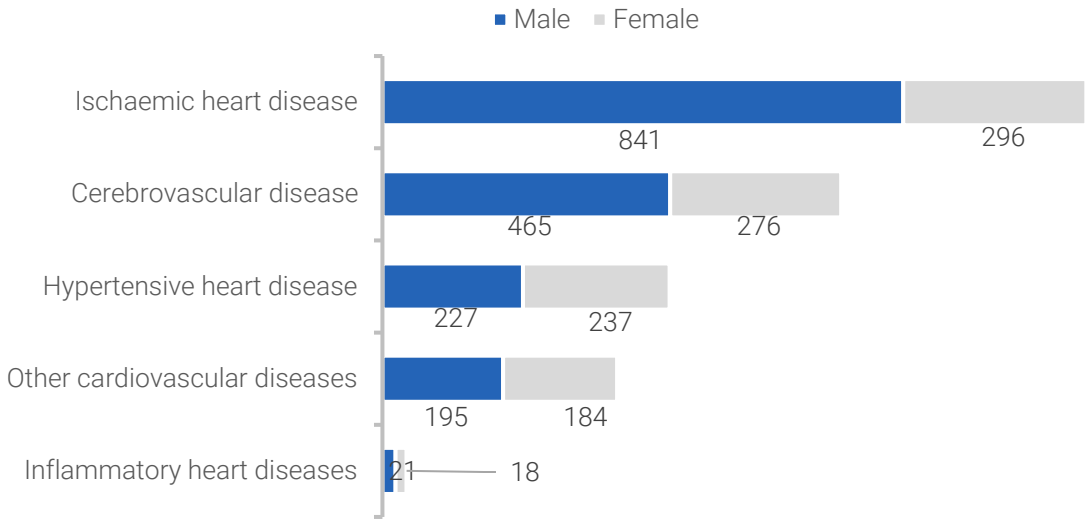
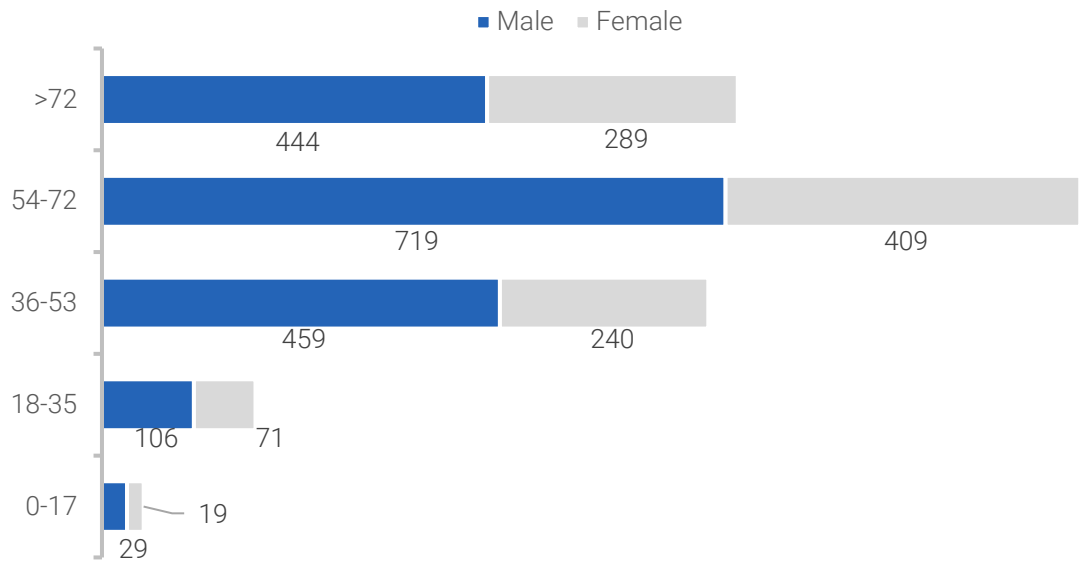


Figure 3-39: CVD admissions by gender and age, 2020



2. GENITOURINARY DISEASES

Genitourinary diseases were the second most common among NCDs inpatients, from which 80% were other genitourinary disease admissions, followed by nephritis and nephrosis accounting for 18%, with majority of the inpatients being females across all age groups.

Figure 3-40: Genitourinary disease admissions by numbers, 2020

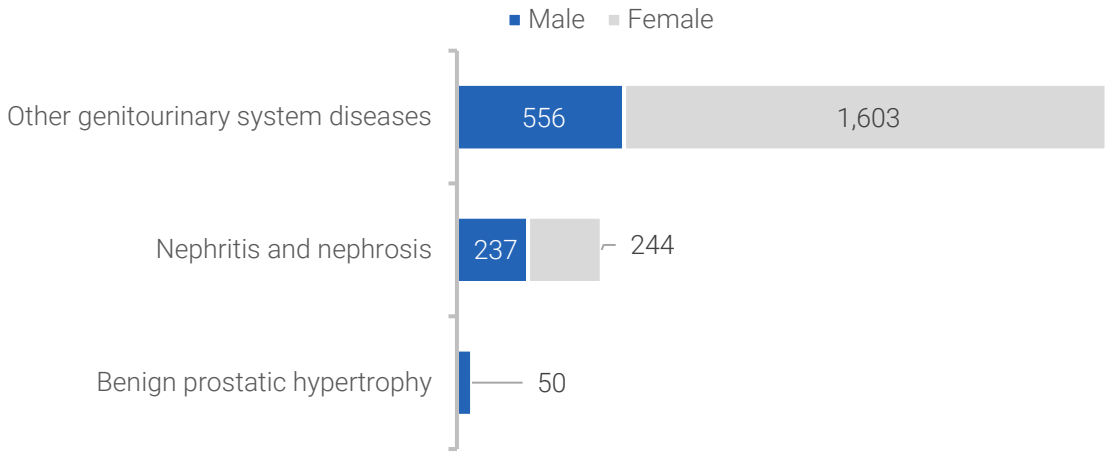
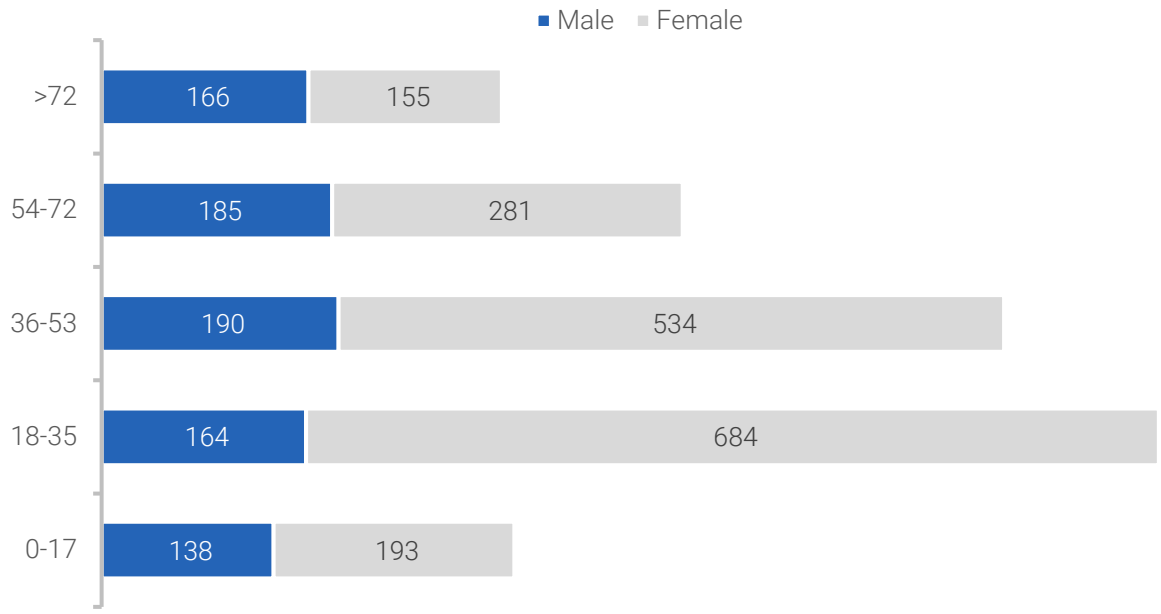


Figure 3-41: Genitourinary disease admissions by gender and age, 2020



3. DIGESTIVE DISEASES

Digestive diseases were the third most common among NCDs inpatients, from which 85% were other digestive disease admissions followed by appendicitis (13%), with majority being females across all age groups.

Figure 3-42: Top 5 CVD disease sub-group admissions by gender, 2020

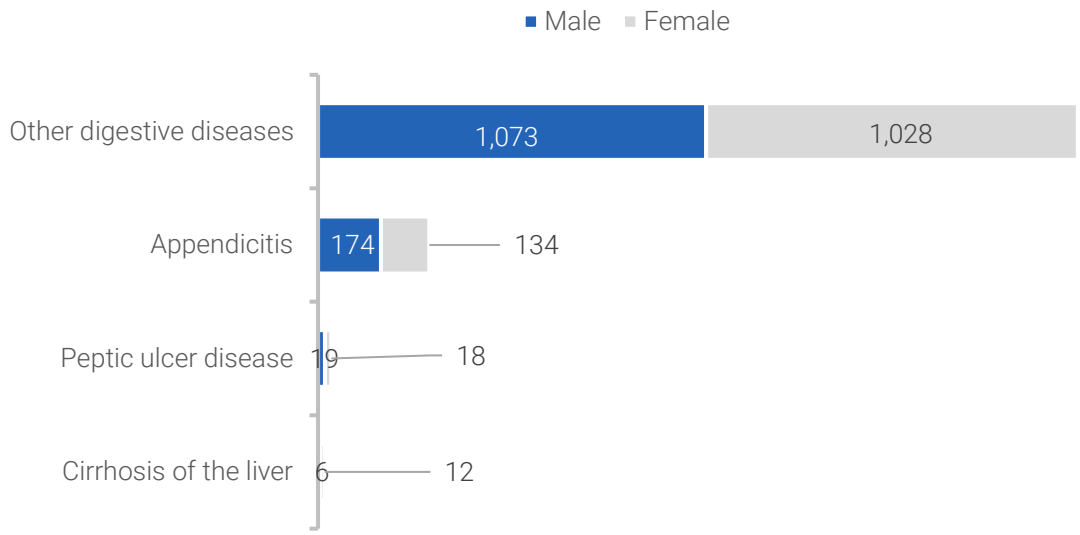
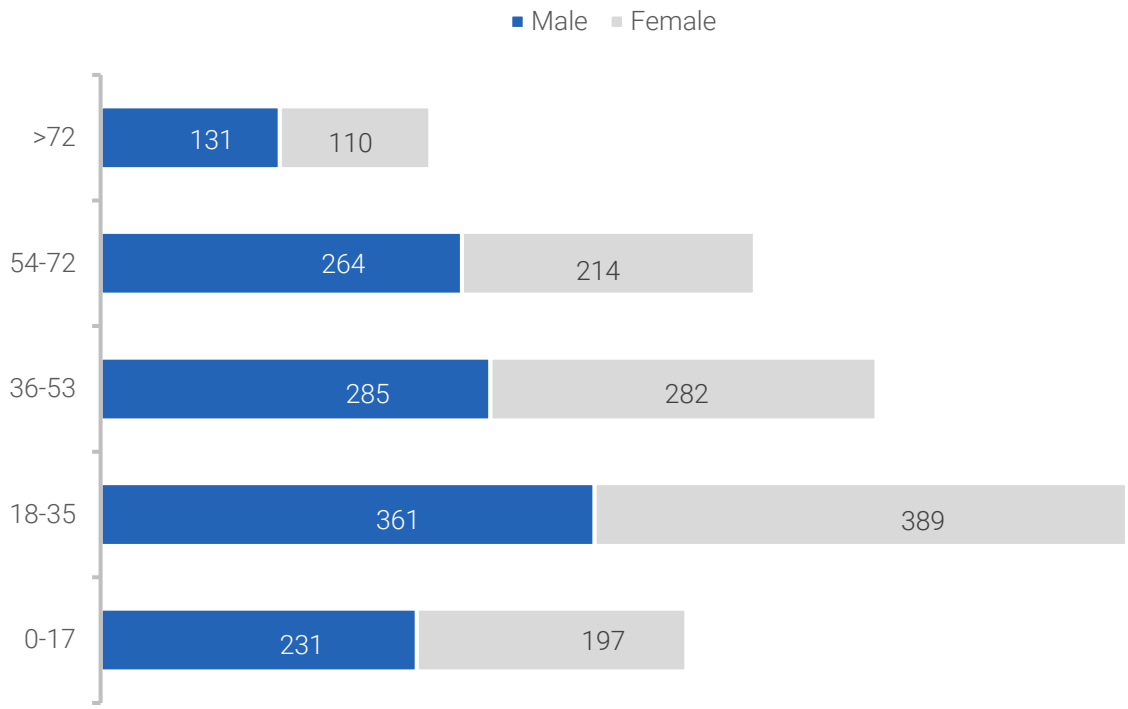


Figure 3-43: CVD admissions by gender and age, 2020



4. ENDOCRINE DISORDERS

Endocrine disorders were the fourth most common among NCDs inpatients which affected both genders equally. It is noted that more endocrine disorder admissions were in atolls (68%) compared to GMR (32%).

Figure 3-44: Endocrine disorders by region 2020

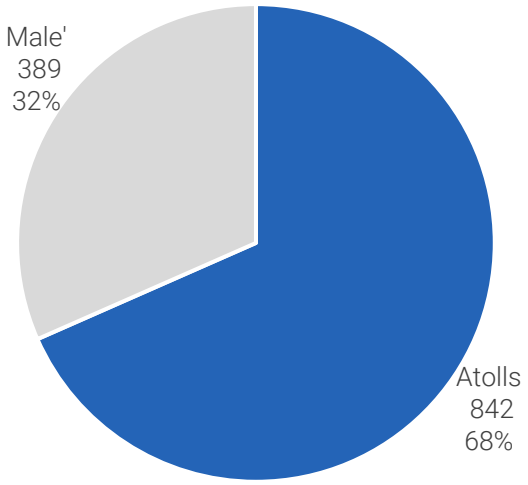
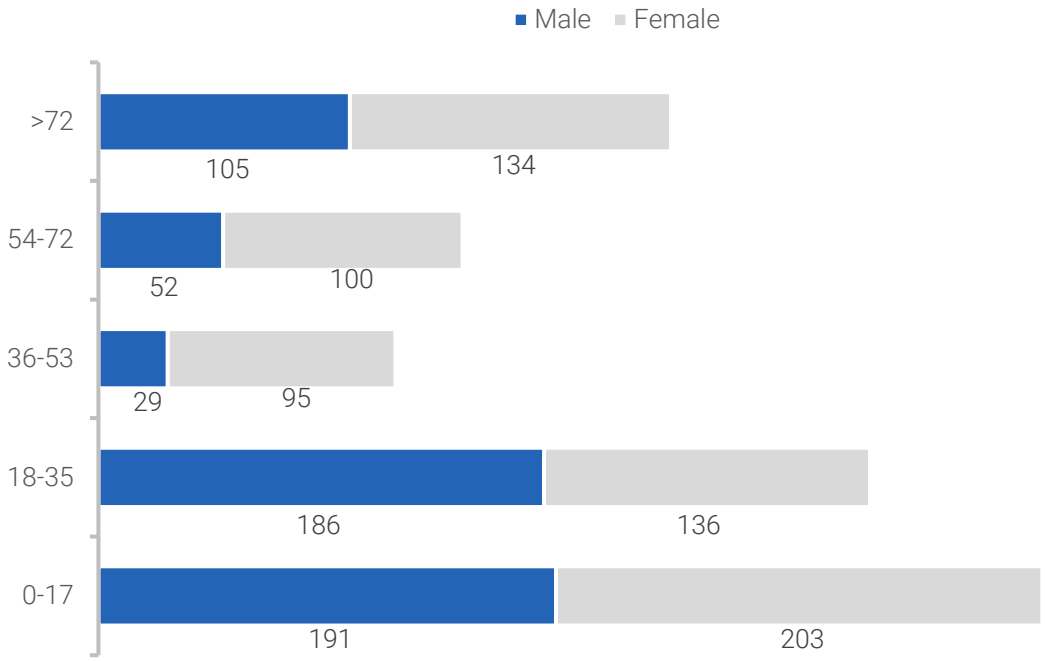


Figure 3-45: Endocrine disorders by gender and age, 2020



5. RESPIRATORY DISEASES

Respiratory diseases were the fifth most common among NCDs inpatients, from which 85% were other respiratory disease.

Figure 3-46: Respiratory disease admission sub-group admissions by gender, 2020

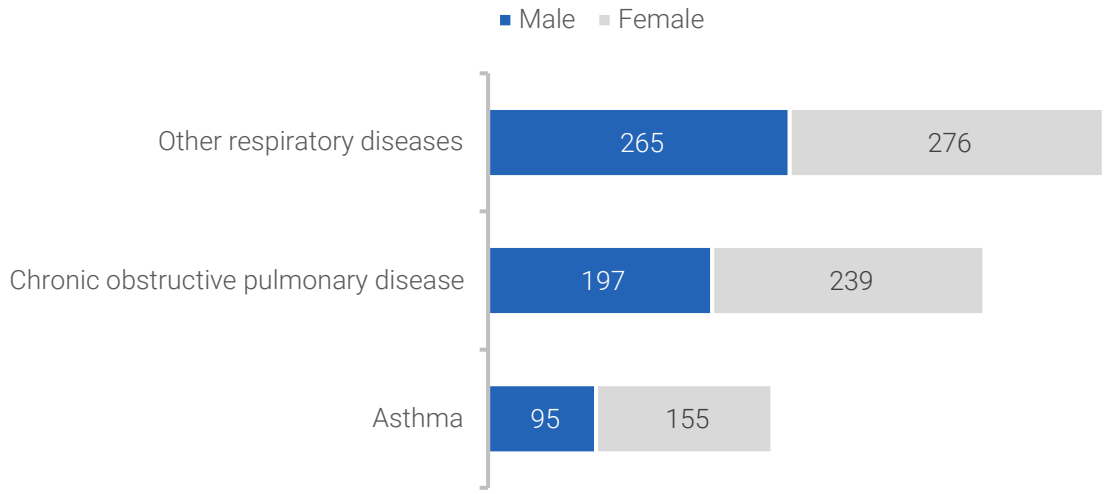
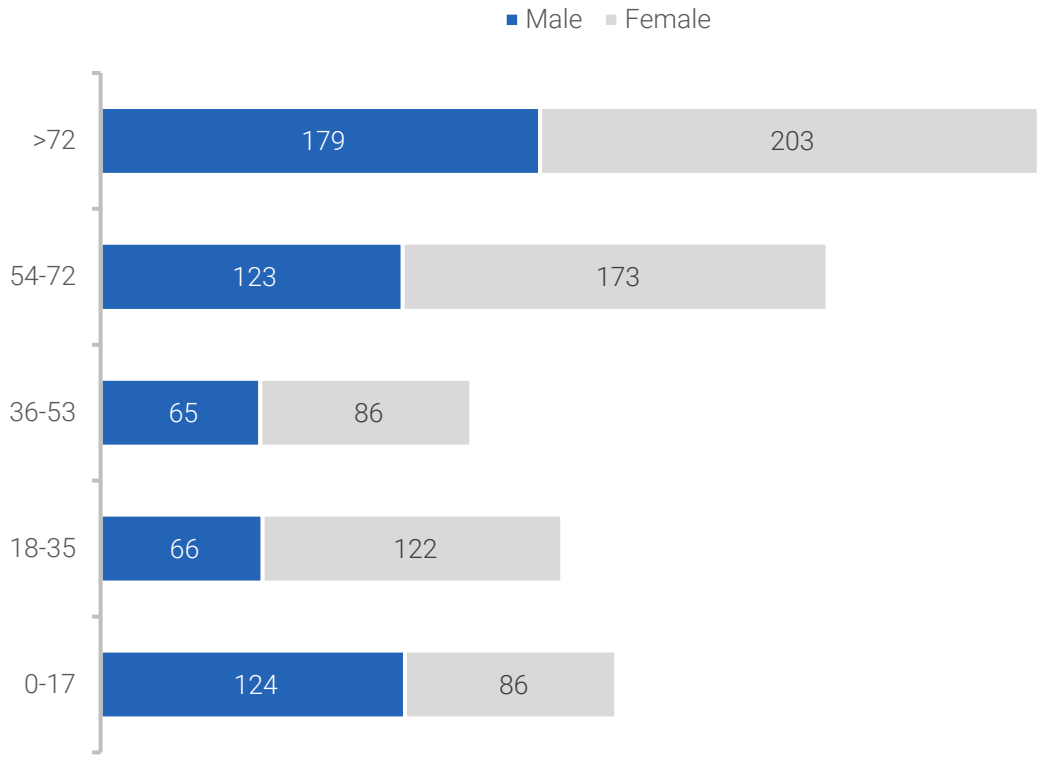


Figure 3-47: Respiratory disease admissions by gender and age, 2020



III. INJURIES

Injuries accounted for 6% of all the admissions, 99% of these injuries were unintentional injuries and injury related admissions were more for males in 2020.

Figure 3-48: Admission by type of injury, 2020

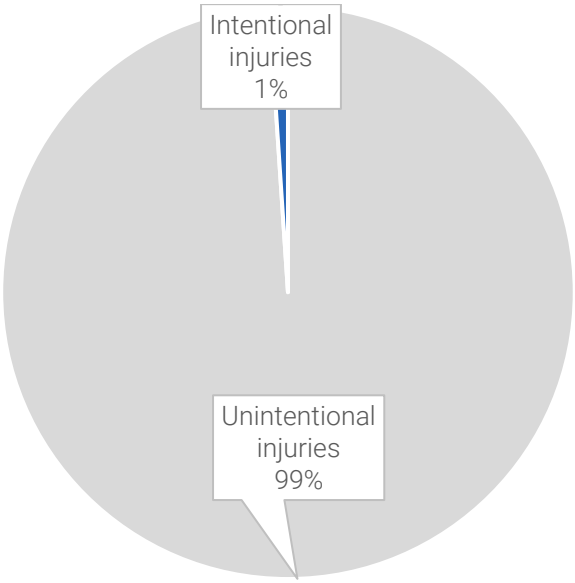
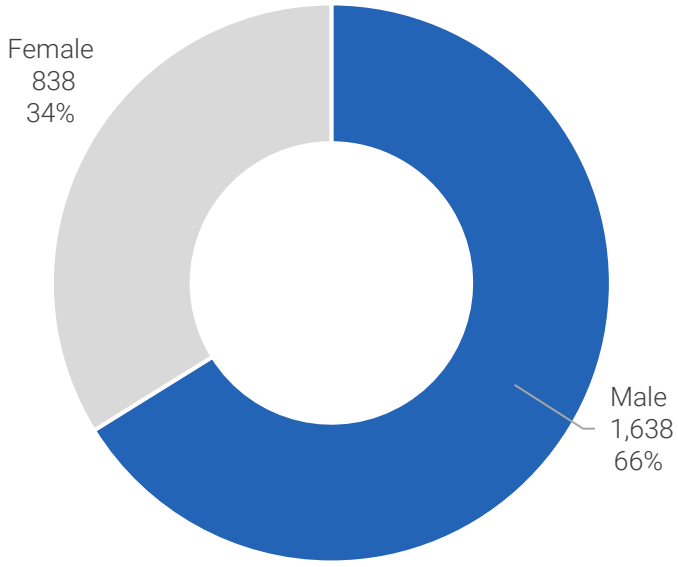


Figure 3-49: Injury related admissions by gender, 2020



Details of admissions by region, atolls, age groups, gender, type of facility is attached with the annex.

D. ANNEXES

Table 3-13: Detail of all admission by gender, age and region, 2020

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Communicable, maternal, perinatal and nutritional conditions	1,374	6,274	1,784	5,325	14,757
Maternal conditions		4,888		3,663	8,551
Abortion		508		280	788
0-17		1		2	3
18-35		397		190	587
36-53		108		88	196
54-71		2			2
Hypertensive disorders		38		55	93
18-35		30		41	71
36-53		8		14	22
Maternal hemorrhage		32		44	76
18-35		28		30	58
36-53		4		14	18
Maternal sepsis		6		8	14
18-35		5		8	13
36-53		1			1
Not categorized / Multiple Sub-categories		1,085		1,467	2,552
Obstructed labour		1,508		716	2,224
0-17		3		1	4
18-35		1,299		588	1,887
36-53		199		127	326
54-71		3			3
>90		4			4
Other maternal conditions		1,711		1,093	2,804
0-17		5		4	9
18-35		1,448		904	2,352
36-53		249		180	429
54-71		3		5	8
>90		6			6
Perinatal conditions	431	373	808	673	2,285
Birth asphyxia and birth trauma	24	19	36	27	106
0-17	24	19	36	27	106
Low birth weight	71	52	101	84	308

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
0-17	71	52	101	84	308
Other perinatal conditions	336	302	671	562	1,871
0-17	336	302	671	562	1,871
Infectious and parasitic diseases	525	524	211	184	1,444
Childhood-cluster diseases			1		1
0-17			1		1
Dengue	93	62	22	11	188
0-17	56	48	9	7	120
18-35	23	6	6	3	38
36-53	6	4	5		15
54-71	4	2	1		7
72-90	4	2	1	1	8
Diarrhoeal diseases	299	330	32	45	706
0-17	188	162	15	18	383
18-35	33	81	6	11	131
36-53	32	38	6	4	80
54-71	26	34	3	7	70
72-90	19	14	2	5	40
>90	1	1			2
Hepatitis B	1		3	3	7
18-35	1		2		3
36-53			1	1	2
54-71				2	2
Intestinal nematode infections			1		1
36-53			1		1
Malaria		1			1
18-35		1			1
Meningitis	1	5	3	1	10
0-17	1	5	2		8
54-71			1	1	2
Other infectious diseases	129	106	129	95	459
0-17	60	39	50	29	178
18-35	13	24	28	27	92
36-53	19	12	12	7	50
54-71	14	22	16	14	66
72-90	20	8	22	17	67
>90	3	1	1	1	6
STDs excluding HIV		19	3	13	35
18-35		12	3	9	24
36-53		4		3	7
54-71		1		1	2
72-90		1			1
>90		1			1

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Tuberculosis	2	1	17	16	36
0-17			3		3
18-35			5	4	9
36-53			5	5	10
54-71	2	1	1	5	9
72-90			3	2	5
Respiratory infections	361	353	225	185	1,124
Lower respiratory infections	207	204	158	134	703
0-17	95	63	42	34	234
18-35	13	17	23	15	68
36-53	16	16	15	13	60
54-71	22	41	30	27	120
72-90	55	64	45	40	204
>90	6	3	3	5	17
Otitis media	3	3	19	12	37
0-17	3		6	2	11
18-35		1	6	3	10
36-53			4	5	9
54-71		1	3	2	6
72-90		1			1
Upper respiratory infections	151	146	48	39	384
0-17	99	76	30	16	221
18-35	25	37	11	16	89
36-53	6	13	3	1	23
54-71	7	7	1	3	18
72-90	14	13	3	3	33
Other emerging diseases	10	3	504	495	1,012
COVID-19 related conditions	10	3	504	495	1,012
0-17	1		19	27	47
18-35	2	3	98	114	217
36-53	6		132	132	270
54-71	1		183	171	355
72-90			69	50	119
>90			3	1	4
Nutritional deficiencies	47	133	36	125	341
Iodine deficiency			1		1
0-17			1		1
Iron-deficiency anemia	40	127	27	122	316
0-17	9	13	5	10	37
18-35	4	37	5	45	91
36-53	2	58	4	46	110
54-71	11	6	7	9	33
72-90	13	13	6	12	44

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
>90	1				1
Other nutritional disorders	6	4	6	3	19
0-17	1	1	3	2	7
18-35	4		1		5
36-53		1	1	1	3
54-71		1			1
72-90	1	1	1		3
Protein-energy malnutrition	1	2	2		5
0-17	1	2			3
18-35			1		1
36-53			1		1
Noncommunicable diseases	3,114	3,673	3,998	3,946	14,731
Cardiovascular diseases	643	470	1,114	558	2,785
Cerebrovascular disease	182	131	283	145	741
0-17	3	1	1	2	7
18-35	7	7	13	7	34
36-53	33	21	69	27	150
54-71	57	44	117	63	281
72-90	73	57	81	45	256
>90	9	1	2	1	13
Hypertensive heart disease	165	171	62	66	464
0-17	3	4			7
18-35	5	12	4	2	23
36-53	19	29	17	14	79
54-71	63	73	20	35	191
72-90	71	51	20	15	157
>90	4	2	1		7
Inflammatory heart diseases	6		15	18	39
0-17			3	2	5
18-35			4	3	7
36-53	1		4	8	13
54-71	2		4	5	11
72-90	3				3
Ischemic heart disease	196	74	645	222	1,137
0-17	3				3
18-35	18	3	26	2	49
36-53	34	18	235	75	362
54-71	80	23	292	90	485
72-90	57	29	91	55	232
>90	4	1	1		6
Not categorized / Multiple Sub-categories	1	5	2	2	10
Other cardiovascular diseases	92	86	103	98	379

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
0-17	7	5	9	4	25
18-35	13	14	16	18	61
36-53	16	18	28	25	87
54-71	21	24	23	31	99
72-90	33	25	26	20	104
>90	2		1		3
Rheumatic heart disease	1	3	4	7	15
18-35		1		1	2
36-53		1	1	3	5
54-71			3	2	5
72-90	1	1		1	3
Genitourinary diseases	411	958	432	889	2,690
Benign prostatic hypertrophy	11		39		50
0-17	1				1
36-53			5		5
54-71	5		20		25
72-90	5		14		19
Nephritis and nephrosis	99	85	138	159	481
0-17	12	4	13	17	46
18-35	12	9	28	34	83
36-53	8	10	40	23	81
54-71	29	36	35	51	151
72-90	33	24	21	34	112
>90	5	2	1		8
Other genitourinary system diseases	301	873	255	730	2,159
0-17	70	118	42	54	284
18-35	66	380	58	261	765
36-53	72	225	65	276	638
54-71	47	98	42	94	281
72-90	42	49	44	42	177
>90	4	3	4	3	14
Digestive diseases	589	615	683	577	2,464
Appendicitis	67	57	107	77	308
0-17	23	13	30	21	87
18-35	29	28	58	42	157
36-53	13	13	16	11	53
54-71	1	3	3	3	10
72-90	1				1
Cirrhosis of the liver	4	4	2	8	18
18-35	1				1
36-53		1	1		2
54-71	2	2	1	6	11
72-90	1	1		2	4

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Other digestive diseases	507	539	566	489	2,101
0-17	124	111	53	51	339
18-35	90	143	173	171	577
36-53	112	116	141	136	505
54-71	103	97	144	90	434
72-90	75	69	51	40	235
>90	3	3	4	1	11
Peptic ulcer disease	11	15	8	3	37
0-17	1			1	2
18-35	5	4	5	1	15
36-53	2	5			7
54-71	2	4	2		8
72-90	1	2	1	1	5
Endocrine disorders	389	453	174	215	1,231
Respiratory diseases	302	338	255	332	1,227
Asthma	59	103	36	52	250
0-17	25	21	15	11	72
18-35	10	31	8	17	66
36-53	4	25	10	9	48
54-71	11	19	1	10	41
72-90	9	7	2	5	23
Chronic obstructive pulmonary disease	144	133	53	106	436
0-17	8	3			11
18-35	2	5	1	4	12
36-53	11	13	4	6	34
54-71	29	38	15	32	114
72-90	90	70	32	62	254
>90	4	4	1	2	11
Other respiratory diseases	99	102	166	174	541
0-17	17	15	59	36	127
18-35	13	8	32	57	110
36-53	8	12	28	21	69
54-71	29	27	21	33	110
72-90	28	38	26	26	118
>90	4	2		1	7
Neuropsychiatric conditions	234	301	279	260	1,074
Alcohol use disorders			4	2	6
18-35			2	2	4
36-53			2		2
Alzheimer and other dementias	2	1	2	3	8
18-35			1		1
54-71	1		1	1	3
72-90	1			1	2

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
>90		1		1	2
Bipolar disorder	8	16	15	29	68
0-17	1	2			3
18-35	4	4	3	11	22
36-53	2	8	12	14	36
54-71	1	2		4	7
Drug use disorders	11	3	12	2	28
0-17			1		1
18-35	7	1	8	2	18
36-53	4	2	3		9
Epilepsy	80	62	47	27	216
0-17	35	21	24	14	94
18-35	29	19	9	7	64
36-53	10	9	11	5	35
54-71	1	7	1	1	10
72-90	5	5	2		12
>90		1			1
Insomnia (primary)	1	1		1	3
36-53	1	1			2
72-90				1	1
Mental Retardation	1				1
18-35	1				1
Migraine	4	18	2	1	25
0-17	1		1		2
18-35	2	13			15
36-53	1	4	1	1	7
54-71		1			1
Multiple sclerosis			1		1
36-53			1		1
Not categorized / Multiple Sub-categories	8	17	2		27
Obsessive-compulsive disorder		1	1		2
18-35		1	1		2
Other neuropsychiatric disorders	79	140	138	141	498
0-17	12	20	22	18	72
18-35	9	39	28	40	116
36-53	15	44	37	36	132
54-71	27	31	33	33	124
72-90	14	6	18	14	52
>90	2				2
Panic disorder	3	6		1	10
18-35		3		1	4
36-53	1	1			2

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
54-71	1	2			3
72-90	1				1
Parkinson disease	4	1	3	5	13
36-53	1		1	1	3
54-71	1	1	1	1	4
72-90	2		1	3	6
Post-traumatic stress disorder		2			2
0-17		2			2
Schizophrenia	26	10	40	16	92
0-17	2	1	2		5
18-35	16	5	25	4	50
36-53	6	3	11	10	30
54-71	1		1	2	4
72-90	1	1	1		3
Unipolar depressive disorders	7	23	12	32	74
0-17	1	3		9	13
18-35	3	12	8	15	38
36-53	3	7	3	7	20
54-71		1	1	1	3
Musculoskeletal diseases	123	151	347	314	935
Back pain	34	35	21	24	114
0-17		2		1	3
18-35	7	9	11	8	35
36-53	8	10	4	5	27
54-71	14	10	4	7	35
72-90	5	4	2	3	14
Gout		1			1
54-71		1			1
Osteoarthritis	6	13	37	72	128
18-35				1	1
36-53	2	2	4	9	17
54-71	2	5	21	53	81
72-90	2	6	12	9	29
Other musculoskeletal disorders	80	98	289	212	679
0-17	11	8	19	16	54
18-35	22	28	127	65	242
36-53	17	31	81	71	200
54-71	13	17	51	50	131
72-90	16	14	11	9	50
>90	1			1	2
Rheumatoid arthritis	3	4		6	13
18-35	1	1		2	4
36-53		2		1	3

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
54-71	1			2	3
72-90	1	1		1	3
Skin diseases	166	127	186	119	598
Diabetes mellitus	117	111	106	112	446
Malignant neoplasms	46	31	172	185	434
Bladder cancer	1		10	1	12
18-35			2		2
36-53			1	1	2
54-71			5		5
72-90	1		2		3
Breast cancer		2	1	41	44
18-35		2		6	8
36-53			1	19	20
54-71				16	16
Cervix uteri cancer		2		6	8
36-53		2		3	5
54-71				2	2
72-90				1	1
Colon and rectum cancers	2		12	6	20
36-53			4		4
54-71			4	5	9
72-90	2		4	1	7
Corpus uteri cancer		2		6	8
18-35				2	2
36-53		1		3	4
54-71				1	1
72-90		1			1
Leukemia			6	7	13
0-17				1	1
36-53			2	3	5
54-71			2	3	5
72-90			2		2
Liver cancer	7	6	13	8	34
36-53			1	2	3
54-71	2	2	5	4	13
72-90	5	4	7	2	18
Lymphomas, multiple myeloma	4	2	7	3	16
18-35	1		2		3
36-53	1		3		4
54-71	2	2	2	2	8
72-90				1	1
Melanoma and other skin cancers		2	2		4
54-71		1	1		2

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
72-90		1	1		2
Mouth and oropharynx cancers	8	3	29	21	61
0-17	1	1	1	3	6
18-35			1	3	4
36-53			10	2	12
54-71	2		10	8	20
72-90	5	2	7	5	19
Oesophagus cancer	1		2		3
36-53	1				1
54-71			1		1
72-90			1		1
Other malignant neoplasms	15	8	50	59	132
0-17	2	2	9	8	21
18-35	1	1	9	8	19
36-53	2	4	14	14	34
54-71	6	1	13	13	33
72-90	4		5	14	23
>90				2	2
Ovary cancer		4		17	21
18-35				1	1
36-53		2		4	6
54-71		2		5	7
72-90				7	7
Pancreas cancer	1		5		6
36-53			2		2
54-71	1		1		2
72-90			2		2
Prostate cancer	5		13		18
54-71	1		6		7
72-90	3		7		10
>90	1				1
Stomach cancer			8	1	9
36-53			6		6
54-71			2		2
72-90				1	1
Trachea, bronchus, lung cancers	2		14	9	25
36-53			6	2	8
54-71	2		5	7	14
72-90			3		3
Other neoplasms	23	26	67	198	314
Congenital anomalies	22	37	100	85	244
Anorectal atresia				1	1
18-35				1	1

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Cleft lip	1				1
0-17	1				1
Cleft palate		1	3	7	11
0-17		1	3	6	10
18-35				1	1
Congenital heart anomalies	3	4	30	12	49
0-17	3		23	11	37
18-35		3	2	1	6
36-53		1	4		5
54-71			1		1
Down syndrome		1	3		4
0-17			1		1
18-35		1	2		3
Oesophageal atresia		1			1
0-17		1			1
Other Congenital anomalies	18	30	62	64	174
0-17	18	10	53	34	115
18-35		15	5	20	40
36-53		4	1	7	12
54-71			3	3	6
72-90		1			1
Renal agenesis			2	1	3
0-17			1	1	2
18-35			1		1
Sense organ diseases	25	36	51	47	159
Glaucoma	1	2	7	5	15
18-35		1			1
36-53			2	2	4
54-71		1	4	3	8
72-90	1		1		2
Hearing loss, adult onset	1		4	4	9
18-35			2	1	3
36-53			1	3	4
54-71			1		1
72-90	1				1
Not categorized / Multiple Sub-categories				1	1
Other sense organ disorders	23	34	40	37	134
0-17	3	8	19	12	42
18-35	3	9	7	7	26
36-53	2	8	6	8	24
54-71	6	7	5	7	25
72-90	9	2	3	3	17

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Oral conditions	24	19	32	55	130
Dental caries	2	1		5	8
0-17				4	4
18-35	1				1
54-71	1	1			2
72-90				1	1
Other oral diseases	21	14	31	48	114
0-17	13	9	10	11	43
18-35	3		13	26	42
36-53	2		5	6	13
54-71	1	4	3	4	12
72-90	2	1		1	4
Periodontal disease	1	4	1	2	8
0-17			1	2	3
36-53	1	1			2
72-90		3			3
Not categorized	1,776	1,225	1,557	1,167	5,725
Ill-defined diseases	1,468	1,769	411	380	4,028
Injuries	762	439	876	399	2,476
Unintentional injuries	747	434	874	395	2,450
Drownings	5	1	1	1	8
0-17	2	1			3
18-35	2			1	3
54-71	1		1		2
Falls	19	21	5		45
0-17	4	7	2		13
18-35	3	2	2		7
36-53	4	2			6
54-71	1	2			3
72-90	6	7	1		14
>90	1	1			2
Fires	4		3		7
18-35	1		1		2
36-53	3		2		5
Not categorized / Multiple Sub-categories	23	10	1		34
Other unintentional injuries	643	375	861	393	2,272
0-17	176	99	151	76	502
18-35	223	82	377	98	780
36-53	103	60	192	73	428
54-71	83	58	95	76	312
72-90	48	72	45	67	232
>90	10	4	1	3	18

Sub-disease groups	Atolls		GMR		Total
	Male	Female	Male	Female	
Poisonings	5	4	1		10
0-17	2	2	1		5
18-35	3	1			4
72-90		1			1
Road traffic accidents	48	23	2	1	74
0-17	5	2			7
18-35	23	11	2	1	37
36-53	9	6			15
54-71	9	4			13
72-90	2				2
Intentional injuries	15	5	2	4	26
Not categorized / Multiple Sub-categories	6		2		8
Poisonings	2	2		1	5
0-17				1	1
18-35		2			2
36-53	1				1
72-90	1				1
Self-inflicted injuries	7	3		3	13
0-17		1			1
18-35	5	2		3	10
36-53	2				2
Not stated	46	37			83
Total	**8,540**	**13,417**	**8,626**	**11,217**	**41,800**

Table 3-14: Admissions by atoll and gender, 2020

Atoll & Gender	Communicable, maternal, perinatal and nutritional conditions	Noncommunicable diseases	Not categorized	Ill-defined diseases	Injuries	Not stated	Total
AA	139	74	64	64	8		349
Male	35	20	40	27	7		129
Female	104	54	24	37	1		220
ADh	396	246	40	187	34		903
Male	92	94	37	85	20		328
Female	304	152	3	102	14		575
B	336	121	36	83	21		597
Male	44	43	36	36	12		171
Female	292	78		47	9		426
Dh	186	116	61	49	18		430
Male	41	47	24	22	12		146
Female	145	69	37	27	6		284
F	306	288	128	91	44		857
Male	66	139	85	40	24		354
Female	240	149	43	51	20		503
Ga	239	278	25	137	100		779
Male	42	132	22	74	55		325
Female	197	146	3	63	45		454
GDh	481	641	231	299	131		1,783
Male	77	298	142	123	78		718
Female	404	343	89	176	53		1,065
Gn	383	213	205	26	62		889
Male	59	101	131	14	38		343
Female	324	112	74	12	24		546
HA	426	296	48	139	65		974
Male	62	132	42	73	42		351
Female	364	164	6	66	23		623
HDh	1,185	777	403	361	116		2,842
Male	226	364	235	144	69		1,038
Female	959	413	168	217	47		1,804
K	58	106	3	26	9		202
Male	17	45	2	17	6		87
Female	41	61	1	9	3		115

Atoll & Gender	Communicable, maternal, perinatal and nutritional conditions	Noncommunicable diseases	Not categorized	Ill-defined diseases	Injuries	Not stated	Total
L	629	452	295	328	123		1,827
Male	98	200	138	141	78		655
Female	531	252	157	187	45		1,172
Lh	412	248	280	165	30		1,135
Male	68	120	148	76	23		435
Female	344	128	132	89	7		700
M	190	213	68	145	27		643
Male	53	106	31	56	20		266
Female	137	107	37	89	7		377
GMR	7,109	7,944	2,724	791	1,275		19,843
Male	1,784	3,998	1,557	411	876		8,626
Female	5,325	3,946	1,167	380	399		11,217
N	190	180	59	70	11		510
Male	39	63	39	32	9		182
Female	151	117	20	38	2		328
R	799	751	331	380	63		2,324
Male	124	325	179	168	43		839
Female	675	426	152	212	20		1,485
S	618	725	481	261	207	83	2,375
Male	76	347	289	147	144	46	1,049
Female	542	378	192	114	63	37	1,326
Sh	281	366	127	168	22		964
Male	37	147	72	68	11		335
Female	244	219	55	100	11		629
Th	364	685	115	248	102		1,514
Male	113	387	84	117	65		766
Female	251	298	31	131	37		748
V	30	11	1	10	8		60
Male	5	4		8	6		23
Female	25	7	1	2	2		37
Total	**14,757**	**14,731**	**5,725**	**4,028**	**2,476**	**83**	**41,800**

Table 3-15: Admissions by disease group and type of health facility, 2020

Sub-disease groups	a. Tertiary	b. Regional Hospital	c. Hospital	d. Atoll Hospital	e. Health Centre	Total
Communicable, maternal, perinatal and nutritional conditions	2,289	3,039	5,665	2,688	1,076	14,757
Maternal conditions	1,633	2,171	2,620	1,872	255	8,551
Perinatal conditions	338	417	1,207	311	12	2,285
Infectious and parasitic diseases	115	231	357	238	503	1,444
Respiratory infections	117	155	382	217	253	1,124
Other emerging diseases	32	10	967		3	1,012
Nutritional deficiencies	54	55	132	50	50	341
Noncommunicable diseases	2,991	2,169	5,785	1,588	2,198	14,731
Cardiovascular diseases	387	444	1,461	252	241	2,785
Genitourinary diseases	532	455	949	324	430	2,690
Digestive diseases	581	352	799	299	433	2,464
Endocrine disorders	103	129	330	223	446	1,231
Respiratory diseases	221	181	435	153	237	1,227
Neuropsychiatric conditions	115	199	496	110	154	1,074
Musculoskeletal diseases	458	105	248	48	76	935
Skin diseases	163	106	192	82	55	598
Diabetes mellitus	57	80	209	36	64	446
Malignant neoplasms	81	44	289	8	12	434
Other neoplasms	136	20	137	12	9	314
Congenital anomalies	72	24	125	20	3	244
Sense organ diseases	61	15	45	9	29	159
Oral conditions	24	15	70	12	9	130
Not categorized	1,545	1,459	1,589	1,092	40	5,725
Ill-defined diseases	401	609	677	457	1,884	4,028
Injuries	425	488	1,037	296	230	2,476

Sub-disease groups	a. Tertiary	b. Regional Hospital	c. Hospital	d. Atoll Hospital	e. Health Centre	Total
Not stated		83				83
Total	**7,651**	**7,847**	**14,753**	**6,121**	**5,428**	**41,800**

Table 3-16: Admissions by disease condition, type of facility and gender, 2020

Sub-disease groups	Private		Public		Total
	Male	Female	Male	Female	
Communicable, maternal, perinatal and nutritional conditions	352	1,991	2,806	9,608	14,757
Maternal conditions		1,669		6,882	8,551
Perinatal conditions	189	155	1,050	891	2,285
Infectious and parasitic diseases	56	64	680	644	1,444
Respiratory infections	69	55	517	483	1,124
Other emerging diseases	25	7	489	491	1,012
Nutritional deficiencies	13	41	70	217	341
Noncommunicable diseases	1,378	1,635	5,734	5,984	14,731
Cardiovascular diseases	233	154	1,524	874	2,785
Genitourinary diseases	139	395	704	1,452	2,690
Digestive diseases	318	279	954	913	2,464
Endocrine disorders	32	72	531	596	1,231
Respiratory diseases	106	115	451	555	1,227
Neuropsychiatric conditions	55	60	458	501	1,074
Musculoskeletal diseases	230	228	240	237	935
Skin diseases	103	60	249	186	598
Diabetes mellitus	24	33	199	190	446
Malignant neoplasms	32	49	186	167	434
Other neoplasms	27	109	63	115	314
Congenital anomalies	39	33	83	89	244
Sense organ diseases	28	33	48	50	159
Oral conditions	12	15	44	59	130
Not categorized	874	766	2,459	1,626	5,725
Ill-defined diseases	219	189	1,660	1,960	4,028
Injuries	299	126	1,339	712	2,476
Not stated			46	37	83
Total	**3,122**	**4,707**	**14,044**	**19,927**	**41,800**

Table 3-17: Admissions by atolls, gender and disease subgroups, 2020

Location/disease sub-groups by gender	Male	Female	Total
Atolls	8,540	13,417	21,957
AA	129	220	349
Communicable, maternal, perinatal and nutritional conditions	35	104	139
Infectious and parasitic diseases	17	8	25
Dengue	3		3
Diarrhoeal diseases	13	7	20
Other infectious diseases	1		1
STDs excluding HIV		1	1
Maternal conditions		80	80
Abortion		11	11
Not categorized / Multiple Sub-categories		27	27
Obstructed labour		32	32
Other maternal conditions		10	10
Nutritional deficiencies	1	1	2
Iron-deficiency anaemia	1	1	2
Perinatal conditions	13	10	23
Low birth weight	3		3
Other perinatal conditions	10	10	20
Respiratory infections	4	5	9
Lower respiratory infections	3	4	7
Upper respiratory infections	1	1	2
Ill-defined diseases	27	37	64
Injuries	7	1	8
Unintentional injuries	7	1	8
Noncommunicable diseases	20	54	74
Cardiovascular diseases	2	5	7
Hypertensive heart disease	2	4	6
Other cardiovascular diseases		1	1

Location/disease sub-groups by gender	Male	Female	Total
Diabetes mellitus	1	2	3
Digestive diseases	4	15	19
Other digestive diseases	4	15	19
Endocrine disorders	4	1	5
Genitourinary diseases	2	7	9
Nephritis and nephrosis		1	1
Other genitourinary system diseases	2	6	8
Malignant neoplasms		1	1
Other malignant neoplasms		1	1
Musculoskeletal diseases		1	1
Other musculoskeletal disorders		1	1
Neuropsychiatric conditions	4	9	13
Bipolar disorder		1	1
Drug use disorders		1	1
Epilepsy	2		2
Not categorized / Multiple Sub-categories		1	1
Other neuropsychiatric disorders	2	5	7
Unipolar depressive disorders		1	1
Oral conditions		1	1
Periodontal disease		1	1
Respiratory diseases	2	9	11
Asthma		3	3
Chronic obstructive pulmonary disease	1	1	2
Other respiratory diseases	1	5	6
Skin diseases	1	3	4
Not categorized	40	24	64
ADh	328	575	903
Communicable, maternal, perinatal and nutritional conditions	92	304	396
Infectious and parasitic diseases	41	49	90
Dengue	1		1
Diarrhoeal diseases	26	44	70

Location/disease sub-groups by gender	Male	Female	Total
Other infectious diseases	14	3	17
STDs excluding HIV		2	2
Maternal conditions		198	198
Abortion		29	29
Hypertensive disorders		1	1
Maternal haemorrhage		2	2
Not categorized / Multiple Sub-categories		63	63
Obstructed labour		40	40
Other maternal conditions		63	63
Nutritional deficiencies	1	14	15
Iron-deficiency anaemia	1	14	15
Perinatal conditions	30	24	54
Low birth weight	10	1	11
Other perinatal conditions	20	23	43
Respiratory infections	20	19	39
Lower respiratory infections	13	16	29
Otitis media	1		1
Upper respiratory infections	6	3	9
Ill-defined diseases	85	102	187
Injuries	20	14	34
Unintentional injuries	20	14	34
Noncommunicable diseases	94	152	246
Cardiovascular diseases	2	12	14
Cerebrovascular disease		3	3
Hypertensive heart disease		3	3
Ischaemic heart disease	2	3	5
Other cardiovascular diseases		2	2
Rheumatic heart disease		1	1
Congenital anomalies	2		2
Congenital heart anomalies	1		1
Other Congenital anomalies	1		1

Location/disease sub-groups by gender	Male	Female	Total
Diabetes mellitus	3	4	7
Digestive diseases	24	26	50
Appendicitis	1	1	2
Other digestive diseases	23	24	47
Peptic ulcer disease		1	1
Endocrine disorders	6	47	53
Genitourinary diseases	15	35	50
Benign prostatic hypertrophy	1		1
Nephritis and nephrosis	1	1	2
Other genitourinary system diseases	13	34	47
Musculoskeletal diseases	9	8	17
Back pain	6	4	10
Other musculoskeletal disorders	3	3	6
Rheumatoid arthritis		1	1
Neuropsychiatric conditions	12	7	19
Bipolar disorder		1	1
Epilepsy	6	2	8
Other neuropsychiatric disorders	5	3	8
Parkinson disease		1	1
Schizophrenia	1		1
Other neoplasms	4	1	5
Respiratory diseases	13	10	23
Asthma	3	4	7
Chronic obstructive pulmonary disease	7	4	11
Other respiratory diseases	3	2	5
Sense organ diseases	2	1	3
Skin diseases	2	1	3
Not categorized	37	3	40

Location/disease sub-groups by gender	Male	Female	Total
B	171	426	597
Communicable, maternal, perinatal and nutritional conditions	44	292	336
Infectious and parasitic diseases	22	27	49
Dengue	11	7	18
Diarrhoeal diseases	5	11	16
Other infectious diseases	6	8	14
STDs excluding HIV		1	1
Maternal conditions		242	242
Abortion		12	12
Hypertensive disorders		6	6
Maternal haemorrhage		6	6
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		42	42
Obstructed labour		40	40
Other maternal conditions		135	135
Nutritional deficiencies	1	1	2
Iron-deficiency anaemia	1		1
Other nutritional disorders		1	1
Perinatal conditions	12	10	22
Birth asphyxia and birth trauma		2	2
Low birth weight	1	2	3
Other perinatal conditions	11	6	17
Respiratory infections	9	12	21
Lower respiratory infections	4	6	10
Upper respiratory infections	5	6	11
Ill-defined diseases	36	47	83
Injuries	12	9	21
Unintentional injuries	12	9	21
Noncommunicable diseases	43	78	121
Cardiovascular diseases	8	9	17
Cerebrovascular disease	2	3	5

Location/disease sub-groups by gender	Male	Female	Total
Hypertensive heart disease	2	2	4
Ischaemic heart disease	4	4	8
Diabetes mellitus	1		1
Digestive diseases	10	15	25
Appendicitis	1	2	3
Other digestive diseases	8	13	21
Peptic ulcer disease	1		1
Endocrine disorders		6	6
Genitourinary diseases	4	26	30
Other genitourinary system diseases	4	26	30
Musculoskeletal diseases	4	2	6
Back pain	2		2
Other musculoskeletal disorders	2	2	4
Neuropsychiatric conditions	4	3	7
Epilepsy		1	1
Migraine		1	1
Not categorized / Multiple Sub-categories	1	1	2
Other neuropsychiatric disorders	3		3
Respiratory diseases	8	14	22
Asthma		8	8
Chronic obstructive pulmonary disease	3	2	5
Other respiratory diseases	5	4	9
Sense organ diseases	2		2
Skin diseases	2	3	5
Not categorized	36		36
Dh	146	284	430
Communicable, maternal, perinatal and nutritional conditions	41	145	186
Infectious and parasitic diseases	10	10	20

Location/disease sub-groups by gender	Male	Female	Total
Dengue	2	3	5
Diarrhoeal diseases	5	6	11
Other infectious diseases	3	1	4
Maternal conditions		104	104
Abortion		6	6
Hypertensive disorders		1	1
Maternal haemorrhage		1	1
Not categorized / Multiple Sub-categories		27	27
Obstructed labour		38	38
Other maternal conditions		31	31
Nutritional deficiencies	1	2	3
Iron-deficiency anaemia	1	2	3
Perinatal conditions	16	13	29
Birth asphyxia and birth trauma	1		1
Low birth weight	6	4	10
Other perinatal conditions	9	9	18
Respiratory infections	14	16	30
Lower respiratory infections	10	12	22
Upper respiratory infections	4	4	8
Ill-defined diseases	22	27	49
Injuries	12	6	18
Unintentional injuries	12	6	18
Noncommunicable diseases	47	69	116
Cardiovascular diseases	9	10	19
Cerebrovascular disease		4	4
Hypertensive heart disease	2	1	3
Ischaemic heart disease	3	2	5
Other cardiovascular diseases	4	3	7
Congenital anomalies	1	1	2
Other Congenital anomalies	1	1	2

Location/disease sub-groups by gender	Male	Female	Total
Diabetes mellitus	7	2	9
Digestive diseases	6	8	14
Other digestive diseases	5	8	13
Peptic ulcer disease	1		1
Endocrine disorders	2	13	15
Genitourinary diseases	8	16	24
Nephritis and nephrosis	5	2	7
Other genitourinary system diseases	3	14	17
Malignant neoplasms		1	1
Other malignant neoplasms		1	1
Musculoskeletal diseases	2	3	5
Back pain	1		1
Other musculoskeletal disorders	1	3	4
Neuropsychiatric conditions	2	2	4
Epilepsy	2		2
Not categorized / Multiple Sub-categories		1	1
Other neuropsychiatric disorders		1	1
Oral conditions		1	1
Other oral diseases		1	1
Other neoplasms	1	1	2
Respiratory diseases	7	10	17
Asthma	2	1	3
Chronic obstructive pulmonary disease	2	6	8
Other respiratory diseases	3	3	6
Sense organ diseases	1		1
Skin diseases	1	1	2
Not categorized	24	37	61
F	354	503	857
Communicable, maternal, perinatal and nutritional conditions	66	240	306

Location/disease sub-groups by gender	Male	Female	Total
Infectious and parasitic diseases	27	24	51
Diarrhoeal diseases	23	20	43
Hepatitis B	1		1
Meningitis	1	1	2
Other infectious diseases	2	3	5
Maternal conditions		180	180
Abortion		21	21
Hypertensive disorders		1	1
Maternal haemorrhage		2	2
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		58	58
Obstructed labour		71	71
Other maternal conditions		26	26
Nutritional deficiencies		3	3
Iron-deficiency anaemia		2	2
Other nutritional disorders		1	1
Perinatal conditions	28	19	47
Birth asphyxia and birth trauma	2	1	3
Low birth weight	1	1	2
Other perinatal conditions	25	17	42
Respiratory infections	11	14	25
Lower respiratory infections	7	9	16
Otitis media		1	1
Upper respiratory infections	4	4	8
Ill-defined diseases	40	51	91
Injuries	24	20	44
Unintentional injuries	24	20	44
Noncommunicable diseases	139	149	288
Cardiovascular diseases	16	17	33
Cerebrovascular disease	5	2	7
Hypertensive heart disease	4	7	11

Location/disease sub-groups by gender	Male	Female	Total
Ischaemic heart disease	4	6	10
Other cardiovascular diseases	2	2	4
Rheumatic heart disease	1		1
Congenital anomalies	1	1	2
Congenital heart anomalies	1	1	2
Diabetes mellitus	16	3	19
Digestive diseases	11	13	24
Appendicitis		1	1
Other digestive diseases	11	12	23
Endocrine disorders	50	57	107
Genitourinary diseases	14	31	45
Nephritis and nephrosis	5		5
Other genitourinary system diseases	9	31	40
Malignant neoplasms		1	1
Ovary cancer		1	1
Musculoskeletal diseases	3		3
Back pain	2		2
Other musculoskeletal disorders	1		1
Neuropsychiatric conditions	10	9	19
Bipolar disorder		1	1
Epilepsy	3	2	5
Other neuropsychiatric disorders	6	5	11
Schizophrenia	1		1
Unipolar depressive disorders		1	1
Oral conditions	1	4	5
Other oral diseases	1	2	3
Periodontal disease		2	2
Other neoplasms	1		1
Respiratory diseases	10	8	18

Location/disease sub-groups by gender	Male	Female	Total
Asthma	3	4	7
Chronic obstructive pulmonary disease	1	3	4
Other respiratory diseases	6	1	7
Sense organ diseases		1	1
Skin diseases	6	4	10
Not categorized	85	43	128
Ga	325	454	779
Communicable, maternal, perinatal and nutritional conditions	42	197	239
Infectious and parasitic diseases	15	24	39
Diarrhoeal diseases	9	18	27
Other infectious diseases	6	6	12
Maternal conditions		149	149
Abortion		16	16
Maternal haemorrhage		2	2
Not categorized / Multiple Sub-categories		44	44
Obstructed labour		45	45
Other maternal conditions		42	42
Nutritional deficiencies	2	2	4
Iron-deficiency anaemia	1	2	3
Other nutritional disorders	1		1
Perinatal conditions	6	8	14
Low birth weight	1		1
Other perinatal conditions	5	8	13
Respiratory infections	19	14	33
Lower respiratory infections	7	5	12
Upper respiratory infections	12	9	21
Ill-defined diseases	74	63	137
Injuries	55	45	100
Unintentional injuries	55	45	100

Location/disease sub-groups by gender	Male	Female	Total
Noncommunicable diseases	132	146	278
Cardiovascular diseases	28	19	47
Cerebrovascular disease	14	8	22
Hypertensive heart disease	5	5	10
Ischaemic heart disease	6	1	7
Other cardiovascular diseases	3	5	8
Congenital anomalies		3	3
Other Congenital anomalies		3	3
Diabetes mellitus	3	5	8
Digestive diseases	15	29	44
Appendicitis		1	1
Other digestive diseases	15	28	43
Endocrine disorders	1	7	8
Genitourinary diseases	17	28	45
Nephritis and nephrosis	3	2	5
Other genitourinary system diseases	14	26	40
Malignant neoplasms	3		3
Lymphomas, multiple myeloma	2		2
Other malignant neoplasms	1		1
Musculoskeletal diseases	9	5	14
Back pain	1	1	2
Other musculoskeletal disorders	8	4	12
Neuropsychiatric conditions	23	11	34
Drug use disorders	4		4
Epilepsy	10	1	11
Migraine	2	5	7
Other neuropsychiatric disorders	5	2	7
Panic disorder		1	1

Location/disease sub-groups by gender	Male	Female	Total
Parkinson disease	2		2
Schizophrenia		1	1
Unipolar depressive disorders		1	1
Oral conditions		1	1
Other oral diseases		1	1
Respiratory diseases	14	27	41
Asthma	1	7	8
Chronic obstructive pulmonary disease	12	16	28
Other respiratory diseases	1	4	5
Sense organ diseases	2	6	8
Skin diseases	17	5	22
Not categorized	22	3	25
GDh	718	1,065	1,783
Communicable, maternal, perinatal and nutritional conditions	77	404	481
Infectious and parasitic diseases	33	30	63
Dengue	2	2	4
Diarrhoeal diseases	18	17	35
Other infectious diseases	13	11	24
Maternal conditions		323	323
Abortion		30	30
Hypertensive disorders		2	2
Maternal haemorrhage		3	3
Not categorized / Multiple Sub-categories		38	38
Obstructed labour		80	80
Other maternal conditions		170	170
Nutritional deficiencies	7	14	21
Iron-deficiency anaemia	6	13	19
Other nutritional disorders	1	1	2
Perinatal conditions	8	9	17
Birth asphyxia and birth trauma	2	3	5
Low birth weight	2	2	4

Location/disease sub-groups by gender	Male	Female	Total
Other perinatal conditions	4	4	8
Respiratory infections	29	28	57
Lower respiratory infections	12	19	31
Upper respiratory infections	17	9	26
Ill-defined diseases	123	176	299
Injuries	78	53	131
Intentional injuries		1	1
Self-inflicted injuries		1	1
Unintentional injuries	78	52	130
Noncommunicable diseases	298	343	641
Cardiovascular diseases	81	46	127
Cerebrovascular disease	20	9	29
Hypertensive heart disease	24	22	46
Inflammatory heart diseases	1		1
Ischaemic heart disease	24	6	30
Other cardiovascular diseases	12	9	21
Congenital anomalies	2	5	7
Congenital heart anomalies		1	1
Other Congenital anomalies	2	4	6
Diabetes mellitus	18	17	35
Digestive diseases	50	48	98
Appendicitis	1	3	4
Cirrhosis of the liver		1	1
Other digestive diseases	49	44	93
Endocrine disorders	10	20	30
Genitourinary diseases	38	107	145
Nephritis and nephrosis	8	7	15
Other genitourinary system diseases	30	100	130

Location/disease sub-groups by gender	Male	Female	Total
Malignant neoplasms	4	6	10
Liver cancer		5	5
Other malignant neoplasms	1	1	2
Prostate cancer	3		3
Musculoskeletal diseases	14	26	40
Back pain	2	5	7
Osteoarthritis		4	4
Other musculoskeletal disorders	12	17	29
Neuropsychiatric conditions	30	23	53
Alzheimer and other dementias	1	1	2
Bipolar disorder	2		2
Drug use disorders	1	1	2
Epilepsy	16	3	19
Migraine		1	1
Other neuropsychiatric disorders	6	15	21
Schizophrenia	2		2
Unipolar depressive disorders	2	2	4
Oral conditions	2	1	3
Other oral diseases	2	1	3
Other neoplasms	5	2	7
Respiratory diseases	17	23	40
Asthma	6	7	13
Chronic obstructive pulmonary disease	6	9	15
Other respiratory diseases	5	7	12
Sense organ diseases	1	1	2
Skin diseases	26	18	44
Not categorized	142	89	231
Gn	343	546	889

Location/disease sub-groups by gender	Male	Female	Total
Communicable, maternal, perinatal and nutritional conditions	59	324	383
Infectious and parasitic diseases	14	7	21
Diarrhoeal diseases	9	5	14
Other infectious diseases	5	2	7
Maternal conditions		269	269
Abortion		25	25
Not categorized / Multiple Sub-categories		54	54
Obstructed labour		74	74
Other maternal conditions		116	116
Nutritional deficiencies	4	3	7
Iron-deficiency anaemia	4	3	7
Perinatal conditions	27	36	63
Low birth weight	1	2	3
Other perinatal conditions	26	34	60
Respiratory infections	14	9	23
Lower respiratory infections	5	2	7
Upper respiratory infections	9	7	16
Ill-defined diseases	14	12	26
Injuries	38	24	62
Intentional injuries	1		1
Not categorized / Multiple Sub-categories	1		1
Unintentional injuries	37	24	61
Noncommunicable diseases	101	112	213
Cardiovascular diseases	24	28	52
Cerebrovascular disease	9	10	19
Hypertensive heart disease	4	7	11
Ischaemic heart disease	7	4	11
Other cardiovascular diseases	4	7	11
Congenital anomalies	3	4	7

Location/disease sub-groups by gender	Male	Female	Total
Oesophageal atresia		1	1
Other Congenital anomalies	3	3	6
Diabetes mellitus	1	1	2
Digestive diseases	34	18	52
Appendicitis	9	6	15
Other digestive diseases	25	12	37
Endocrine disorders	6	10	16
Genitourinary diseases	13	29	42
Benign prostatic hypertrophy	1		1
Nephritis and nephrosis	2	1	3
Other genitourinary system diseases	10	28	38
Malignant neoplasms	2	1	3
Corpus uteri cancer		1	1
Other malignant neoplasms	2		2
Musculoskeletal diseases	1		1
Other musculoskeletal disorders	1		1
Neuropsychiatric conditions	3	10	13
Epilepsy	2	4	6
Other neuropsychiatric disorders		6	6
Unipolar depressive disorders	1		1
Oral conditions	1		1
Other oral diseases	1		1
Other neoplasms		1	1
Respiratory diseases	10	8	18
Asthma	2	2	4
Chronic obstructive pulmonary disease	2	5	7
Other respiratory diseases	6	1	7
Sense organ diseases	1		1

Location/disease sub-groups by gender	Male	Female	Total
Skin diseases	2	2	4
Not categorized	131	74	205
HA	351	623	974
Communicable, maternal, perinatal and nutritional conditions	62	364	426
Infectious and parasitic diseases	20	23	43
Dengue	2	1	3
Diarrhoeal diseases	11	14	25
Other infectious diseases	7	8	15
Maternal conditions		293	293
Abortion		26	26
Hypertensive disorders		2	2
Maternal haemorrhage		5	5
Not categorized / Multiple Sub-categories		58	58
Obstructed labour		94	94
Other maternal conditions		108	108
Nutritional deficiencies	4	14	18
Iron-deficiency anaemia	3	14	17
Other nutritional disorders	1		1
Perinatal conditions		1	1
Birth asphyxia and birth trauma		1	1
Respiratory infections	36	32	68
Lower respiratory infections	22	16	38
Upper respiratory infections	14	16	30
Other emerging diseases	2	1	3
COVID-19 related conditions	2	1	3
Ill-defined diseases	73	66	139
Injuries	42	23	65
Intentional injuries	2		2
Self-inflicted injuries	2		2
Unintentional injuries	40	23	63

Location/disease sub-groups by gender	Male	Female	Total
Noncommunicable diseases	132	164	296
Cardiovascular diseases	31	30	61
Cerebrovascular disease	5	7	12
Hypertensive heart disease	12	12	24
Ischaemic heart disease	10	6	16
Other cardiovascular diseases	4	5	9
Diabetes mellitus	3	13	16
Digestive diseases	20	20	40
Appendicitis	4	2	6
Other digestive diseases	15	18	33
Peptic ulcer disease	1		1
Endocrine disorders	7	17	24
Genitourinary diseases	23	37	60
Nephritis and nephrosis	5	2	7
Other genitourinary system diseases	18	35	53
Malignant neoplasms	2		2
Liver cancer	1		1
Lymphomas, multiple myeloma	1		1
Musculoskeletal diseases	5	2	7
Back pain	2	1	3
Osteoarthritis	1		1
Other musculoskeletal disorders	2	1	3
Neuropsychiatric conditions	11	10	21
Drug use disorders	1		1
Epilepsy	3	2	5
Migraine	1	1	2
Other neuropsychiatric disorders	5	4	9

Location/disease sub-groups by gender	Male	Female	Total
Panic disorder		1	1
Schizophrenia	1	2	3
Respiratory diseases	16	28	44
Asthma	4	6	10
Chronic obstructive pulmonary disease	6	12	18
Other respiratory diseases	6	10	16
Sense organ diseases	2		2
Skin diseases	12	7	19
Not categorized	42	6	48
HDh	1,038	1,804	2,842
Communicable, maternal, perinatal and nutritional conditions	226	959	1,185
Infectious and parasitic diseases	74	63	137
Dengue	49	36	85
Diarrhoeal diseases	12	9	21
Meningitis		1	1
Other infectious diseases	11	16	27
STDs excluding HIV		1	1
Tuberculosis	2		2
Maternal conditions		744	744
Abortion		73	73
Hypertensive disorders		6	6
Maternal haemorrhage		2	2
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		182	182
Obstructed labour		282	282
Other maternal conditions		198	198
Nutritional deficiencies	4	15	19
Iron-deficiency anaemia	2	15	17
Other nutritional disorders	2		2
Perinatal conditions	116	106	222
Birth asphyxia and birth trauma	4	3	7

Location/disease sub-groups by gender	Male	Female	Total
Low birth weight	23	12	35
Other perinatal conditions	89	91	180
Respiratory infections	32	31	63
Lower respiratory infections	20	22	42
Upper respiratory infections	12	9	21
Ill-defined diseases	144	217	361
Injuries	69	47	116
Intentional injuries	2	1	3
Not categorized / Multiple Sub-categories	1		1
Poisonings		1	1
Self-inflicted injuries	1		1
Unintentional injuries	67	46	113
Noncommunicable diseases	364	413	777
Cardiovascular diseases	122	67	189
Cerebrovascular disease	47	28	75
Hypertensive heart disease	15	13	28
Inflammatory heart diseases	1		1
Ischaemic heart disease	40	12	52
Not categorized / Multiple Sub-categories		1	1
Other cardiovascular diseases	19	12	31
Rheumatic heart disease		1	1
Congenital anomalies	4	4	8
Cleft palate		1	1
Other Congenital anomalies	4	3	7
Diabetes mellitus	15	14	29
Digestive diseases	55	59	114
Appendicitis	9	8	17
Cirrhosis of the liver	1		1

Location/disease sub-groups by gender	Male	Female	Total
Other digestive diseases	44	49	93
Peptic ulcer disease	1	2	3
Endocrine disorders	15	37	52
Genitourinary diseases	42	103	145
Benign prostatic hypertrophy	2		2
Nephritis and nephrosis	12	19	31
Other genitourinary system diseases	28	84	112
Malignant neoplasms	9	4	13
Bladder cancer	1		1
Breast cancer		1	1
Liver cancer	5		5
Lymphomas, multiple myeloma		1	1
Oesophagus cancer	1		1
Other malignant neoplasms		1	1
Ovary cancer		1	1
Trachea, bronchus, lung cancers	2		2
Musculoskeletal diseases	14	25	39
Back pain		3	3
Other musculoskeletal disorders	13	22	35
Rheumatoid arthritis	1		1
Neuropsychiatric conditions	36	61	97
Bipolar disorder	2	8	10
Drug use disorders	2		2
Epilepsy	4	10	14
Mental Retardation	1		1
Not categorized / Multiple Sub-categories		2	2
Obsessive-compulsive disorder		1	1
Other neuropsychiatric disorders	12	27	39
Panic disorder		1	1
Parkinson disease	1		1

Location/disease sub-groups by gender	Male	Female	Total
Schizophrenia	11	4	15
Unipolar depressive disorders	3	8	11
Other neoplasms	2		2
Respiratory diseases	37	28	65
Asthma	8	7	15
Chronic obstructive pulmonary disease	13	9	22
Other respiratory diseases	16	12	28
Sense organ diseases		3	3
Skin diseases	13	8	21
Not categorized	235	168	403
K	87	115	202
Communicable, maternal, perinatal and nutritional conditions	17	41	58
Infectious and parasitic diseases	8	10	18
Diarrhoeal diseases	5	7	12
Other infectious diseases	3	2	5
STDs excluding HIV		1	1
Maternal conditions		22	22
Abortion		1	1
Hypertensive disorders		1	1
Not categorized / Multiple Sub-categories		5	5
Other maternal conditions		15	15
Nutritional deficiencies	2	2	4
Iron-deficiency anaemia	1	2	3
Other nutritional disorders	1		1
Respiratory infections	7	7	14
Lower respiratory infections	6	4	10
Upper respiratory infections	1	3	4
Ill-defined diseases	17	9	26
Injuries	6	3	9

Location/disease sub-groups by gender	Male	Female	Total
Unintentional injuries	6	3	9
Noncommunicable diseases	45	61	106
Cardiovascular diseases	10	4	14
Cerebrovascular disease		1	1
Hypertensive heart disease	1		1
Inflammatory heart diseases	1		1
Ischaemic heart disease	6	3	9
Other cardiovascular diseases	2		2
Diabetes mellitus	1		1
Digestive diseases	9	14	23
Appendicitis		1	1
Other digestive diseases	9	13	22
Endocrine disorders	4	7	11
Genitourinary diseases	8	16	24
Nephritis and nephrosis	3	1	4
Other genitourinary system diseases	5	15	20
Musculoskeletal diseases	1		1
Back pain	1		1
Neuropsychiatric conditions		4	4
Migraine		2	2
Other neuropsychiatric disorders		2	2
Oral conditions	1		1
Periodontal disease	1		1
Respiratory diseases	10	13	23
Asthma	4	5	9
Chronic obstructive pulmonary disease	6	5	11
Other respiratory diseases		3	3
Sense organ diseases	1	1	2
Skin diseases		2	2

Location/disease sub-groups by gender	Male	Female	Total
Not categorized	2	1	3
L	655	1,172	1,827
Communicable, maternal, perinatal and nutritional conditions	98	531	629
Infectious and parasitic diseases	48	37	85
Dengue	1	1	2
Diarrhoeal diseases	43	31	74
Other infectious diseases	4	5	9
Maternal conditions		436	436
Abortion		42	42
Hypertensive disorders		8	8
Not categorized / Multiple Sub-categories		107	107
Obstructed labour		167	167
Other maternal conditions		112	112
Nutritional deficiencies	2	14	16
Iron-deficiency anaemia	2	12	14
Protein-energy malnutrition		2	2
Perinatal conditions	26	28	54
Birth asphyxia and birth trauma	3	2	5
Low birth weight	7	8	15
Other perinatal conditions	16	18	34
Respiratory infections	14	14	28
Lower respiratory infections	6	11	17
Otitis media	1		1
Upper respiratory infections	7	3	10
Other emerging diseases	8	2	10
COVID-19 related conditions	8	2	10
Ill-defined diseases	141	187	328
Injuries	78	45	123
Intentional injuries	3	1	4

Location/disease sub-groups by gender	Male	Female	Total
Not categorized / Multiple Sub-categories	2		2
Poisonings	1		1
Self-inflicted injuries		1	1
Unintentional injuries	75	44	119
Noncommunicable diseases	200	252	452
Cardiovascular diseases	42	25	67
Cerebrovascular disease	11	9	20
Hypertensive heart disease	7	6	13
Inflammatory heart diseases	1		1
Ischaemic heart disease	16	1	17
Not categorized / Multiple Sub-categories		1	1
Other cardiovascular diseases	7	8	15
Congenital anomalies	3	3	6
Cleft lip	1		1
Other Congenital anomalies	2	3	5
Diabetes mellitus	17	2	19
Digestive diseases	34	38	72
Appendicitis	2	4	6
Other digestive diseases	32	33	65
Peptic ulcer disease		1	1
Endocrine disorders	12	13	25
Genitourinary diseases	32	76	108
Benign prostatic hypertrophy	2		2
Nephritis and nephrosis	14	8	22
Other genitourinary system diseases	16	68	84
Malignant neoplasms		2	2
Lymphomas, multiple myeloma		1	1
Ovary cancer		1	1
Musculoskeletal diseases	9	15	24

Location/disease sub-groups by gender	Male	Female	Total
Back pain	1	3	4
Osteoarthritis		1	1
Other musculoskeletal disorders	8	11	19
Neuropsychiatric conditions	18	23	41
Bipolar disorder		1	1
Drug use disorders	1		1
Epilepsy	4	4	8
Not categorized / Multiple Sub-categories	2	3	5
Other neuropsychiatric disorders	10	13	23
Panic disorder	1	1	2
Post-traumatic stress disorder		1	1
Oral conditions	4		4
Dental caries	1		1
Other oral diseases	3		3
Other neoplasms		3	3
Respiratory diseases	13	25	38
Asthma		8	8
Chronic obstructive pulmonary disease	6	11	17
Other respiratory diseases	7	6	13
Sense organ diseases	2	8	10
Skin diseases	14	19	33
Not categorized	138	157	295
Lh	435	700	1,135
Communicable, maternal, perinatal and nutritional conditions	68	344	412
Infectious and parasitic diseases	21	29	50
Dengue	1	1	2
Diarrhoeal diseases	16	24	40
Other infectious diseases	4	2	6
STDs excluding HIV		2	2

Location/disease sub-groups by gender	Male	Female	Total
Maternal conditions		274	274
Abortion		32	32
Hypertensive disorders		1	1
Maternal haemorrhage		3	3
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		94	94
Obstructed labour		114	114
Other maternal conditions		29	29
Perinatal conditions	26	18	44
Birth asphyxia and birth trauma	3	2	5
Low birth weight	3	4	7
Other perinatal conditions	20	12	32
Respiratory infections	21	23	44
Lower respiratory infections	17	14	31
Upper respiratory infections	4	9	13
Ill-defined diseases	76	89	165
Injuries	23	7	30
Unintentional injuries	23	7	30
Noncommunicable diseases	120	128	248
Cardiovascular diseases	27	10	37
Cerebrovascular disease	9	3	12
Hypertensive heart disease	3		3
Inflammatory heart diseases	1		1
Ischaemic heart disease	10	3	13
Other cardiovascular diseases	4	4	8
Congenital anomalies	2	1	3
Other Congenital anomalies	2	1	3
Diabetes mellitus		3	3
Digestive diseases	28	29	57
Cirrhosis of the liver	1	1	2

Location/disease sub-groups by gender	Male	Female	Total
Other digestive diseases	27	27	54
Peptic ulcer disease		1	1
Endocrine disorders	1	3	4
Genitourinary diseases	24	51	75
Nephritis and nephrosis	4	1	5
Other genitourinary system diseases	20	50	70
Malignant neoplasms		2	2
Other malignant neoplasms		1	1
Ovary cancer		1	1
Musculoskeletal diseases	4		4
Back pain	2		2
Other musculoskeletal disorders	2		2
Neuropsychiatric conditions	10	9	19
Bipolar disorder		2	2
Epilepsy	5	4	9
Insomnia (primary)		1	1
Other neuropsychiatric disorders	2	1	3
Schizophrenia	3	1	4
Oral conditions	1		1
Other oral diseases	1		1
Respiratory diseases	19	13	32
Asthma	2	4	6
Chronic obstructive pulmonary disease	14	1	15
Other respiratory diseases	3	8	11
Skin diseases	4	7	11
Not categorized	148	132	280
M	266	377	643
Communicable, maternal, perinatal and nutritional conditions	53	137	190
Infectious and parasitic diseases	12	16	28

Location/disease sub-groups by gender	Male	Female	Total
Dengue	1		1
Diarrhoeal diseases	11	13	24
Other infectious diseases		3	3
Maternal conditions		105	105
Abortion		12	12
Hypertensive disorders		1	1
Not categorized / Multiple Sub-categories		1	1
Obstructed labour		14	14
Other maternal conditions		77	77
Nutritional deficiencies	6		6
Iron-deficiency anaemia	6		6
Perinatal conditions	20	14	34
Birth asphyxia and birth trauma	4	4	8
Low birth weight	7	3	10
Other perinatal conditions	9	7	16
Respiratory infections	15	2	17
Lower respiratory infections	7	2	9
Upper respiratory infections	8		8
Ill-defined diseases	56	89	145
Injuries	20	7	27
Intentional injuries	1		1
Not categorized / Multiple Sub-categories	1		1
Unintentional injuries	19	7	26
Noncommunicable diseases	106	107	213
Cardiovascular diseases	14	4	18
Cerebrovascular disease	2		2
Hypertensive heart disease	3	2	5
Ischaemic heart disease	7	2	9
Other cardiovascular diseases	2		2
Congenital anomalies		3	3

Location/disease sub-groups by gender	Male	Female	Total
Other Congenital anomalies		3	3
Diabetes mellitus	1	2	3
Digestive diseases	14	15	29
Appendicitis	1	2	3
Other digestive diseases	13	12	25
Peptic ulcer disease		1	1
Endocrine disorders	42	28	70
Genitourinary diseases	11	33	44
Other genitourinary system diseases	11	33	44
Malignant neoplasms	6		6
Mouth and oropharynx cancers	2		2
Other malignant neoplasms	2		2
Prostate cancer	2		2
Musculoskeletal diseases	3	3	6
Back pain	1	2	3
Other musculoskeletal disorders	2	1	3
Neuropsychiatric conditions	6	2	8
Migraine	1	2	3
Other neuropsychiatric disorders	4		4
Schizophrenia	1		1
Other neoplasms	1	1	2
Respiratory diseases	4	8	12
Asthma	2	3	5
Chronic obstructive pulmonary disease	1	1	2
Other respiratory diseases	1	4	5
Skin diseases	4	8	12
Not categorized	31	37	68

Location/disease sub-groups by gender	Male	Female	Total
N	182	328	510
Communicable, maternal, perinatal and nutritional conditions	39	151	190
Infectious and parasitic diseases	19	16	35
Dengue	4	5	9
Diarrhoeal diseases	14	9	23
Malaria		1	1
Other infectious diseases	1	1	2
Maternal conditions		109	109
Abortion		17	17
Not categorized / Multiple Sub-categories		8	8
Obstructed labour		40	40
Other maternal conditions		44	44
Nutritional deficiencies		2	2
Iron-deficiency anaemia		2	2
Perinatal conditions	11	12	23
Low birth weight		4	4
Other perinatal conditions	11	8	19
Respiratory infections	9	12	21
Lower respiratory infections	5	10	15
Upper respiratory infections	4	2	6
Ill-defined diseases	32	38	70
Injuries	9	2	11
Unintentional injuries	9	2	11
Noncommunicable diseases	63	117	180
Cardiovascular diseases	13	9	22
Cerebrovascular disease	3	3	6
Hypertensive heart disease	5	6	11
Ischaemic heart disease	2		2
Other cardiovascular diseases	3		3
Diabetes mellitus		3	3

Location/disease sub-groups by gender	Male	Female	Total
Digestive diseases	10	19	29
Appendicitis		2	2
Other digestive diseases	10	17	27
Endocrine disorders	15	26	41
Genitourinary diseases	10	29	39
Nephritis and nephrosis		1	1
Other genitourinary system diseases	10	28	38
Musculoskeletal diseases	2	7	9
Back pain	1	1	2
Other musculoskeletal disorders	1	5	6
Rheumatoid arthritis		1	1
Neuropsychiatric conditions	4	5	9
Drug use disorders	1		1
Epilepsy	1		1
Other neuropsychiatric disorders	1	5	6
Schizophrenia	1		1
Respiratory diseases	6	17	23
Asthma		2	2
Chronic obstructive pulmonary disease	3	9	12
Other respiratory diseases	3	6	9
Sense organ diseases	1	1	2
Skin diseases	2	1	3
Not categorized	39	20	59
R	839	1,485	2,324
Communicable, maternal, perinatal and nutritional conditions	124	675	799
Infectious and parasitic diseases	32	46	78
Dengue	4		4
Diarrhoeal diseases	22	30	52
Meningitis		1	1

Location/disease sub-groups by gender	Male	Female	Total
Other infectious diseases	6	12	18
STDs excluding HIV		2	2
Tuberculosis		1	1
Maternal conditions		535	535
Abortion		39	39
Hypertensive disorders		2	2
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		154	154
Obstructed labour		198	198
Other maternal conditions		141	141
Nutritional deficiencies	5	11	16
Iron-deficiency anaemia	4	11	15
Protein-energy malnutrition	1		1
Perinatal conditions	54	39	93
Birth asphyxia and birth trauma	3	1	4
Low birth weight	4	7	11
Other perinatal conditions	47	31	78
Respiratory infections	33	44	77
Lower respiratory infections	23	22	45
Upper respiratory infections	10	22	32
Ill-defined diseases	168	212	380
Injuries	43	20	63
Intentional injuries		1	1
Poisonings		1	1
Unintentional injuries	43	19	62
Noncommunicable diseases	325	426	751
Cardiovascular diseases	70	76	146
Cerebrovascular disease	6	8	14
Hypertensive heart disease	33	44	77
Inflammatory heart diseases	1		1
Ischaemic heart disease	18	11	29

Location/disease sub-groups by gender	Male	Female	Total
Not categorized / Multiple Sub-categories	1	2	3
Other cardiovascular diseases	11	10	21
Rheumatic heart disease		1	1
Congenital anomalies	1		1
Other Congenital anomalies	1		1
Diabetes mellitus	10	20	30
Digestive diseases	100	85	185
Appendicitis	24	6	30
Cirrhosis of the liver	1	1	2
Other digestive diseases	73	76	149
Peptic ulcer disease	2	2	4
Endocrine disorders	25	32	57
Genitourinary diseases	57	124	181
Benign prostatic hypertrophy	3		3
Nephritis and nephrosis	15	13	28
Other genitourinary system diseases	39	111	150
Malignant neoplasms	6	3	9
Corpus uteri cancer		1	1
Liver cancer	1	1	2
Mouth and oropharynx cancers	5		5
Other malignant neoplasms		1	1
Musculoskeletal diseases	2	7	9
Back pain		3	3
Gout		1	1
Osteoarthritis		1	1
Other musculoskeletal disorders	2	2	4
Neuropsychiatric conditions	13	28	41
Bipolar disorder	1		1
Epilepsy	5	12	17

Location/disease sub-groups by gender	Male	Female	Total
Migraine		3	3
Other neuropsychiatric disorders	4	6	10
Panic disorder	2	1	3
Post-traumatic stress disorder		1	1
Schizophrenia	1		1
Unipolar depressive disorders		5	5
Oral conditions	2	3	5
Dental caries	1	1	2
Other oral diseases	1	2	3
Other neoplasms	2	2	4
Respiratory diseases	27	30	57
Asthma	6	16	22
Chronic obstructive pulmonary disease	10	7	17
Other respiratory diseases	11	7	18
Sense organ diseases	3	5	8
Skin diseases	7	11	18
Not categorized	179	152	331
S	1,049	1,326	2,375
Communicable, maternal, perinatal and nutritional conditions	76	542	618
Infectious and parasitic diseases	25	25	50
Dengue	3		3
Diarrhoeal diseases	18	13	31
Other infectious diseases	4	7	11
STDs excluding HIV		5	5
Maternal conditions		470	470
Abortion		59	59
Hypertensive disorders		4	4
Maternal haemorrhage		1	1
Maternal sepsis		1	1
Not categorized / Multiple Sub-categories		59	59
Obstructed labour		75	75

Location/disease sub-groups by gender	Male	Female	Total
Other maternal conditions		271	271
Nutritional deficiencies	2	14	16
Iron-deficiency anaemia	2	13	15
Other nutritional disorders		1	1
Perinatal conditions	16	9	25
Birth asphyxia and birth trauma	1		1
Low birth weight		2	2
Other perinatal conditions	15	7	22
Respiratory infections	33	24	57
Lower respiratory infections	24	18	42
Otitis media	1		1
Upper respiratory infections	8	6	14
Ill-defined diseases	147	114	261
Injuries	144	63	207
Intentional injuries	5	1	6
Poisonings	1		1
Self-inflicted injuries	4	1	5
Unintentional injuries	139	62	201
Noncommunicable diseases	347	378	725
Cardiovascular diseases	77	47	124
Cerebrovascular disease	41	28	69
Hypertensive heart disease	9	2	11
Ischaemic heart disease	22	8	30
Other cardiovascular diseases	5	9	14
Congenital anomalies	2	5	7
Congenital heart anomalies	1		1
Down syndrome		1	1
Other Congenital anomalies	1	4	5

Location/disease sub-groups by gender	Male	Female	Total
Diabetes mellitus	6	12	18
Digestive diseases	66	58	124
Appendicitis	10	13	23
Cirrhosis of the liver		1	1
Other digestive diseases	55	43	98
Peptic ulcer disease	1	1	2
Endocrine disorders	20	28	48
Genitourinary diseases	44	106	150
Nephritis and nephrosis	17	20	37
Other genitourinary system diseases	27	86	113
Malignant neoplasms	10	9	19
Breast cancer		1	1
Cervix uteri cancer		2	2
Colon and rectum cancers	2		2
Lymphomas, multiple myeloma	1		1
Melanoma and other skin cancers		2	2
Mouth and oropharynx cancers	1	3	4
Other malignant neoplasms	6	1	7
Musculoskeletal diseases	27	20	47
Back pain	10	3	13
Osteoarthritis	5	7	12
Other musculoskeletal disorders	12	9	21
Rheumatoid arthritis		1	1
Neuropsychiatric conditions	22	33	55
Alzheimer and other dementias	1		1
Bipolar disorder	2	2	4
Drug use disorders		1	1
Epilepsy	9	12	21
Insomnia (primary)	1		1

Location/disease sub-groups by gender	Male	Female	Total
Not categorized / Multiple Sub-categories	1	1	2
Other neuropsychiatric disorders	4	11	15
Parkinson disease	1		1
Schizophrenia	3	2	5
Unipolar depressive disorders		4	4
Oral conditions	6	7	13
Other oral diseases	6	6	12
Periodontal disease		1	1
Other neoplasms	3	9	12
Respiratory diseases	34	26	60
Asthma	4	1	5
Chronic obstructive pulmonary disease	18	13	31
Other respiratory diseases	12	12	24
Sense organ diseases	3	2	5
Skin diseases	27	16	43
Not categorized	289	192	481
Not stated	46	37	83
Not stated	46	37	83
Not stated	46	37	83
Sh	335	629	964
Communicable, maternal, perinatal and nutritional conditions	37	244	281
Infectious and parasitic diseases	10	6	16
Diarrhoeal diseases	2	2	4
Meningitis		2	2
Other infectious diseases	8	2	10
Maternal conditions		198	198
Abortion		38	38
Maternal haemorrhage		3	3
Not categorized / Multiple Sub-categories		44	44
Obstructed labour		76	76

Location/disease sub-groups by gender	Male	Female	Total
Other maternal conditions		37	37
Nutritional deficiencies		11	11
Iron-deficiency anaemia		11	11
Perinatal conditions	19	14	33
Birth asphyxia and birth trauma	1		1
Low birth weight	1		1
Other perinatal conditions	17	14	31
Respiratory infections	8	15	23
Lower respiratory infections	4	3	7
Otitis media		2	2
Upper respiratory infections	4	10	14
Ill-defined diseases	68	100	168
Injuries	11	11	22
Intentional injuries	1		1
Not categorized / Multiple Sub-categories	1		1
Unintentional injuries	10	11	21
Noncommunicable diseases	147	219	366
Cardiovascular diseases	23	29	52
Cerebrovascular disease	2	2	4
Hypertensive heart disease	17	24	41
Ischaemic heart disease	3	1	4
Not categorized / Multiple Sub-categories		1	1
Other cardiovascular diseases	1	1	2
Congenital anomalies	1	1	2
Other Congenital anomalies	1	1	2
Diabetes mellitus	10	2	12
Digestive diseases	59	49	108
Appendicitis	4	2	6
Other digestive diseases	55	47	102

Location/disease sub-groups by gender	Male	Female	Total
Endocrine disorders	4	12	16
Genitourinary diseases	7	51	58
Nephritis and nephrosis	2	3	5
Other genitourinary system diseases	5	48	53
Malignant neoplasms	1	1	2
Other malignant neoplasms		1	1
Pancreas cancer	1		1
Musculoskeletal diseases	2	13	15
Back pain	1	2	3
Other musculoskeletal disorders	1	11	12
Neuropsychiatric conditions	10	40	50
Bipolar disorder	1		1
Epilepsy	1	2	3
Migraine		1	1
Not categorized / Multiple Sub-categories	4	8	12
Other neuropsychiatric disorders	3	29	32
Unipolar depressive disorders	1		1
Oral conditions	6		6
Other oral diseases	6		6
Other neoplasms	1	3	4
Respiratory diseases	13	14	27
Asthma		4	4
Chronic obstructive pulmonary disease	9	7	16
Other respiratory diseases	4	3	7
Sense organ diseases		1	1
Skin diseases	10	3	13
Not categorized	72	55	127
Th	766	748	1,514

Location/disease sub-groups by gender	Male	Female	Total
Communicable, maternal, perinatal and nutritional conditions	113	251	364
Infectious and parasitic diseases	74	73	147
Dengue	9	6	15
Diarrhoeal diseases	34	49	83
Other infectious diseases	31	14	45
STDs excluding HIV		4	4
Maternal conditions		134	134
Abortion		13	13
Hypertensive disorders		1	1
Maternal haemorrhage		2	2
Not categorized / Multiple Sub-categories		20	20
Obstructed labour		28	28
Other maternal conditions		70	70
Nutritional deficiencies	5	10	15
Iron-deficiency anaemia	5	10	15
Perinatal conditions	1	3	4
Low birth weight	1		1
Other perinatal conditions		3	3
Respiratory infections	33	31	64
Lower respiratory infections	12	8	20
Upper respiratory infections	21	23	44
Ill-defined diseases	117	131	248
Injuries	65	37	102
Unintentional injuries	65	37	102
Noncommunicable diseases	387	298	685
Cardiovascular diseases	42	23	65
Cerebrovascular disease	6	3	9
Hypertensive heart disease	17	11	28
Ischaemic heart disease	11	1	12
Other cardiovascular diseases	8	8	16

Location/disease sub-groups by gender	Male	Female	Total
Congenital anomalies		6	6
Congenital heart anomalies		2	2
Other Congenital anomalies		4	4
Diabetes mellitus	4	5	9
Digestive diseases	38	54	92
Appendicitis	1	3	4
Cirrhosis of the liver	1		1
Other digestive diseases	32	45	77
Peptic ulcer disease	4	6	10
Endocrine disorders	165	88	253
Genitourinary diseases	42	53	95
Benign prostatic hypertrophy	2		2
Nephritis and nephrosis	3	3	6
Other genitourinary system diseases	37	50	87
Malignant neoplasms	3		3
Other malignant neoplasms	3		3
Musculoskeletal diseases	12	14	26
Back pain	1	7	8
Other musculoskeletal disorders	9	6	15
Rheumatoid arthritis	2	1	3
Neuropsychiatric conditions	16	12	28
Drug use disorders	1		1
Epilepsy	7	3	10
Migraine		2	2
Other neuropsychiatric disorders	7	5	12
Panic disorder		1	1
Schizophrenia	1		1
Unipolar depressive disorders		1	1
Oral conditions		1	1
Other oral diseases		1	1

Location/disease sub-groups by gender	Male	Female	Total
Other neoplasms	3	3	6
Respiratory diseases	42	26	68
Asthma	12	10	22
Chronic obstructive pulmonary disease	24	12	36
Other respiratory diseases	6	4	10
Sense organ diseases	4	6	10
Skin diseases	16	7	23
Not categorized	84	31	115
V	23	37	60
Communicable, maternal, perinatal and nutritional conditions	5	25	30
Infectious and parasitic diseases	3	1	4
Diarrhoeal diseases	3	1	4
Maternal conditions		23	23
Abortion		6	6
Hypertensive disorders		1	1
Other maternal conditions		16	16
Perinatal conditions	2		2
Other perinatal conditions	2		2
Respiratory infections		1	1
Lower respiratory infections		1	1
Ill-defined diseases	8	2	10
Injuries	6	2	8
Unintentional injuries	6	2	8
Noncommunicable diseases	4	7	11
Cardiovascular diseases	2		2
Ischaemic heart disease	1		1
Other cardiovascular diseases	1		1
Diabetes mellitus		1	1
Digestive diseases	2	3	5

Location/disease sub-groups by gender	Male	Female	Total
Other digestive diseases	2	3	5
Endocrine disorders		1	1
Respiratory diseases		1	1
Asthma		1	1
Skin diseases		1	1
Not categorized		1	1
GMR	8,626	11,217	19,843
GMR	8,626	11,217	19,843
Communicable, maternal, perinatal and nutritional conditions	1,784	5,325	7,109
Infectious and parasitic diseases	211	184	395
Childhood-cluster diseases	1		1
Dengue	22	11	33
Diarrhoeal diseases	32	45	77
Hepatitis B	3	3	6
Intestinal nematode infections	1		1
Meningitis	3	1	4
Other infectious diseases	129	95	224
STDs excluding HIV	3	13	16
Tuberculosis	17	16	33
Maternal conditions		3,663	3,663
Abortion		280	280
Hypertensive disorders		55	55
Maternal haemorrhage		44	44
Maternal sepsis		8	8
Not categorized / Multiple Sub-categories		1,467	1,467
Obstructed labour		716	716
Other maternal conditions		1,093	1,093
Nutritional deficiencies	36	125	161
Iodine deficiency	1		1
Iron-deficiency anaemia	27	122	149
Other nutritional disorders	6	3	9

Location/disease sub-groups by gender	Male	Female	Total
Protein-energy malnutrition	2		2
Perinatal conditions	808	673	1,481
Birth asphyxia and birth trauma	36	27	63
Low birth weight	101	84	185
Other perinatal conditions	671	562	1,233
Respiratory infections	225	185	410
Lower respiratory infections	158	134	292
Otitis media	19	12	31
Upper respiratory infections	48	39	87
Other emerging diseases	504	495	999
COVID-19 related conditions	504	495	999
Ill-defined diseases	411	380	791
Injuries	876	399	1,275
Intentional injuries	2	4	6
Not categorized / Multiple Sub-categories	2		2
Poisonings		1	1
Self-inflicted injuries		3	3
Unintentional injuries	874	395	1,269
Noncommunicable diseases	3,998	3,946	7,944
Cardiovascular diseases	1,114	558	1,672
Cerebrovascular disease	283	145	428
Hypertensive heart disease	62	66	128
Inflammatory heart diseases	15	18	33
Ischaemic heart disease	645	222	867
Not categorized / Multiple Sub-categories	2	2	4
Other cardiovascular diseases	103	98	201
Rheumatic heart disease	4	7	11

Location/disease sub-groups by gender	Male	Female	Total
Congenital anomalies	100	85	185
Anorectal atresia		1	1
Cleft palate	3	7	10
Congenital heart anomalies	30	12	42
Down syndrome	3		3
Other Congenital anomalies	62	64	126
Renal agenesis	2	1	3
Diabetes mellitus	106	112	218
Digestive diseases	683	577	1,260
Appendicitis	107	77	184
Cirrhosis of the liver	2	8	10
Other digestive diseases	566	489	1,055
Peptic ulcer disease	8	3	11
Endocrine disorders	174	215	389
Genitourinary diseases	432	889	1,321
Benign prostatic hypertrophy	39		39
Nephritis and nephrosis	138	159	297
Other genitourinary system diseases	255	730	985
Malignant neoplasms	172	185	357
Bladder cancer	10	1	11
Breast cancer	1	41	42
Cervix uteri cancer		6	6
Colon and rectum cancers	12	6	18
Corpus uteri cancer		6	6
Leukaemia	6	7	13
Liver cancer	13	8	21
Lymphomas, multiple myeloma	7	3	10
Melanoma and other skin cancers	2		2

Location/disease sub-groups by gender	Male	Female	Total
Mouth and oropharynx cancers	29	21	50
Oesophagus cancer	2		2
Other malignant neoplasms	50	59	109
Ovary cancer		17	17
Pancreas cancer	5		5
Prostate cancer	13		13
Stomach cancer	8	1	9
Trachea, bronchus, lung cancers	14	9	23
Musculoskeletal diseases	347	314	661
Back pain	21	24	45
Osteoarthritis	37	72	109
Other musculoskeletal disorders	289	212	501
Rheumatoid arthritis		6	6
Neuropsychiatric conditions	279	260	539
Alcohol use disorders	4	2	6
Alzheimer and other dementias	2	3	5
Bipolar disorder	15	29	44
Drug use disorders	12	2	14
Epilepsy	47	27	74
Insomnia (primary)		1	1
Migraine	2	1	3
Multiple sclerosis	1		1
Not categorized / Multiple Sub-categories	2		2
Obsessive-compulsive disorder	1		1
Other neuropsychiatric disorders	138	141	279
Panic disorder		1	1
Parkinson disease	3	5	8
Schizophrenia	40	16	56

Location/disease sub-groups by gender	Male	Female	Total
Unipolar depressive disorders	12	32	44
Oral conditions	32	55	87
Dental caries		5	5
Other oral diseases	31	48	79
Periodontal disease	1	2	3
Other neoplasms	67	198	265
Respiratory diseases	255	332	587
Asthma	36	52	88
Chronic obstructive pulmonary disease	53	106	159
Other respiratory diseases	166	174	340
Sense organ diseases	51	47	98
Skin diseases	186	119	305
Not categorized	1,557	1,167	2,724
Total	**17,166**	**24,634**	**41,800**

Table 3-18: Adapted Global Burden of Disease Study Classification system for diseases and injuries used in this chapter

Title of GBD cause	ICD-10 4-character codes
All Causes	A00-Y89
I. Communicable, maternal, perinatal and nutritional conditions	A00-B99, G00-G04, N70-N73, J00-J06, J10-J18, J20-J22, H65-H66, O00-O99, P00-*P96*, E00-E02, E40-E46, E50, D50-D53, D64.9, E51-E64
A. Infectious and parasitic diseases	A00-B99, G00, G03-G04, N70-N73
1. Tuberculosis	A15-A19, B90
2. STDs excluding HIV	A50-A64, N70-N73
a. Syphilis	A50-A53
b. Chlamydia	A55-A56
c. Gonorrhoea	A54
d. Other STDs	A57-A64, N70-N73
3. HIV/AIDS	B20-B24
4. Diarrhoeal diseases	*A00, A01,A03, A04*, A06-A09
5. Childhood-cluster diseases	A33-A37, A80, B05, B91
a. Pertussis	A37
b. Poliomyelitis	A80,B91
c. Diphtheria	A36
d. Measles	B05
e. Tetanus	A33-A35
6. Meningitis	A39, G00, G03
7. Hepatitis B	B16-B19 (minus B17.1, B18.2)
Hepatitis C	B17.1, B18.2
8. Malaria	B50-B54
9. Tropical-cluster diseases	B55-B57, B65, B73, B74.0-B74.2
a. Trypanosomiasis	B56
b. Chagas disease	B57
c. Schistosomiasis	B65
d. Leishmaniasis	B55
e. lymphatic filariasis	B74.0-B74.2
f. Onchocerciasis	B73
10. Leprosy	A30
11. Dengue	A90-A91
12. Japanese encephalitis	A83.0
13. Trachoma	A71

Title of GBD cause			ICD-10 4-character codes
	14.	Intestinal nematode infections	*B76-B81*
		a. Ascariasis	B77
		b. Trichuriasis	B79
		c. Hookworm disease	B76
		Other intestinal infections	B78, B80,B81
		Other infectious diseases	A02,A05,A20-A28,A31,A32,A38,A40-A49,A65-A70,A74-A79,A81,A82,A83.1-A83.9,A84-A89,A92-A99,B00-B04,B06-B15,B25-B49,B58-B60,B64,B66-B72,B74.3-B74.9,B75,B82-B89,B92-B99, G04
B.		Respiratory infections	J00-J06, J10-J18, J20-J22, H65-H66
	1.	Lower respiratory infections	J10-J18, J20-J22
	2.	Upper respiratory infections	J00-J06
	3.	Otitis media	H65-H66
C.		Maternal conditions	O00-O99
	1.	Maternal haemorrhage	O44-O46, O67, O72
	2.	Maternal sepsis	O85-O86
	3.	Hypertensive disorders	O10-O16
	4.	Obstructed labour	O64-O66
	5.	Abortion	O00-O07
		Other maternal conditions	O20-O43,O47-O63,O68-O71,O73-O75,O87-O99
D.		Perinatal conditions	P00-*P96*
	1.	Low birth weight	P05, P07, P22, P27-P28
	2.	Birth asphyxia and birth trauma	P03, P10-P15, P20-P21, P24-P26, P29
		Other perinatal conditions	P00-P02, P04, P08, P23, P35-P96
E.		Nutritional deficiencies	E00-E02, E40-E46, E50, D50-D53,D64.9, E51-E64
	1.	Protein-energy malnutrition	E40-E46
	2.	Iodine deficiency	E00-E02
	3.	Vitamin A deficiency	E50
	4.	Iron-deficiency anaemia	D50, D64.9
		Other nutritional disorders	D51-D53, E51-E64
F.		Other emerging diseases	U00-U49, U82-U85
	1.	Covid-19	E40-E46

Title of GBD cause			ICD-10 4-character codes
II.	*Noncommunicable diseases*		C00-C97, D00-D48,D55-D64 (minus D 64.9) D65-D89, E03-E07, E10-E16, E20-E34, E65-E88, F01-F99, G06-G98, H00-H61, H68-H93, I00-I99, J30-J98, K00-K92, N00-N64, N75-N98, L00-L98, M00-M99, Q00-Q99
	A.	Malignant neoplasms	C00-C97
		1. Mouth and oropharynx cancers	C00-C14
		2. Oesophagus cancer	C15
		3. Stomach cancer	C16
		4. Colon and rectum cancers	C18-C21
		5. Liver cancer	C22
		6. Pancreas cancer	C25
		7. Trachea, bronchus, lung cancers	C33-C34
		8. Melanoma and other skin cancers	C43-C44
		9. Breast cancer	C50
		10. Cervix uteri cancer	C53
		11. Corpus uteri cancer	C54-C55
		12. Ovary cancer	C56
		13. Prostate cancer	C61
		14. Bladder cancer	C67
		15. Lymphomas, multiple myeloma	C81-C90, C96
		16. Leukaemia	C91-C95
		Other malignant neoplasms	C17,C23,C24,C26-C32,C37-C41,C45-C49,C51,C52,C57-C60,C62-C66,C68-C80,C97
	B.	Other neoplasms	D00-D48
	C.	Diabetes mellitus	E10-E14
	D.	Endocrine disorders	*D55-D64 (minus D64.9),D65-D89, E03-E07, E15-E16, E20-E34, E65-E88*
	E.	Neuropsychiatric conditions	F01-F99, G06-G98
		1. Unipolar depressive disorders	F32-F33
		2. Bipolar disorder	F30-F31
		3. Schizophrenia	F20-F29
		4. Epilepsy	G40-G41
		5. Alcohol use disorders	F10
		6. Alzheimer and other dementias	F01, F03, G30-G31

Title of GBD cause		ICD-10 4-character codes
7.	Parkinson disease	G20-G21
8.	Multiple sclerosis	G35
9.	Drug use disorders	F11-F16, F18-F19
10.	Post-traumatic stress disorder	*F43.1*
11.	Obsessive-compulsive disorder	F42
12.	Panic disorder	F40.0, F41.0
13.	Insomnia (primary)	F51
14.	Migraine	G43
15.	Mental Retardation	F70-F79
	Other neuropsychiatric disorders	F04-F09,F17,F34-F39,F401-F409,F411-F419, F43(minus F43.1), F44-F50, F52-F69, F80-F99,G06-G12,G23-G25,G36,G37,G44-G98
F.	Sense organ diseases	H00-H61, H68-H93
1.	Glaucoma	H40
2.	Cataracts	H25-H26
3.	Vision disorders, age-related	H524
4.	Hearing loss, adult onset	H90-H91
	Other sense organ disorders	H00-H21,H27-H35, H43-H61(minus H524),H68-H83, H92-H93
G.	Cardiovascular diseases	I00-I99
1.	Rheumatic heart disease	I01-I09
2.	Hypertensive heart disease	I10-I13
3.	Ischaemic heart disease	I20-I25
4.	Cerebrovascular disease	I60-I69
5.	Inflammatory heart diseases	I30-I33, I38, I40, I42
	Other cardiovascular diseases	I00, I26-I28, I34-I37, I44-I51, I70-I99
H.	Respiratory diseases	J30-J98
1.	Chronic obstructive pulmonary disease	J40-J44
2.	Asthma	J45-J46
	Other respiratory diseases	J30-J39,J47-J98
I.	Digestive diseases	K20-*K92*
1.	Peptic ulcer disease	K25-K27
2.	Cirrhosis of the liver	K70, K74
3.	Appendicitis	K35-K37

	Title of GBD cause	ICD-10 4-character codes
	Other digestive diseases	K20-K22,K28-K31,K38,K40-K66,K71-K73,K75-K92
J.	Genitourinary diseases	N00-N64, N75-N98
1.	Nephritis and nephrosis	N00-N19
2.	Benign prostatic hypertrophy	N40
	Other genitourinary system diseases	N20-N39, N41-N64, N75-N98
K.	Skin diseases	L00-L98
L.	Musculoskeletal diseases	M00-M99
1.	Rheumatoid arthritis	M05-M06
2.	Osteoarthritis	M15-M19
3.	Gout	M10
4.	Back pain	M45-M48, M54 (minus M54.2)
	Other musculoskeletal disorders	M00-M02, M08, M11-M13, M20-M43, M50-M53, M54.2, M55-M99
M.	Congenital anomalies	Q00-Q99
1.	Abdominal wall defect	*Q79.2-Q79.5*
2.	Anencephaly	Q00
3.	Anorectal atresia	Q42
4.	Cleft lip	Q36
5.	Cleft palate	Q35, Q37
6.	Oesophageal atresia	Q39.0-Q39.1
7.	Renal agenesis	Q60
8.	Down syndrome	Q90
9.	Congenital heart anomalies	Q20-Q28
10.	Spina bifida	Q05
	Other Congenital anomalies	Q01-Q04, Q06-Q18, Q30-Q34, Q38, Q392-Q399, Q40-Q41, Q43-Q56, Q61-Q78, Q790, Q791, Q796, Q798, Q799, Q80-Q89, Q91-Q99
N.	Oral conditions	K00-K14
1.	Dental caries	K02
2.	Periodontal disease	K05
3.	Edentulism	-
	Other oral diseases	K00, K01,K03,K04,K06-K14
III.	*Injuries*	V01-Y89
A.	Unintentional injuries	V01-X59, Y40-Y86, Y88, Y89

	Title of GBD cause	ICD-10 4-character codes
	1. Road traffic accidents	See below
	2. Poisonings	X40-X49
	3. Falls	W00-W19
	4. Fires	X00-X09
	5. Drownings	W65-W74
	6. Other unintentional injuries	*Rest of V, W20*-W64, W75-W99, X10-X39, X50-X59, Y40-Y84, Y859, Y86, Y88,Y89
B.	Intentional injuries	X60-Y09, Y35-Y36, Y870, Y871
	1. Self-inflicted injuries	X60-X84, Y870
	2. Violence	X85-Y09, Y871
	3. War	Y36
	Other intentional injuries	Y35
	Ill-defined diseases	R00-R99
	Ill-defined injuries/accidents	Y10-Y34, Y872

MORTALITY

4. MORTALITY

According to CDC (Centers for Disease Control and Prevention 2012), a "mortality rate is a measure of the frequency of occurrence of death in a defined population during a specified interval". Morbidity and mortality measures are often the same mathematically; it's just a matter of what you choose to measure, illness or death.

What is Mortality?

"mortality rate is a measure of the frequency of occurrence of death in a defined population during a specified interval"

When mortality rates are based on vital statistics (e.g., counts of death certificates), the denominator most commonly used is the size of the population at the middle of the time period. Thus, for calculations, mid-year population of Maldivians (Maldives Bureau of Statistics (MBS) 2021) are used in this chapter.

Currently, information derived from causes of death statistics are used for establishing and monitoring public health policies. While this type of source is well established and provides reliable and comparable public data collection for all deaths in the country, cause of death data does not provide information on incidence and prevalence of diseases and in particular lacks information on comorbidities that would be necessary for a comprehensive picture of public health.

4.1 TOTAL DEATHS IN MALDIVES

In this chapter, we used *all death registration data for Maldives*[14] for 2020. As mentioned, by law (Attorney General's Office 1992) birth and death certification has been mandatory since 1992 and since then a system of Medical Certification of Cause of Death (MCCOD) has been operating (Ministry of Health 2015). Thus, the death data as of October 2021 from GEMEN population module (digitised civil registration and vital statistics (CRVS) data system) is taken for this analysis. The CRVS data contains all the information on the death certificates completed in the Maldives, including socio-demographic information, address, nationality, parents' details, birth and death dates and causes of death certified by a doctor in accordance with the WHO international form of MCCOD (Usman and Moosa 2020). The Ministry of Health uses the information in the death certificates to determine the Final Underlying Cause of Death (FUCOD), which is then coded using International Statistical Classification of Diseases and Related Health Problems - 10th revision (ICD-10), version 2019 (World Health Organisation 2007).

Death Certification in Maldives

In Maldives birth and death certification has been mandatory since 1992 – and a Medical Certification of Cause of Death (MCCOD) is a pre-requirite for burial.

[14]All deaths occurred in Maldives: Maldivians and foreigners).

4.2 CRUDE DEATH RATE

The crude death rate is one of the simplest measures of mortality level in a population.

DEFINITION

CDR: Number of deaths over a given period divided by the person-years lived by the population over that period. It is expressed as number of deaths per 1,000 population

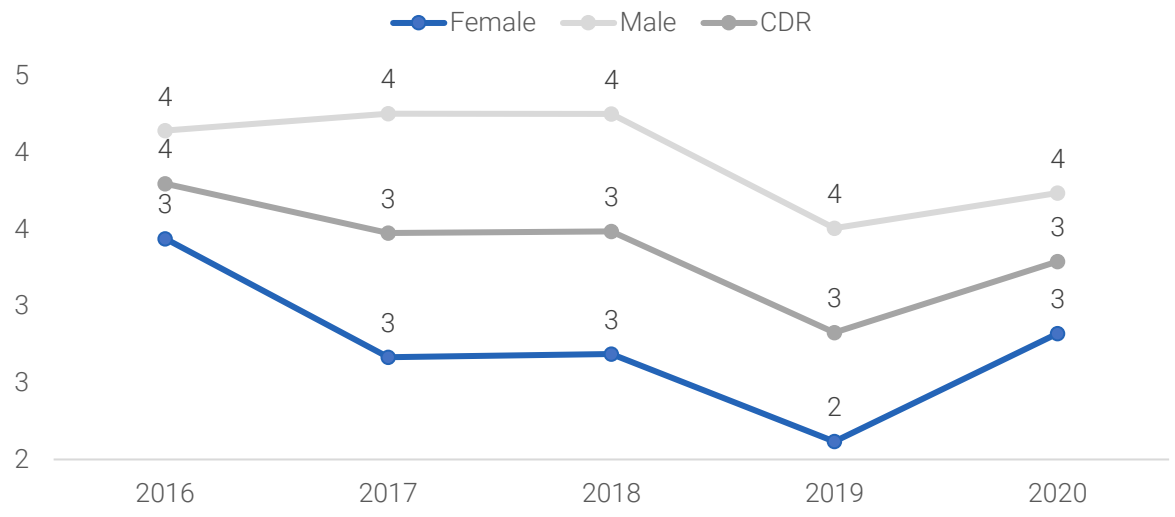
Equation 4-1: Crude Death Rate

$$CDR = \frac{Number\ of\ death\ within\ a\ year}{\text{Total mid} - \text{year population}} x\ 1{,}000$$

Table 4-2: Crude Death Rate (CDR) 2016-2020

	Total Deaths			Population			CDR		
Year	Female	Male	Total	Female	Male	Grand Total	Female	Male	CDR
2016	596	745	1341	173235	179769	353005	3	4	4
2017	470	780	1250	176298	183310	359608	3	4	3
2018	482	795	1277	179319	186857	366176	3	4	3
2019	386	668	1054	182346	190394	372739	2	4	3
2020	523	725	1248	185331	193940	379270	3	4	3

Figure 4-4: Neonatal Mortality Rate, 2016 – 2020



4.2.1 DEATHS BY GENDER

In 2020, there were more male deaths (58%) compared to female deaths, and more deaths occurred in Greater Male' Region (GMR).

Table 4-1: Deaths by location, 2020

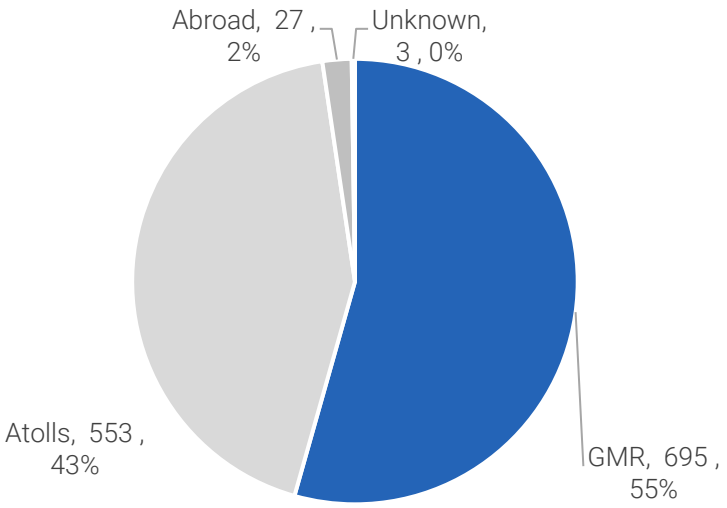
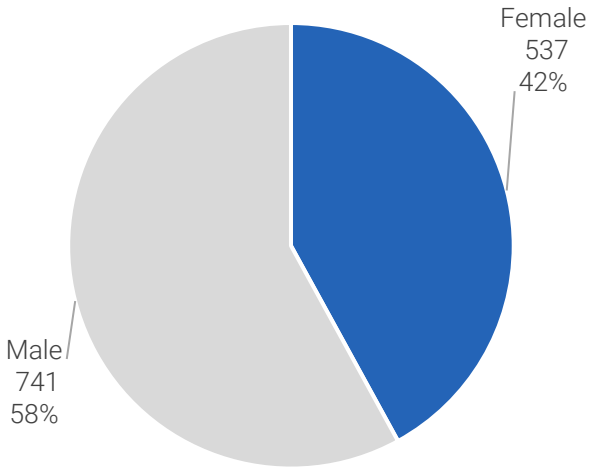


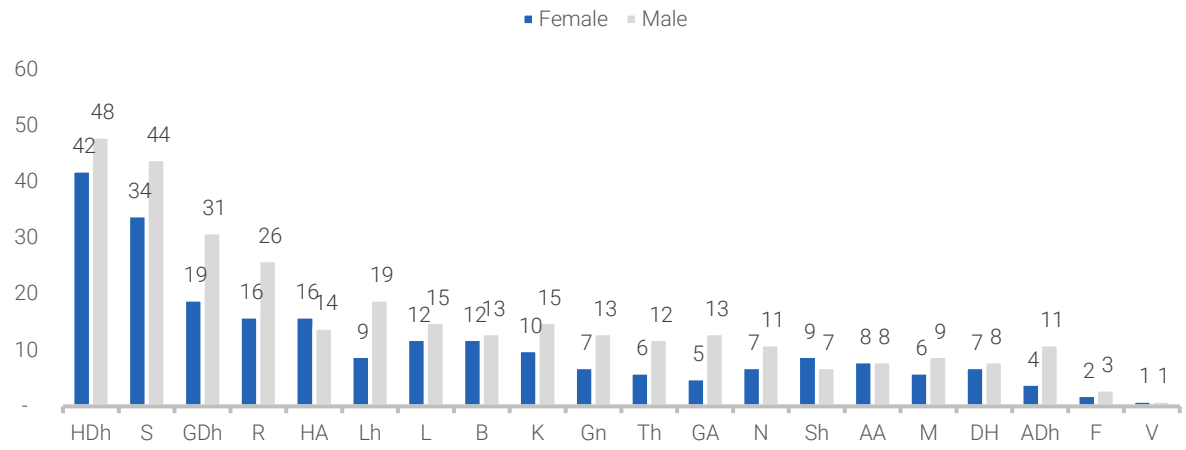
Figure 4-1: Deaths by gender, 2020



4.1.1.1. DEATHS BY ATOLLS

When disaggregated by atolls (excluding GMR and abroad), it can be seen that most deaths occurred at Haa Dhaal and Seenu atoll followed by Gaaf Dhaal and Raa atoll.

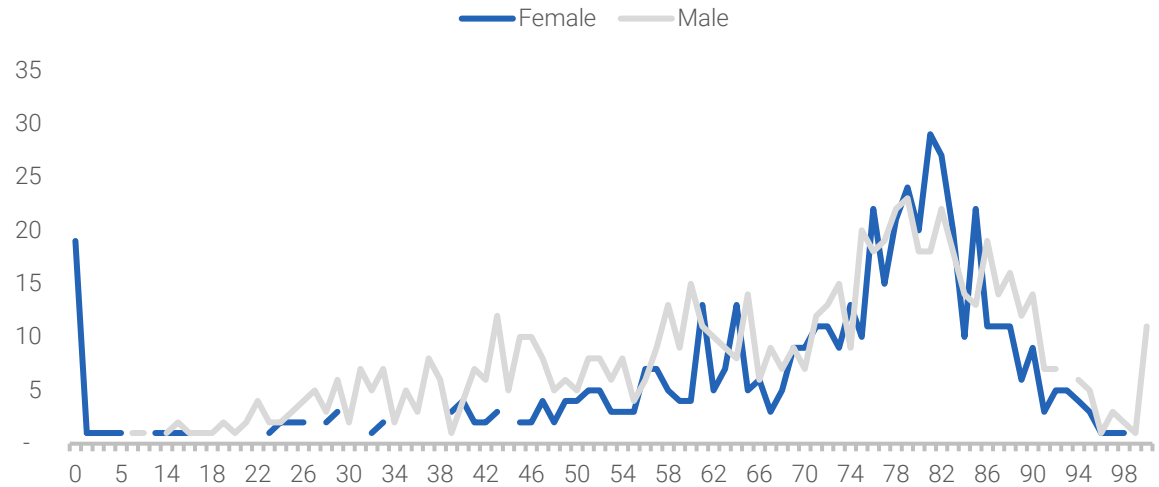
Figure 4-2: Deaths by atolls, 2020



4.2.2 DEATHS BY AGE

Contrary to inpatients where most admission were in the reproductive age-group, when we look at the age of death, it can be seen that highest are among children below 1 year and followed by elderly.

Figure 4-3: Deaths by age, 2020



4.2.3 TYPE OF DEATHS

4.2.3.1 NEONATAL DEATHS

Neonatal deaths (Pathirana, Muñoz et al. 2016), (deaths among live births during the first 28 completed days of life) may be subdivided into early neonatal deaths, occurring during the first 7 days of life, and late neonatal deaths, occurring after the 7th day but before the 28th completed day of life.

DEFINITION

NEONATAL MORTALITY RATE [NMR] is defined by WHO as "Probability that a child born in a specific year or period will die during the first 28 completed days of life if subject to age-specific mortality rates of that period, expressed per 1000 live births."

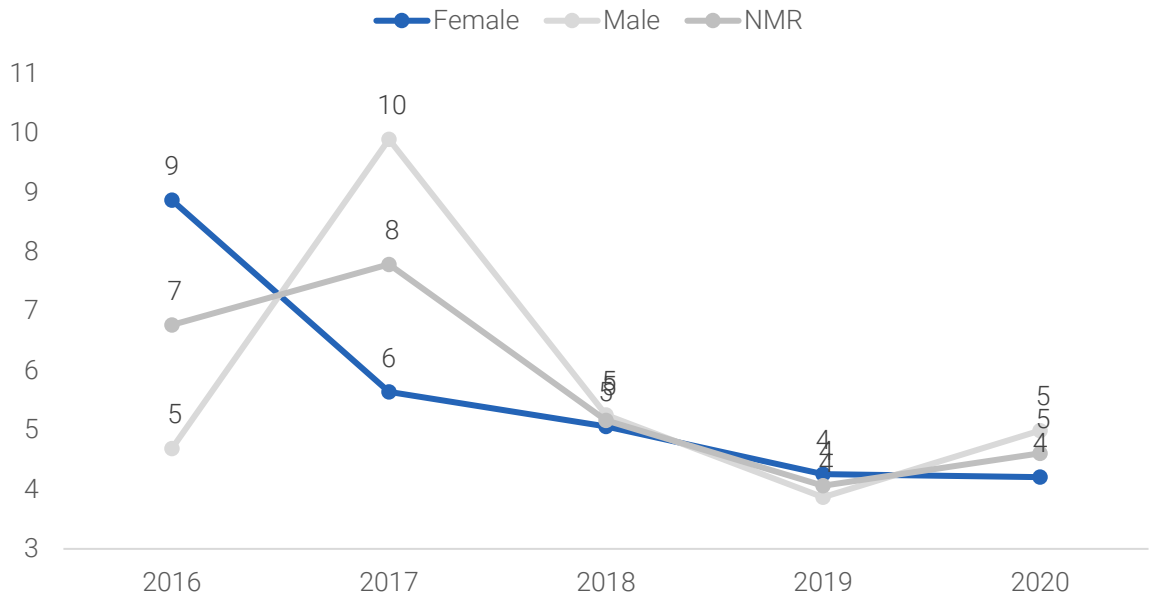
Equation 4-1: Neonatal Mortality Rate

$$NMR = \frac{No.\ of\ infant\ deahts\ (< 28\ days)}{\text{Number of Live Births}} x\ 1{,}000$$

Table 4-2: Neonatal deaths and NMR, 2016-2020

	Neonatal Deaths			Live Births			NMR		
Year	Female	Male	Total	Female	Male	Total	Female	Male	NMR
2016	30	16	46	3,381	3,411	6792	9	5	7
2017	19	34	53	3,366	3,435	6801	6	10	8
2018	16	18	34	3,159	3,426	6585	5	5	5
2019	13	12	25	3,051	3,101	6152	4	4	4
2020	13	16	29	3,089	3,204	6293	4	5	5

Figure 4-4: Neonatal Mortality Rate, 2016 – 2020



4.2.3.2 POST NEONATAL DEATHS

DEFINITION

POST NEONATAL MORTALITY (PNM) rate is defined by WHO as the probability of dying between 28 days to 364 days of age expressed per 1000 live births.

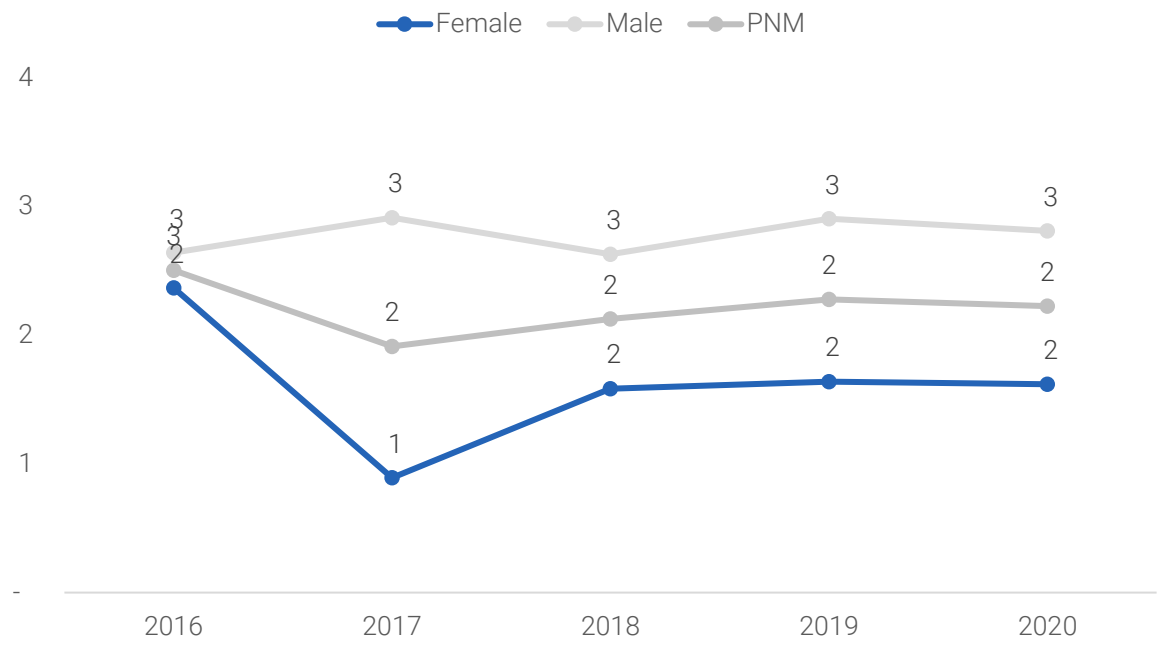
Table 4-3: Post neonatal deaths and PNM, 2015-2019

	Post-Neonatal Deaths			Live Births			PNM rate		
Year	Female	Male	Total	Female	Male	Total	Female	Male	PNM
2016	8	9	17	3,381	3,411	6,792	2	3	3
2017	3	10	13	3,366	3,435	6,801	1	3	2
2018	5	9	14	3,159	3,426	6,585	2	3	2
2019	5	9	14	3,051	3,101	6,152	2	3	2
2020	5	9	14	3,089	3,204	6,293	2	3	2

Equation 4-2: Post Neonatal Mortality Rate

$$PNM = \frac{No.\ of\ infant\ deaths\ (28 - 364\ days)}{\text{Number of Live Births}} x\ 1{,}000$$

Figure 4-5: Post neonatal deaths, 2016-2019



4.2.3.3 INFANT DEATHS

In 2017 globally, 4.1 million (75% of all under-five deaths) occurred within the first year of life. Global infant mortality rate (World Health Organisation 2017) has decreased from an estimated rate of 65 deaths per 1000 live births in 1990 to 29 deaths per 1000 live births in 2017. Maldives IMR has been lower than the global average since then and does not show any gender difference.

DEFINITION

INFANT MORTALITY RATE [IMR] is defined by WHO as "probability of dying between birth and exactly one year of age expressed per 1000 live births".

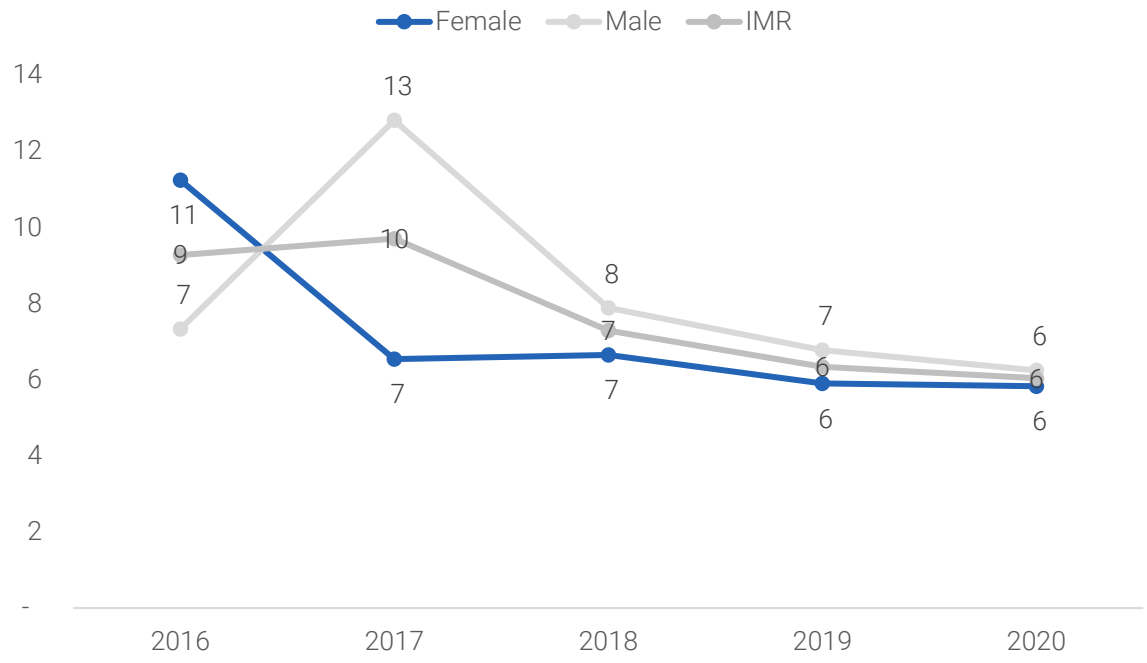
Equation 4-3: Infant Mortality Rate

$$IMR = \frac{No.\,of\ infant\ deaths\ (0-365\ days)}{\text{Number of Live Births}}\ x\ 1{,}000$$

Table 4-4: Infant Deaths and IMR, 2016 -2020

	Infant Deaths			Live Births			IMR		
Year	Female	Male	Total	Female	Male	Total	Female	Male	IMR
2016	38	25	63	3,381	3,411	6792	11	7	9
2017	22	44	66	3,366	3,435	6801	7	13	10
2018	21	27	48	3,159	3,426	6585	7	8	7
2019	18	21	39	3,051	3,101	6152	6	7	6
2020	18	20	38	3,089	3,204	6293	6	6	6

Figure 4-6: Infant Mortality Rate, 2016 – 2020



4.2.3.4 UNDER 5 DEATHS

In Globally, under-five mortality rate (World Health Organisation 2018) has decreased by 59%, from an estimated rate of 93 deaths per 1000 live births in 1990 to 39 deaths per 1000 live births in 2018. This is equivalent to 1 in 11 children dying before reaching age 5 in 1990, compared to 1 in 26 in 2018. Maldives U5MR is lower than the global average figures with a lightly higher rate for boys compared to girls.

UNDER 5 MORTALITY RATE [U5MR] is defined by WHO as "probability of dying between birth and exactly five years of age expressed per 1,000 live births".

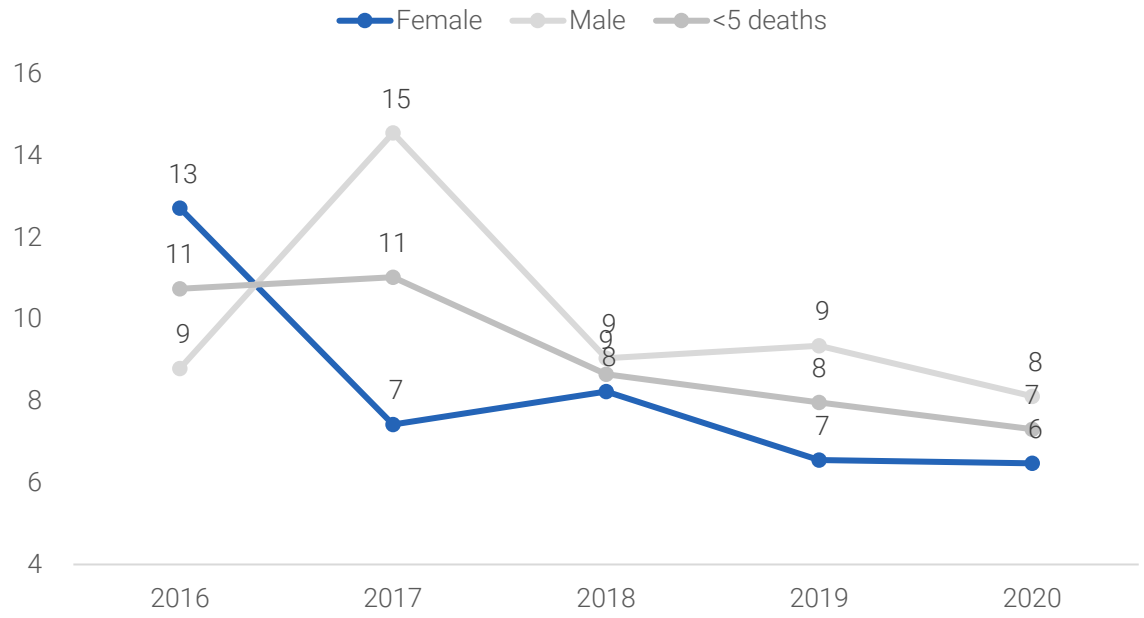
Equation 4-4: Under 5 Mortality Rate

$$U5MR = \frac{No.of\ deaths\ (0\ days - 5\ years)}{\text{Number of Live Births}} x1000$$

Table 4-5: Under 5 deaths and U5MR, 2016- 2020

	Infant Deaths			Live Births			Under 5 deaths		
Year	Female	Male	Total	Female	Male	Total	Female	Male	U5MR
2016	43	30	73	3,381	3,411	6792	13	9	11
2017	25	50	75	3,366	3,435	6801	7	15	11
2018	26	31	57	3,159	3,426	6585	8	9	9
2019	20	29	49	3,051	3,101	6152	7	9	8
2020	20	26	46	3,089	3,204	6293	6	8	7

Figure 4-7: Under 5 Deaths, 2016 -2020



4.2.3.5 MATERNAL DEATHS

Due to the small population of Maldives, even one single death can have a large impact on the MMR figures (World Health Organisation 2018). For example, 6 maternal deaths occurred in 2009 while 8 maternal deaths occurred in 2010 in Maldives. Hence, the MMR significantly increased from 81 deaths/ 100,000 live births in 2009 to 112 deaths/100,000 live births in 2010.

Although, MMR have changed from 103 deaths/100,000 live births in 2017 to 0 deaths/100,000 live births in 2019, significant fluctuations for the MMR can be observed for the past 5 years. In 2020, 2 maternal deaths were reported in Maldives, with an MMR of 32 deaths/100,000 live births.

MATERNAL MORTALITY RATIO [MMR] is defined by WHO as "The annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, expressed per 100, 000 live births, for a specified time period".

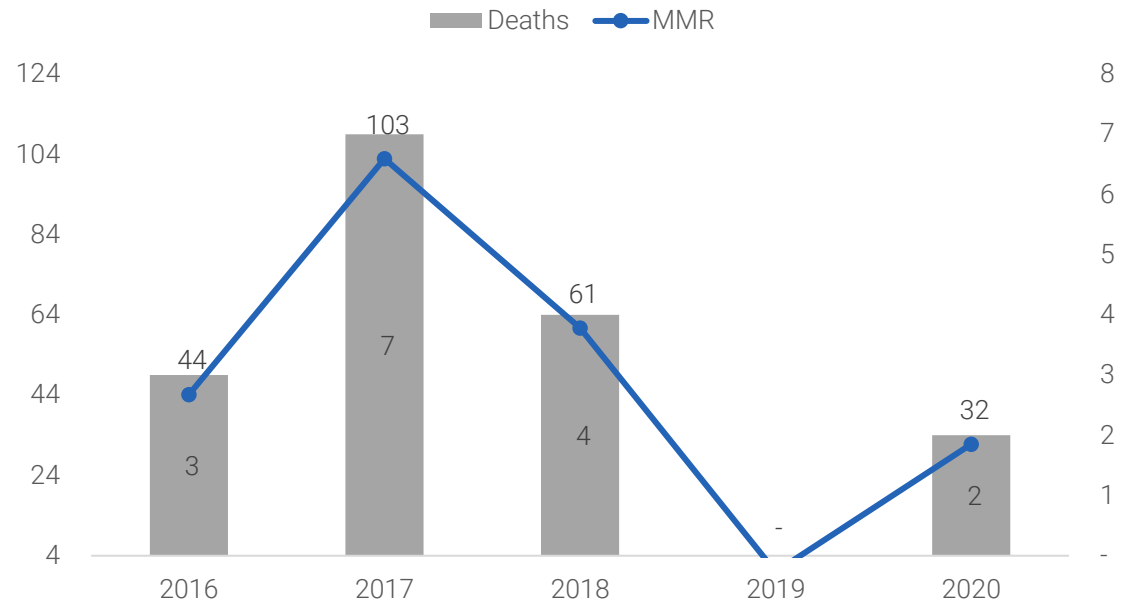
Equation 4-5: Maternal Mortality Ratio

$$MMR = \frac{Number\ of\ Maternal\ Deaths}{\text{Number of Live Births}} x\ 100{,}000$$

Table 4-6: Maternal Mortality, 2016-2020

	Live Births			Maternal Mortality	
Year	Female	Male	Total	Deaths	MMR
2016	3,381	3,411	6792	3	44
2017	3,366	3,435	6801	7	103
2018	3,159	3,426	6585	4	61
2019	3,051	3,101	6152	-	-
2020	3,089	3,204	6293	2	32

Figure 4-8: Maternal mortality, 2016 -2020



4.2.4 DEATHS BY GLOBAL BURDEN OF DISEASE GROUPS

The death data of 2020 shows that there is a double burden of diseases in the country, showing that deaths are high in both Communicable, maternal, perinatal and nutritional conditions, and Non-communicable disease categories.

Table 4-7: Deaths by disease categories, 2020

GBD Categories	Female	Male	Grand Total
Noncommunicable diseases	371	467	838
Communicable, maternal, perinatal and nutritional conditions	98	112	210
Ill-defined diseases	55	112	167
Injuries	6	44	50
Not Stated	6	5	11
Not categorized	1	1	2
Grand Total	**536**	**741**	**1,278**

Therefore, the remaining of this chapter will be focused on communicable, maternal, perinatal & nutritional conditions and non-communicable and injuries in detail.

4.3 LEADING CAUSES OF DEALTHS

Leading causes of death is a useful measure of population health. It is of most value when making comparisons over time or between population groups. Changes in the pattern of causes of death can result from changes in behaviors, exposures to disease or injury, and social and environmental circumstances, as well as from data coding practices.

Leading causes of death presented in this snapshot are based on the 'underlying cause of death', which is the disease or injury that began the train of events leading to death (World Health Organisation 2018).

Rankings of leading causes of deaths are an important source of policy relevant information to prevent premature mortality in countries as well as for monitoring the impact of interventions.

Causes of death are documented on death certificates by medical doctors in Maldives, and coded by the trained coders at Ministry of Health using the World Health Organization International Statistical Classification of Diseases and Related Health Problems (ICD-10) (World Health Organisation 2007).

The ICD allows diseases that cause death to be grouped in a way that is meaningful for monitoring population health. For the purpose of this publication Global Burden of Disease Categories are used when reporting the categories as well.

Most deaths, however, result from more than one contributing disease or condition. Analyses using 'associated causes of death' may offer insight into the disease processes occurring at the end of life or, for injury causes of death, the nature of the injury.

The more frequent categories of garbage codes appear in the list of leading causes, and the higher that they are ranked, the more distorted will be the true picture of leading causes of death in the country. Therefore, for the purpose of this exercise, codes which fall into "not categorized" or "multiple categories" are not considered when ranking the death burden across life stages.

Table 4-8: Top 20 leading causes of death based on Global Burden of Disease Categories, 2020[15]

Rank	GBD sub-groups	All Deaths		GBD sub-groups	Female		GBD sub-groups	Male	
		#	%		#	%		#	%
1	Other cardiovascular diseases	166	13%	Other cardiovascular diseases	71	14%	Other cardiovascular diseases	95	13%
2	Cerebrovascular disease	105	8%	Other respiratory diseases	45	9%	Ischaemic heart disease	63	9%
3	Ischaemic heart disease	102	8%	Cerebrovascular disease	45	9%	Cerebrovascular disease	60	8%
4	Other respiratory diseases	80	6%	Ischaemic heart disease	39	7%	Other respiratory diseases	35	5%
5	Lower respiratory infections	68	5%	Other infectious diseases	35	7%	Lower respiratory infections	35	5%
6	Chronic obstructive pulmonary disease	58	5%	Chronic obstructive pulmonary disease	34	7%	COVID-19 related conditions	32	4%
7	Other infectious diseases	48	4%	Lower respiratory infections	33	6%	Chronic obstructive pulmonary disease	24	3%
8	COVID-19 related conditions	48	4%	COVID-19 related conditions	16	3%	Drownings	19	3%
9	Hypertensive heart disease	29	2%	Hypertensive heart disease	13	2%	Liver cancer	17	2%
10	Other malignant neoplasms	26	2%	Breast cancer	11	2%	Trachea, bronchus, lung cancers	17	2%
11	Nephritis and nephrosis	26	2%	Endocrine disorders	11	2%	Other malignant neoplasms	16	2%
12	Liver cancer	25	2%	Other malignant neoplasms	10	2%	Hypertensive heart disease	16	2%
13	Endocrine disorders	22	2%	Other digestive diseases	10	2%	Nephritis and nephrosis	16	2%
14	Drownings	20	2%	Nephritis and nephrosis	10	2%	Other infectious diseases	13	2%
15	Trachea, bronchus, lung cancers	20	2%	Liver cancer	8	2%	Other unintentional injuries	12	2%
16	Other digestive diseases	17	1%	Mouth and oropharynx cancers	7	1%	Endocrine disorders	11	2%
17	Other unintentional injuries	16	1%	Other Congenital anomalies	5	1%	Other perinatal conditions	8	1%

Rank	GBD sub-groups	All Deaths #	All Deaths %	GBD sub-groups	Female #	Female %	GBD sub-groups	Male #	Male %
18	Other perinatal conditions	12	1%	Other perinatal conditions	4	1%	Other neuropsychiatric disorders	8	1%
19	Other neuropsychiatric disorders	12	1%	Other neuropsychiatric disorders	4	1%	Inflammatory heart diseases	8	1%
20	Breast cancer	12	1%	Lymphomas, multiple myeloma	4	1%	Other digestive diseases	7	1%

[15]Deaths falling into Not categorized / Multiple Sub-categories are omitted in the table

Table 4-9: Top 20 leading causes of death based on ICD-10 sub-groups, 2020

Rank	All Deaths		Female		Male	
	ICD sub-groups	#	%	ICD sub-groups	#	%	ICD sub-groups	#	%
1	Other forms of heart disease	165	13%	Other forms of heart disease	69	13%	Other forms of heart disease	96	13%
2	Malignant neoplasms	126	10%	Malignant neoplasms	51	10%	Ill-defined and unknown causes of mortality	83	11%
3	Ill-defined and unknown causes of mortality	118	9%	Cerebrovascular diseases	45	9%	Malignant neoplasms	75	10%
4	Cerebrovascular diseases	105	8%	Chronic lower respiratory diseases	40	8%	Ischaemic heart diseases	64	9%
5	Ischaemic heart diseases	103	8%	Ischaemic heart diseases	39	7%	Cerebrovascular diseases	60	8%
6	Chronic lower respiratory diseases	68	5%	Ill-defined and unknown causes of mortality	35	7%	Provisional assignment of new diseases of uncertain etiology or emergency use	33	5%
7	Influenza and pneumonia	59	5%	Other bacterial diseases	31	6%	Accidents	31	4%
8	Provisional assignment of new diseases of uncertain etiology or emergency use	50	4%	Influenza and pneumonia	28	5%	Influenza and pneumonia	31	4%
9	Other bacterial diseases	43	3%	Other respiratory diseases principally affecting the interstitium	18	3%	Chronic lower respiratory diseases	28	4%
10	Other respiratory diseases principally affecting the interstitium	34	3%	Lung diseases due to external agents	17	3%	Other respiratory diseases principally affecting the interstitium	16	2%
11	Accidents	34	3%	Provisional assignment of new diseases of uncertain etiology or emergency use	17	3%	Renal failure	16	2%
12	Hypertensive diseases	29	2%	Hypertensive diseases	13	2%	Hypertensive diseases	16	2%
13	Renal failure	27	2%	Renal failure	11	2%	General symptoms and signs	15	2%

Rank	ICD sub-groups	All Deaths #	All Deaths %	ICD sub-groups	Female #	Female %	ICD sub-groups	Male #	Male %
14	Lung diseases due to external agents	27	2%	Symptoms and signs involving the circulatory and respiratory systems	9	2%	Diabetes mellitus	15	2%
15	General symptoms and signs	24	2%	General symptoms and signs	9	2%	Symptoms and signs involving the circulatory and respiratory systems	12	2%
16	Diabetes mellitus	22	2%	Metabolic disorders	8	2%	Other bacterial diseases	12	2%
17	Symptoms and signs involving the circulatory and respiratory systems	21	2%	Other diseases of the respiratory system	7	1%	Lung diseases due to external agents	10	1%
18	Metabolic disorders	13	1%	Diabetes mellitus	7	1%	Respiratory and cardiovascular disorders specific to the perinatal period	9	1%
19	Respiratory and cardiovascular disorders specific to the perinatal period	12	1%	Diseases of liver	5	1%	Pulmonary heart disease and diseases of pulmonary circulation	6	1%
20	Other diseases of the respiratory system	11	1%	Other acute lower respiratory infections	5	1%	Metabolic disorders	5	1%
21	Other acute lower respiratory infections	9	1%	Sequelae of infectious and parasitic diseases	3	1%	Other diseases of urinary system	5	1%

4.4 MORTALITY ACROSS LIFE STAGES

People experience different health problems at different times of their lives—from infancy and childhood to old age. Hence, they have different health needs at different life stages. This chapter presents the leading causes of total burden at each life stage. Burden of disease analysis is useful to measure the impact of different diseases or injuries on a population. It combines the burden of living with ill health (non-fatal burden) with the burden of dying prematurely (fatal burden). In this section, burden is analyzed using fatal burden – deaths from all the health facilities – completed death dataset from GEMEN population.

4.4.1 INFANTS AND CHILDREN (AGED 0-14 YEARS)

Conditions during the neonatal period are the top five among 0-4 years. Other perinatal conditions and low birth weight were highest burden in children aged under 5. In contrast, among children aged 5–14 CVD was the highest cause of deaths

Figure 4-10: Top 5 leading causes of all death for infants and children aged 0-14 years, 2020

All persons	1st	2nd	3rd	4th	5th
0-4	Other Perinatal conditions 26%	Low birth weight 17%	Birth asphyxia and birth trauma 15%	Infectious diseases 9%	Congenital anomalies 9%
5-9	Neuropsychiatric disorders 50%	Cardiovascular diseases 50%			
10-14	Cardiovascular diseases 50%	Lower respiratory infections 50%			

Looking at the girls, a similar picture is seen among 0-4 years age group where the highest cause of death was other perinatal conditions, while for ages 5 – 9 years of age it was cardiovascular diseases. There were no deaths among girls 10-14 years in 2020.

Figure 4-11: Top 5 leading causes of female death for infants and children aged 0-14 years, 2020

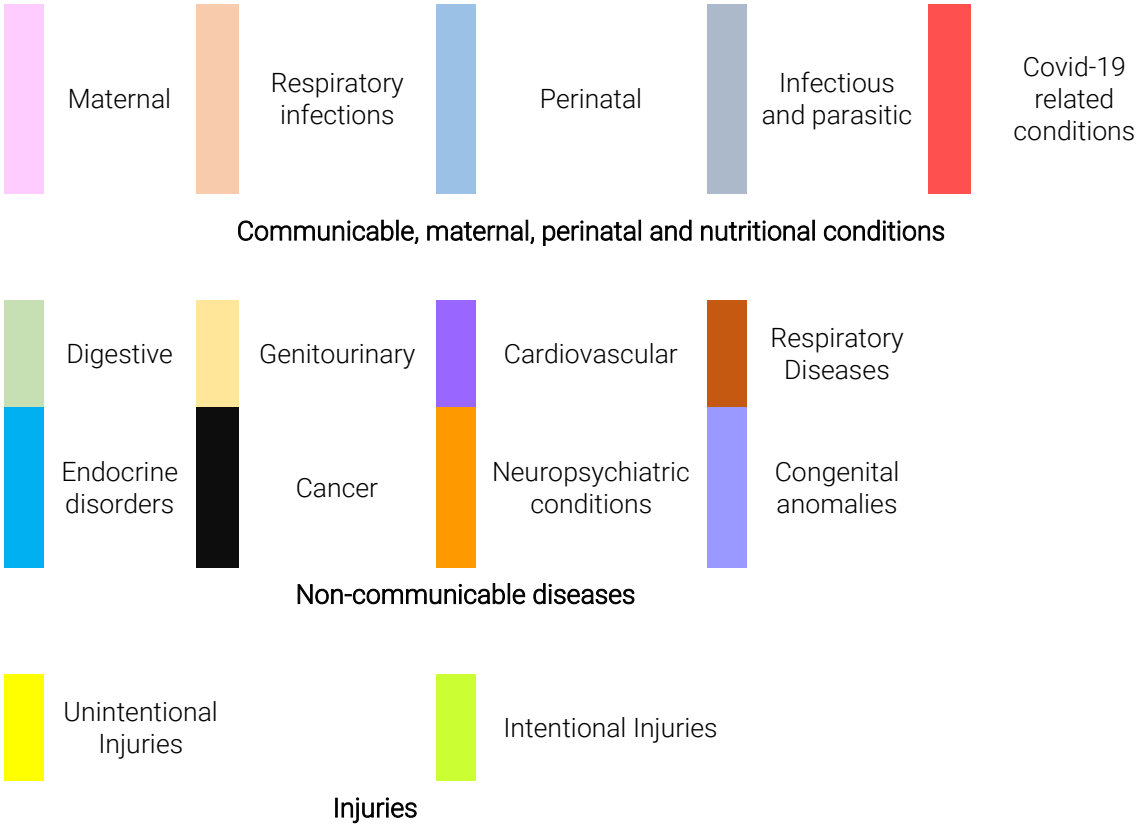
Females	1st	2nd	3rd	4th	5th
0-4	Perinatal conditions 19%	Congenital anomalies 19%	Low birth weight 14%	Infectious diseases 14%	Birth asphyxia and birth trauma 10%
5-9	Cardiovascular diseases 100%				

For boys below 5 years of age highest cause of death was also other perinatal conditions. It is noted that drowning, a category 3 (Unintentional injuries), cause was among the top 5 cause of death for boys under 5 years.

Figure 4-12: Top 5 leading causes of male death for infants and children aged 0-14 years, 2020

Males	1st	2nd	3rd	4th	5th
0-4	Perinatal conditions 31%	Low birth weight 19%	Birth asphyxia and birth trauma 19%	Drownings 4%	Anencephaly 4%
5-9	Neuropsychiatric disorders 100%				
10-14	Cardiovascular diseases 50%	Lower respiratory infections 50%			

Legend used for the above figures;



4.4.2 YOUNG PEOPLE (AGED 15 - 34 YEARS)

This age group reflects the young population dividend of the country with healthy productive population. As such, it is noted that the majority of deaths were due to injuries in the age groups 20-34. Among adolescent age group (15-19) a combination of communicable and non-communicable diseases was observed.

Figure 4-13: Top 5 leading causes of all death for youth population aged 15-34 years, 2020

All persons	1st	2nd	3rd	4th	5th
15-19	Infectious diseases 10%	Chronic obstructive pulmonary disease 10%	Inflammatory heart diseases 10%	Respiratory diseases 10%	Lower respiratory infections 10%
20-24	Unintentional injuries 19%	Cardiovascular diseases 19%	Drownings 13%	Lower respiratory infections 6%	Respiratory diseases 6%
25-29	Cardiovascular diseases 17%	Road traffic accidents 7%	Unintentional injuries 7%	Self-inflicted injuries 7%	Maternal conditions 3%
30-34	Self-inflicted injuries 12%	Infectious diseases 8%	Ischaemic heart disease 8%	Unintentional injuries 4%	Epilepsy 4%

Most of the females deaths were due to respiratory infections and respiratory diseases in the younger females. Maternal deaths were observed among top 5 in the 25-29 age group with hemorrhage as the cause of death. Cancers were more common among the 30-34 age group.

Figure 4-14: Top 5 leading causes of female death for youth population aged 15-34 years, 2020

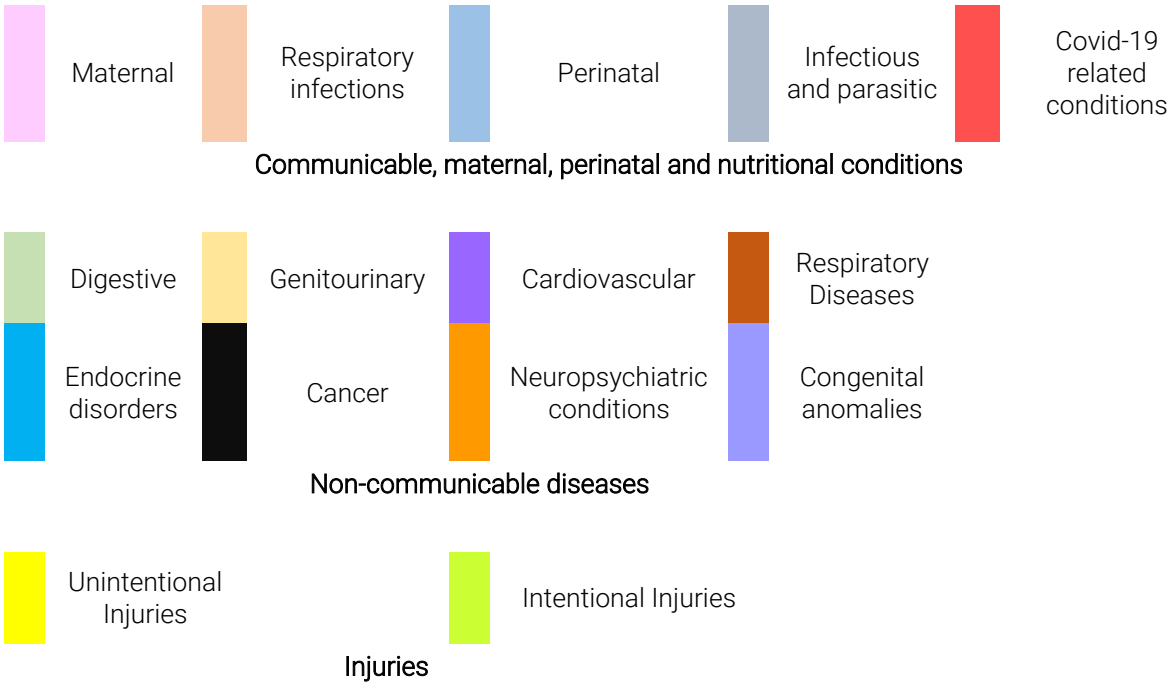
Females	1st	2nd	3rd	4th	5th
15-19	Lower respiratory infections 33%	Respiratory diseases 33%	Nephritis and nephrosis 33%		
20-24	Malignant neoplasms 20%	Lower respiratory infections 20%	Respiratory diseases 20%	Infectious diseases 20%	
25-29	Maternal conditions 13%	Epilepsy 13%	Self-inflicted injuries 13%	Maternal haemorrhage 13%	Cardiovascular diseases 13%
30-34	Breast cancer 33%	Respiratory diseases 33%	Mouth and oropharynx cancers 33%		

Unlike females, most of the males deaths were due to unintentional injuries and cardiovascular diseases for aged group 15-34 years.

Figure 4-15: Top 5 leading causes of male death for youth population aged 15-34 years, 2020

Males	1st	2nd	3rd	4th	5th
15-19	Infectious diseases 14%	Chronic obstructive pulmonary disease 14%	Inflammatory heart diseases 14%		
20-24	Unintentional injuries 27%	Cardiovascular diseases 27%	Drownings 18%	Tuberculosis 9%	
25-29	Cardiovascular diseases 19%	Unintentional injuries 10%	Road traffic accidents 10%	Ischaemic heart disease 5%	Neuropsychiatric disorders 5%
30-34	Self-inflicted injuries 13%	Infectious diseases 9%	Ischaemic heart disease 9%	Epilepsy 4%	Inflammatory heart diseases 4%

Legend used for the above figures;



4.4.3 ADULTS (AGED 35 -64 YEARS)

Although, the most admission were due to maternal condition (see chapter on Morbidity) the most common cause of death was due to cardiovascular diseases.

Figure 4-16: Top 5 leading causes of all death for young adults aged 35-64 years, 2020

All persons	1st	2nd	3rd	4th	5th
35-44	Cardiovascular diseases 12%	Ischaemic heart disease 8%	Covid-19 related conditions 7%	Cerebrovascular disease 5%	Unintentional injuries 4%
45-54	Cardiovascular diseases 18%	Ischaemic heart disease 11%	Cerebrovascular disease 10%	Drownings 6%	Lower respiratory infections 4%
55-64	Cardiovascular diseases 19%	Cerebrovascular disease 9%	Ischaemic heart disease 9%	Malignant neoplasms 8%	Covid-19 related conditions 6%

For females who fall under the reproductive age group 35-44 years, the main reason for deaths was cardiovascular diseases followed by respiratory diseases and cancers.

Figure 4-17: Top 5 leading causes of female death for young adults aged 35-64 years, 2020

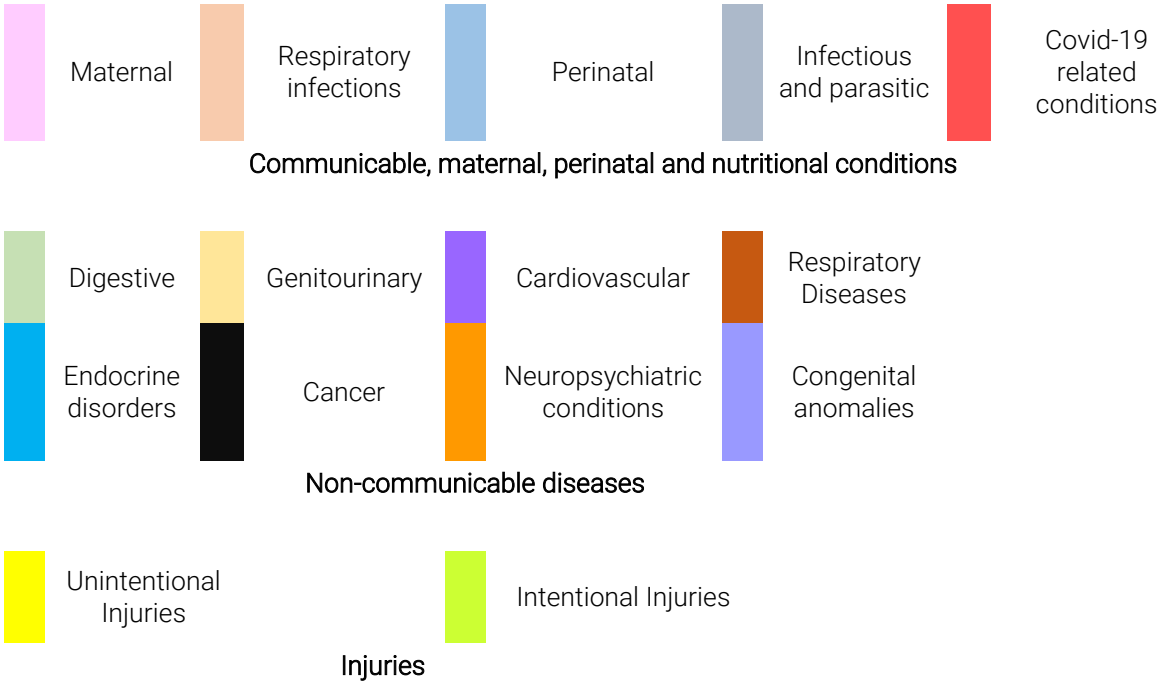
Females	1st	2nd	3rd	4th	5th
35-44	Ischaemic heart disease 18%	Cardiovascular diseases 18%	Endocrine disorders 12%	Breast cancer 12%	Digestive diseases 6%
45-54	Cardiovascular diseases 12%	Respiratory diseases 12%	Cerebrovascular disease 12%	Breast cancer 6%	Malignant neoplasms 6%
55-64	Cardiovascular diseases 15%	Breast cancer 6%	Infectious diseases 6%	Chronic obstructive pulmonary disease 6%	Ischaemic heart disease 6%

For young males who fall under the age group 35-44 years, the main reason for deaths were CVD, COVID-19 and unintentional injuries while for older adults aged 45-64 cardiovascular diseases was the main reason for death.

Figure 4-18: Top 5 leading causes of male death for young adults aged 35-64 years, 2020

Males	1st	2nd	3rd	4th	5th
35-44	Cardiovascular diseases 12%	Ischaemic heart disease 8%	Covid-19 related conditions 7%	Cerebrovascular disease 5%	Unintentional injuries 4%
45-54	Cardiovascular diseases 16%	Cerebrovascular disease 10%	Ischaemic heart disease 9%	Respiratory diseases 5%	Drownings 4%
55-64	Cardiovascular diseases 17%	Ischaemic heart disease 8%	Cerebrovascular disease 7%	Malignant neoplasms 5%	Covid-19 related conditions 5%

Legend used for the above figures;



4.4.4 ELDERLY (AGED 65 YEARS AND ABOVE)

Despite the predicted higher mortality related to COVID-19 among elderly in 2020, the highest burden of death in this age group was from cardiovascular diseases, followed by respiratory diseases.

Figure 4-19: Top 5 leading causes of all death for elderly aged 65 and above, 2020

All persons	1st	2nd	3rd	4th	5th
65-74	Ischaemic heart disease 14%	Cardiovascular diseases 11%	Respiratory diseases 8%	Chronic obstructive pulmonary disease 7%	Cerebrovascular disease 6%
75-84	Cardiovascular diseases 12%	Cerebrovascular disease 11%	Lower respiratory infections 9%	Respiratory diseases 8%	Ischaemic heart disease 8%
>85	Cardiovascular diseases 16%	Cerebrovascular disease 10%	Respiratory diseases 9%	Ischaemic heart disease 8%	Lower respiratory infections 7%

Similarly, for elderly females cardiovascular diseases was highest among older people aged 65 and above in 2020 followed by respiratory diseases and respiratory infections.

Figure 4-20: Top 5 leading causes of female death for elderly aged 65 and above, 2020

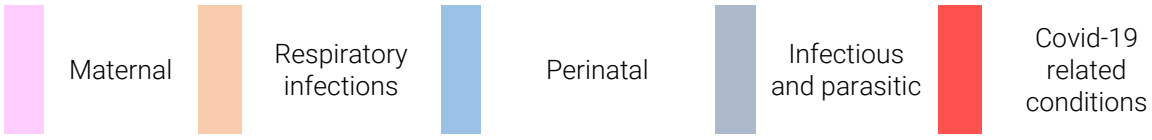
Females	1st	2nd	3rd	4th	5th
65-74	Cardiovascular diseases 15%	Chronic obstructive pulmonary disease 13%	Ischaemic heart disease 13%	Respiratory diseases 6%	Infectious diseases 5%
75-84	Cardiovascular diseases 12%	Respiratory diseases 11%	Cerebrovascular disease 11%	Lower respiratory infections 9%	Ischaemic heart disease 8%
>85	Cardiovascular diseases 16%	Cerebrovascular disease 14%	Respiratory diseases 9%	Lower respiratory infections 9%	Infectious diseases 8%

For elderly males, the most common reason for deaths included cardiovascular diseases across all age groups followed by respiratory diseases. CVOID-19 was observed among top 5 among males 75-84 years.

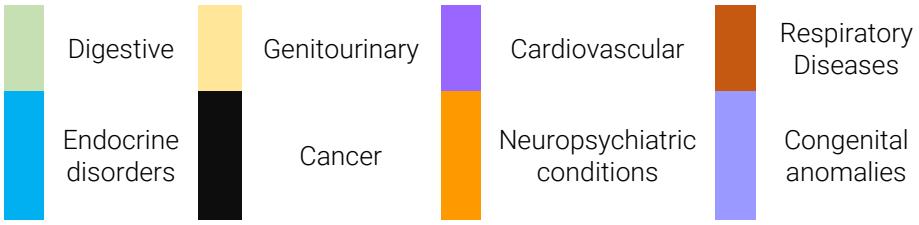
Figure 4-21: Top 5 leading causes of male death for elderly aged 65 and above, 2020

Males	1st	2nd	3rd	4th	5th
65-74	Ischaemic heart disease 16%	Respiratory diseases 9%	Trachea, bronchus, lung cancers 8%	Cerebrovascular disease 8%	Cardiovascular diseases 7%
75-84	Cerebrovascular disease 12%	Cardiovascular diseases 11%	Lower respiratory infections 8%	Ischaemic heart disease 7%	COVID-19 related conditions 6%
>85	Cardiovascular diseases 16%	Ischaemic heart disease 10%	Respiratory diseases 10%	Cerebrovascular disease 8%	Chronic obstructive pulmonary disease 6%

Legend used for the above figures;



Communicable, maternal, perinatal and nutritional conditions



Non-communicable diseases

Injuries

4.5 DEATHS BY MAIN DISEASE CONDITIONS

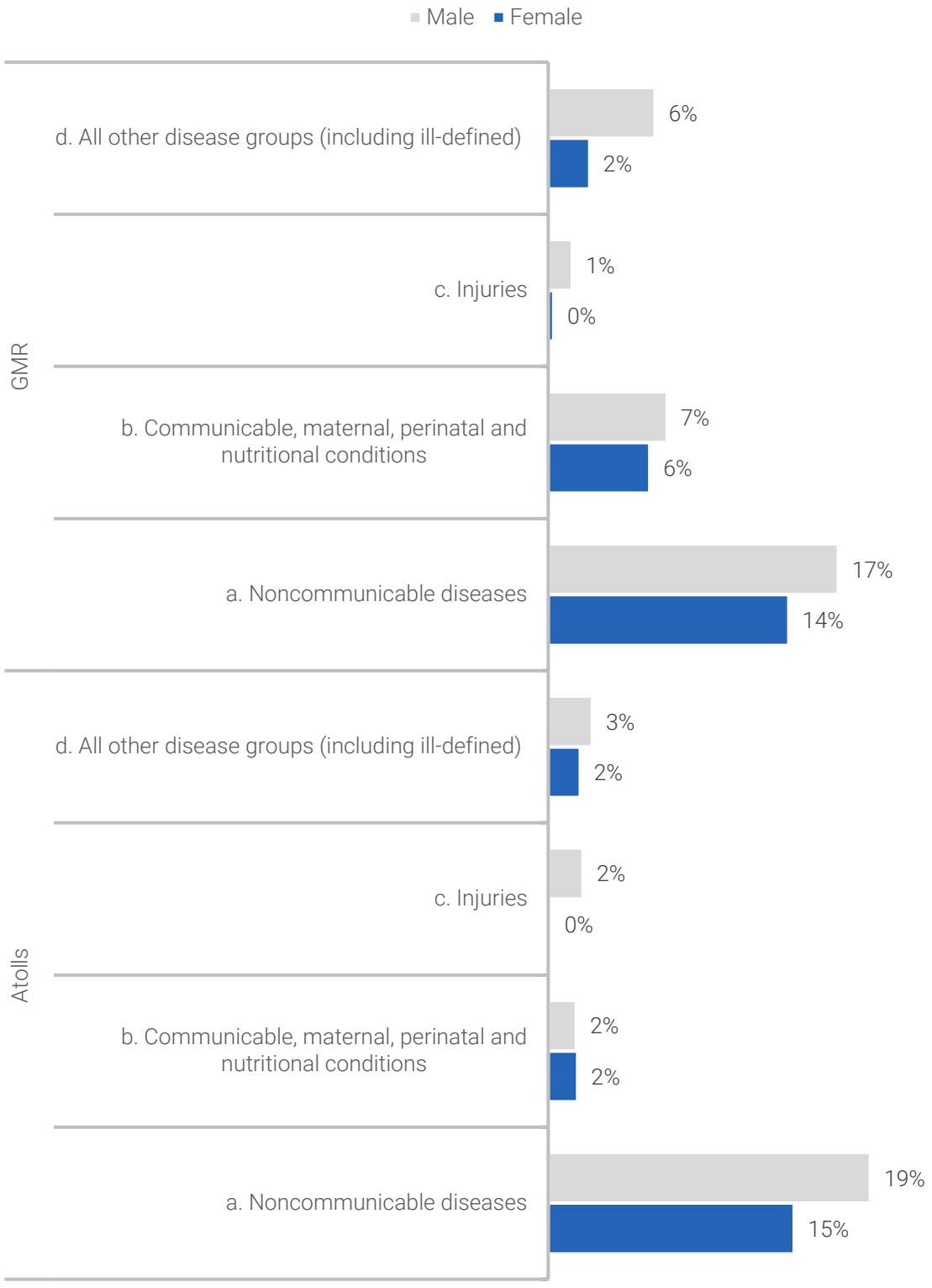
From the total of 1,278 deaths among the Maldives population, 1,248 deaths occurred in the Maldives[16]. By burden of disease categories, 838 deaths were due to non-communicable disease, 210 were due to communicable, maternal, perinatal and nutritional conditions and 50 due to injuries. It is also notable that more male deaths were reported in 2020 for all disease groups.

Table 4-10: Deaths by location by disease group and gender , 2020

GBD Categories	Female	Male	Total
Abroad	12	15	27
a. Noncommunicable diseases	7	9	16
b. Communicable, maternal, perinatal and nutritional conditions		2	2
d. All other disease groups (including ill-defined)	5	4	9
Atolls	232	321	553
a. Noncommunicable diseases	184	241	425
b. Communicable, maternal, perinatal and nutritional conditions	22	21	43
c. Injuries	2	26	28
d. All other disease groups (including ill-defined)	24	33	57
GMR	291	404	695
a. Noncommunicable diseases	180	217	397
b. Communicable, maternal, perinatal and nutritional conditions	76	89	165
c. Injuries	4	18	22
d. All other disease groups (including ill-defined)	31	80	111
Unknown	2	1	3
d. All other disease groups (including ill-defined)	2	1	3
Total	**537**	**741**	**1,278**

[16]Details in the following section will focus on deaths occurred in Maldives (1,248 deaths).

Figure 4-22: Deaths occurred in Maldives by disease group and gender, 2020

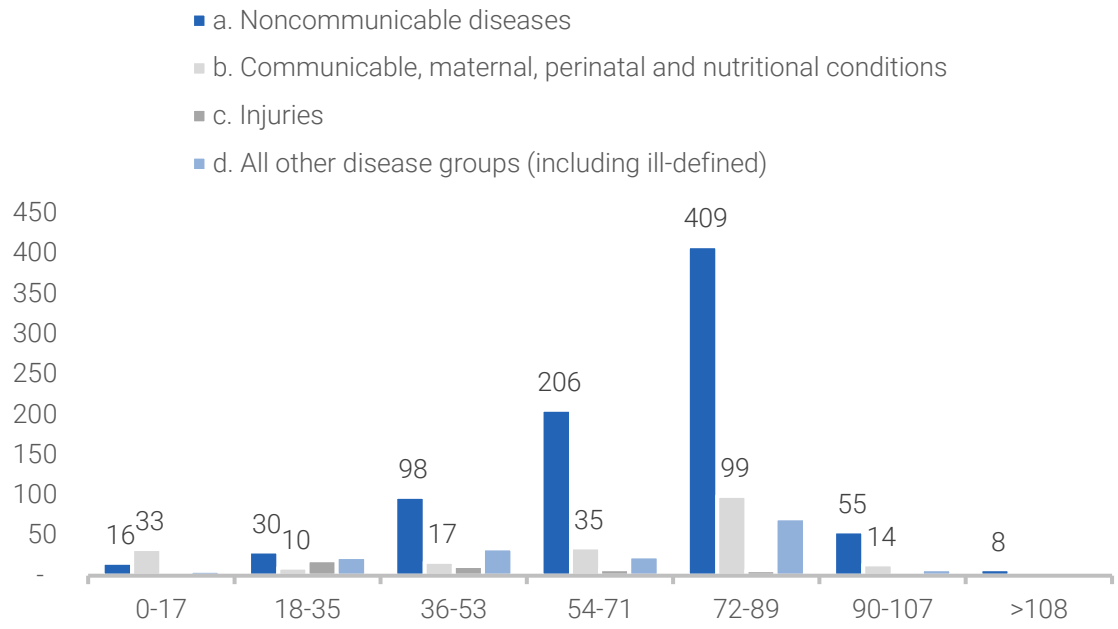


Non-communicable diseases had the highest number of deaths in all age groups except for 0-17 years, while for communicable, maternal, perinatal and nutritional conditions deaths were higher for children (0-17 years).

Table 4-11: Deaths by Main Disease Conditions and age groups, 2020

GBD Categories	a. Noncommunicable diseases	b. Communicable, maternal, perinatal and nutritional conditions	c. Injuries	d. All other disease groups (including ill-defined)	Total
Female	364	98	6	55	523
0-17	9	13		2	24
18-35	10	5	1	3	19
36-53	37	5	1	2	45
54-71	86	17	3	10	116
72-89	200	52	1	34	287
90-107	22	6		4	32
Male	458	110	44	113	725
0-17	7	20	2	4	33
18-35	20	5	18	20	63
36-53	61	12	11	32	116
54-71	120	18	5	14	157
72-89	209	47	6	37	299
90-107	33	8	1	4	46
>108	8		1	2	11
Total	**822**	**208**	**50**	**168**	**1,248**

Figure 4-23: Deaths by Main Disease Conditions and age groups, 2020



Deaths by calendar months varied between 95 to 125, with most deaths being in November.

Table 4-12: Main Disease Group Deaths by month, 2020

GBD Categories	a. Noncommunicable diseases	b. Communicable, maternal, perinatal and nutritional conditions	c. Injuries	d. All other disease groups (including ill-defined)	Total
January	62	22	8	18	110
February	65	16	6	8	95
March	65	17	4	13	99
April	63	18	4	14	99
May	74	13	3	16	106
June	58	24	4	16	102
July	67	19	4	12	102
August	67	19	3	14	103
September	75	14	2	14	105
October	71	15	5	11	102
November	77	22	4	21	124
December	78	9	3	11	101
Total	**822**	**208**	**50**	**168**	**1,248**

The death burden of Maldives is more for NCDs – and this figure rises with the garbage codes redistributed to related categories.

Table 4-13: Deaths by sub-disease groups of GBD and gender, 2020

GBD Categories	Female	Male	Total
Noncommunicable diseases	364	458	822
Cardiovascular diseases	173	245	418
Respiratory diseases	82	60	142
Malignant neoplasms	51	75	126
Genitourinary diseases	14	21	35
Diabetes mellitus	7	15	22
Endocrine disorders	11	11	22
Neuropsychiatric conditions	6	15	21
Digestive diseases	10	8	18
Congenital anomalies	5	2	7
Other neoplasms	1	4	5
Skin diseases	2	1	3
Musculoskeletal diseases	2	1	3
Communicable, maternal, perinatal and nutritional conditions	98	110	208
Respiratory infections	33	35	68
Infectious and parasitic diseases	38	24	62
Other emerging diseases	16	32	48
Perinatal conditions	9	18	27
Maternal conditions	2		2
Nutritional deficiencies		1	1
Ill-defined diseases	53	110	163
Not categorised / Multiple Sub-categories	53	110	163
Injuries	6	44	50
Unintentional injuries	5	37	42
Intentional injuries	1	7	8
Not Stated	1	2	3
Not Stated	1	2	3
Not categorised	1	1	2
Not categorised / Multiple Sub-categories	1	1	2
Total	**523**	**725**	**1,248**

The rest of this chapter will focus of the top 5 NCDs and communicable, maternal, perinatal and nutritional conditions the conditions in detail.

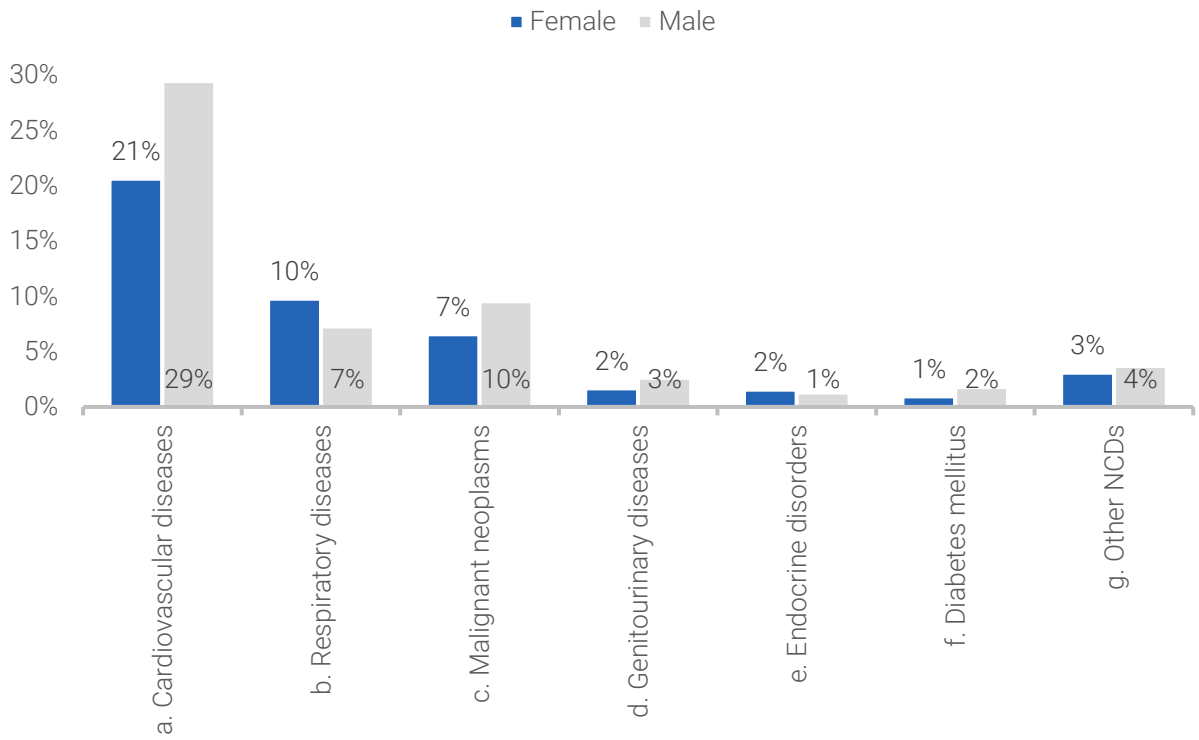
4.5.1 NON-COMMUNICABLE DISEASES

Excluding garbage codes, noncommunicable diseases (NCDs) accounted for more than 838 deaths in the country. The top 5 NCDs cause of deaths in the county is summarized below.

Table 4-14: Deaths due to noncommunicable diseases in numbers, 2020

GBD Categories	Female	Male	Total
a. Cardiovascular diseases	173	247	420
b. Respiratory diseases	82	61	143
c. Malignant neoplasms	55	80	135
d. Genitourinary diseases	14	22	36
e. Endocrine disorders	13	11	24
f. Diabetes mellitus	8	15	23
g. Other NCDs	26	31	57
Total	**371**	**467**	**838**

Figure 4-24: Noncommunicable diseases in percent, 2020



It can be also noted that the deaths in atolls and GMR varied for different NCD groups.

Figure 4-25: Top NCD deaths by location, 2020

Disease sub-groups	Atolls	GMR	Grand Total
Other cardiovascular diseases	110	56	166
Cerebrovascular disease	55	50	105
Ischaemic heart disease	58	44	102
Other respiratory diseases	42	38	80
Chronic obstructive pulmonary disease	30	28	58
Not categorised / Multiple Sub-categories	18	13	31
Hypertensive heart disease	22	7	29
Other malignant neoplasms	6	20	26
Nephritis and nephrosis	13	13	26
Liver cancer	9	16	25
Endocrine disorders	10	12	22
Trachea, bronchus, lung cancers	5	15	20
Other digestive diseases	4	13	17
Breast cancer	3	9	12
Other neuropsychiatric disorders	4	8	12
Mouth and oropharynx cancers	2	8	10

4.5.1.1 CARDIOVASCULAR DISEASES (CVD)

Cardiovascular diseases (CVDs) had the most deaths among NCDs, and there were more male deaths (59% of all CVD deaths). Most (60%) of CVD deaths were reported from the atolls.

Figure 4-26: CVD deaths by gender, 2020

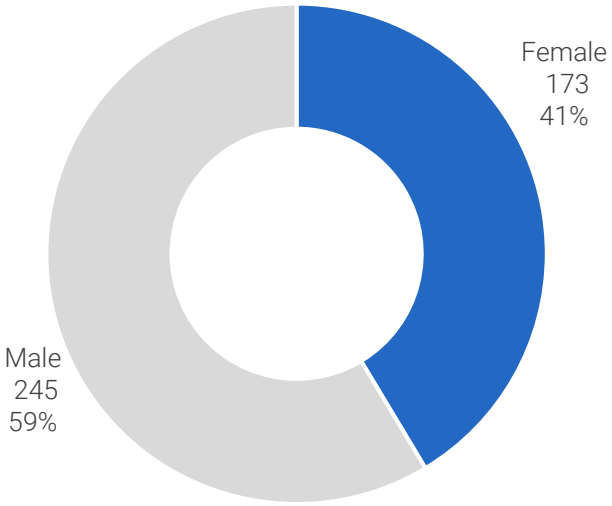
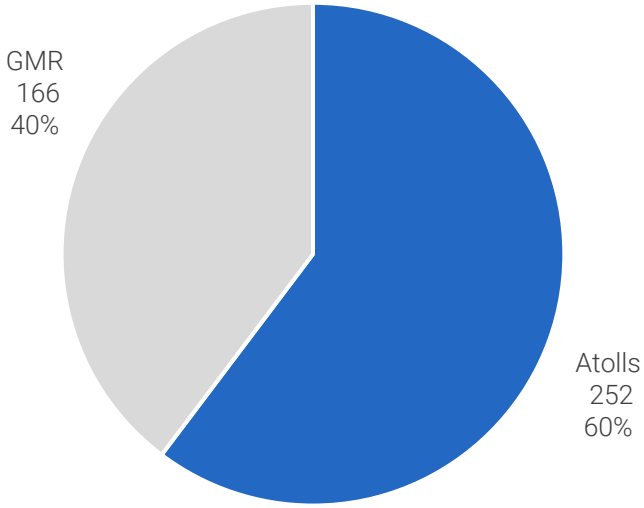
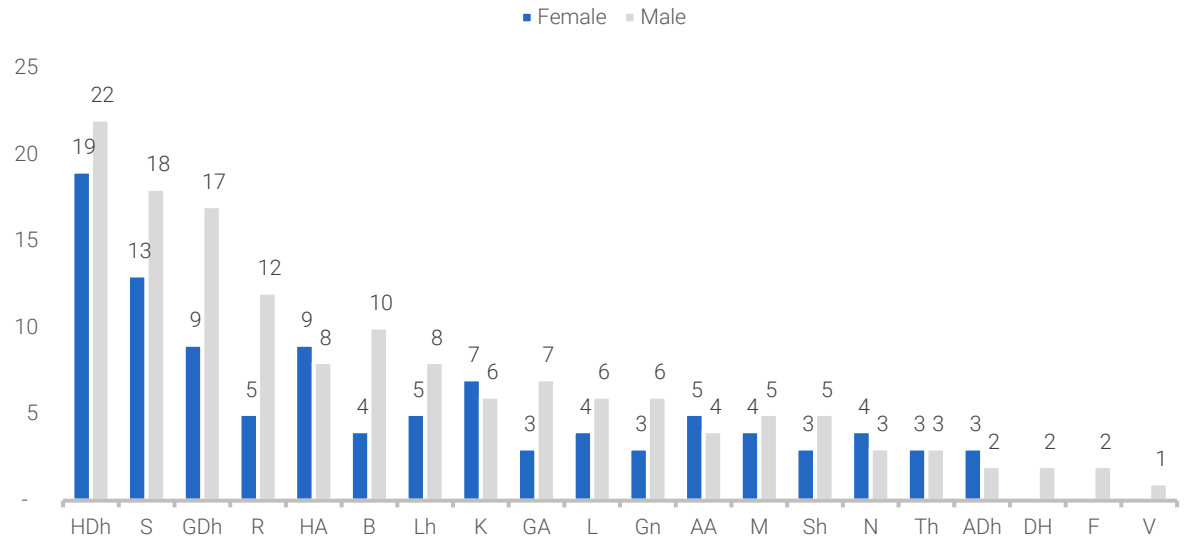


Figure 4-27: CVD deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad) shows that highest number of CVD deaths occurred in HDh, S and GDh in 2020.

Figure 4-28: CVD deaths by atolls, 2020



The highest number of deaths from CVDs were reported as other cardiovascular diseases (41%) followed by cerebrovascular diseases (27%), with majority of the CVD deaths being males across all age groups.

Figure 4-29: Top 5 CVD deaths by gender, 2020

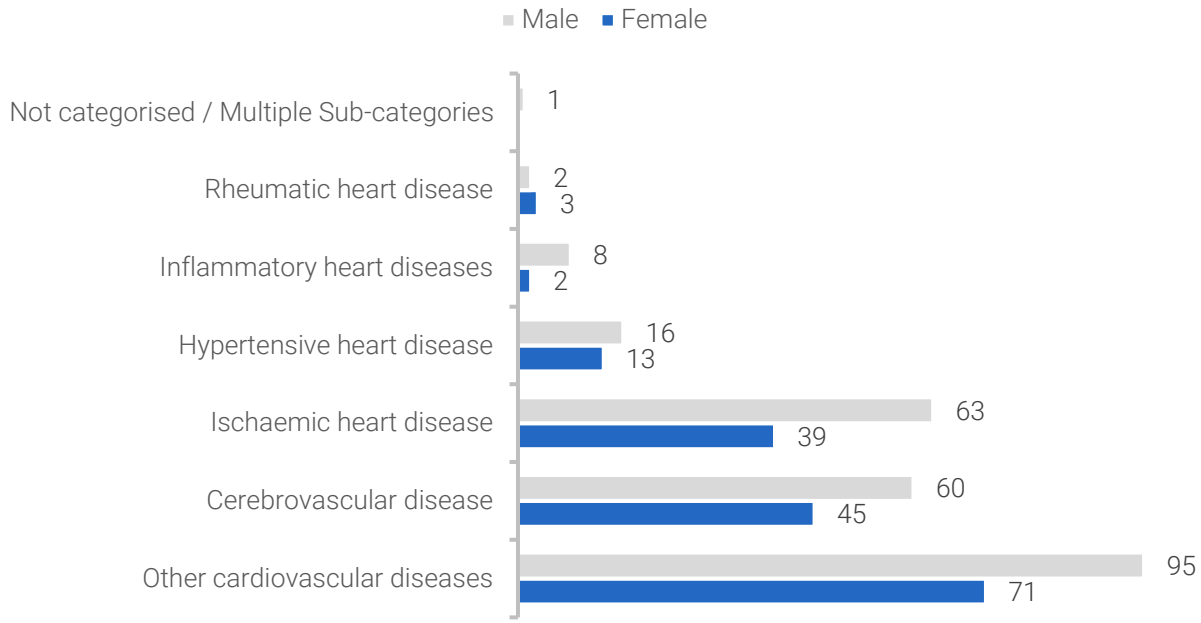
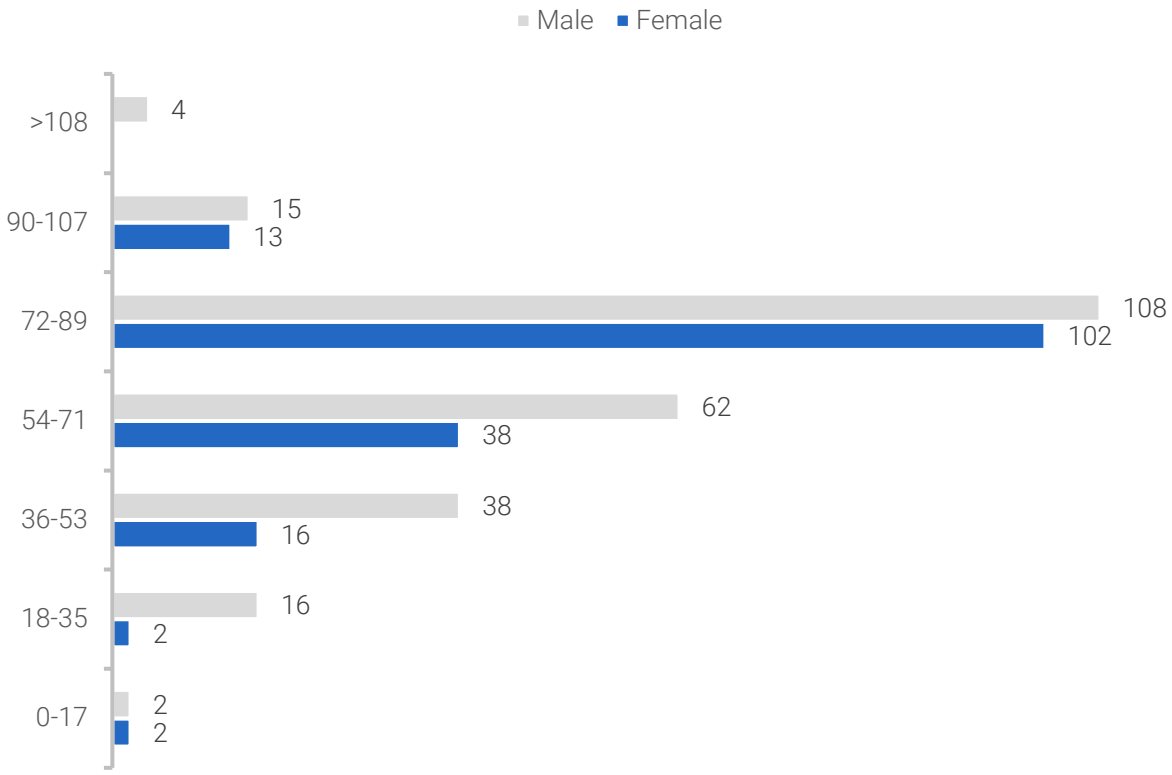


Figure 4-30: CVD Deaths by gender and age, 2020

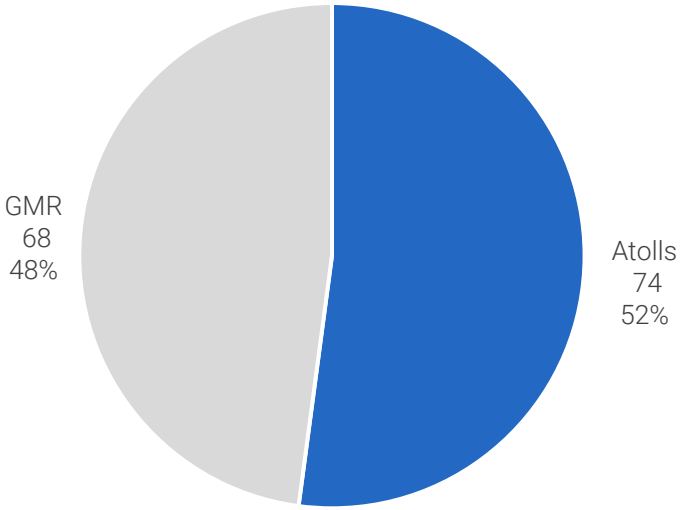


4.5.1.2 RESPIRATORY DISEASES

Respiratory diseases was the second most common deaths among NCDs and there were more female deaths (57% of all respiratory diseases deaths). Similarly to CVDs, majority (52%) of respiratory diseases deaths were also reported from atolls.

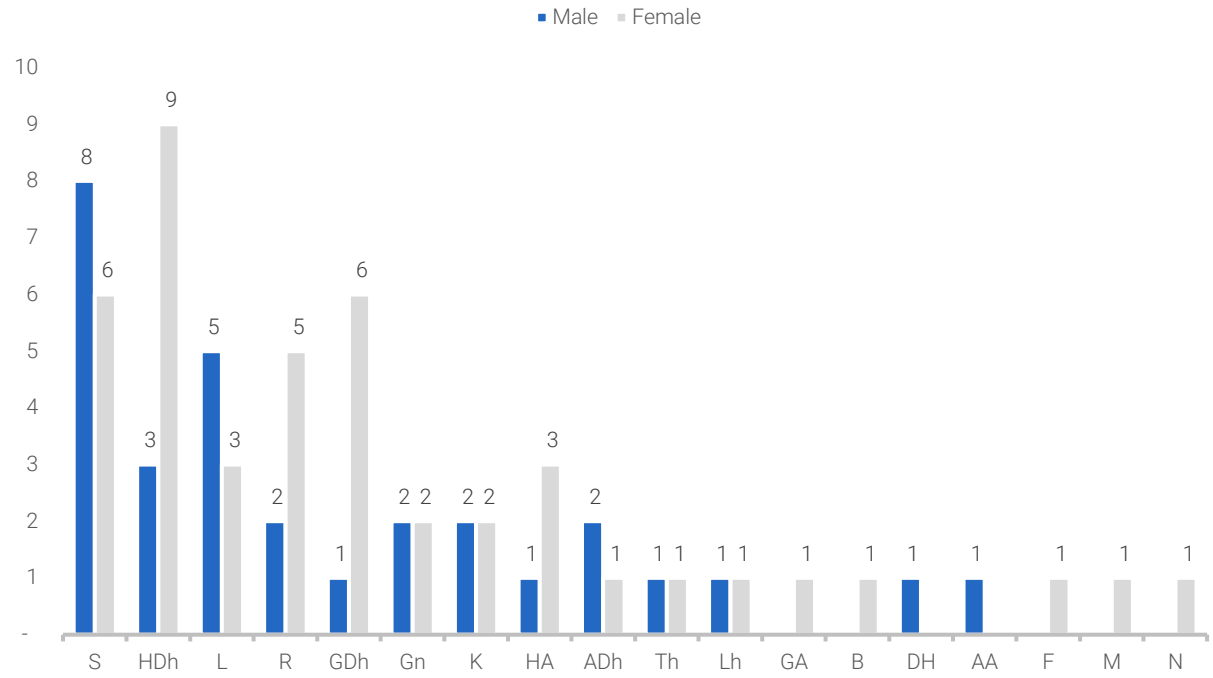
Figure 4-31: Respiratory diseases disease sub-group deaths by gender, 2020

Figure 4-32: Respiratory diseases deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad), the highest number of respiratory deaths occurred in S, HDh, and L in 2020.

Figure 4-33: Respiratory disease deaths by atolls, 2020



The highest number of deaths from respiratory diseases were other respiratory diseases (57%) followed by chronic obstructive pulmonary disease (40%), with majority of the deaths being females across all age groups.

Figure 4-34: Top 5 respiratory diseases deaths by gender, 2020

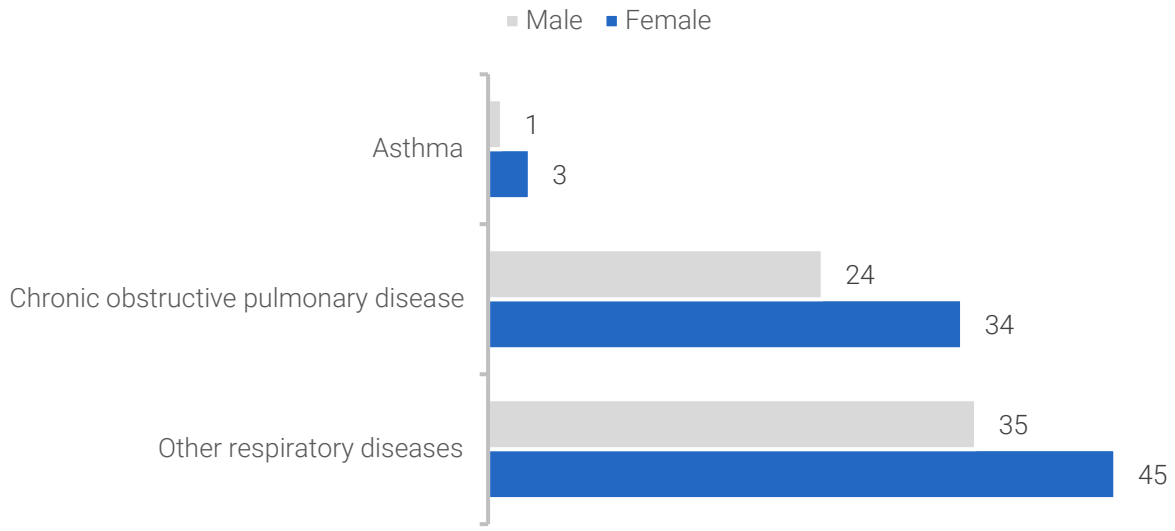
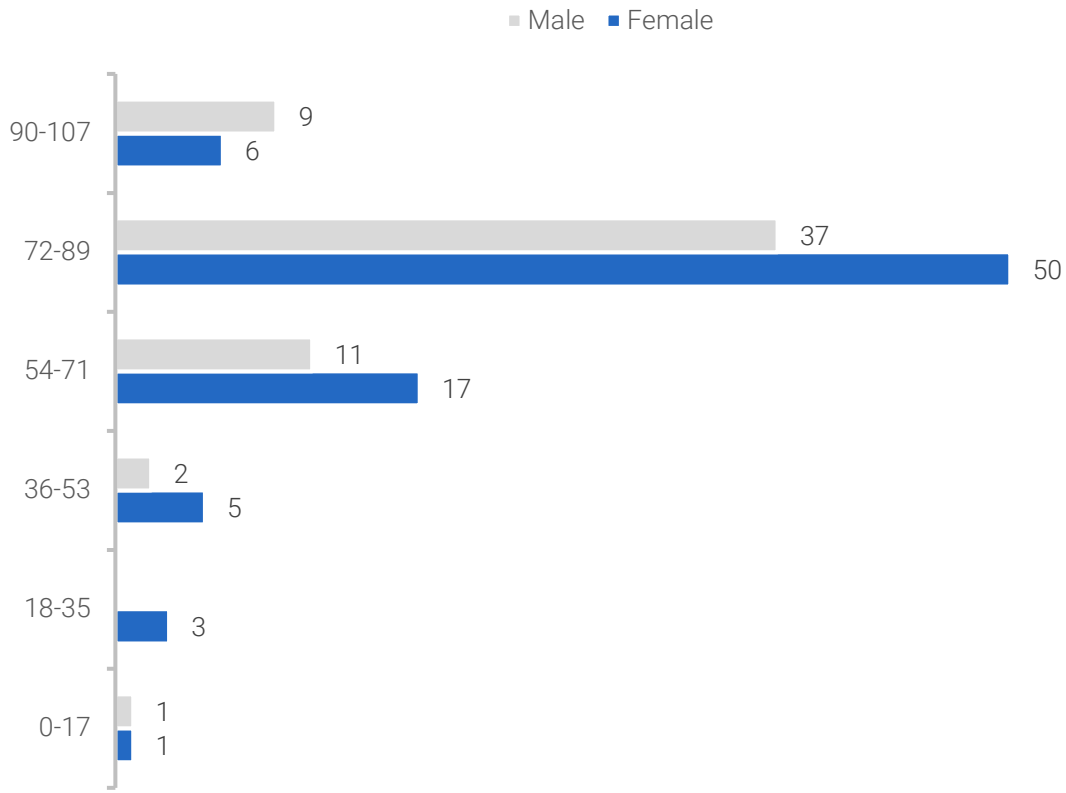


Figure 4-35: Respiratory diseases deaths by gender and age, 2020

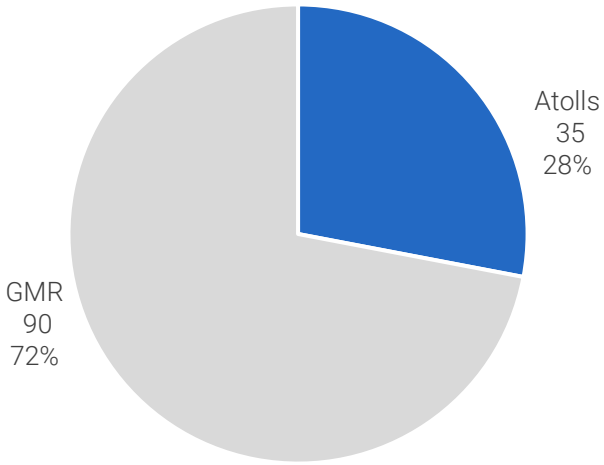


4.5.1.3 MALIGNANT NEOPLASMS (CANCER)

Cancer was the third most common cause of deaths among NCDs, with more female deaths (60% of all cancer deaths). Most (72%) of cancer deaths were reported from GMR.

Figure 4-36: Cancer disease deaths by gender, 2020

Figure 4-37: Cancer deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad), highest number of Cancer deaths occurred in S, HDh, and GDh in 2020. In addition, it can also be seen that cancer deaths are common for all age groups and gender.

Figure 4-38: Cancer deaths by atolls and gender, 2020

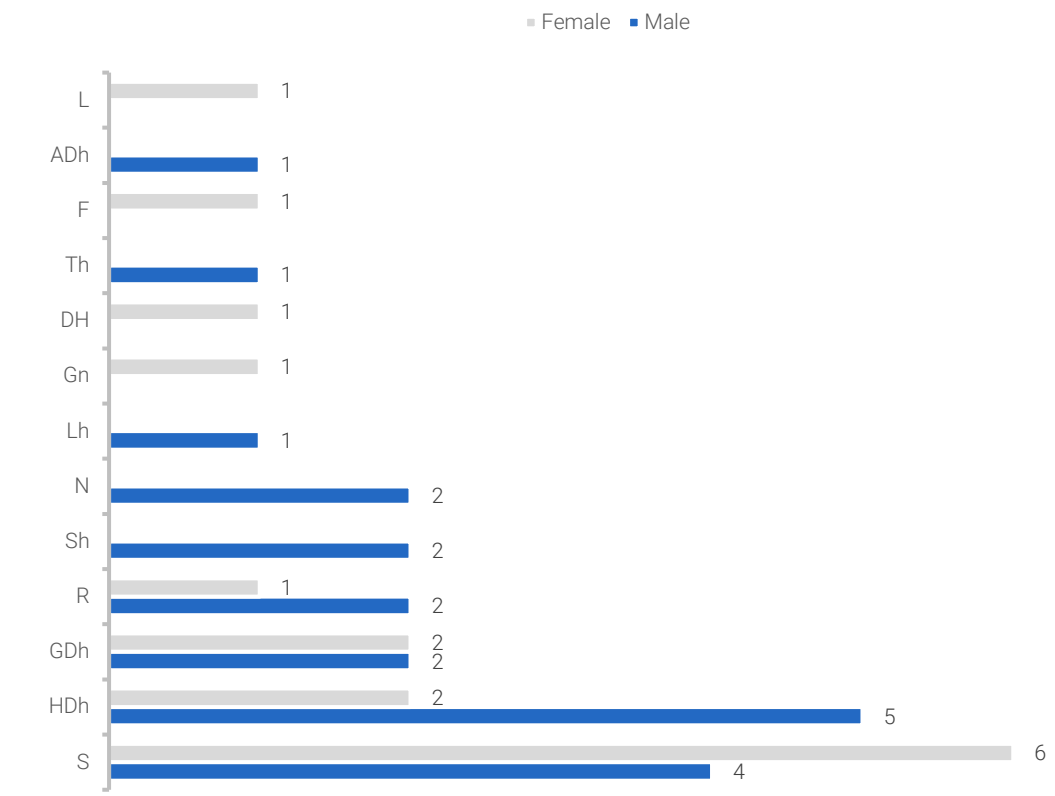
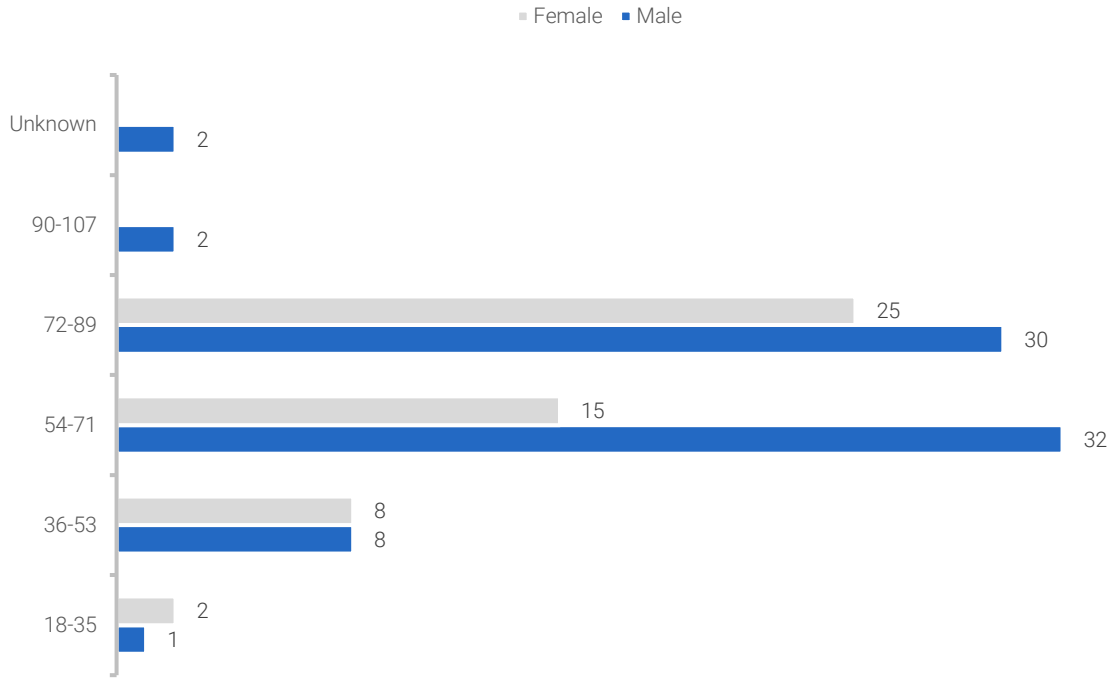


Figure 4-39: Cancer deaths by gender and age, 2020

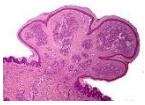


The highest number of deaths from cancer were reported as other cancer (57%), with majority of the deaths being females across all age groups.

Figure 4-40: Top 5 cancer related deaths for males, 2020

Male Cancers/ number	
Trachea, bronchus, lung cancers (17)	
Liver cancer (17)	
Other malignant neoplasms (16)	
Prostate cancer (6)	
Pancreas cancer (5)	

Figure 4-41: Top 5 cancer related deaths for females, 2020

Female Cancers/ number	
Breast cancer (11)	
Other malignant neoplasms (9)	
Liver cancer (8)	
Mouth and oropharynx cancers (7)	
Lymphomas, multiple myeloma (4)	

4.5.1.4 GENITOURINARY DISEASES

Genitourinary diseases were the fourth most common cause of deaths among NCDs, with more male deaths (62% of all genitourinary diseases deaths) and 44% of genitourinary diseases deaths were reported from atolls.

Figure 4-42: Genitourinary disease deaths by gender, 2020

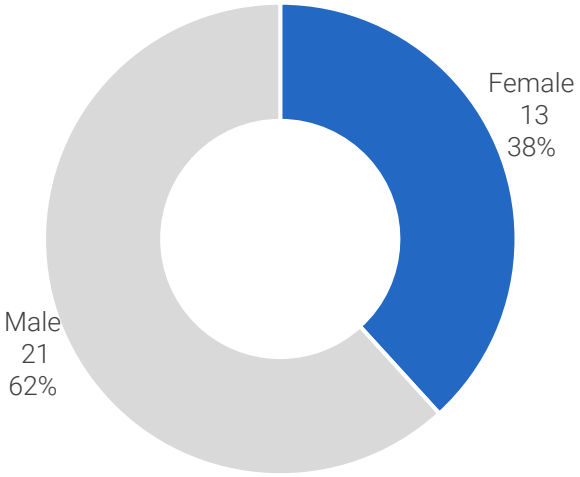
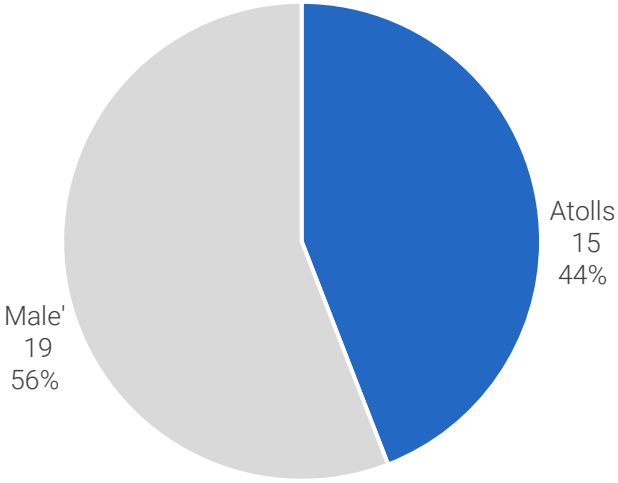


Figure 4-43: Genitourinary diseases deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad), the highest number of genitourinary diseases deaths occurred in GDh, N, and S in 2020.

The highest number of deaths from genitourinary diseases deaths were reported for Nephritis and nephrosis (25 deaths) with majority of the deaths being males across all age groups.

Figure 4-44: Genitourinary diseases deaths by atolls, 2020

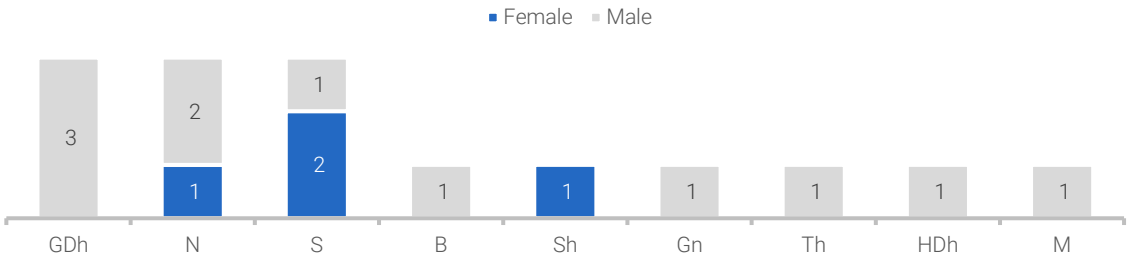


Figure 4-45: Top Genitourinary diseases deaths by age and gender, 2020

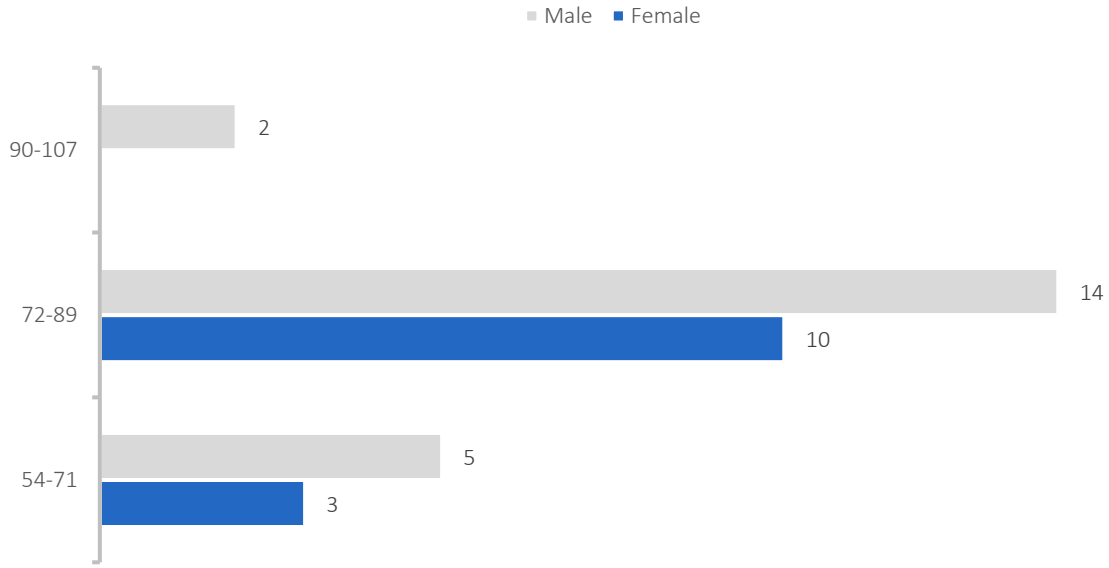
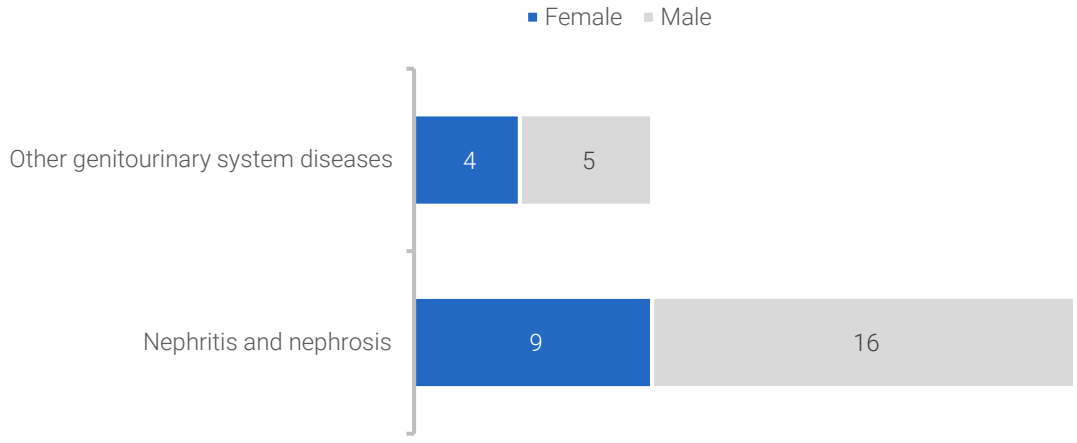


Figure 4-46: Genitourinary diseases Deaths by gender, 2020



4.5.1.5 ENDOCRINE DISORDERS

Endocrine disorders had the fifth most common cause of deaths among NCDs, where there were more female and male deaths were equal (50% of all endocrine disorders deaths) and 45% of endocrine disorder deaths were reported from atolls.

Figure 4-47: Endocrine disorders deaths by gender, 2020

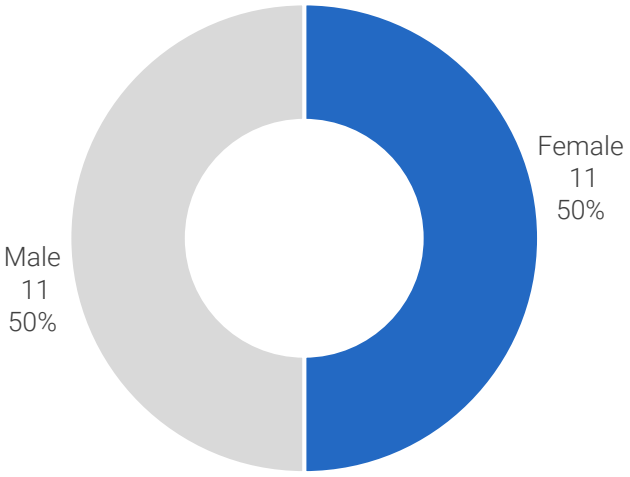
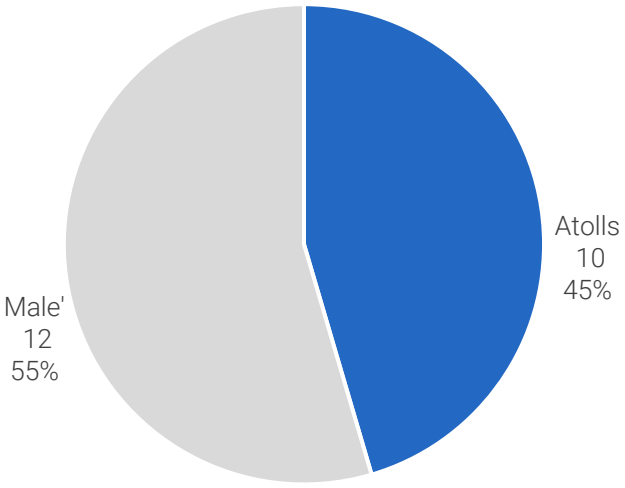


Figure 4-48: Endocrine disorders deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad) the highest number of endocrine disorders deaths occurred in Raa atoll in 2020.

Figure 4-49: Top Endocrine disorders deaths by gender and age, 2020

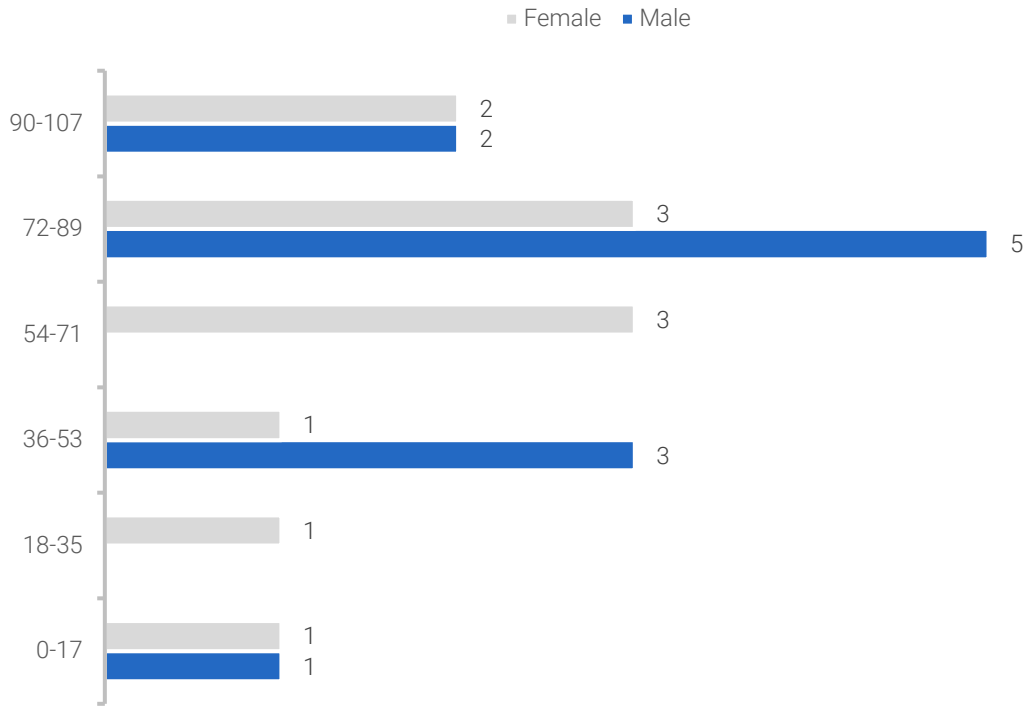
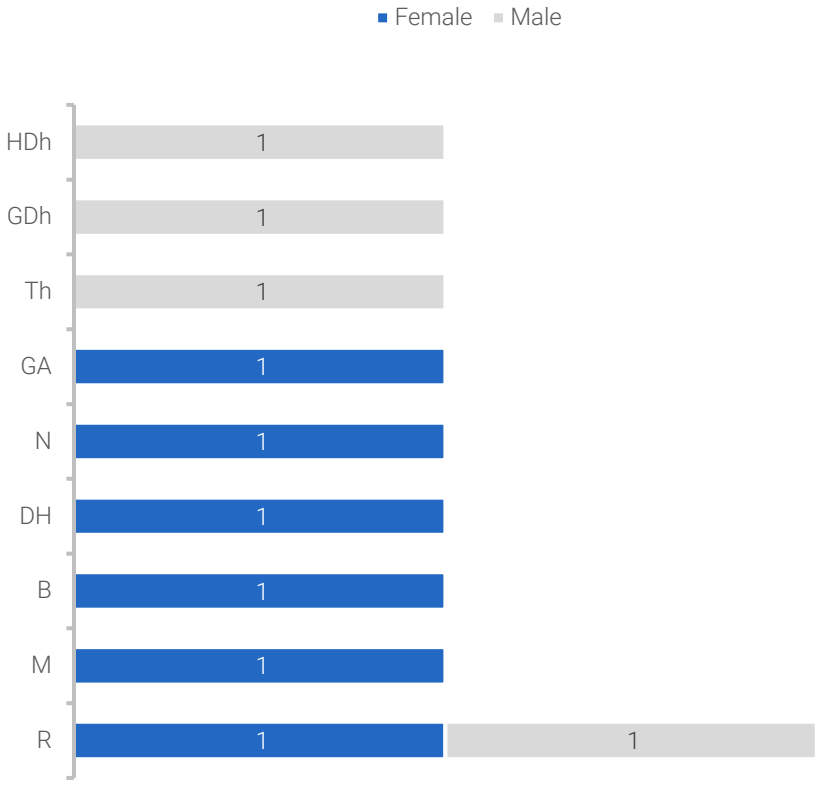


Figure 4-50: Endocrine disorders deaths by atolls, 2020



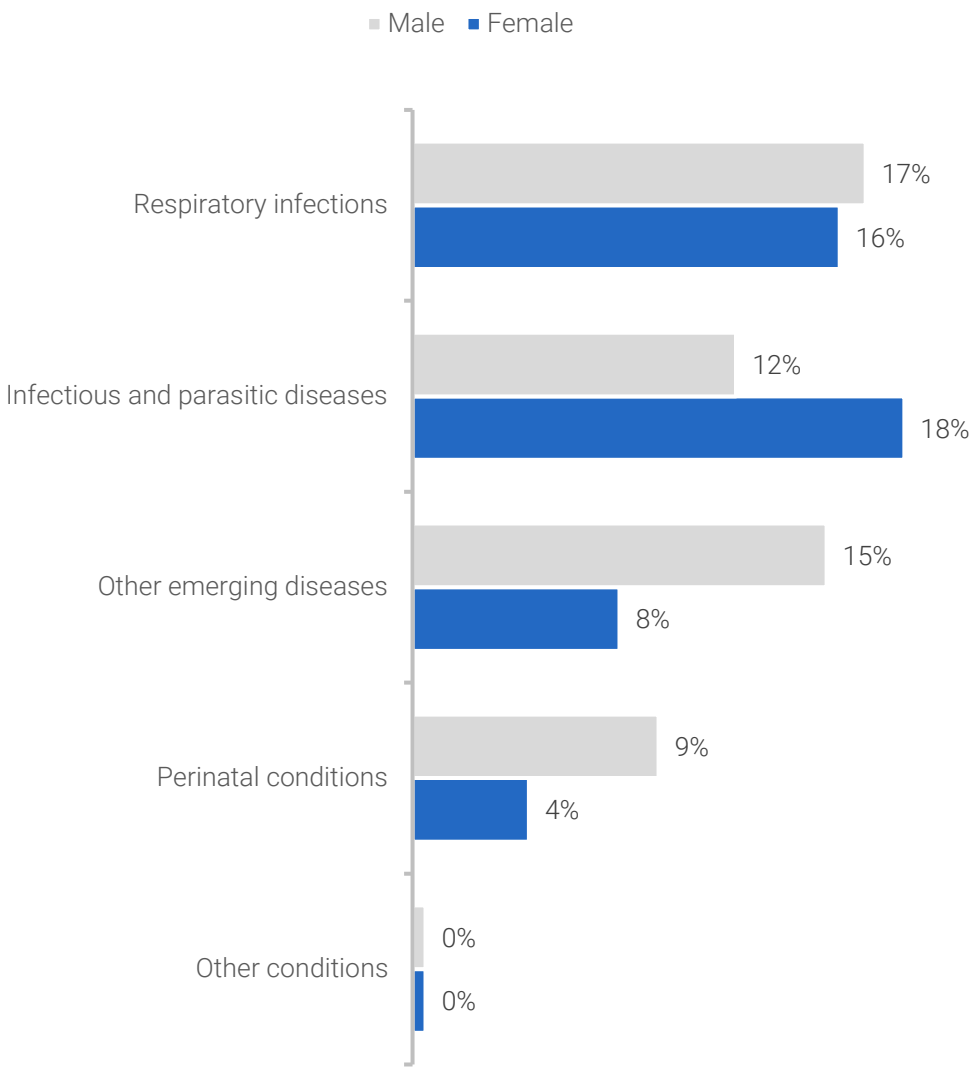
4.5.2 COMMUNICABLE, MATERNAL, PERINATAL AND NUTRITIONAL CONDITIONS

Most of the communicable, maternal, perinatal and nutritional condition deaths were males, where highest number of deaths were from respiratory infections (68) followed by infectious and parasitic diseases (62).

Figure 4-51: Communicable, maternal, perinatal and nutritional condition deaths in numbers, 2020

Disease group	Female	Male	Total
Respiratory infections	33	35	68
Infectious and parasitic diseases	38	24	62
Other emerging diseases	16	32	48
Perinatal conditions	9	18	27
Other condition	2	1	3
Grand Total	**97**	**112**	**208**

Figure 4-52: Communicable, maternal, perinatal and nutritional condition by disease group in percent, 2020



It can be also noted that the deaths in atolls and GMR differed in communicable, maternal, perinatal and nutritional conditions. The top communicable, maternal, perinatal and nutritional condition deaths for Maldives will be discussed in detail for this chapter

Table 4-15: Communicable, maternal, perinatal and nutritional conditions deaths by subgroups, 2020

Disease sub-groups	Atolls	GMR	Grand Total
Lower respiratory infections	19	49	68
Other infectious diseases	12	36	48
COVID-19 related conditions	1	47	48
Other perinatal conditions		12	12
Tuberculosis	6	3	9
Low birth weight		8	8
Birth asphyxia and birth trauma	2	5	7
Diarrhoeal diseases	2		2
Hepatitis B	1	1	2
Maternal haemorrhage		1	1
Other maternal conditions		1	1
Other nutritional disorders		1	1
Meningitis		1	1
Grand Total	**43**	**165**	**208**

4.5.2.1 RESPIRATORY INFECTIONS

Lower respiratory infections were the most common among in communicable, maternal, perinatal and nutritional conditions, with more male deaths (51% of all lower respiratory infections deaths) and 72% of lower respiratory infections deaths were reported from GMR.

Figure 4-53: Lower respiratory infections disease deaths by gender, 2020

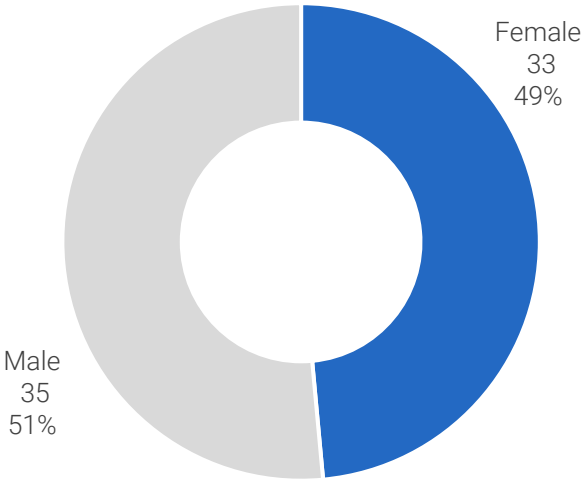
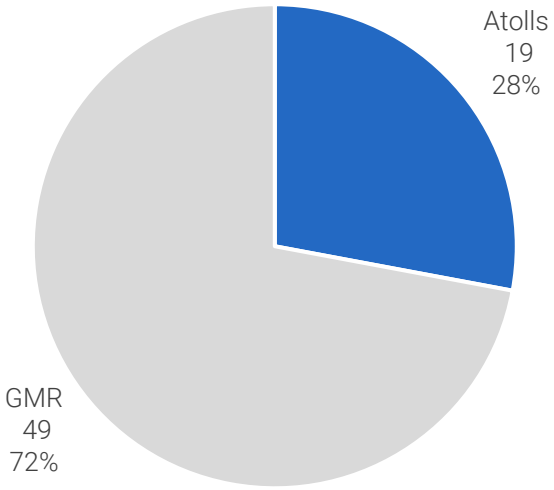


Figure 4-54: Lower respiratory infections Deaths by region, 2020



Disaggregating by atolls (excluding GMR and abroad), highest number of lower respiratory infections deaths occurred in Lh, HDh and R atoll in 2020 and were highest among elderly.

Figure 4-55: Respiratory infection deaths by atolls and gender, 2020

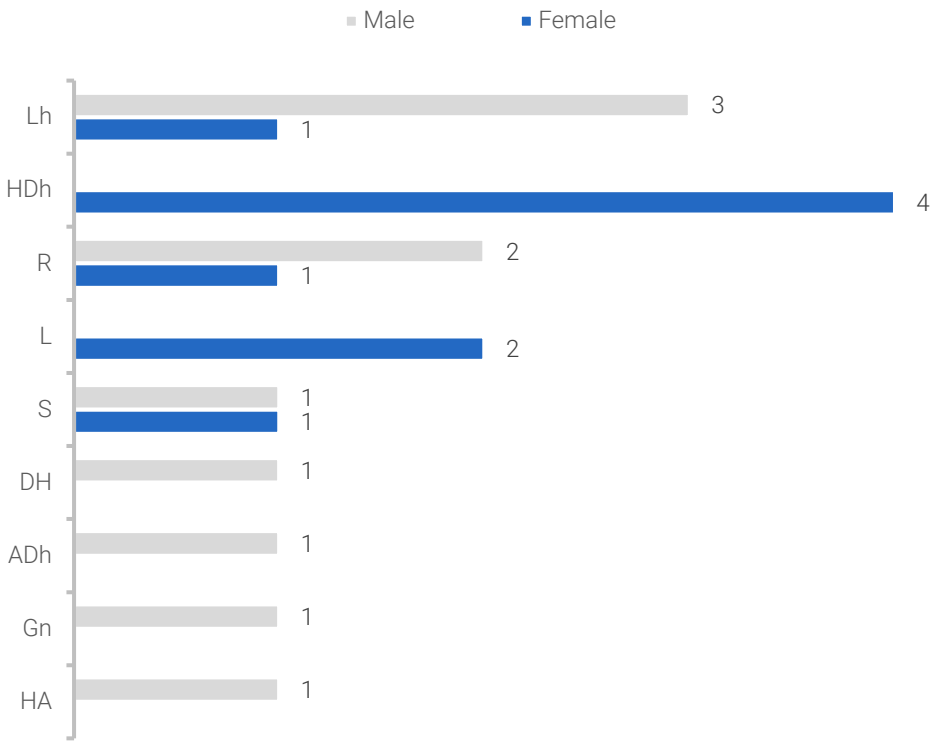
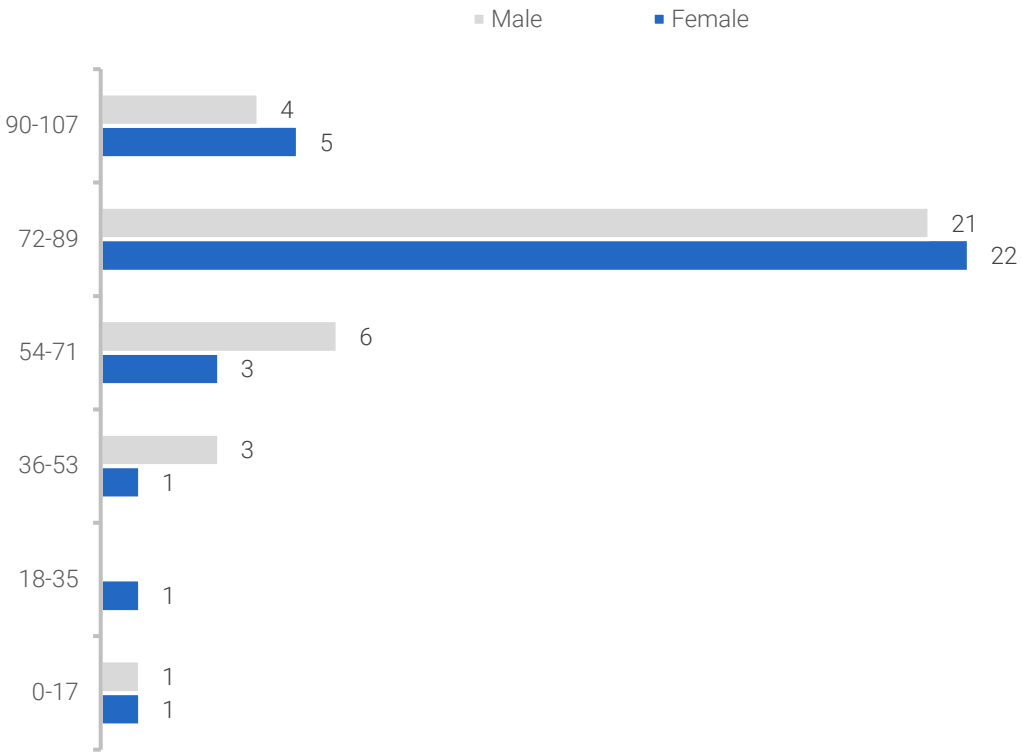


Figure 4-56: Lower respiratory infections Deaths by gender and age, 2020



4.5.2.2 INFECTIOUS AND PARASITIC DISEASES

Infectious and parasitic diseases was the second most common among communicable, maternal, perinatal and nutritional condition, with more female deaths (61% of all infectious and parasitic diseases deaths), and 34% of infectious and parasitic diseases deaths were reported from atolls.

Figure 4-57: Infectious and parasitic diseases disease deaths by gender, 2020

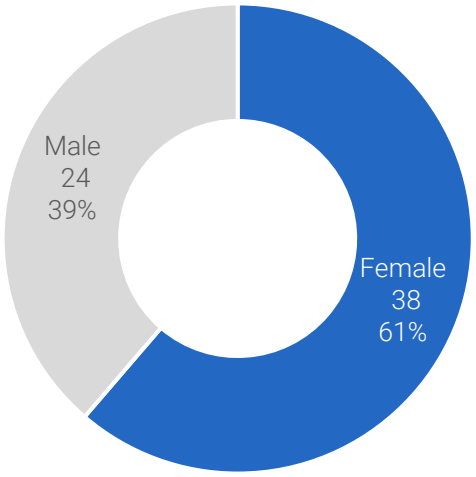
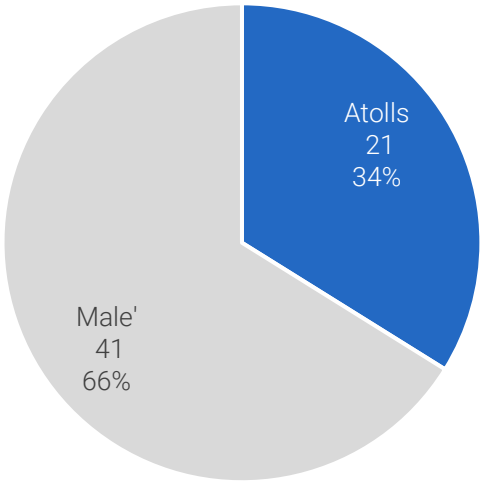


Figure 4-58: Infectious and parasitic diseases deaths by region, 2020



The highest number of deaths were from this category was from other infectious diseases and TB and were highest for females at the age group of 72-89 years.

Figure 4-59: Infectious and parasitic diseases by sub-groups and gender, 2020

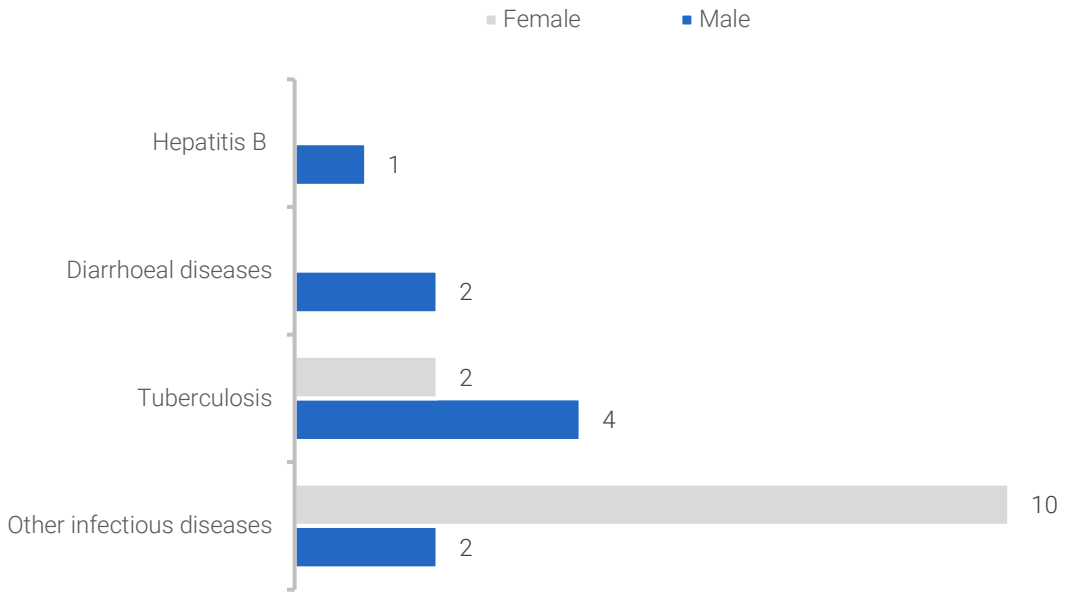
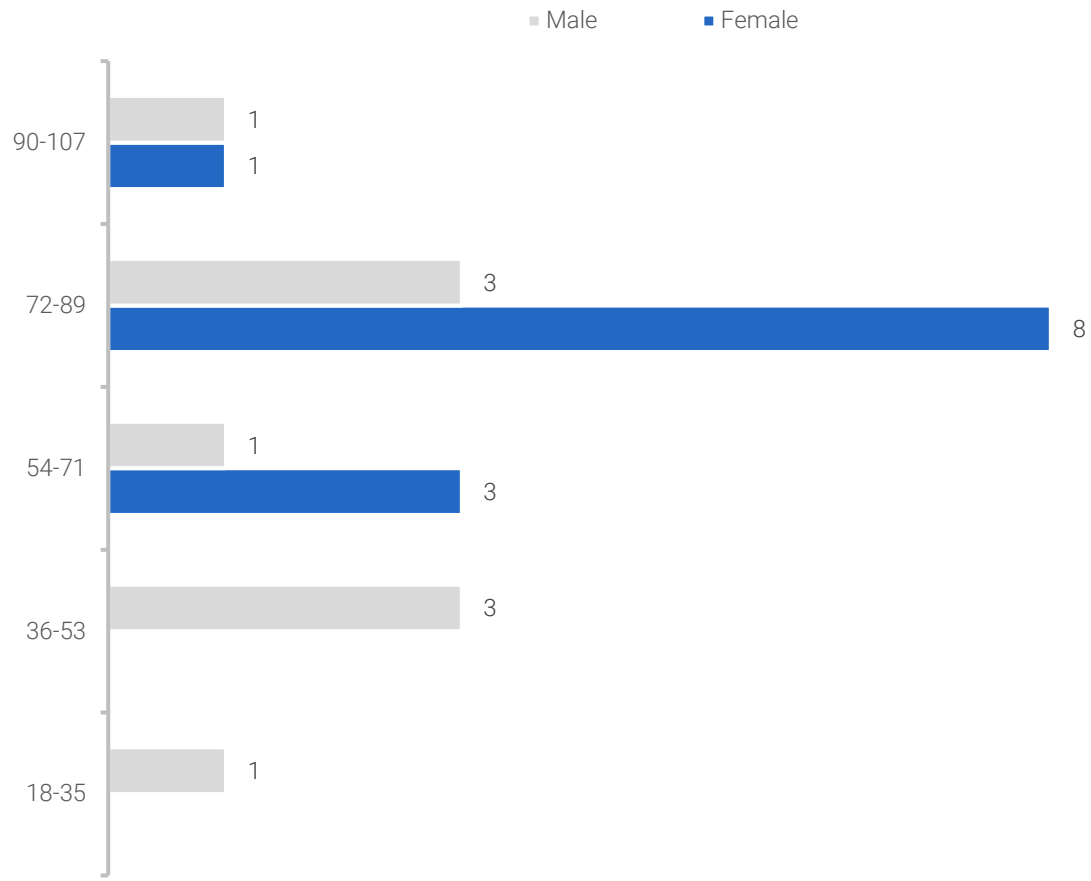


Figure 4-60: Infectious and parasitic diseases deaths by gender and age, 2020



4.5.2.3 OTHER EMERGING DISEASES (COVID-19 DEATHS)

Other emerging diseases including COVID-19 was the third most common among communicable, maternal, perinatal and nutritional conditions, with more male deaths (67% of all COVID-19 deaths), with all, except 1 death (2%) in Dhaalu atoll, occurring in GMR (98%) in 2020.

Figure 4-61: COVID-19 deaths by gender, 2020

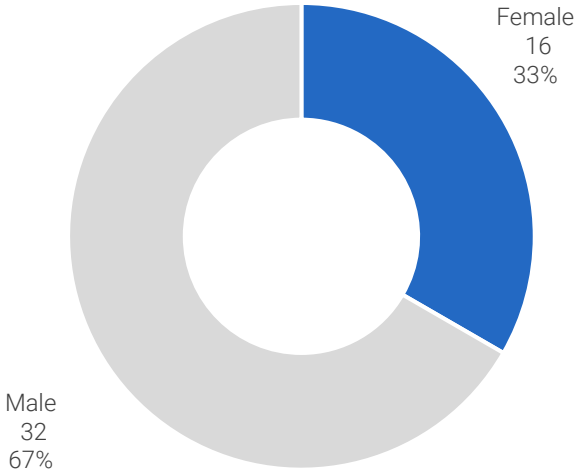
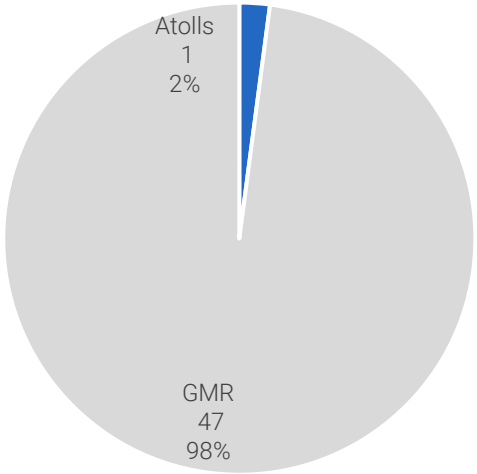


Figure 4-62: COVID-19 deaths by region, 2020[17]



[17]Details COVID-19 deaths are covered in in the specified chapter for COVID-19 (Chapter 6)

4.5.2.4 OTHER COMMUNICABLE, MATERNAL, PERINATAL AND NUTRITIONAL CONDITION

Other communicable, maternal, perinatal and nutritional conditions, was the fourth most common cause of death in this category where perinatal conditions was the highest and almost all deaths occurred in GMR.

Figure 4-63: Deaths due to other communicable, maternal, perinatal and nutritional conditions, 2020

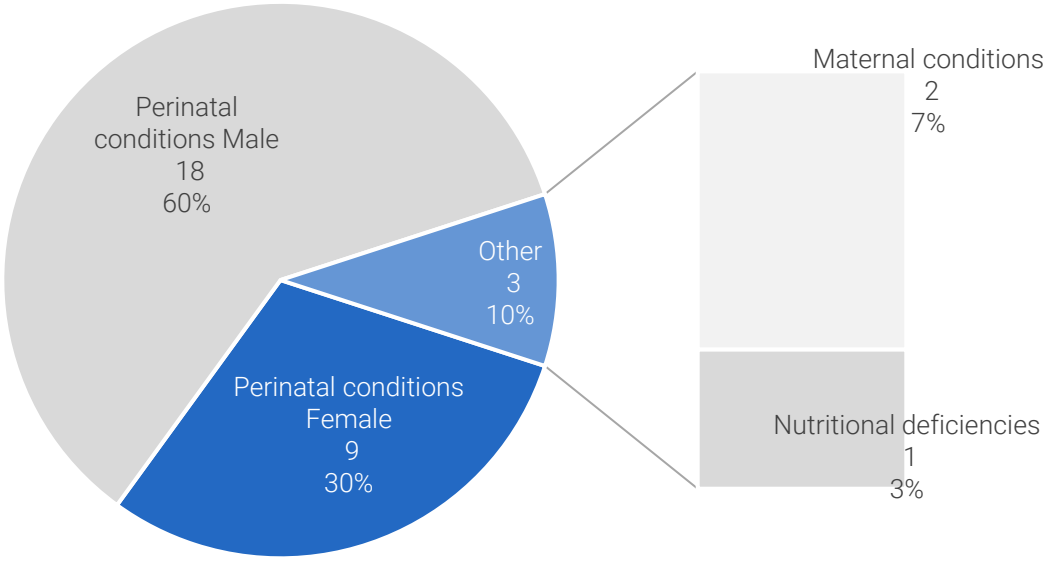
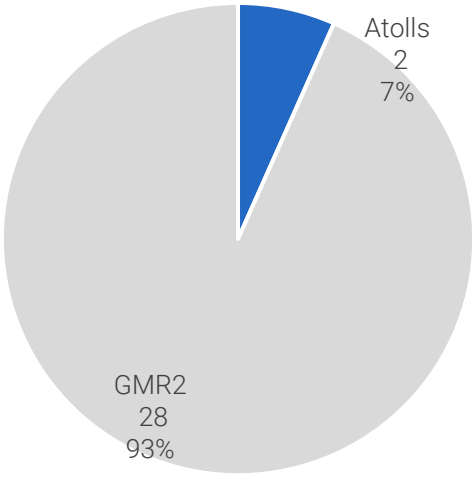


Figure 4-64: Deaths due to other communicable, maternal, perinatal and nutritional conditions by region, 2020



Other perinatal deaths were higher compared to deaths due to maternal and nutritional conditions.

Table 4-16: Maternal, perinatal and nutritional deficiencies deaths by location and gender, 2020

	Atolls		GMR		Total
Age	Female	Male	Female	Male	
0-17	1	1	8	17	27
Perinatal conditions	1	1	8	17	27
Other perinatal conditions			4	8	12
Low birth weight			3	5	8
Birth asphyxia and birth trauma	1	1	1	4	7
18-35			2		2
Maternal conditions			2		2
Maternal haemorrhage			1		1
Other maternal conditions			1		1
72-89				1	1
Nutritional deficiencies				1	1
Other nutritional disorders				1	1
Total	**1**	**1**	**10**	**18**	**30**

4.5.3 INJURIES

Injuries as a cause of death was more common among males (88% of all injuries deaths), and Similarly, 56% of injuries deaths were also reported from atolls.

Figure 4-65: Injuries disease sub-group deaths by gender, 2020

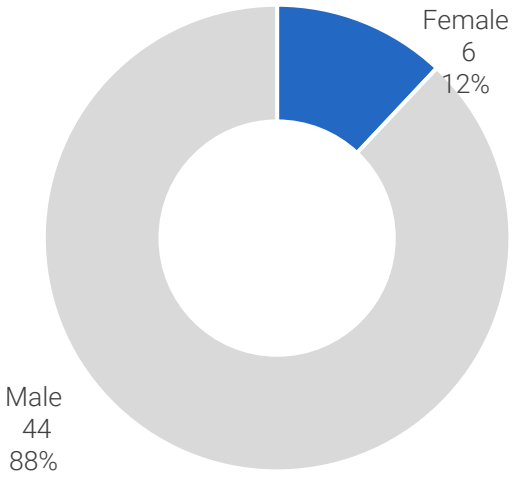
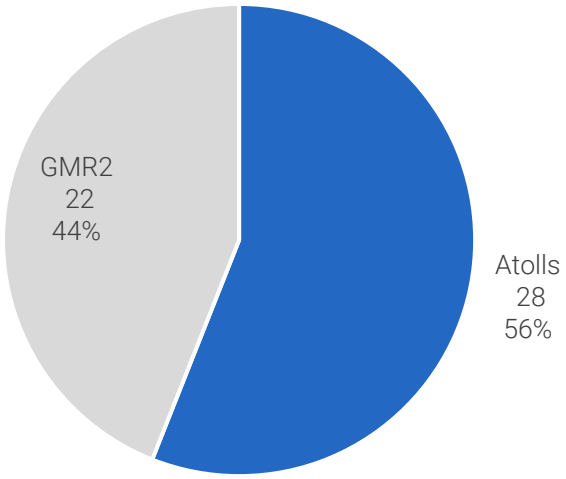


Figure 4-66: Injuries deaths by location, 2020

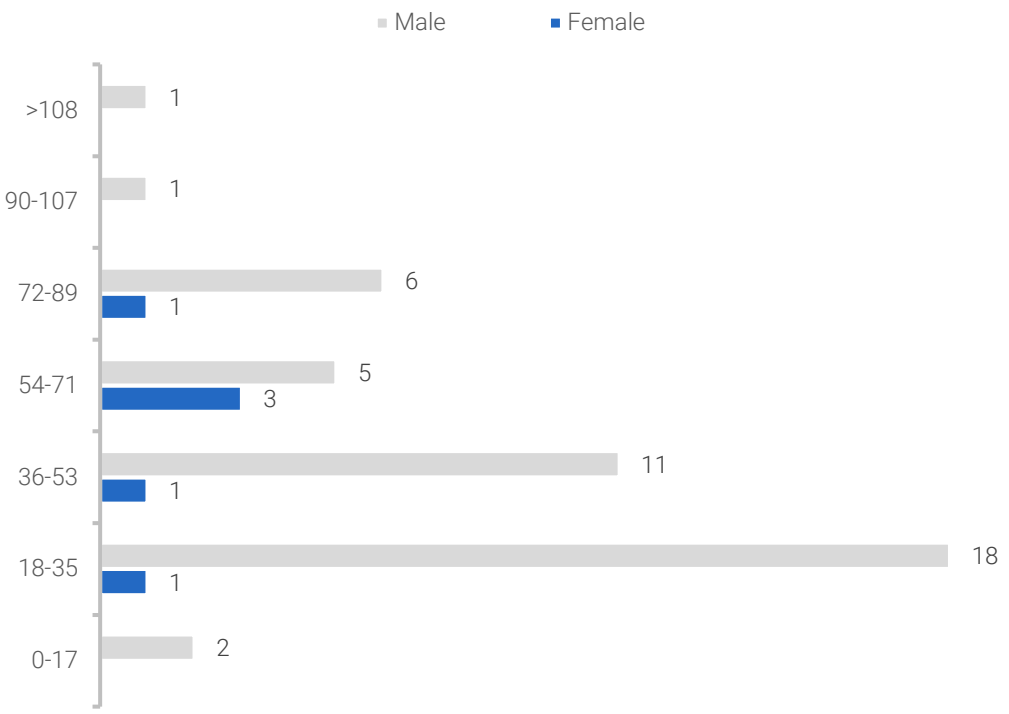


Unintentional injuries were highest among injuries (42) and were more common among younger people.

Figure 4-67: Injury deaths by sub-categories and gender, 2020

Disease groups	Male	Female	Total
Intentional injuries	7	1	8
Self-inflicted injuries	4	1	5
Not categorized	3		3
Unintentional injuries	37	5	42
Drownings	19	1	20
Other unintentional injuries	12	4	16
Falls	2		2
Road traffic accidents	2		2
Not categorized	1		1
Fires	1		1
Grand Total	**44**	**6**	**50**

Figure 4-68: Injury deaths by gender and age, 2020



Injuries accounted for 6% of all the deaths, and 99% of these injuries were unintentional injuries

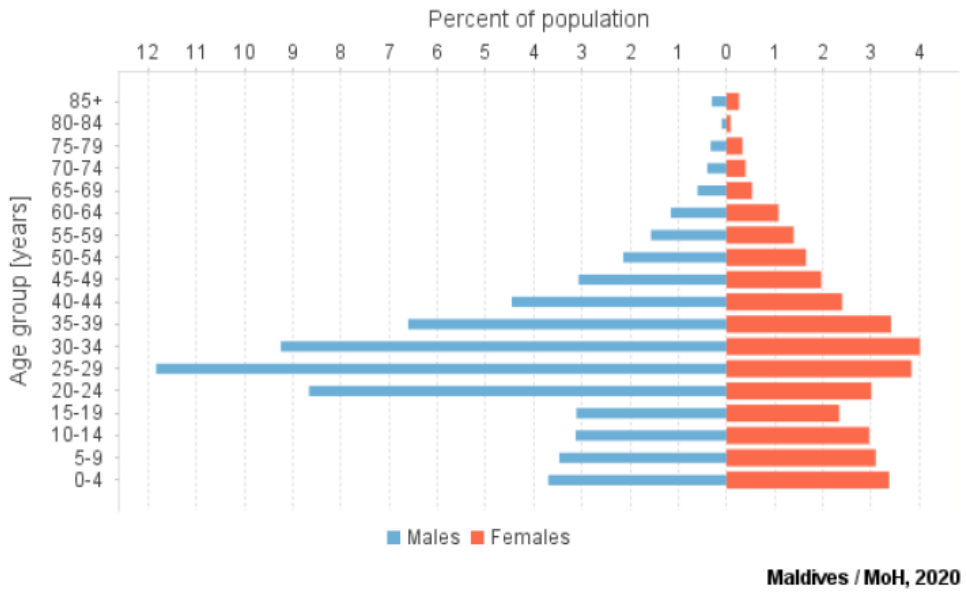
4.6 ANALYSIS OF CAUSE OF DEATH DATA

This section is presents data using the Analysis of Cause of Death Data (ANACONDA) tool developed by University of Melbourne (Mikkelsen and Lopez 2017, University of Melbourne 2019) to assess the quality of mortality data. The principles underlying the various data quality checks in ANACONDA (Mikkelsen, Moegaard et al. 2020) are based on years of demographic and epidemiological research into the characteristics of human mortality, how the risks of dying change with age, and how causes of death change as overall mortality levels decline. A second major resource used in ANACONDA is the Global Burden of Disease (GBD) Study.

4.6.1 DEMOGRAPHIC DATA

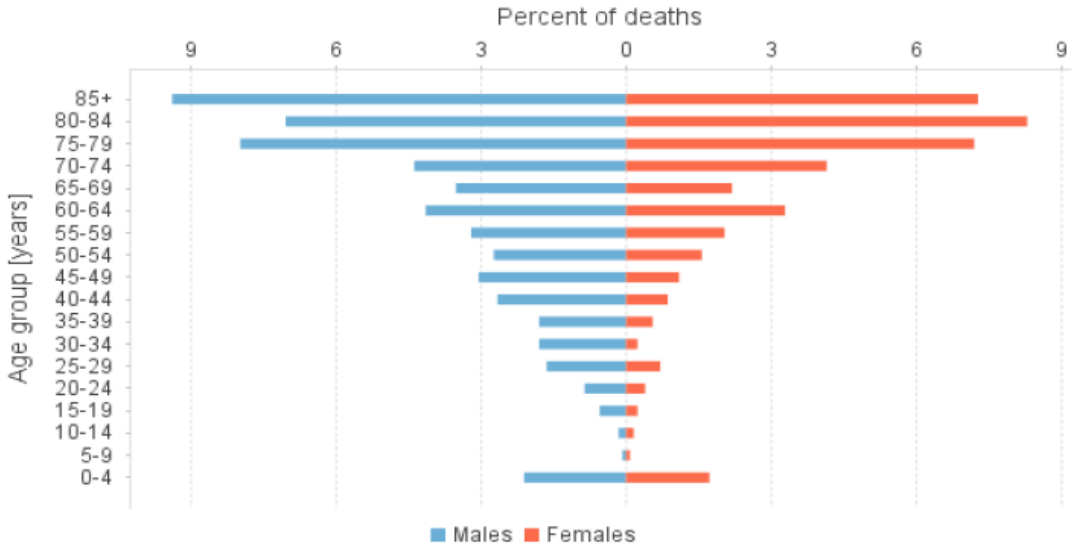
The population pyramid shows a large reproductive age group with a slight increase in the lowest age groups. The population data source for 2017-19 is mid-year population estimated from Census 2014 (Maldives Bureau of Statistics (MBS) 2021)Maldives Bureau of Statistics.

Figure 4-69: Population pyramid by per cent of population for 2020



However, deaths are higher in the elder age bands.

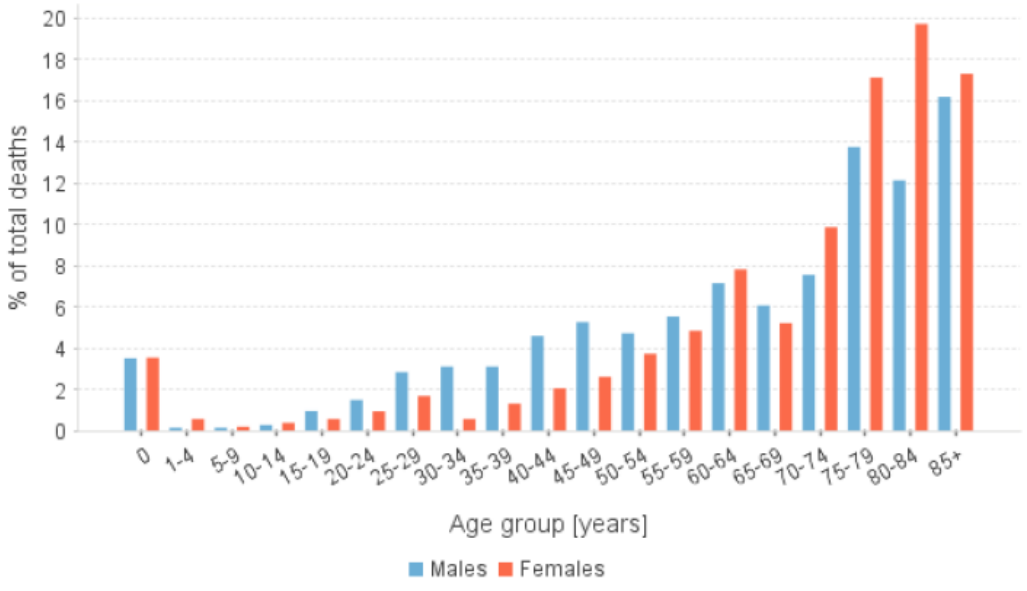
Figure 4-70: Age-sex-distribution of deaths by per cent of deaths, 2020



4.6.2 AGE-SEX DISTRIBUTION OF DEATHS

Age-sex is reported for all deaths. The year of birth and death is also known for all reported deaths. Percentage of male deaths is generally higher for all age groups below 70 years of age.

Figure 4-71: Distribution of deaths by age for Maldives 2020



4.6.3 CLASSIFICATION OF DEATHS INTO BROAD CAUSE OF DEATH (COD) GROUPS

The percentage distribution of deaths is grouped into three very broad cause of death groups as used in the Global Burden of Disease study:

- Group 1: Communicable diseases including infectious & parasitic diseases and maternal, neonatal and perinatal causes, and malnutrition conditions
- Group 2: Non-communicable diseases, including mental health conditions
- Group 3: External causes (e.g., accidents, homicide, suicide, war deaths and natural disasters)

These broad disease and injury groups are compared and distributed by ICD code.

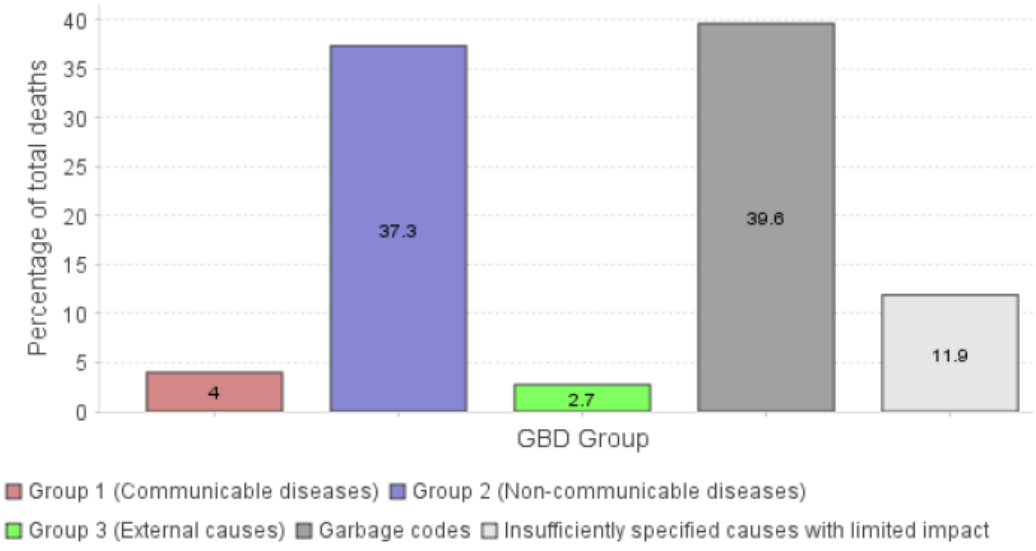
4.6.4 BROAD CAUSE OF DEATH GROUPS

What is a Garbage Code?

Errors in correctly identifying and coding the underlying cause of death can arise from many sources in a country's cause of death data system. This step identifies and classifies these various sources of error in a country's cause of death data. Collectively these errors are known as 'garbage codes' (referred to as 'garbage codes' in the GBD Study where they were first defined to indicate that they are of limited value for public health policy and planning which requires accurate information on the underlying cause of death.

Source: ANACONDA software

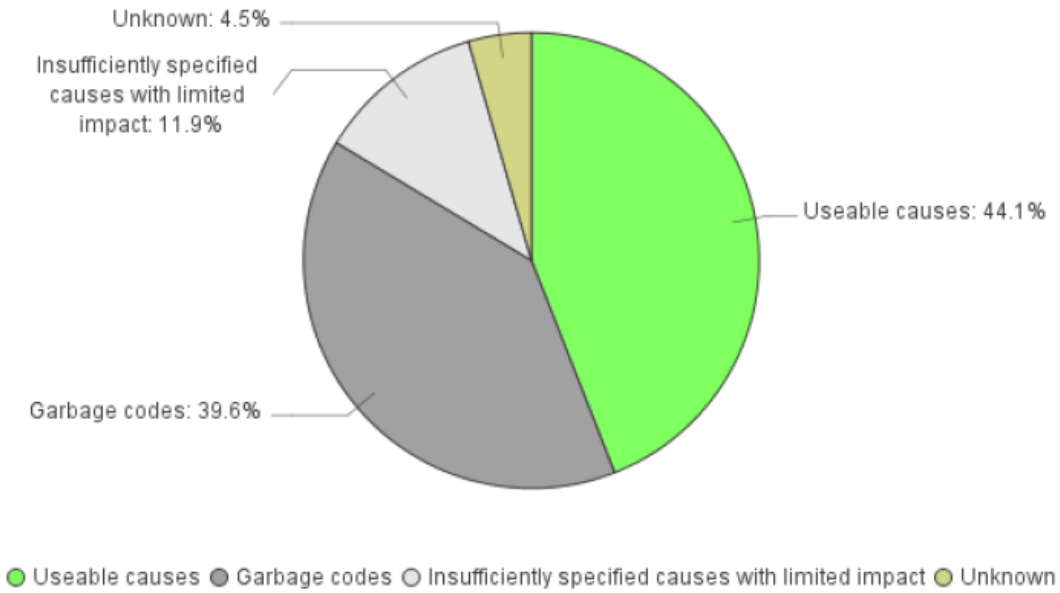
Figure 4-72: Percentage of deaths by three GBD broad cause groups and garbage codes, 2020



4.6.5 QUALITY OF CAUSE OF DEATH DATA

When the death data are distributed by usability of the causes coded deaths, the usable codes are less than 50%. This makes the Cause of Death (COD) of little use for health policy.

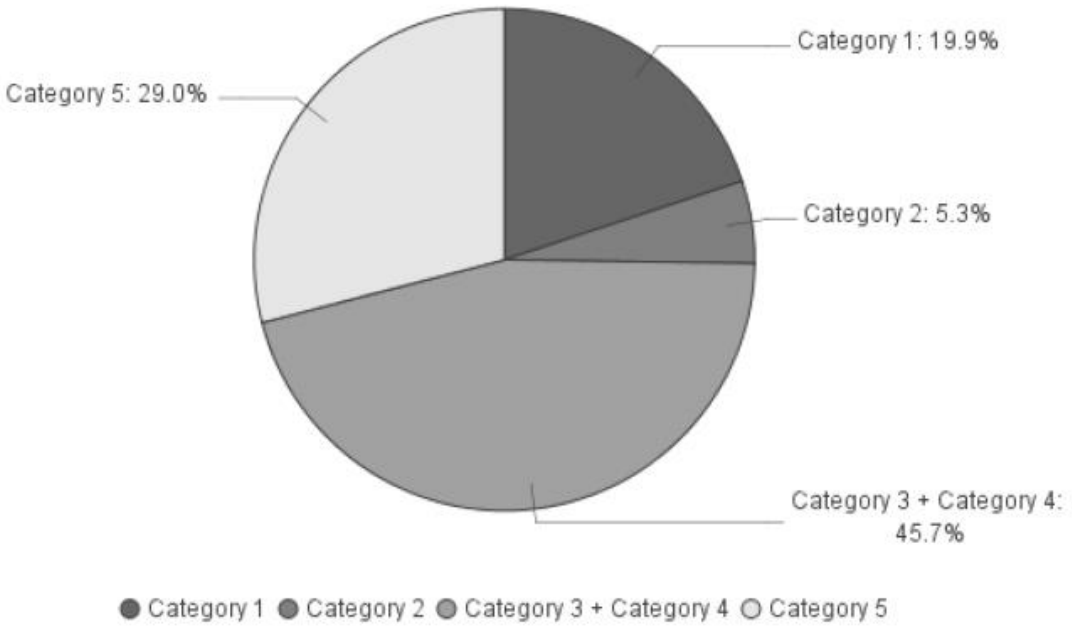
Figure 4-73: Distribution of deaths by usability, 2020



Since, garbage codes are high, it was important to look at the distribution of the garbage codes by category. There are five typologies of garbage codes (Naghavi, Makela et al. 2010),

- category 1: Symptoms, signs and ill-defined conditions" there are mostly drawn from the R codes (R00-R99) in ICD10;
- category 2: Impossible as underlying cause of death: these include conditions such as essential hypertension and atherosclerosis as well as causes which are the long-term sequalae of various diseases;
- category 3: Intermediate cause of death: these are diseases or injuries which have been precipitated by an underlying cause;
- category 4: Immediate causes of death, such as cardiac arrest or respiratory failure: these are immediate reasons or cause leader to death (i.e., the final step in a morbid process resulting to death), but not the underlying one;
- category 5: Insufficient specified causes within ICD chapters within a larger cause category of death category, such as ill-defined site or cancer or ill-defined injuries. Use of these codes is generally unhelpful to guide prevention efforts since health policies and programmes are usually cause-specific (e.g.: lung cancer prevention versus breast cancer prevention) and require specific cause of death detail to monitor their impact.

Figure 4-74: Distribution of garbage codes by category, 2020



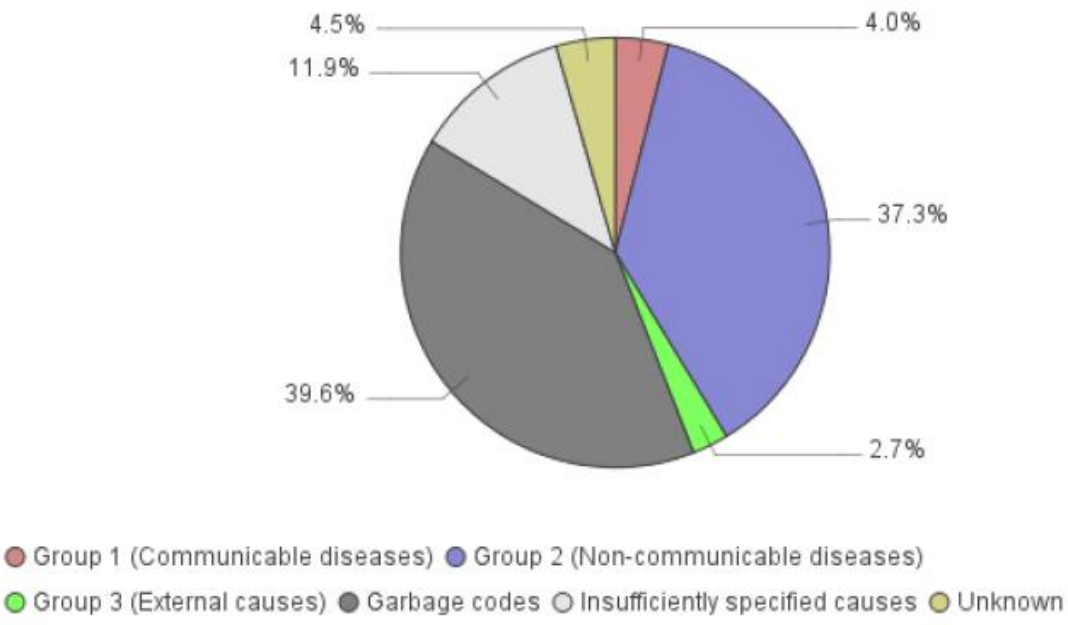
4.6.6 DISTRIBUTION OF GARBAGE CODES BY BROAD GBD GROUPS

Since, garbage codes are high, the probable distribution of garbage codes based on the input data by broad GBD groups after re-distribution of garbage codes shows that garbage codes redistributed to groups 2 (non-communicable diseases) are highest in all three time-periods. After redistribution of garbage codes, the ratio of NCD by CDs is 10.

Table 4-17: Ratio of Group 2 to Group 1 (after redistribution of garbage codes), 2020

% Communicable Diseases	% Non-communicable Diseases	Non-communicable Diseases: Communicable Diseases ratio
8.3	83.1	10

Figure 4-75: Probable distribution of deaths by broad GBD groups after redistribution of garbage codes, 2020



4.6.7 VITAL STATISTICS PERFORMANCE INDEX - VSPI(Q)

The Vital Statistics Performance Index for Quality (VSPI(Q)) shows that the score over the years has gone to "medium" (51.5% summary score) in 2017-19 to "low" (47.3%) in 2020.

All the areas of the VSPI(Q) have shown a score of above 90 except quality of cause of death reporting (68.2) and level of cause-specific detail availability of data (75.7), making these the priority action areas for improving data quality. The time period (2017-19) showed the highest VSPI(Q) in the Maldives (51.5) and Maldives has also shown progressively highest VSPI(Q) compared to all the WHO SEARO countries (Mikkelsen, Phillips et al. 2015) throughout the last decade.

Table 4-18: VSPI Quality Component Score for combined years: 2017, 2018 and 2019

Component	Score
Quality of age and sex reporting	99.3
Quality of cause of death reporting	68.2
Biologically plausible COD	100
Level of cause-specific detail available	75.7
Completeness of death reporting	92.3
Classification	LOW
Summary score	47.3%

Therefore, it is important to work on the priority areas such as quality of cause of death reporting and level of cause of specific details to improve quality of Vital Statistics.

4.7 ANNEXES

Table 4-19: Deaths by location, disease sub-groups, age and gender, 2020

Location/Disease sub-groups/Age	Female	Male	Total
GMR	291	404	695
Noncommunicable diseases	180	217	397
Cardiovascular diseases	69	97	166
Other cardiovascular diseases	24	32	56
0-17	1	1	2
18-35	1	4	5
36-53	2	4	6
54-71	12	10	22
72-89	7	10	17
90-107	1		1
>108		3	3
Cerebrovascular disease	20	30	50
18-35		1	1
36-53	2	7	9
54-71	5	7	12
72-89	11	14	25
90-107	2		2
>108		1	1
Ischaemic heart disease	18	26	44
18-35		2	2
36-53	2	5	7
54-71	5	9	14
72-89	11	10	21
Hypertensive heart disease	3	4	7
36-53		1	1
54-71		1	1
72-89	3	2	5
Inflammatory heart diseases	2	4	6
0-17		1	1
36-53		1	1
54-71	2	1	3
72-89		1	1
Rheumatic heart disease	2		2
36-53	1		1
54-71	1		1

Location/Disease sub-groups/Age	Female	Male	Total
Not categorised / Multiple Sub-categories		1	1
Malignant neoplasms	36	55	91
Other malignant neoplasms	8	12	20
18-35	1		1
36-53	3		3
54-71	1	7	8
72-89	3	4	7
>108		1	1
Liver cancer	4	12	16
36-53		1	1
54-71	2	2	4
72-89	2	8	10
>108		1	1
Trachea, bronchus, lung cancers	2	13	15
36-53		1	1
54-71	1	6	7
72-89	1	6	7
Breast cancer	8	1	9
36-53	2	1	3
54-71	5		5
72-89	1		1
Mouth and oropharynx cancers	5	3	8
18-35	1		1
36-53		1	1
54-71	1	2	3
72-89	3		3
Lymphomas, multiple myeloma	2	3	5
18-35		1	1
36-53		1	1
54-71	2	1	3
Leukaemia	1	2	3
54-71		1	1
72-89	1	1	2
Prostate cancer		3	3
54-71		1	1
72-89		2	2
Ovary cancer	3		3
36-53	1		1
54-71	1		1
72-89	1		1
Cervix uteri cancer	2		2
36-53	1		1
72-89	1		1

Location/Disease sub-groups/Age	Female	Male	Total
Stomach cancer	1	1	2
36-53		1	1
72-89	1		1
Pancreas cancer		2	2
54-71		1	1
72-89		1	1
Colon and rectum cancers		2	2
36-53		1	1
72-89		1	1
Bladder cancer		1	1
72-89		1	1
Respiratory diseases	38	30	68
Other respiratory diseases	21	17	38
0-17	1		1
18-35	2		2
36-53	1	1	2
54-71	4	3	7
72-89	12	11	23
90-107	1	2	3
Chronic obstructive pulmonary disease	15	13	28
0-17		1	1
36-53		1	1
54-71	3	2	5
72-89	11	8	19
90-107	1	1	2
Asthma	2		2
36-53	1		1
54-71	1		1
Genitourinary diseases	10	10	20
Nephritis and nephrosis	7	6	13
0-17	1		1
54-71	1	1	2
72-89	5	4	9
90-107		1	1
Other genitourinary system diseases	3	4	7
54-71	1	1	2
72-89	2	3	5
Digestive diseases	9	4	13
Other digestive diseases	9	4	13
0-17		1	1
36-53	2	1	3
54-71	3	2	5
72-89	4		4

Location/Disease sub-groups/Age	Female	Male	Total
Endocrine disorders	5	7	12
Endocrine disorders	5	7	12
0-17	1	1	2
18-35	1		1
36-53	1	2	3
72-89	1	3	4
90-107	1	1	2
Neuropsychiatric conditions	5	6	11
Other neuropsychiatric disorders	4	4	8
36-53	2	2	4
54-71	1	1	2
72-89	1	1	2
Parkinson disease	1		1
72-89	1		1
Alzheimer and other dementias		1	1
72-89		1	1
Multiple sclerosis		1	1
36-53		1	1
Diabetes mellitus	4	3	7
Not categorised / Multiple Sub-categories	4	3	7
Other neoplasms		4	4
Not categorised / Multiple Sub-categories		4	4
Congenital anomalies	3		3
Other Congenital anomalies	3		3
0-17	3		3
Skin diseases		1	1
Not categorised / Multiple Sub-categories		1	1
Musculoskeletal diseases	1		1
Back pain	1		1
72-89	1		1
Communicable, maternal, perinatal and nutritional conditions	76	89	165
Respiratory infections	24	25	49
Lower respiratory infections	24	25	49
0-17	1	1	2
18-35	1		1
36-53	1	2	3
54-71	2	5	7
72-89	15	17	32
90-107	4		4
Other emerging diseases	16	31	47
COVID-19 related conditions	16	31	47
18-35		1	1
36-53	3	5	8

Location/Disease sub-groups/Age	Female	Male	Total
54-71	6	7	13
72-89	7	16	23
90-107		2	2
Infectious and parasitic diseases	26	15	41
Other infectious diseases	25	11	36
0-17	3	1	4
18-35	2	2	4
36-53	1	1	2
54-71	4	1	5
72-89	15	5	20
90-107		1	1
Tuberculosis	1	2	3
18-35		1	1
54-71	1		1
72-89		1	1
Hepatitis B		1	1
54-71		1	1
Meningitis		1	1
54-71		1	1
Perinatal conditions	8	17	25
Other perinatal conditions	4	8	12
0-17	4	8	12
Low birth weight	3	5	8
0-17	3	5	8
Birth asphyxia and birth trauma	1	4	5
0-17	1	4	5
Maternal conditions	2		2
Maternal haemorrhage	1		1
18-35	1		1
Other maternal conditions	1		1
18-35	1		1
Nutritional deficiencies		1	1
Other nutritional disorders		1	1
72-89		1	1
Ill-defined diseases	30	80	110
Not categorised / Multiple Sub-categories	30	80	110
Injuries	4	18	22
Unintentional injuries	3	14	17
Other unintentional injuries	2	5	7
18-35		1	1
36-53		2	2
54-71	1		1
72-89	1	1	2

Location/Disease sub-groups/Age	Female	Male	Total
>108		1	1
Drownings	1	5	6
18-35		2	2
54-71	1	2	3
72-89		1	1
Road traffic accidents		2	2
18-35		2	2
Falls		1	1
72-89		1	1
Fires		1	1
36-53		1	1
Intentional injuries	1	4	5
Self-inflicted injuries	1	3	4
18-35	1	3	4
Not categorised / Multiple Sub-categories		1	1
Not categorised	1		1
HDh	42	48	90
Noncommunicable diseases	33	37	70
Cardiovascular diseases	19	23	42
Other cardiovascular diseases	8	7	15
0-17	1		1
18-35		2	2
36-53		2	2
72-89	7	3	10
Cerebrovascular disease	5	7	12
54-71	2	1	3
72-89	3	6	9
Ischaemic heart disease	3	7	10
54-71		3	3
72-89	3	4	7
Hypertensive heart disease	3	1	4
54-71	1		1
72-89	2	1	3
Rheumatic heart disease		1	1
36-53		1	1
Respiratory diseases	9	3	12
Other respiratory diseases	6	2	8
36-53	1		1
54-71	1		1
72-89	4	2	6
Chronic obstructive pulmonary disease	3	1	4
54-71	2		2
72-89	1		1

Location/Disease sub-groups/Age	Female	Male	Total
90-107		1	1
Malignant neoplasms	2	5	7
Trachea, bronchus, lung cancers		2	2
54-71		2	2
Liver cancer		2	2
54-71		1	1
72-89		1	1
Pancreas cancer		1	1
54-71		1	1
Breast cancer	1		1
18-35	1		1
Lymphomas, multiple myeloma	1		1
72-89	1		1
Neuropsychiatric conditions	1	2	3
Epilepsy	1	1	2
18-35	1	1	2
Other neuropsychiatric disorders		1	1
18-35		1	1
Digestive diseases	1	1	2
Other digestive diseases	1		1
36-53	1		1
Cirrhosis of the liver		1	1
90-107		1	1
Congenital anomalies		1	1
Anencephaly		1	1
0-17		1	1
Skin diseases	1		1
Not categorised / Multiple Sub-categories	1		1
Endocrine disorders		1	1
Endocrine disorders		1	1
90-107		1	1
Genitourinary diseases		1	1
Nephritis and nephrosis		1	1
72-89		1	1
Communicable, maternal, perinatal and nutritional conditions	6	2	8
Respiratory infections	4		4
Lower respiratory infections	4		4
54-71	1		1
72-89	2		2
90-107	1		1
Infectious and parasitic diseases	2	1	3
Tuberculosis	2		2
54-71	1		1

Location/Disease sub-groups/Age	Female	Male	Total
72-89	1		1
Other infectious diseases		1	1
18-35		1	1
Perinatal conditions		1	1
Birth asphyxia and birth trauma		1	1
0-17		1	1
Ill-defined diseases	3	5	8
Not categorised / Multiple Sub-categories	3	5	8
Injuries		4	4
Unintentional injuries		4	4
Drownings		3	3
36-53		1	1
54-71		1	1
72-89		1	1
Other unintentional injuries		1	1
18-35		1	1
S	34	44	78
Noncommunicable diseases	29	34	63
Cardiovascular diseases	13	18	31
Ischaemic heart disease	4	7	11
18-35		1	1
54-71		3	3
72-89	4	3	7
Cerebrovascular disease	5	5	10
36-53	1	1	2
72-89	4	4	8
Other cardiovascular diseases	4	4	8
54-71		2	2
72-89	4	2	6
Hypertensive heart disease		2	2
54-71		1	1
72-89		1	1
Respiratory diseases	6	8	14
Other respiratory diseases	3	5	8
36-53	1		1
54-71		2	2
72-89	1	2	3
90-107	1	1	2
Chronic obstructive pulmonary disease	3	3	6
72-89	3	2	5
90-107		1	1
Malignant neoplasms	6	4	10
Liver cancer	2	1	3

Location/Disease sub-groups/Age	Female	Male	Total
36-53		1	1
72-89	2		2
Trachea, bronchus, lung cancers	1	1	2
54-71	1	1	2
Breast cancer	2		2
36-53	1		1
72-89	1		1
Pancreas cancer		1	1
72-89		1	1
Other malignant neoplasms		1	1
54-71		1	1
Mouth and oropharynx cancers	1		1
72-89	1		1
Genitourinary diseases	2	1	3
Nephritis and nephrosis	1	1	2
72-89	1	1	2
Other genitourinary system diseases	1		1
72-89	1		1
Diabetes mellitus		2	2
Not categorised / Multiple Sub-categories		2	2
Neuropsychiatric conditions		1	1
Other neuropsychiatric disorders		1	1
0-17		1	1
Congenital anomalies	1		1
Other Congenital anomalies	1		1
36-53	1		1
Musculoskeletal diseases	1		1
Rheumatoid arthritis	1		1
54-71	1		1
Ill-defined diseases	2	6	8
Not categorised / Multiple Sub-categories	2	6	8
Communicable, maternal, perinatal and nutritional conditions	2	2	4
Respiratory infections	1	1	2
Lower respiratory infections	1	1	2
72-89	1		1
90-107		1	1
Infectious and parasitic diseases	1	1	2
Other infectious diseases	1		1
72-89	1		1
Diarrhoeal diseases		1	1
90-107		1	1
Injuries	1	1	2
Unintentional injuries	1	1	2

Location/Disease sub-groups/Age	Female	Male	Total
Other unintentional injuries	1	1	2
18-35		1	1
36-53	1		1
Not categorised		1	1
GDh	19	31	50
Noncommunicable diseases	17	26	43
Cardiovascular diseases	9	17	26
Other cardiovascular diseases	5	8	13
36-53		3	3
54-71		2	2
72-89	3	2	5
90-107	2	1	3
Ischaemic heart disease	2	7	9
54-71		1	1
72-89	1	4	5
90-107	1	2	3
Cerebrovascular disease	2	1	3
18-35		1	1
72-89	1		1
90-107	1		1
Inflammatory heart diseases		1	1
54-71		1	1
Respiratory diseases	6	1	7
Other respiratory diseases	4		4
18-35	1		1
72-89	3		3
Chronic obstructive pulmonary disease	2	1	3
54-71		1	1
72-89	2		2
Malignant neoplasms	2	2	4
Liver cancer	2		2
72-89	2		2
Prostate cancer		1	1
90-107		1	1
Other malignant neoplasms		1	1
72-89		1	1
Genitourinary diseases		3	3
Nephritis and nephrosis		3	3
54-71		1	1
72-89		2	2
Diabetes mellitus		1	1
Not categorised / Multiple Sub-categories		1	1
Digestive diseases		1	1

Location/Disease sub-groups/Age	Female	Male	Total
Other digestive diseases		1	1
72-89		1	1
Endocrine disorders		1	1
Endocrine disorders		1	1
72-89		1	1
Communicable, maternal, perinatal and nutritional conditions	1	1	2
Infectious and parasitic diseases	1	1	2
Tuberculosis		1	1
72-89		1	1
Other infectious diseases	1		1
54-71	1		1
Ill-defined diseases	1	1	2
Not categorised / Multiple Sub-categories	1	1	2
Injuries		2	2
Unintentional injuries		2	2
Other unintentional injuries		2	2
18-35		2	2
Not Stated		1	1
R	16	26	42
Noncommunicable diseases	12	18	30
Cardiovascular diseases	5	12	17
Other cardiovascular diseases	2	4	6
36-53		2	2
54-71	1		1
72-89	1	1	2
90-107		1	1
Ischaemic heart disease	2	4	6
54-71		1	1
72-89	2	2	4
90-107		1	1
Cerebrovascular disease	1	3	4
36-53		1	1
54-71		1	1
72-89	1		1
90-107		1	1
Hypertensive heart disease		1	1
54-71		1	1
Respiratory diseases	5	2	7
Other respiratory diseases	2	1	3
72-89	2	1	3
Chronic obstructive pulmonary disease	2	1	3
54-71	2		2
72-89		1	1

Location/Disease sub-groups/Age	Female	Male	Total
Asthma	1		1
54-71	1		1
Malignant neoplasms	1	2	3
Other malignant neoplasms	1	1	2
54-71		1	1
72-89	1		1
Liver cancer		1	1
54-71		1	1
Endocrine disorders	1	1	2
Endocrine disorders	1	1	2
36-53		1	1
90-107	1		1
Congenital anomalies		1	1
Congenital heart anomalies		1	1
36-53		1	1
Communicable, maternal, perinatal and nutritional conditions	2	3	5
Respiratory infections	1	2	3
Lower respiratory infections	1	2	3
36-53		1	1
72-89	1	1	2
Infectious and parasitic diseases	1	1	2
Other infectious diseases	1		1
72-89	1		1
Hepatitis B		1	1
72-89		1	1
Ill-defined diseases	2	3	5
Not categorised / Multiple Sub-categories	2	3	5
Injuries		2	2
Unintentional injuries		1	1
Other unintentional injuries		1	1
90-107		1	1
Intentional injuries		1	1
Not categorised / Multiple Sub-categories		1	1
HA	16	14	30
Noncommunicable diseases	12	11	23
Cardiovascular diseases	9	8	17
Other cardiovascular diseases	3	4	7
18-35		1	1
36-53	1		1
72-89	1		1
90-107	1	3	4
Ischaemic heart disease	3	1	4
36-53	1	1	2

Location/Disease sub-groups/Age	Female	Male	Total
72-89	2		2
Hypertensive heart disease		2	2
72-89		2	2
Cerebrovascular disease	2		2
72-89	2		2
Rheumatic heart disease	1		1
54-71	1		1
Inflammatory heart diseases		1	1
18-35		1	1
Respiratory diseases	3	1	4
Other respiratory diseases	2		2
36-53	1		1
90-107	1		1
Asthma		1	1
54-71		1	1
Chronic obstructive pulmonary disease	1		1
72-89	1		1
Digestive diseases		1	1
Other digestive diseases		1	1
72-89		1	1
Diabetes mellitus		1	1
Not categorised / Multiple Sub-categories		1	1
Communicable, maternal, perinatal and nutritional conditions	2	1	3
Infectious and parasitic diseases	2		2
Other infectious diseases	2		2
72-89	2		2
Respiratory infections		1	1
Lower respiratory infections		1	1
90-107		1	1
Ill-defined diseases	2	1	3
Not categorised / Multiple Sub-categories	2	1	3
Injuries		1	1
Intentional injuries		1	1
Not categorised / Multiple Sub-categories		1	1
Lh	9	19	28
Noncommunicable diseases	6	15	21
Cardiovascular diseases	5	8	13
Ischaemic heart disease		4	4
36-53		2	2
54-71		2	2
Cerebrovascular disease	1	3	4
72-89	1	1	2
90-107		2	2

Location/Disease sub-groups/Age	Female	Male	Total
Other cardiovascular diseases	2	1	3
72-89	2	1	3
Hypertensive heart disease	2		2
54-71	1		1
72-89	1		1
Diabetes mellitus		4	4
Not categorised / Multiple Sub-categories		4	4
Respiratory diseases	1	1	2
Other respiratory diseases	1	1	2
72-89	1	1	2
Neuropsychiatric conditions		1	1
Alzheimer and other dementias		1	1
72-89		1	1
Malignant neoplasms		1	1
Other malignant neoplasms		1	1
54-71		1	1
Communicable, maternal, perinatal and nutritional conditions	2	3	5
Respiratory infections	1	3	4
Lower respiratory infections	1	3	4
72-89	1	2	3
90-107		1	1
Infectious and parasitic diseases	1		1
Other infectious diseases	1		1
90-107	1		1
Injuries	1		1
Unintentional injuries	1		1
Other unintentional injuries	1		1
54-71	1		1
Ill-defined diseases		1	1
Not categorised / Multiple Sub-categories		1	1
L	12	15	27
Noncommunicable diseases	8	13	21
Cardiovascular diseases	4	6	10
Other cardiovascular diseases	2	2	4
72-89	1	2	3
90-107	1		1
Cerebrovascular disease	2	2	4
72-89	2	2	4
Ischaemic heart disease		1	1
54-71		1	1
Hypertensive heart disease		1	1
72-89		1	1
Respiratory diseases	3	5	8

Location/Disease sub-groups/Age	Female	Male	Total
Chronic obstructive pulmonary disease	3	2	5
72-89	3	2	5
Other respiratory diseases		3	3
72-89		2	2
90-107		1	1
Neuropsychiatric conditions		1	1
Other neuropsychiatric disorders		1	1
>108		1	1
Digestive diseases		1	1
Other digestive diseases		1	1
90-107		1	1
Malignant neoplasms	1		1
Colon and rectum cancers	1		1
72-89	1		1
Communicable, maternal, perinatal and nutritional conditions	3	1	4
Respiratory infections	2		2
Lower respiratory infections	2		2
72-89	2		2
Infectious and parasitic diseases		1	1
Diarrhoeal diseases		1	1
36-53		1	1
Perinatal conditions	1		1
Birth asphyxia and birth trauma	1		1
0-17	1		1
Injuries		1	1
Unintentional injuries		1	1
Drownings		1	1
18-35		1	1
Ill-defined diseases	1		1
Not categorised / Multiple Sub-categories	1		1
B	12	13	25
Noncommunicable diseases	7	12	19
Cardiovascular diseases	4	10	14
Other cardiovascular diseases	3	8	11
36-53	1	1	2
54-71	1	1	2
72-89	1	5	6
90-107		1	1
Ischaemic heart disease	1	2	3
54-71	1	1	2
72-89		1	1
Respiratory diseases	1		1
Chronic obstructive pulmonary disease	1		1

Location/Disease sub-groups/Age	Female	Male	Total
90-107	1		1
Neuropsychiatric conditions		1	1
Drug use disorders		1	1
36-53		1	1
Endocrine disorders	1		1
Endocrine disorders	1		1
72-89	1		1
Skin diseases	1		1
Not categorised / Multiple Sub-categories	1		1
Genitourinary diseases		1	1
Nephritis and nephrosis		1	1
54-71		1	1
Ill-defined diseases	4		4
Not categorised / Multiple Sub-categories	4		4
Communicable, maternal, perinatal and nutritional conditions	1	1	2
Infectious and parasitic diseases	1	1	2
Other infectious diseases	1	1	2
36-53		1	1
54-71	1		1
K	10	15	25
Noncommunicable diseases	9	9	18
Cardiovascular diseases	7	6	13
Other cardiovascular diseases	3	4	7
18-35		1	1
54-71	2	2	4
72-89	1	1	2
Ischaemic heart disease	2		2
54-71	1		1
72-89	1		1
Cerebrovascular disease	1	1	2
54-71		1	1
72-89	1		1
Hypertensive heart disease	1	1	2
72-89	1		1
90-107		1	1
Respiratory diseases	2	2	4
Chronic obstructive pulmonary disease	2	2	4
54-71	1	1	2
72-89	1	1	2
Diabetes mellitus		1	1
Not categorised / Multiple Sub-categories		1	1
Ill-defined diseases		4	4
Not categorised / Multiple Sub-categories		4	4

Location/Disease sub-groups/Age	Female	Male	Total
Communicable, maternal, perinatal and nutritional conditions	1	1	2
Infectious and parasitic diseases	1	1	2
Tuberculosis		1	1
36-53		1	1
Other infectious diseases	1		1
72-89	1		1
Not Stated		1	1
Gn	7	13	20
Noncommunicable diseases	7	10	17
Cardiovascular diseases	3	6	9
Other cardiovascular diseases	2	5	7
36-53	1		1
54-71		1	1
72-89	1	2	3
90-107		2	2
Cerebrovascular disease		1	1
72-89		1	1
Ischaemic heart disease	1		1
36-53	1		1
Respiratory diseases	2	2	4
Other respiratory diseases		2	2
54-71		1	1
90-107		1	1
Chronic obstructive pulmonary disease	2		2
54-71	1		1
72-89	1		1
Congenital anomalies	1		1
Other Congenital anomalies	1		1
0-17	1		1
Neuropsychiatric conditions		1	1
Schizophrenia		1	1
72-89		1	1
Malignant neoplasms	1		1
Other malignant neoplasms	1		1
72-89	1		1
Genitourinary diseases		1	1
Nephritis and nephrosis		1	1
72-89		1	1
Ill-defined diseases		2	2
Not categorised / Multiple Sub-categories		2	2
Communicable, maternal, perinatal and nutritional conditions		1	1
Respiratory infections		1	1
Lower respiratory infections		1	1

Location/Disease sub-groups/Age	Female	Male	Total
72-89		1	1
Th	6	12	18
Noncommunicable diseases	5	8	13
Cardiovascular diseases	3	3	6
Other cardiovascular diseases	2	1	3
36-53	1		1
72-89	1	1	2
Cerebrovascular disease	1	1	2
72-89	1	1	2
Hypertensive heart disease		1	1
72-89		1	1
Diabetes mellitus	1	1	2
Not categorised / Multiple Sub-categories	1	1	2
Respiratory diseases	1	1	2
Other respiratory diseases	1		1
72-89	1		1
Chronic obstructive pulmonary disease		1	1
72-89		1	1
Malignant neoplasms		1	1
Colon and rectum cancers		1	1
54-71		1	1
Genitourinary diseases		1	1
Other genitourinary system diseases		1	1
90-107		1	1
Endocrine disorders		1	1
Endocrine disorders		1	1
72-89		1	1
Injuries		3	3
Unintentional injuries		3	3
Drownings		1	1
72-89		1	1
Other unintentional injuries		1	1
36-53		1	1
Falls		1	1
36-53		1	1
Not Stated	1		1
Ill-defined diseases		1	1
Not categorised / Multiple Sub-categories		1	1
GA	5	13	18
Noncommunicable diseases	5	9	14
Cardiovascular diseases	3	7	10
Other cardiovascular diseases	1	5	6
18-35		1	1

Location/Disease sub-groups/Age	Female	Male	Total
36-53		3	3
72-89	1	1	2
Cerebrovascular disease	1	1	2
54-71		1	1
72-89	1		1
Hypertensive heart disease	1	1	2
36-53	1		1
72-89		1	1
Neuropsychiatric conditions		1	1
Other neuropsychiatric disorders		1	1
72-89		1	1
Respiratory diseases	1		1
Other respiratory diseases	1		1
90-107	1		1
Diabetes mellitus		1	1
Not categorised / Multiple Sub-categories		1	1
Endocrine disorders	1		1
Endocrine disorders	1		1
72-89	1		1
Ill-defined diseases		2	2
Not categorised / Multiple Sub-categories		2	2
Injuries		2	2
Unintentional injuries		1	1
Drownings		1	1
54-71		1	1
Intentional injuries		1	1
Self-inflicted injuries		1	1
18-35		1	1
N	7	11	18
Noncommunicable diseases	7	7	14
Cardiovascular diseases	4	3	7
Other cardiovascular diseases	2	2	4
36-53		1	1
72-89	2	1	3
Inflammatory heart diseases		1	1
72-89		1	1
Cerebrovascular disease	1		1
90-107	1		1
Hypertensive heart disease	1		1
90-107	1		1
Genitourinary diseases	1	2	3
Nephritis and nephrosis	1	2	3
54-71		1	1

Location/Disease sub-groups/Age	Female	Male	Total
72-89	1	1	2
Malignant neoplasms		2	2
Trachea, bronchus, lung cancers		1	1
72-89		1	1
Liver cancer		1	1
72-89		1	1
Respiratory diseases	1		1
Other respiratory diseases	1		1
72-89	1		1
Endocrine disorders	1		1
Endocrine disorders	1		1
54-71	1		1
Injuries		2	2
Unintentional injuries		2	2
Drownings		2	2
36-53		2	2
Communicable, maternal, perinatal and nutritional conditions		1	1
Infectious and parasitic diseases		1	1
Tuberculosis		1	1
54-71		1	1
Ill-defined diseases		1	1
Not categorised / Multiple Sub-categories		1	1
Sh	9	7	16
Noncommunicable diseases	6	7	13
Cardiovascular diseases	4	5	9
Other cardiovascular diseases	3	1	4
18-35	1	1	2
54-71	1		1
72-89	1		1
Cerebrovascular disease	1	1	2
36-53	1		1
72-89		1	1
Hypertensive heart disease		2	2
54-71		1	1
72-89		1	1
Ischaemic heart disease		1	1
72-89		1	1
Malignant neoplasms		2	2
Prostate cancer		1	1
90-107		1	1
Pancreas cancer		1	1
54-71		1	1
Genitourinary diseases	1		1

Location/Disease sub-groups/Age	Female	Male	Total
Nephritis and nephrosis	1		1
54-71	1		1
Diabetes mellitus	1		1
Not categorised / Multiple Sub-categories	1		1
Ill-defined diseases	3		3
Not categorised / Multiple Sub-categories	3		3
AA	8	8	16
Noncommunicable diseases	6	5	11
Cardiovascular diseases	5	4	9
Other cardiovascular diseases	2	1	3
54-71		1	1
72-89	2		2
Cerebrovascular disease	1	2	3
54-71		1	1
72-89	1	1	2
Ischaemic heart disease	2		2
54-71	1		1
72-89	1		1
Inflammatory heart diseases		1	1
36-53		1	1
Respiratory diseases		1	1
Other respiratory diseases		1	1
72-89		1	1
Other neoplasms	1		1
Not categorised / Multiple Sub-categories	1		1
Ill-defined diseases	2	1	3
Not categorised / Multiple Sub-categories	2	1	3
Injuries		2	2
Unintentional injuries		2	2
Drownings		2	2
18-35		1	1
36-53		1	1
ADh	4	11	15
Noncommunicable diseases	4	6	10
Cardiovascular diseases	3	2	5
Cerebrovascular disease	1	1	2
72-89	1	1	2
Ischaemic heart disease	1		1
72-89	1		1
Other cardiovascular diseases		1	1
72-89		1	1
Hypertensive heart disease	1		1
72-89	1		1

Location/Disease sub-groups/Age	Female	Male	Total
Respiratory diseases	1	2	3
Other respiratory diseases	1	2	3
54-71	1		1
72-89		1	1
90-107		1	1
Neuropsychiatric conditions		1	1
Alzheimer and other dementias		1	1
72-89		1	1
Malignant neoplasms		1	1
Prostate cancer		1	1
72-89		1	1
Injuries		2	2
Unintentional injuries		2	2
Drownings		2	2
0-17		1	1
36-53		1	1
Communicable, maternal, perinatal and nutritional conditions		2	2
Respiratory infections		1	1
Lower respiratory infections		1	1
90-107		1	1
Infectious and parasitic diseases		1	1
Tuberculosis		1	1
72-89		1	1
Ill-defined diseases		1	1
Not categorised / Multiple Sub-categories		1	1
DH	7	8	15
Noncommunicable diseases	2	4	6
Cardiovascular diseases		2	2
Other cardiovascular diseases		1	1
36-53		1	1
Ischaemic heart disease		1	1
72-89		1	1
Musculoskeletal diseases		1	1
Other musculoskeletal disorders		1	1
18-35		1	1
Respiratory diseases		1	1
Other respiratory diseases		1	1
72-89		1	1
Endocrine disorders	1		1
Endocrine disorders	1		1
54-71	1		1
Malignant neoplasms	1		1
Lymphomas, multiple myeloma	1		1

Location/Disease sub-groups/Age	Female	Male	Total
72-89	1		1
Communicable, maternal, perinatal and nutritional conditions	2	2	4
Infectious and parasitic diseases	2		2
Other infectious diseases	2		2
72-89	2		2
Respiratory infections		1	1
Lower respiratory infections		1	1
54-71		1	1
Other emerging diseases		1	1
COVID-19 related conditions		1	1
54-71		1	1
Ill-defined diseases	3		3
Not categorised / Multiple Sub-categories	3		3
Injuries		2	2
Unintentional injuries		2	2
Drownings		2	2
54-71		1	1
72-89		1	1
M	6	9	15
Noncommunicable diseases	6	7	13
Cardiovascular diseases	4	5	9
Other cardiovascular diseases	3	2	5
54-71		1	1
72-89	1	1	2
90-107	2		2
Ischaemic heart disease		2	2
72-89		2	2
Cerebrovascular disease		1	1
54-71		1	1
Hypertensive heart disease	1		1
72-89	1		1
Genitourinary diseases		1	1
Nephritis and nephrosis		1	1
72-89		1	1
Respiratory diseases	1		1
Other respiratory diseases	1		1
72-89	1		1
Diabetes mellitus		1	1
Not categorised / Multiple Sub-categories		1	1
Endocrine disorders	1		1
Endocrine disorders	1		1
54-71	1		1
Ill-defined diseases		1	1

Location/Disease sub-groups/Age	Female	Male	Total
Not categorised / Multiple Sub-categories		1	1
Injuries		1	1
Unintentional injuries		1	1
Not categorised / Multiple Sub-categories		1	1
F	2	3	5
Noncommunicable diseases	2	2	4
Cardiovascular diseases		2	2
Rheumatic heart disease		1	1
72-89		1	1
Other cardiovascular diseases		1	1
54-71		1	1
Respiratory diseases	1		1
Other respiratory diseases	1		1
72-89	1		1
Malignant neoplasms	1		1
Mouth and oropharynx cancers	1		1
54-71	1		1
Injuries		1	1
Unintentional injuries		1	1
Other unintentional injuries		1	1
18-35		1	1
V	1	1	2
Noncommunicable diseases	1	1	2
Diabetes mellitus	1		1
Not categorised / Multiple Sub-categories	1		1
Cardiovascular diseases		1	1
Other cardiovascular diseases		1	1
72-89		1	1
Grand Total	**523**	**725**	**1,248**

Table 4-20: Adapted Global Burden of Disease Study Classification system for diseases and injuries used in this chapter

Title of GBD cause	ICD-10 4-character codes
All Causes	A00-Y89
I. Communicable, maternal, perinatal and nutritional conditions	A00-B99, G00-G04, N70-N73, J00-J06, J10-J18, J20-J22, H65-H66, O00-O99, P00-*P96*, E00-E02, E40-E46, E50, D50-D53, D64.9, E51-E64
A. Infectious and parasitic diseases	A00-B99, G00, G03-G04, N70-N73
1. Tuberculosis	A15-A19, B90
2. STDs excluding HIV	A50-A64, N70-N73
a. Syphilis	A50-A53
b. Chlamydia	A55-A56
c. Gonorrhoea	A54
d. Other STDs	A57-A64, N70-N73
3. HIV/AIDS	B20-B24
4. Diarrhoeal diseases	*A00, A01,A03, A04*, A06-A09
5. Childhood-cluster diseases	A33-A37, A80, B05, B91
a. Pertussis	A37
b. Poliomyelitis	A80,B91
c. Diphtheria	A36
d. Measles	B05
e. Tetanus	A33-A35
6. Meningitis	A39, G00, G03
7. Hepatitis B	B16-B19 (minus B17.1, B18.2)
Hepatitis C	B17.1, B18.2
8. Malaria	B50-B54
9. Tropical-cluster diseases	B55-B57, B65, B73, B74.0-B74.2
a. Trypanosomiasis	B56
b. Chagas disease	B57
c. Schistosomiasis	B65
d. Leishmaniasis	B55
e. lymphatic filariasis	B74.0-B74.2
f. Onchocerciasis	B73
10. Leprosy	A30
11. Dengue	A90-A91
12. Japanese encephalitis	A83.0
13. Trachoma	A71
14. Intestinal nematode infections	*B76-B81*
a. Ascariasis	B77
b. Trichuriasis	B79
c. Hookworm disease	B76
Other intestinal infections	B78, B80,B81
Other infectious diseases	A02,A05,A20-A28,A31,A32,A38,A40-A49,A65-A70,A74-A79,A81,A82,A83.1-A83.9,A84-A89,A92-

	Title of GBD cause	ICD-10 4-character codes
		A99,B00-B04,B06-B15,B25-B49,B58-B60,B64,B66-B72,B74.3-B74.9,B75,B82-B89,B92-B99, G04
B.	Respiratory infections	J00-J06, J10-J18, J20-J22, H65-H66
1.	Lower respiratory infections	J10-J18, J20-J22
2.	Upper respiratory infections	J00-J06
3.	Otitis media	H65-H66
C.	Maternal conditions	O00-O99
1.	Maternal haemorrhage	O44-O46, O67, O72
2.	Maternal sepsis	O85-O86
3.	Hypertensive disorders	O10-O16
4.	Obstructed labour	O64-O66
5.	Abortion	O00-O07
	Other maternal conditions	O20-O43,O47-O63,O68-O71,O73-O75,O87-O99
D.	Perinatal conditions	P00-*P96*
1.	Low birth weight	P05, P07, P22, P27-P28
2.	Birth asphyxia and birth trauma	P03, P10-P15, P20-P21, P24-P26, P29
	Other perinatal conditions	P00-P02, P04, P08, P23, P35-P96
E.	Nutritional deficiencies	E00-E02, E40-E46, E50, D50-D53,D64.9, E51-E64
1.	Protein-energy malnutrition	E40-E46
2.	Iodine deficiency	E00-E02
3.	Vitamin A deficiency	E50
4.	Iron-deficiency anaemia	D50, D64.9
	Other nutritional disorders	D51-D53, E51-E64
F.	Other emerging diseases	U00-U49, U82-U85
1.	Covid-19	E40-E46
II.	*Noncommunicable diseases*	C00-C97, D00-D48,D55-D64 (minus D 64.9) D65-D89, E03-E07, E10-E16, E20-E34, E65-E88, F01-F99, G06-G98, H00-H61, H68-H93, I00-I99, J30-J98, K00-K92, N00-N64, N75-N98, L00-L98, M00-M99, Q00-Q99
A.	Malignant neoplasms	C00-C97
1.	Mouth and oropharynx cancers	C00-C14
2.	Oesophagus cancer	C15
3.	Stomach cancer	C16
4.	Colon and rectum cancers	C18-C21
5.	Liver cancer	C22
6.	Pancreas cancer	C25
7.	Trachea, bronchus, lung cancers	C33-C34
8.	Melanoma and other skin cancers	C43-C44
9.	Breast cancer	C50
10.	Cervix uteri cancer	C53
11.	Corpus uteri cancer	C54-C55
12.	Ovary cancer	C56
13.	Prostate cancer	C61
14.	Bladder cancer	C67

	Title of GBD cause	ICD-10 4-character codes
15.	Lymphomas, multiple myeloma	C81-C90, C96
16.	Leukaemia	C91-C95
	Other malignant neoplasms	C17,C23,C24,C26-C32,C37-C41,C45-C49,C51,C52,C57-C60,C62-C66,C68-C80,C97
B.	Other neoplasms	D00-D48
C.	Diabetes mellitus	E10-E14
D.	Endocrine disorders	*D55-D64 (minus D64.9),D65-D89, E03-E07, E15-E16, E20-E34, E65-E88*
E.	Neuropsychiatric conditions	F01-F99, G06-G98
1.	Unipolar depressive disorders	F32-F33
2.	Bipolar disorder	F30-F31
3.	Schizophrenia	F20-F29
4.	Epilepsy	G40-G41
5.	Alcohol use disorders	F10
6.	Alzheimer and other dementias	F01, F03, G30-G31
7.	Parkinson disease	G20-G21
8.	Multiple sclerosis	G35
9.	Drug use disorders	F11-F16, F18-F19
10.	Post-traumatic stress disorder	*F43.1*
11.	Obsessive-compulsive disorder	F42
12.	Panic disorder	F40.0, F41.0
13.	Insomnia (primary)	F51
14.	Migraine	G43
15.	Mental Retardation	F70-F79
	Other neuropsychiatric disorders	F04-F09,F17,F34-F39,F401-F409,F411-F419, F43(minus F43.1), F44-F50, F52-F69, F80-F99,G06-G12,G23-G25,G36,G37,G44-G98
F.	Sense organ diseases	H00-H61, H68-H93
1.	Glaucoma	H40
2.	Cataracts	H25-H26
3.	Vision disorders, age-related	H524
4.	Hearing loss, adult onset	H90-H91
	Other sense organ disorders	H00-H21,H27-H35, H43-H61(minus H524),H68-H83, H92-H93
G.	Cardiovascular diseases	I00-I99
1.	Rheumatic heart disease	I01-I09
2.	Hypertensive heart disease	I10-I13
3.	Ischaemic heart disease	I20-I25
4.	Cerebrovascular disease	I60-I69
5.	Inflammatory heart diseases	I30-I33, I38, I40, I42
	Other cardiovascular diseases	I00, I26-I28, I34-I37, I44-I51, I70-I99
H.	Respiratory diseases	J30-J98
1.	Chronic obstructive pulmonary disease	J40-J44
2.	Asthma	J45-J46

	Title of GBD cause	ICD-10 4-character codes
	Other respiratory diseases	J30-J39,J47-J98
I.	**Digestive diseases**	K20-*K92*
1.	Peptic ulcer disease	K25-K27
2.	Cirrhosis of the liver	K70, K74
3.	Appendicitis	K35-K37
	Other digestive diseases	K20-K22,K28-K31,K38,K40-K66,K71-K73,K75-K92
J.	**Genitourinary diseases**	N00-N64, N75-N98
1.	Nephritis and nephrosis	N00-N19
2.	Benign prostatic hypertrophy	N40
	Other genitourinary system diseases	N20-N39, N41-N64, N75-N98
K.	**Skin diseases**	L00-L98
L.	**Musculoskeletal diseases**	M00-M99
1.	Rheumatoid arthritis	M05-M06
2.	Osteoarthritis	M15-M19
3.	Gout	M10
4.	Back pain	M45-M48, M54 (minus M54.2)
	Other musculoskeletal disorders	M00-M02, M08, M11-M13, M20-M43, M50-M53, M54.2, M55-M99
M.	**Congenital anomalies**	Q00-Q99
1.	Abdominal wall defect	*Q79.2-Q79.5*
2.	Anencephaly	Q00
3.	Anorectal atresia	Q42
4.	Cleft lip	Q36
5.	Cleft palate	Q35, Q37
6.	Oesophageal atresia	Q39.0-Q39.1
7.	Renal agenesis	Q60
8.	Down syndrome	Q90
9.	Congenital heart anomalies	Q20-Q28
10.	Spina bifida	Q05
	Other Congenital anomalies	Q01-Q04, Q06-Q18, Q30-Q34, Q38, Q392-Q399, Q40-Q41, Q43-Q56, Q61-Q78, Q790, Q791, Q796, Q798, Q799, Q80-Q89, Q91-Q99
N.	**Oral conditions**	K00-K14
1.	Dental caries	K02
2.	Periodontal disease	K05
3.	Edentulism	-
	Other oral diseases	K00, K01,K03,K04,K06-K14
III.	*Injuries*	V01-Y89
A.	**Unintentional injuries**	V01-X59, Y40-Y86, Y88, Y89
1.	Road traffic accidents	**See below**
2.	Poisonings	X40-X49
3.	Falls	W00-W19

	Title of GBD cause	ICD-10 4-character codes
4.	Fires	X00-X09
5.	Drownings	W65-W74
6.	Other unintentional injuries	*Rest of V, W20*-W64, W75-W99, X10-X39, X50-X59, Y40-Y84, Y859, Y86, Y88,Y89
B.	**Intentional injuries**	X60-Y09, Y35-Y36, Y870, Y871
1.	Self-inflicted injuries	X60-X84, Y870
2.	Violence	X85-Y09, Y871
3.	War	Y36
	Other intentional injuries	Y35
	Ill-defined diseases	R00-R99
	Ill-defined injuries/accidents	Y10-Y34, Y872

PUBLIC HEALTH

5. PUBLIC HEALTH

Public health is the science and art of preventing disease, prolonging life, and promoting health through the organized efforts of society (World Health Organisation 2021). CDC Foundation defines public health as “the science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention and detection and control of infectious diseases” (CDC Foundation 2016). In general, public health seeks to protect the health of the whole population of a specified area.

This chapter looks at some of the public health concerns for Maldives. It will provide some data on preventive and health promotion initiatives that are being undertaken within Maldives. This will include immunization coverage, surveillance of diseases, HIV screening, sextually transmitted diseases, family planning and Thalassemia.

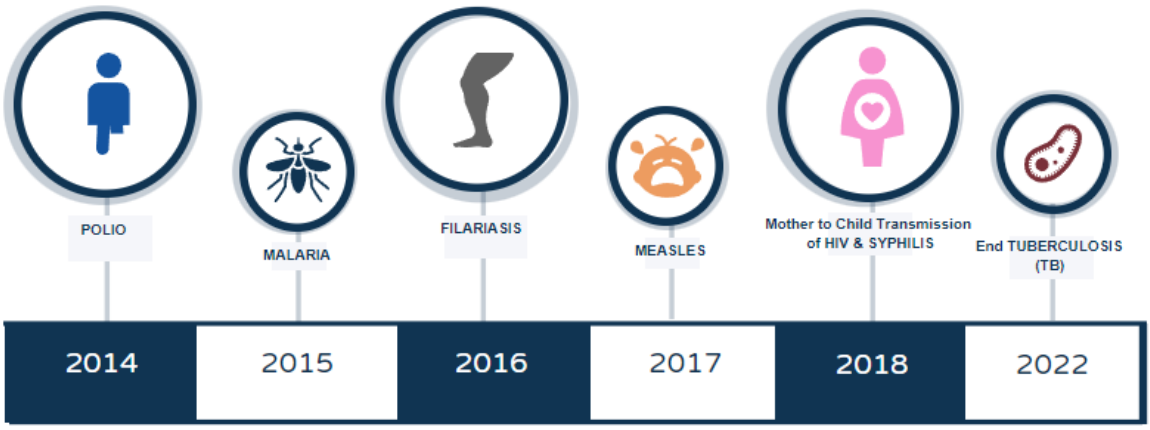
5.1 DISEASE ELIMINATION

Currently, there are 6 disease targeted for elimination (Dowdle 1998) from the Maldives. Of these the country has maintained elimination status for malaria, polio, filaria and mother to child transmission of HIV/Syphilis. Measles was eliminated in 2017, yet remerged in 2019.

Elimination of disease:

Reduction to zero of the incidences of a specified disease in a defined geographical area as a result of deliberate efforts; continued intervention measures are required.

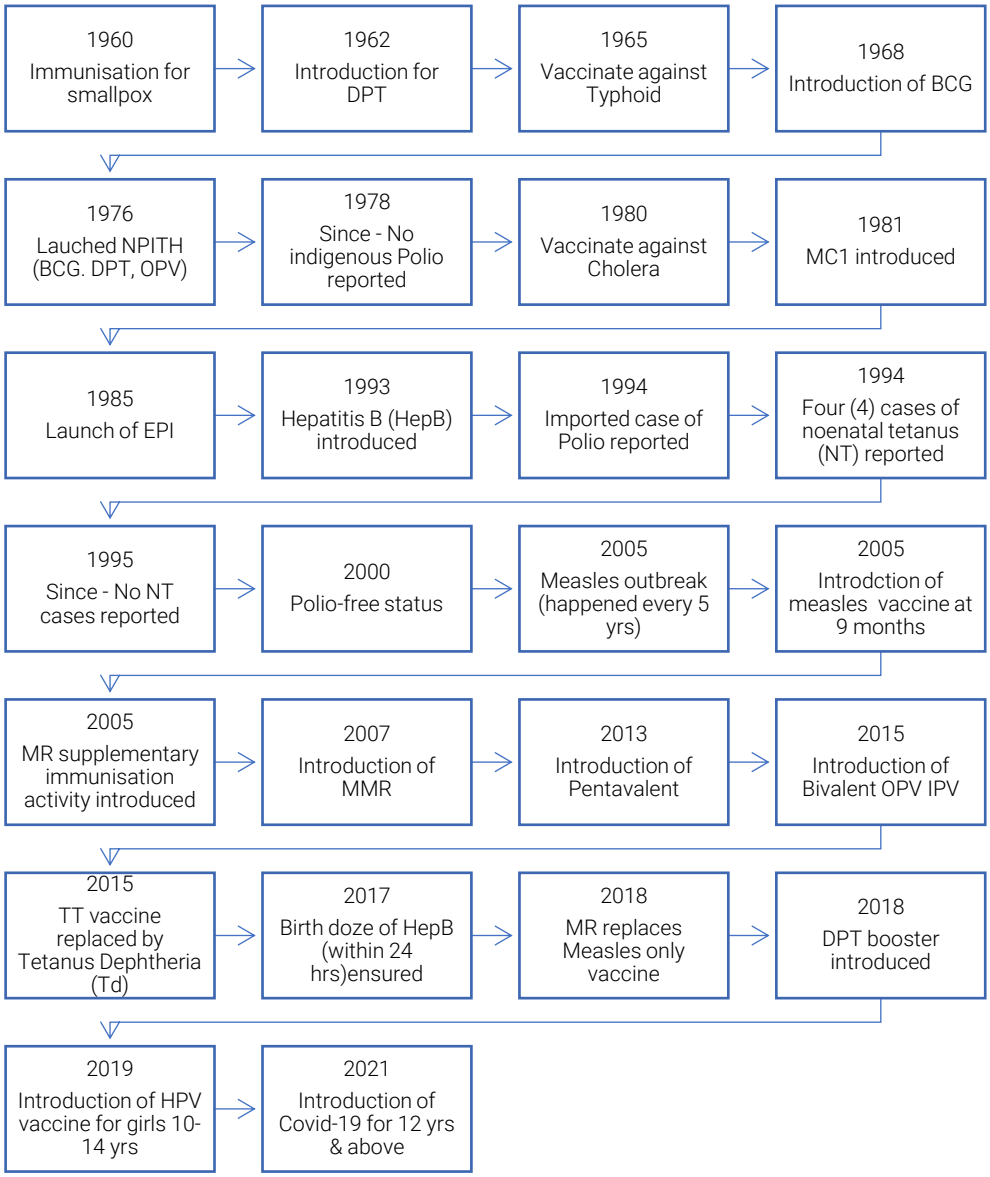
Figure 5-1: Elimination of diseases and targets



5.2 EXPANDED PROGRAMME ON IMMUNIZATION (EPI)

Since the launch of EPI in 1985, Maldives have achieved and maintained high immunization coverage of children less than 2 years of age. The EPI is one of the most widely implemented health programmes in the world and has a well-established access to children in the Maldives. This section presents data on routine immunization, vitamin A and deworming coverage in the existing immunization schedule

Figure 5-2: History of immunization in the Maldives till 2021



5.2.1 ROUTINE IMMUNISATION SCHEDULE

The national immunization programme of the Maldives includes 10 vaccines to be given to a child. These are given to in the in the following order to protect against certain diseases.

Figure 5-3: Maldives routine child immunization schedule

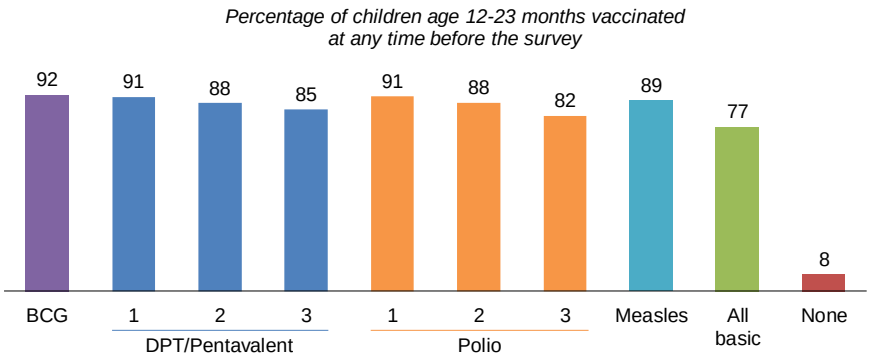
Vaccine	Disease protected against	Usual site	At Birth	Child in Months					Child in Yr		
				2	4	6	9	18	4	10	15
BCG	Tuberculosis	Left upper arm									
HepB	Hepatitis B	Thigh									
Pentavalent	Diphtheria, Tetanus, Pertussis, Haemophilus & Hepatitis B	Thigh									
BOPV	Polio	By mouth									
IPV	Polio	Thigh									
MR	Measles & rubella	Thigh									
MMR	Measles, mumps & rubella	Thigh									
DPT Booster	Diphtheria, Tetanus, Pertussis (whooping cough)	Thigh									
HPV	Cervical Cancer	Upper arm									
Td	Tetanus	Upper arm									

Table 5 1: Key finding of MDHS on immunization coverage by percentage, 2016-17

Immunization coverage rate	MDHS 2016-17
BCG	92%
OPV 3rd Dose	82%
Pentavalent Vaccine (DTP+HEP B+HIB) 3rd Dose	85%
Measles	89%
All basic vaccinations	77%

Definitions: Immunization coverage rate by vaccine for each vaccine in the national schedule is defined by WHO (World Health Organisation 2018) as "percentage of the target population that has received the last recommended dose for each vaccine recommended in the national schedule by vaccine. This should include all vaccines within a country's routine immunization schedule".

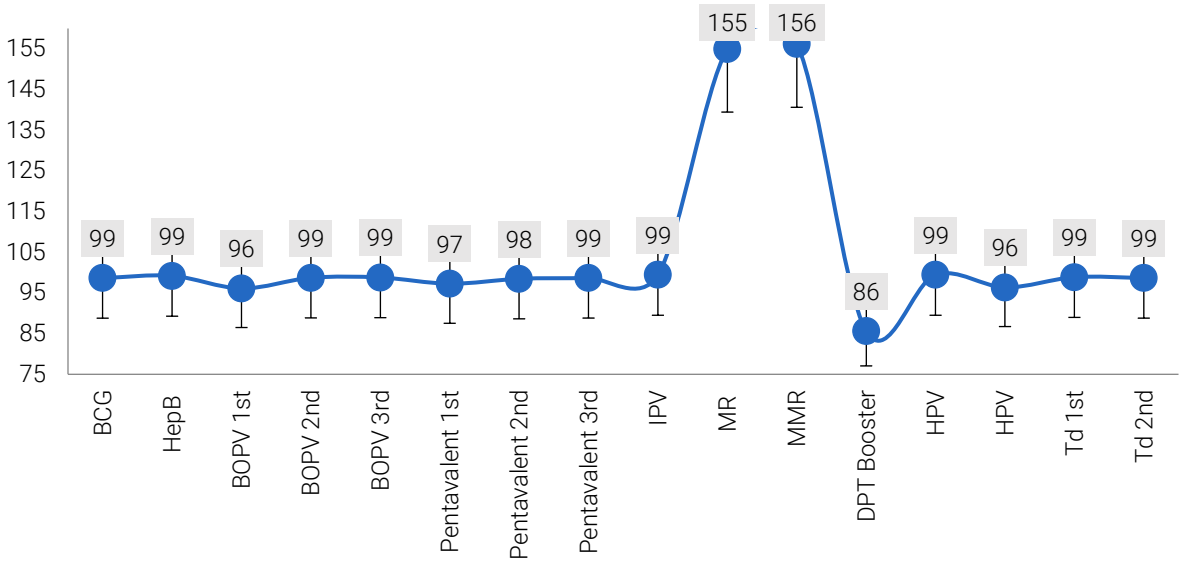
Immunization is a safe and effective way to protect against harmful communicable diseases and, at the population level, prevent the spread of these diseases among the community (Ministry of Health [Maldives] and ICF 2018).



In Maldives, routine immunization begins at birth, and includes vaccines against 17 diseases. Based on MDHS 2016-17 findings, 77% of children aged 12-23 months had received all basic vaccinations in the National Immunization Schedule (Ministry of Health and ICF 2018).

In 2020, the status of immunization showed a high coverage of more than 95% for all the vaccines. MR and MMR were given additional doses during the year, due to the re-emergence outbreak of measles in 2019, thus having a coverage more than 100%[18].

Figure 5-4: Immunization coverage, 2020



[18]Data source: Immunization programme – Health Protection Agency. Detailed table by atolls and coverage is attached with annex.

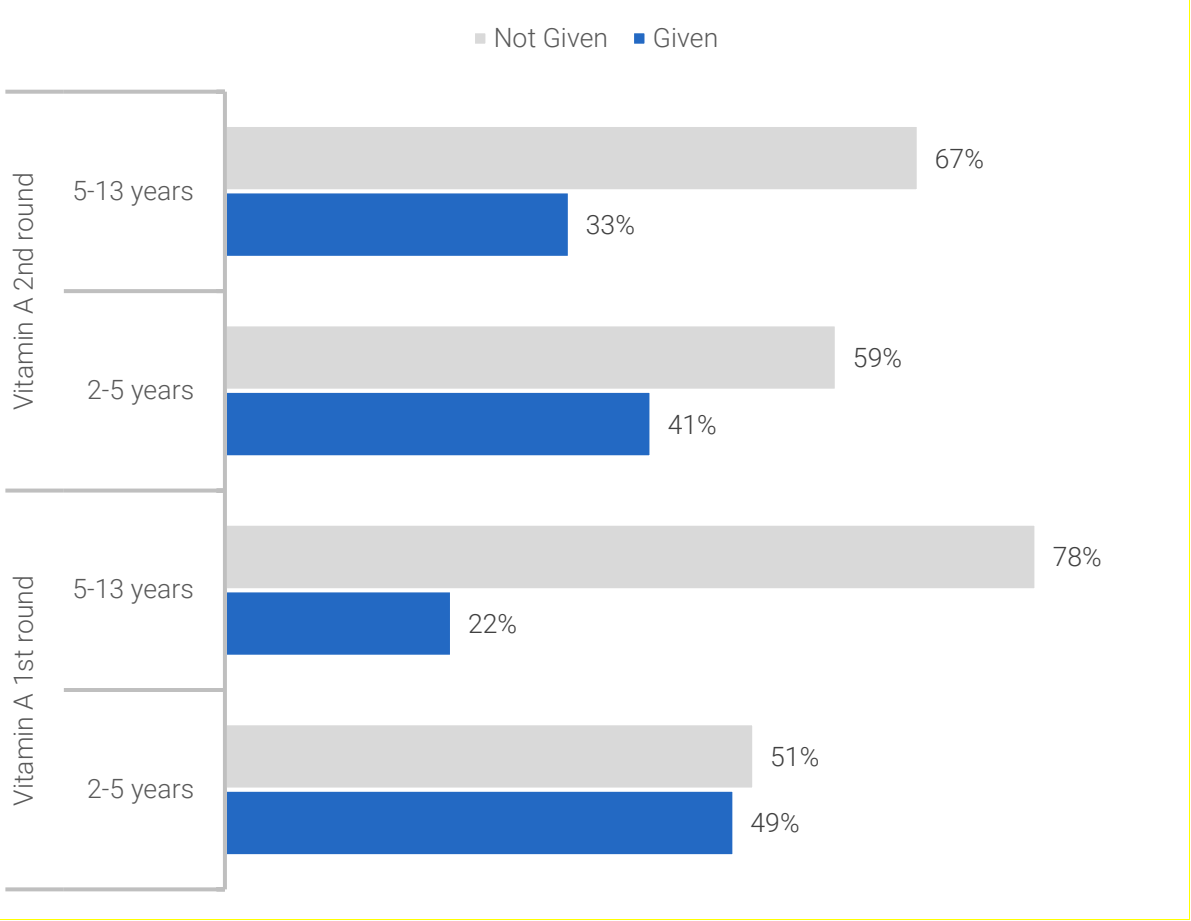
5.2.2 VITAMIN A COVERAGE

Vitamin A and Deworming supplementation is an ongoing programme since 1999 and it is led by Nutrition Programme of HPA. Vitamin A is provided through schools and health facilities for under 5 year students.

Vitamin A is essential for the functioning of the immune system and the healthy growth and development of children, and is usually acquired through a healthy diet. Further, there is an urgent need to understand current situation in the Maldives. This will be done through the soon to be conducted Micronutrient Survey.

Yet, vitamin A deficiency is the leading cause of preventable childhood blindness and increases the risk of death from common childhood infections, such as measles and those causing diarrhoea (World Health Organisation, 2018a).

Figure 5-5: Vitamin A coverage by age groups, 2020

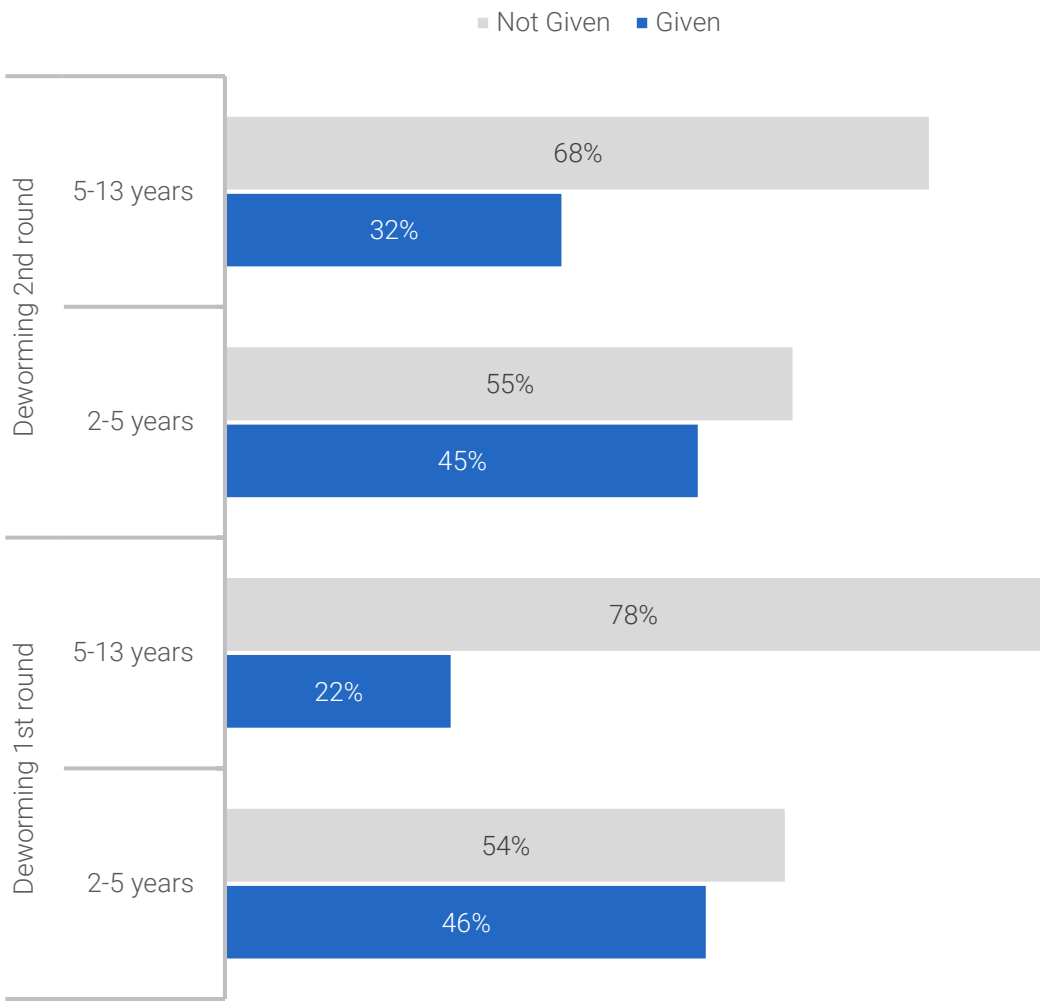


5.2.3 DEWORMING COVERAGE

Soil-transmitted helminths (STHs), more commonly known as intestinal worms, represent a serious public health problem wherever the climate is tropical and inadequate sanitation and unhygienic conditions prevail. Thus, similar to Vitamin-A, deworming are also given to over 2 – 13 years and is monitored routinely by age and geographical coverage in the Maldives.

After conducting a prevalence study on STH, deworming control program strategy is revised. Currently deworming is given once a year to 2-13 yrs age group.

Figure 5-6: Deworming coverage by age groups, 2020



5.3 SURVEILLANCE

The communicable disease surveillance program of Health Protection Agency maintains data[19] on the notifiable diseases in Maldives aimed at early detection and long-term monitoring of diseases for enabling efficient policy decisions. In this section data is presented for six diseases monitored in 2020.

Figure 5-7: Diseases under surveillance reported by region, 2020

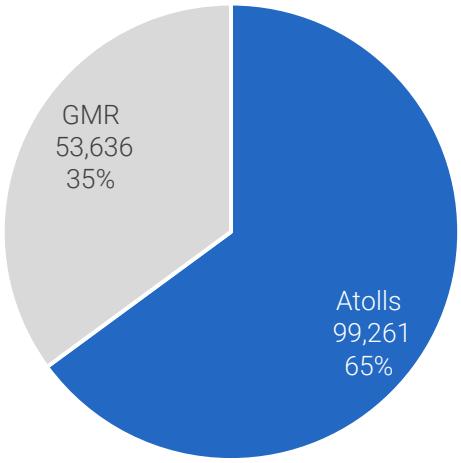


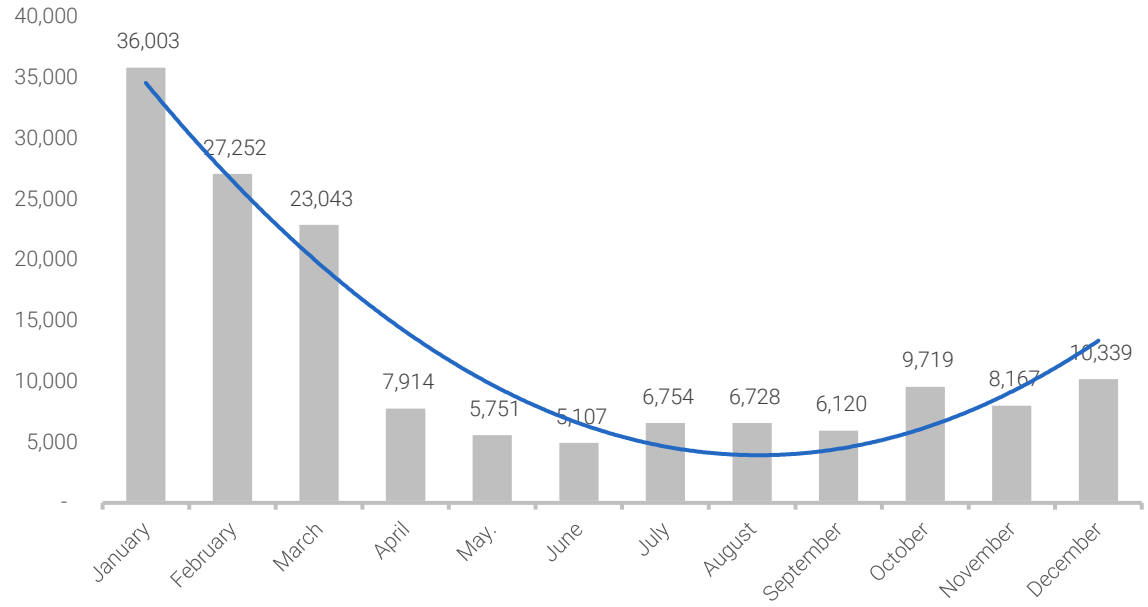
Table 5-2: Diseases under surveillance by region, 2020

Row Labels	Atolls	GMR	Total
Acute Respiratory Infection (ARI)	63,968	32,691	96,659
Viral Fever	17,400	13,406	30,806
Acute Gastroenteritis (AGE)	9,930	4,962	14,892
Conjunctivitis	6,905	2,083	8,988
Chicken pox	564	254	818
Dengue	256	72	328
Measles	106	137	243
Hand-foot-mouth disease (HFMD)	132	31	163
Grand Total	**99,261**	**53,636**	**152,897**

[19]Data source: Communicable disease surveillance – Health Protection Agency. Detailed table attached with annex.

It can be seen that the number of surveillance cases were highest during January, February and March of 2020 – which is just before the COVID-19 pandemic community spread in the Maldives.

Figure 5-8: Diseases under surveillance by month, 2020

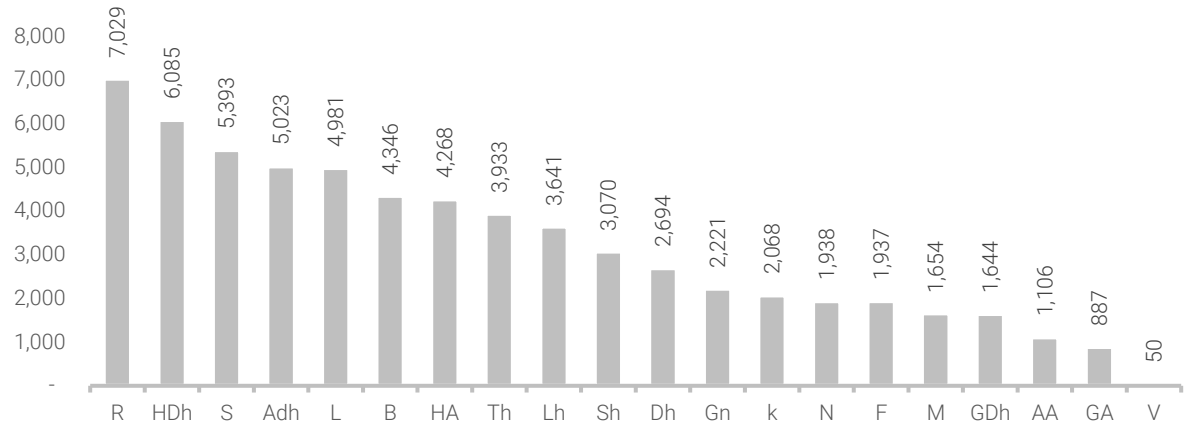


The remaining of this section focuses in detail representation of the four (4) most common diseases by atolls and occurrence by months of 2020.

5.3.1 ACUTE RESPIRATORY INFECTIONS (ARI)

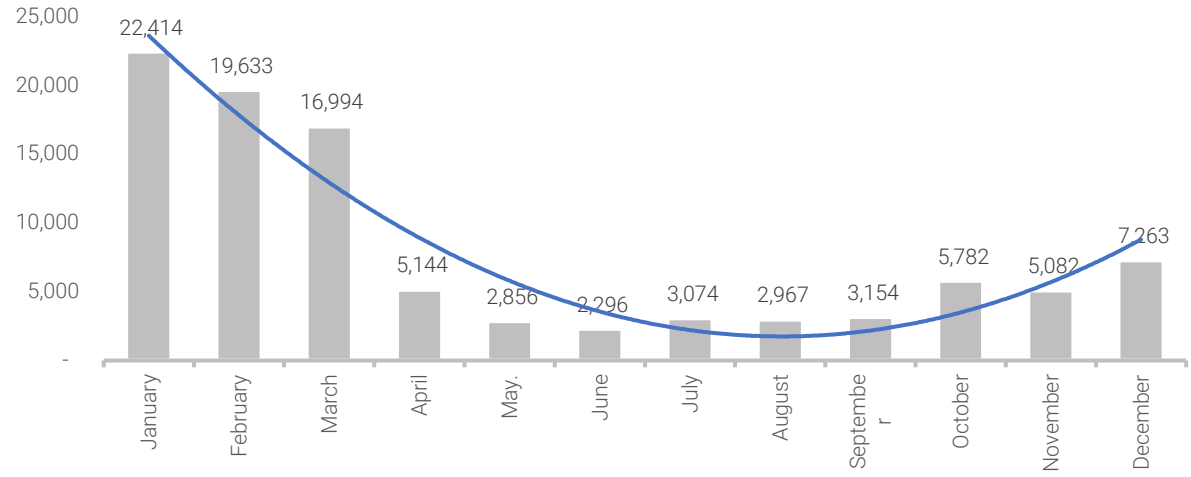
The total number of ARIs were 96,659 and GMR had one third (33%) of the total infections[20]. Excluding, GMR when we disaggregate the data, it can be seen that R. HDh and S atoll had the most cases.

Figure 5-9: ARI cases across atolls, 2020



Similarly, it can be seen that the number of ARI cases were highest during January, February and March of 2020 – which is just before the COVID-19 pandemic community spread in the Maldives. The marked drop in April -September is an effect of public health measures taken to control the COVID-19 transmission.

Figure 5-10: Total ARI cases by month, 2020

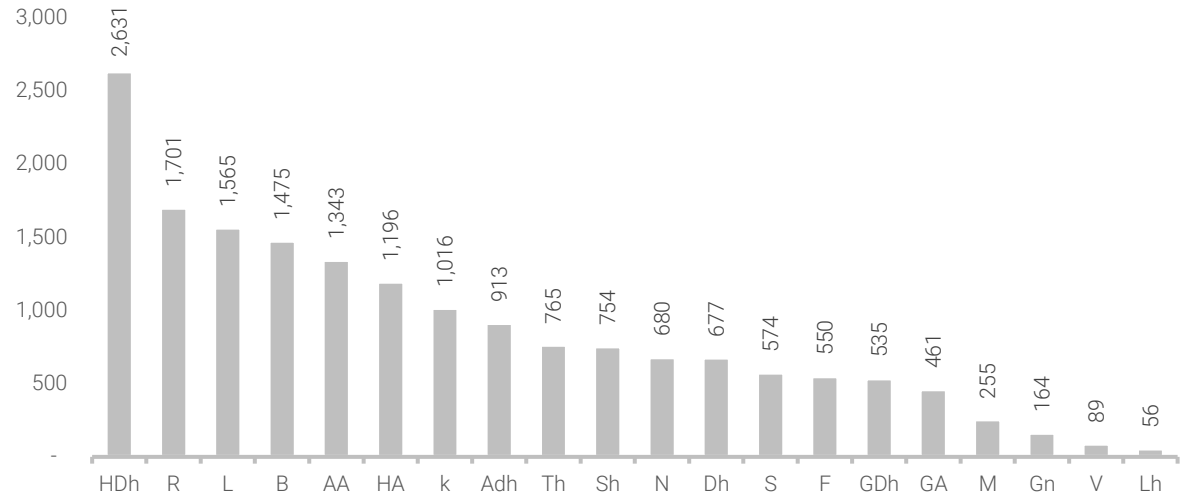


[20]Data source: Surveillance Programme – Health Protection Agency

5.3.2 VIRAL FEVER (VF)

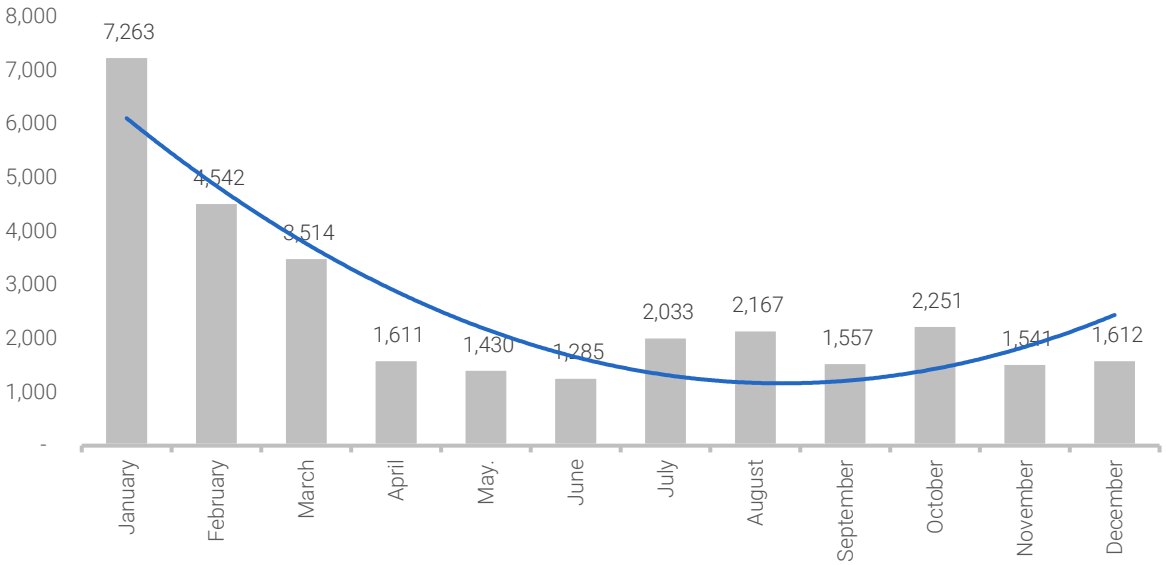
The total number of VF cases were 30,806 and GMR had almost half (44%) of total cases. Excluding, GMR when we disaggregate the data, it can be seen that HDh, R and L atoll had the most cases.

Figure 5-11: Viral Fever cases across atolls, 2020



Similar to ARI cases, it can be seen that the number of VF cases were also highest during January, February and March of 2020 – which is just before the COVID-19 pandemic community spread in the Maldives. The marked drop in April -September is an effect of public health measures taken to control the COVID-19 transmission.

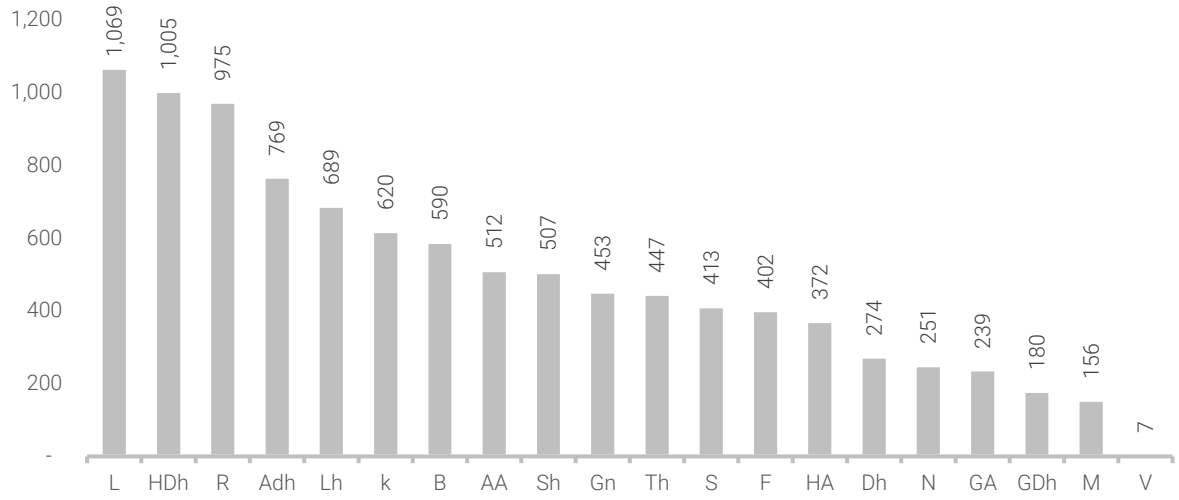
Figure 5-12: Total Viral Fever cases by month, 2020



5.3.3 ACUTE GASTRO-ENTRITIS (AGE)

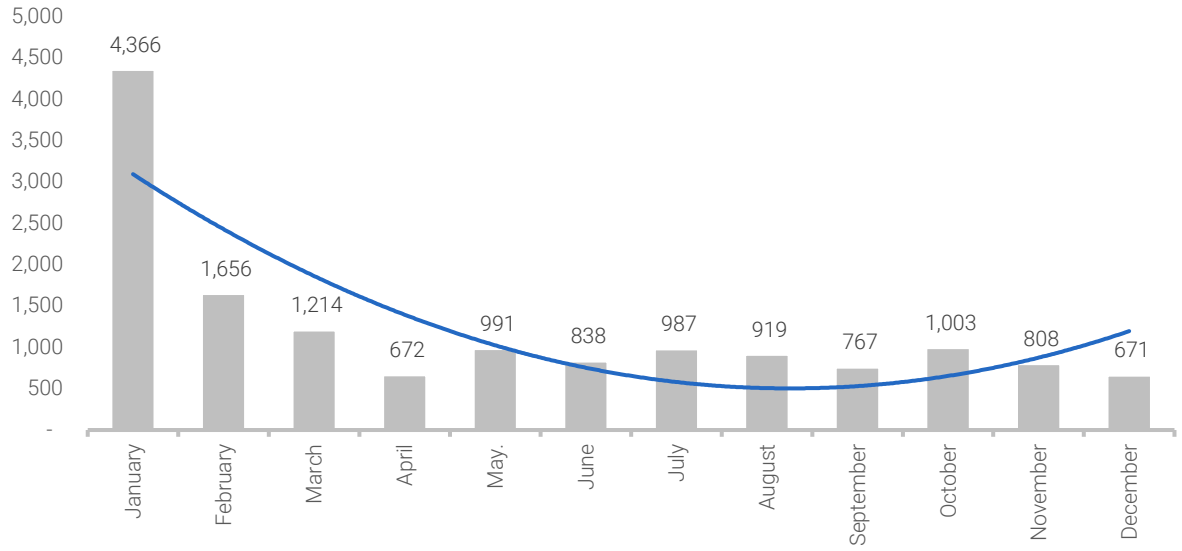
The total number of AGE cases were 14,892 and GMR had one third (33%) of total cases. Excluding, GMR when we disaggregate the data, it can be seen that L, HDh and R had the most cases.

Figure 5-13: AGE cases across atolls, 2020



100.35Similar to ARI and VF cases, it can be seen that the number of AGE cases were also highest during January, February and March of 2020 – which is just before the COVID-19 pandemic community spread in the Maldives. The marked drop in April - September is an effect of public health measures taken to control the COVID-19 transmission.

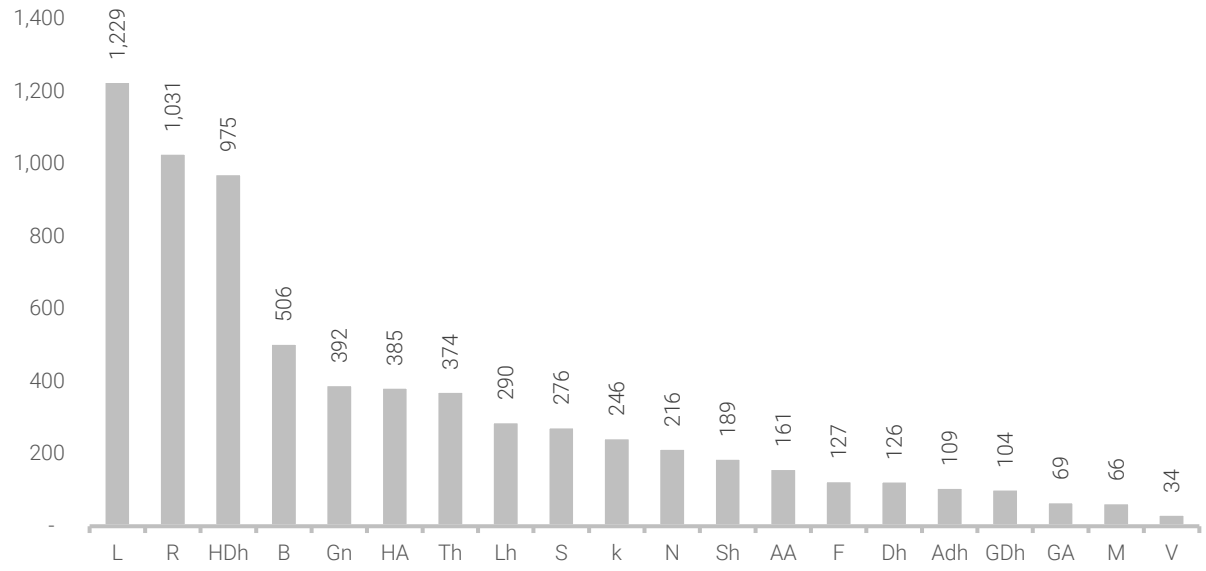
Figure 5-14: Total AGE cases by month, 2020



5.3.4 CONJUNCTIVITIS

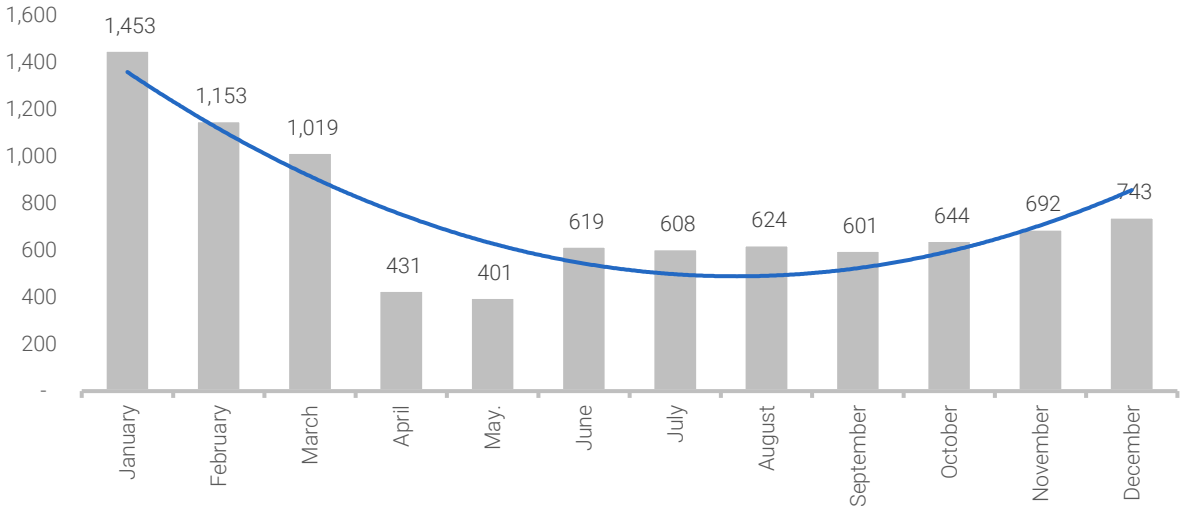
The total number of Conjunctivitis cases were 8,988 and GMR had almost one fourth (23%) of total cases. Excluding, GMR when we disaggregate the data, it can be seen that L, R and HDh had the most cases.

Figure 5-15: Conjunctivitis cases across atolls, 2020



Similar to other disease cases, it can be seen that the number of Conjunctivitis cases were also highest during January, February and March of 2020 – which is just before the COVID-19 pandemic community spread in the Maldives. The marked drop in April - May is an effect of public health measures taken to control the COVID-19 transmission.

Figure 5-16: Total Conjunctivitis cases by month, 2020



5.4 HIV SCREENING

HIV stands for human immunodeficiency virus. It weakens a person's immune system by destroying important cells that fight disease and infection. There is currently no effective cure for HIV but with proper medical care, HIV can be controlled. In this section we present data on the total screened for different groups.

In Maldives, the HIV screening services includes provider-initiated and client-initiated counseling and testing (PICT and CICT). The tests are done by informed and voluntary consent from the client. The HIV testing and every HIV positive result (screening test) is notified to the National HIV/AIDS programme[21], for confirmatory testing and linkage to treatment and care. An HIV is available from all the hospital and health centers; anyone can access to these services free of charge.

A total of 53,069 HIV tests were done in 2020, of which 41,871 were locals and 11,198 were foreigners. From these 6 were positive. From the total positives, 3 were positive during the pre-employment HIV tests and returned back to their countries, while the other 3 were found HIV positive during the tests done for multipurpose tests.

When disaggregated by gender, a total of 25,264 local males, 16,607 local females and 11,198 foreigners (gender not disaggregated) did HIV testing.

[21]Data source for HIV screening/testing section: National AIDS programme- Health Protection Agency (HPA)

5.4.1 MULTI-PUPORSE HIV SCREENING

The highest number of HIV screening was done for multiple purposes as part of health care, namely for surgeries, invasive medical intervention and for dependent visas. As such a total of 17,811 HIV tests were done, where 89% were locals with majority of the tests done among people 25- 49 years of age.

Figure 5-17: HIV screening for pre-employment purposes by origin, 2020

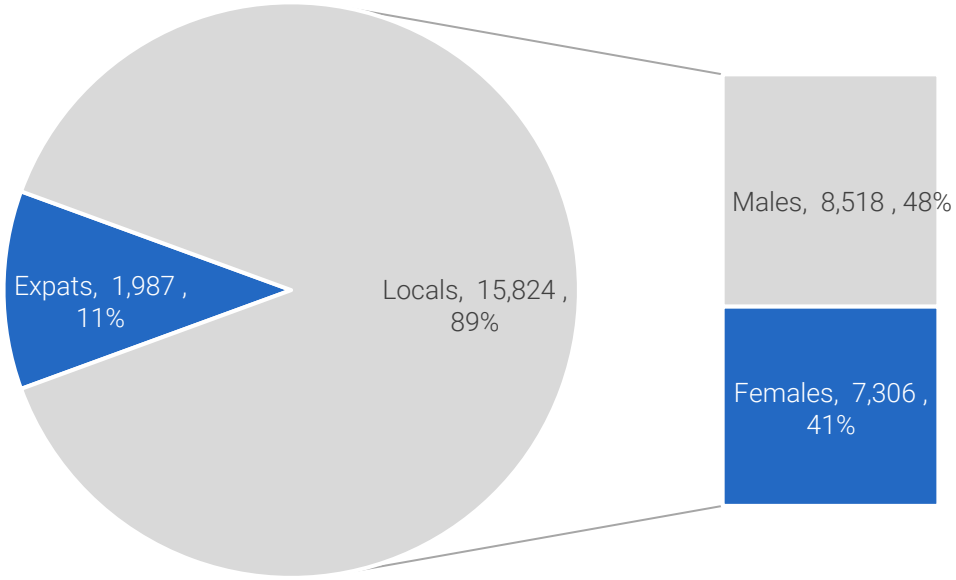
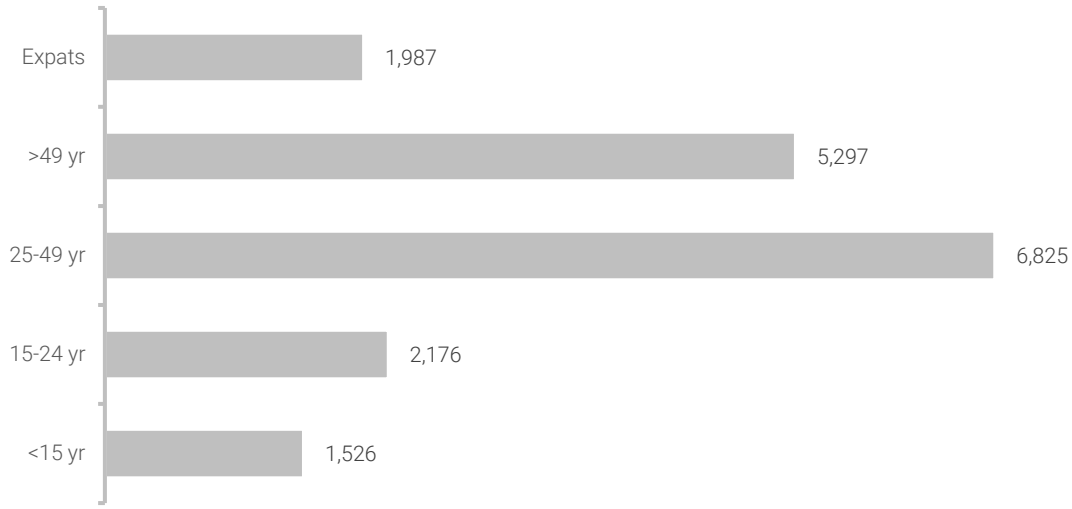
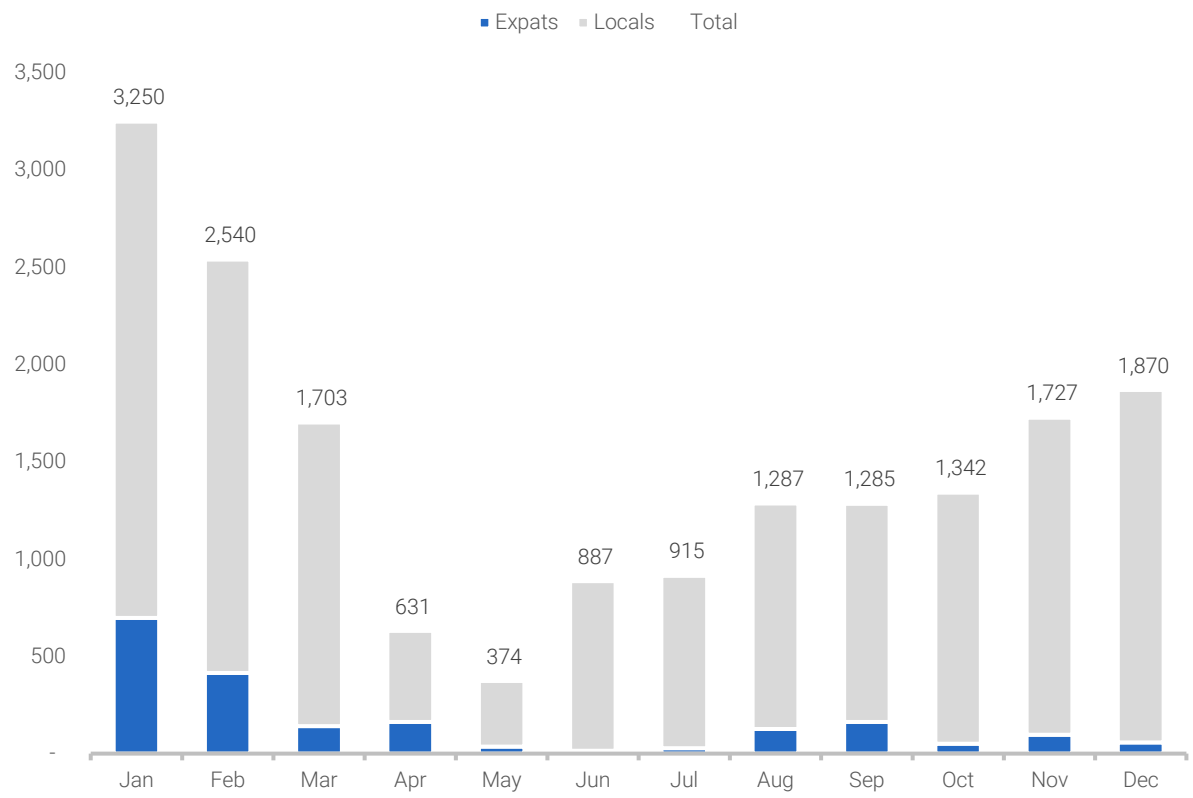


Figure 5-18: HIV screened for pre-employment by age groups, 2020



HIV tests for multiple purposes over the year 2020 peaked in January and February before the COVID-19 community spread. The marked drop in testing April onwards is an effect of scaled down health services to respond to the COVID-19 pandemic.

Figure 5-19: Trend of multi-purpose HIV testing, 2020



5.4.2 PRE-EMPLOYMENT HIV SCREENING

The second highest number HIV screening was done for pre-employment purposes with a total of 9,499 HIV tests, where 91% were expats.

Figure 5-20: HIV screening for pre-employment purposes by origin, 2020

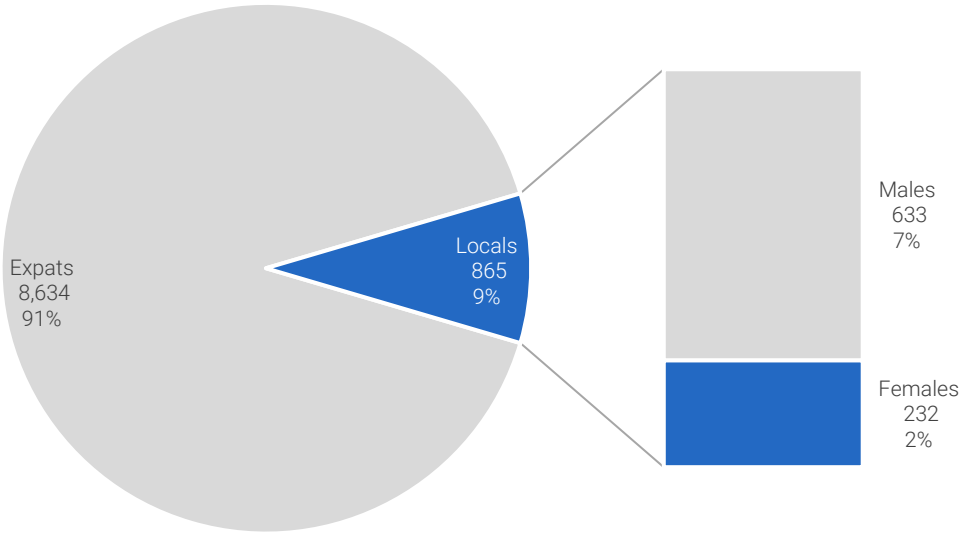
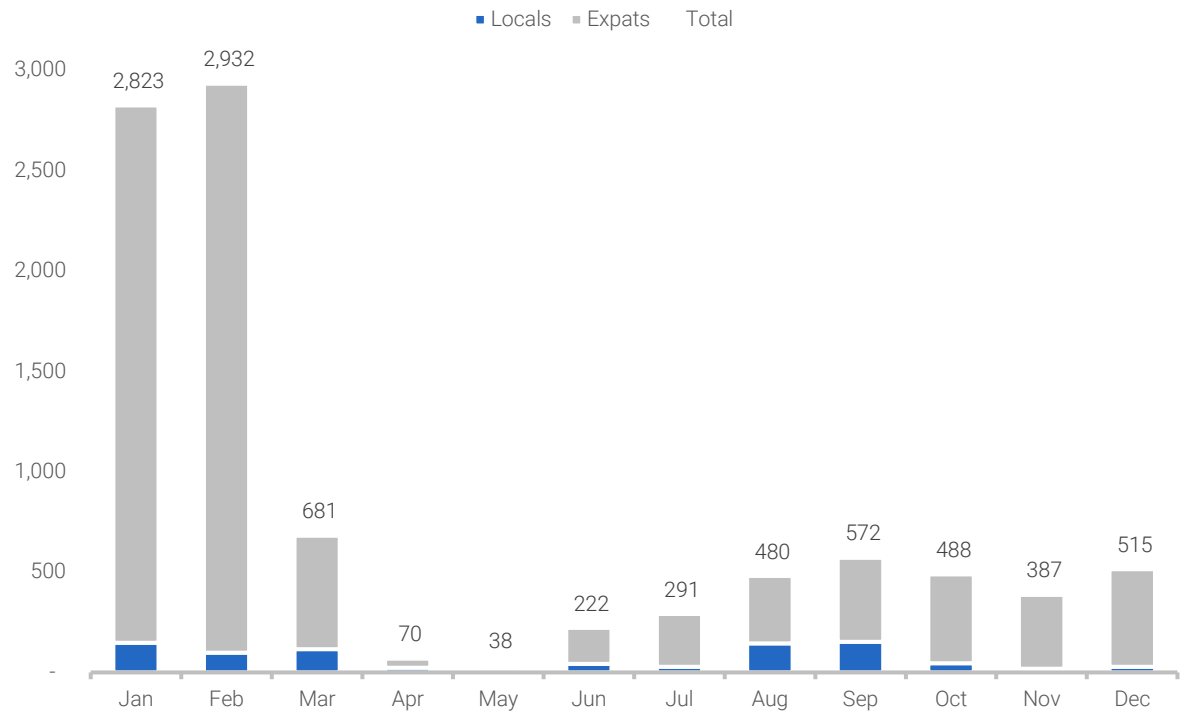


Figure 5-21: HIV screened for pre-employment by age groups, 2020

The pre-employment purposes test over the year 2020 peaked in January and February before the COVID-19 community spread. The marked drop in testing April onwards is an effect of international travel restrictions as a response to the COVID-19 pandemic.

Figure 5-22: Trend of pre-employment HIV testing, 2020



5.4.3 BLOOD DONORS HIV SCREENING

The third highest numbers of HIV screening were done among blood donors with a total of 16,810, where 97% were locals and people at the age of 25 – 49 years tested most.

Figure 5-23: HIV screened blood donors by origin and gender, 2020

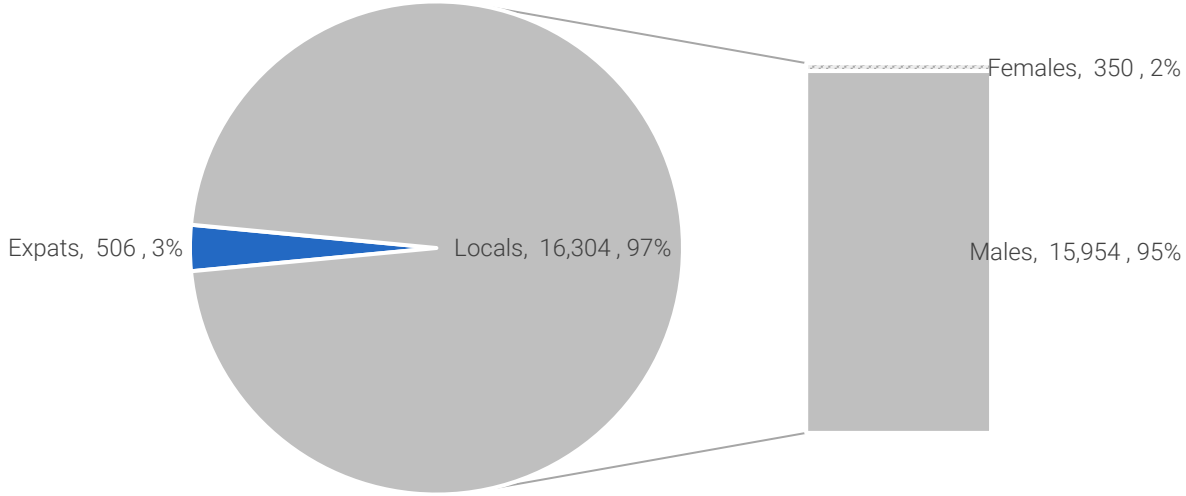
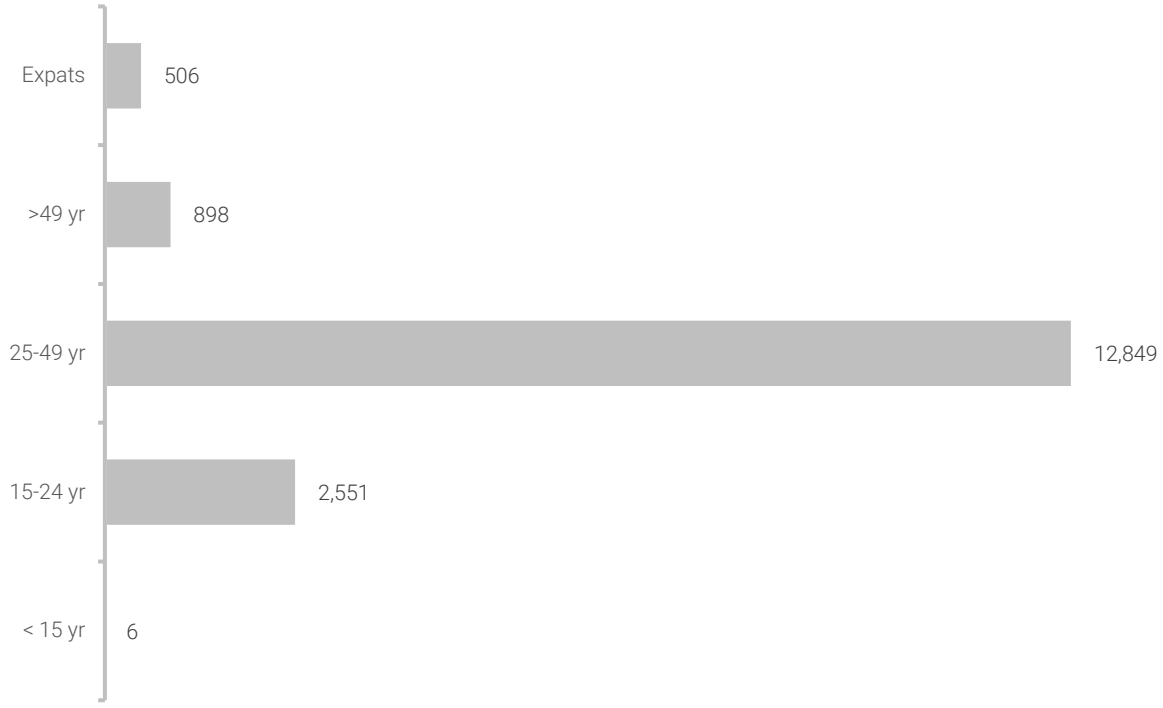
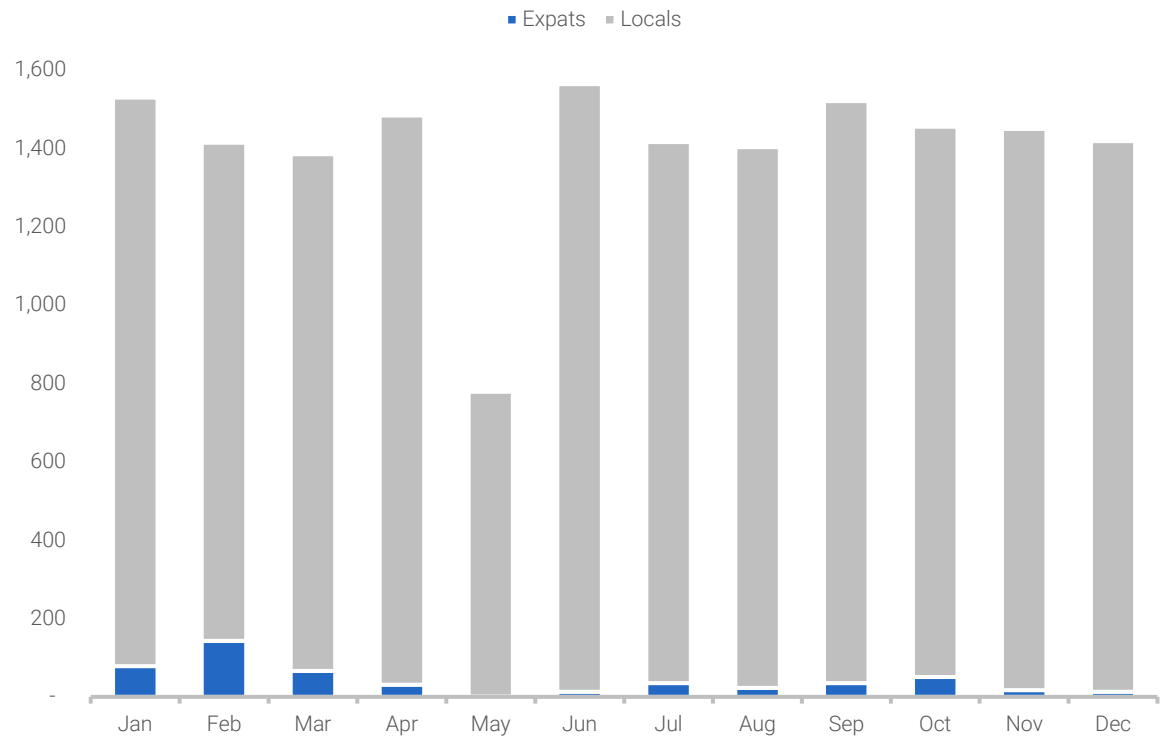


Figure 5-24: HIV screened blood donors by age groups, 2020



The blood donor testing over the year 2020 was similar across all the months except in May with almost half – this is an effect of scaled down health services to respond to the COVID-19 pandemic.

Figure 5-25: Trend of blood donor HIV testing



5.4.4 ANTENATAL-CARE (ANC) HIV SCREENING

A large number of HIV screening was also done among pregnant mother during the ANC check-up with a total of 8,703, where 99% were locals and the ages of 25 – 49 years were tested most.

Figure 5-26: HIV screened ANC patients by origin, 2020

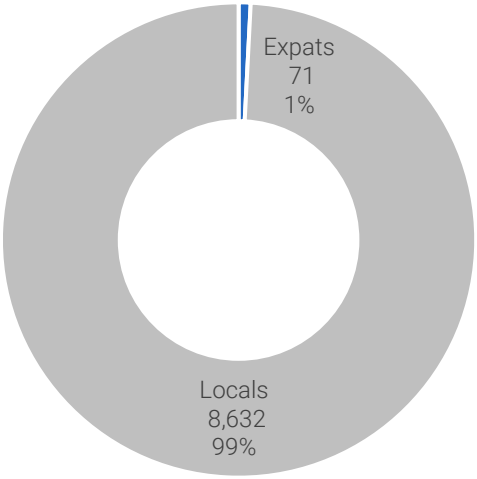
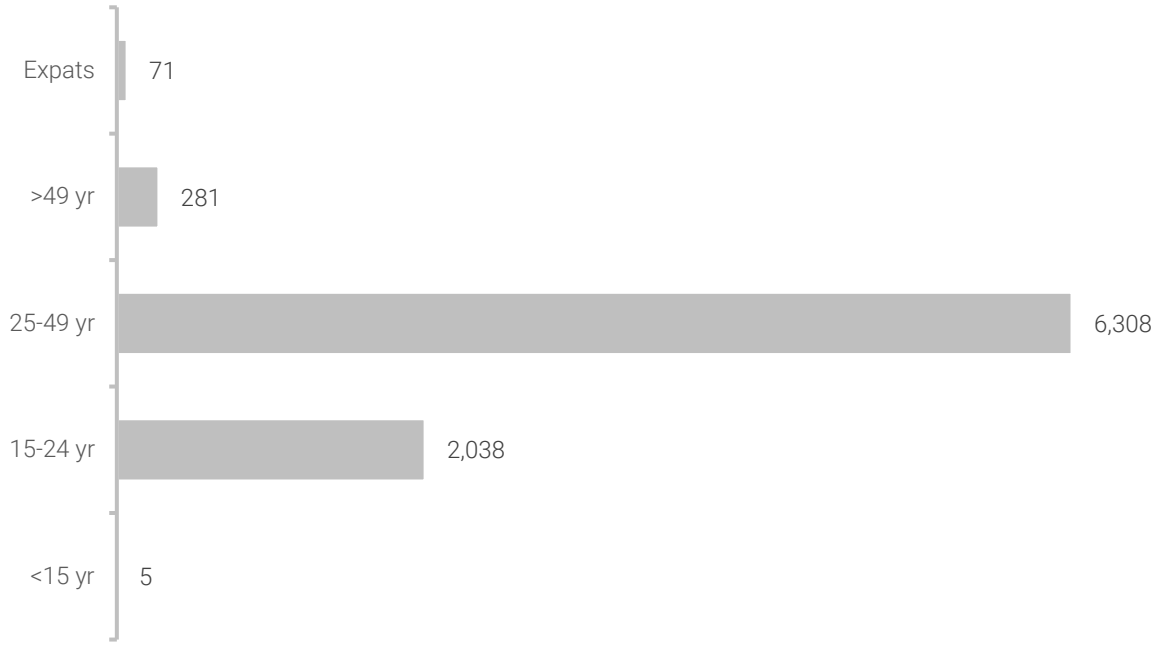
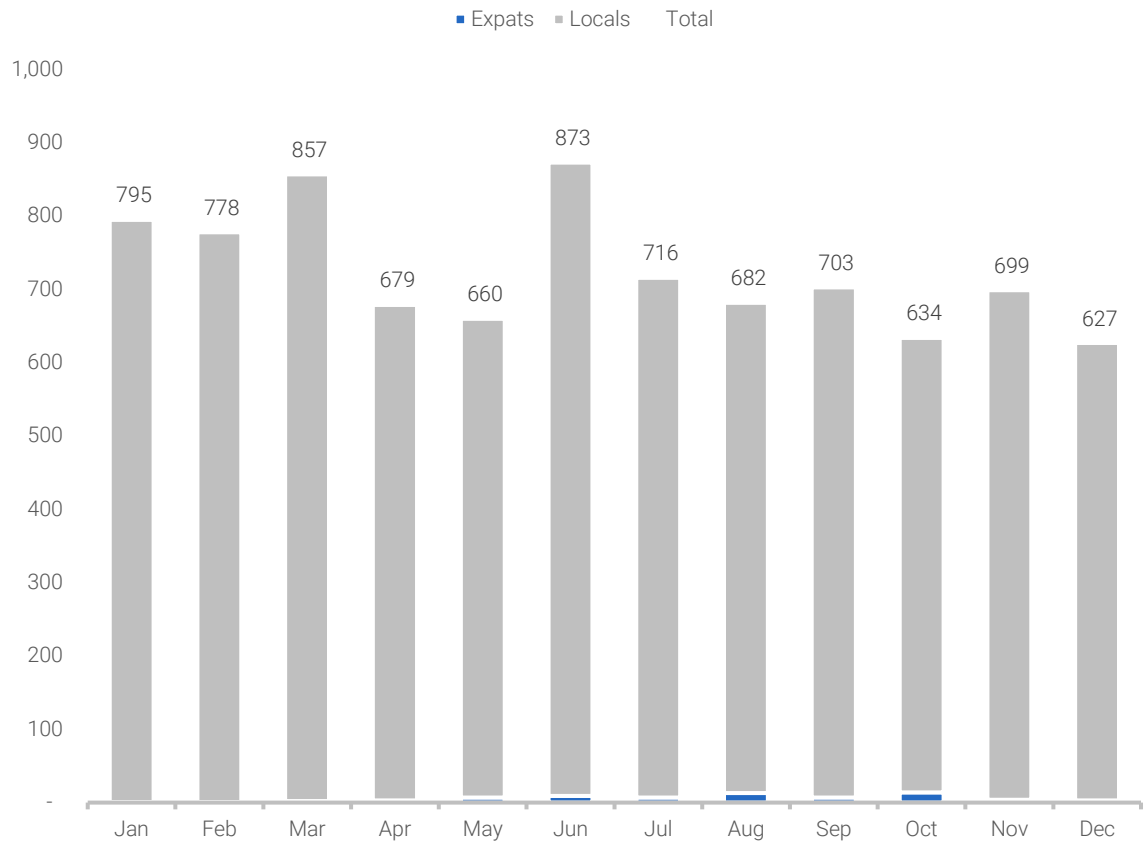


Figure 5-27: HIV screened ANC patients by age groups, 2020



The ANC patients test over the year 2020 was similar across all the months.

Figure 5-28: Trend of ANC patient HIV testing, 2020



5.4.5 OTHER HIV SCREENING

The last HIV screening category discussed here is a combination of Thalassemic (154), IDU users (54), self-referred (31) and STI patients (7) where all the categories included only locals.

Figure 5-29: HIV screened other patients by gender, 2020

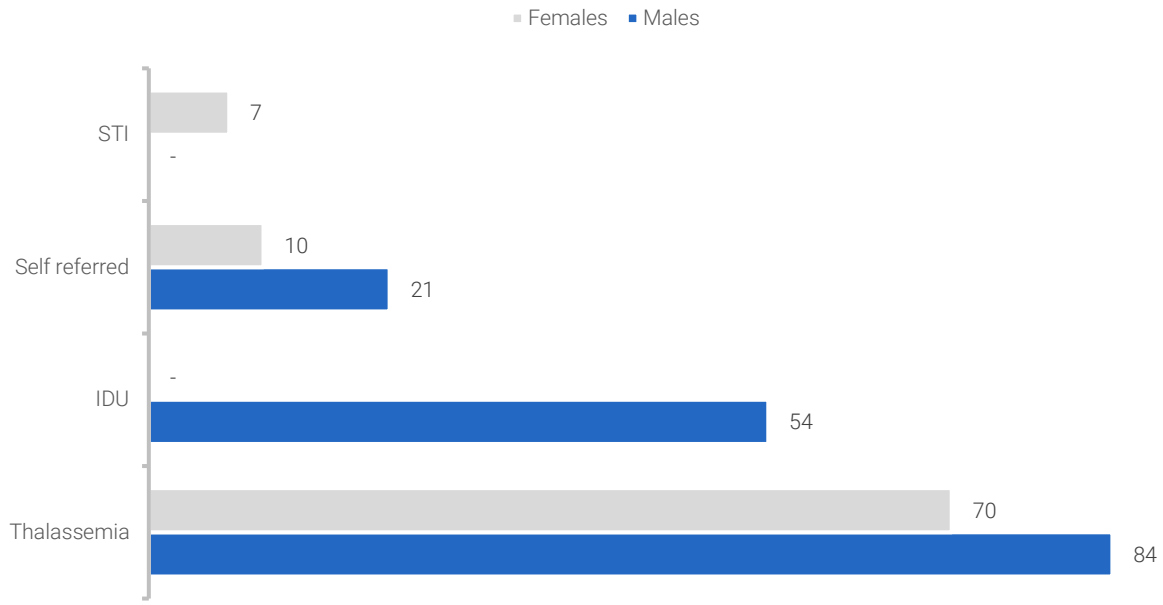
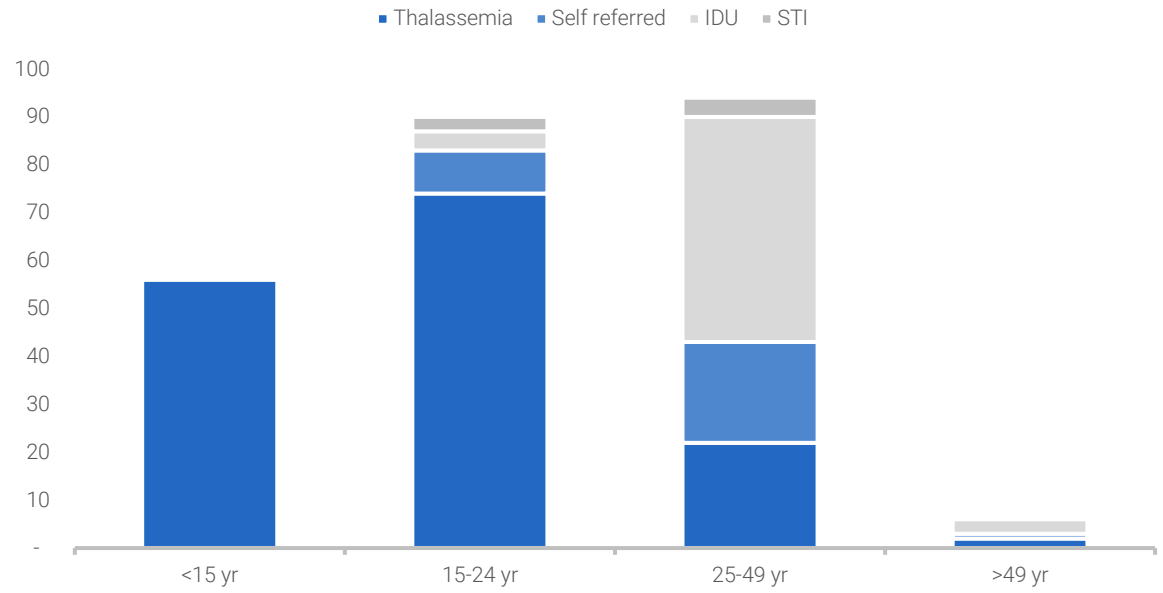
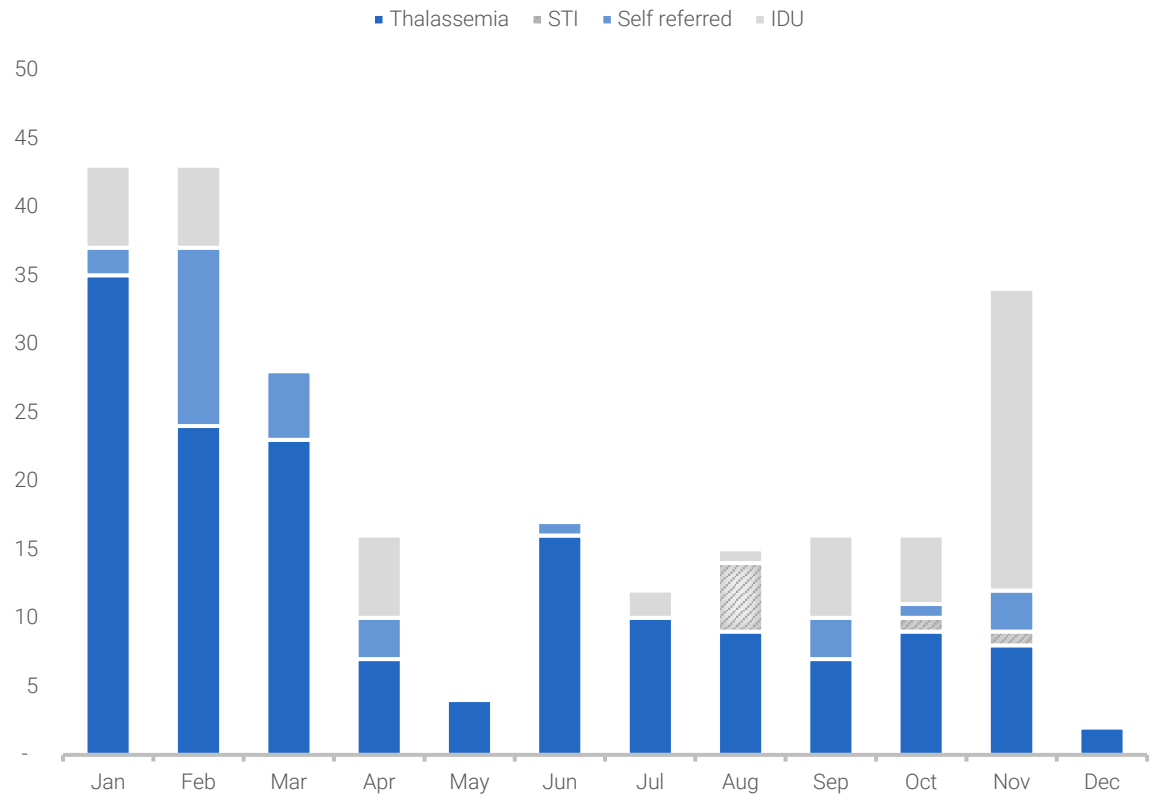


Figure 5-30: HIV screened other groups, 2020



This is other tests showing a reduction particularly in May, but also reduced till end of year except for IDUs which picked up since September – this may be related to reduced services in response to the pandemic.

Figure 5-31: Trend of other groups HIV testing, 2020



5.5 SEXUALLY TRANSMITTED INFECTIONS (STIs)

The National Program[22] at Health Protection Agency monitors STIs based on three indications (Ministry of Health and Family 2013). These are;

1. Vaginal Discharge Syndrome
2. Urethral Discharge Syndrome
3. Genital Ulcers in males and females

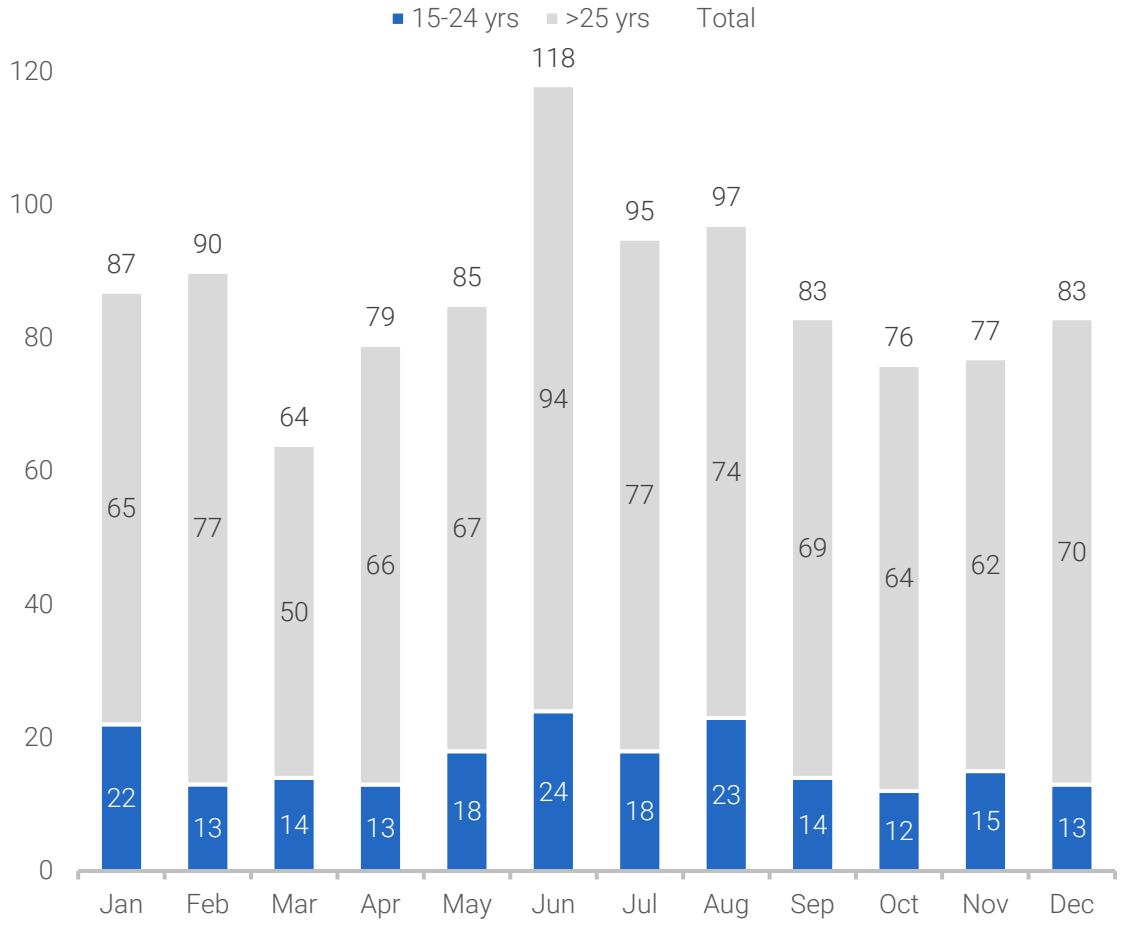
The highest number of reported STI was vaginal discharge syndrome (1,034) for females and urethral discharge syndrome (18) for males. Number of reported ulcers for females in 2020 is three (3) while for males is one. STI reporting did not show marked variation during the year despite health services disruptions due to COVID-19 during the year.

Figure 5-32: Definitions of the STI terms used, 2020

	Syndrome	Criteria for diagnosis
1	Urethral Discharge syndrome	Urethral discharge in man (with or without dysuria) seen at the urethral meatus, with or without milking or expressing urethra
2	Vaginal discharge syndrome	An abnormal vaginal discharge with change in quantity, consistency, color or odour (with or without vulval burning and itching)
3	Genital Ulcer	An ulcer (visible break in the skin) on penis, scrotum or rectum in men, and in women on labia, vagina, cervix and rectum.

[22]Data source for STI section: National programme- Health Protection Agency (HPA)

Figure 5-33: Number of reported cases of vaginal discharge syndrome, 2020



5.6 FAMILY PLANNING

The contraceptive user rate for the Maldives in 17.48, from which the female population has higher usage rate (11.38) compared to males (6.10). Similarly, the contraceptive usage is high in GMR (10.23) compared to atolls (7.25) in 2020.

Figure 5-34: Contraceptive usage by gender, 2020

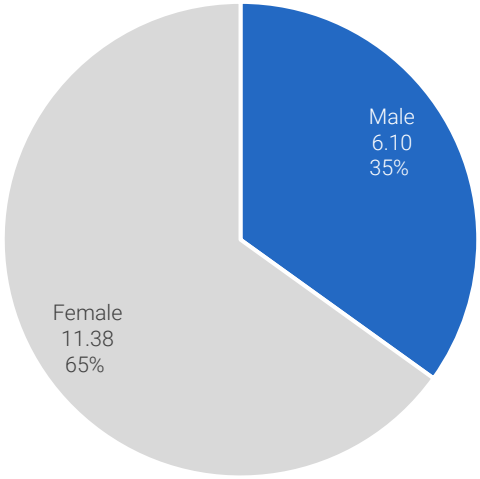
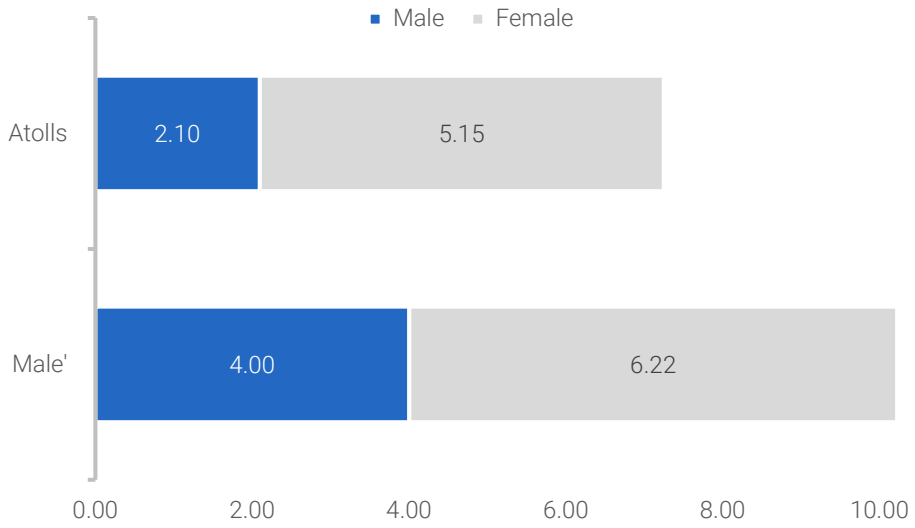
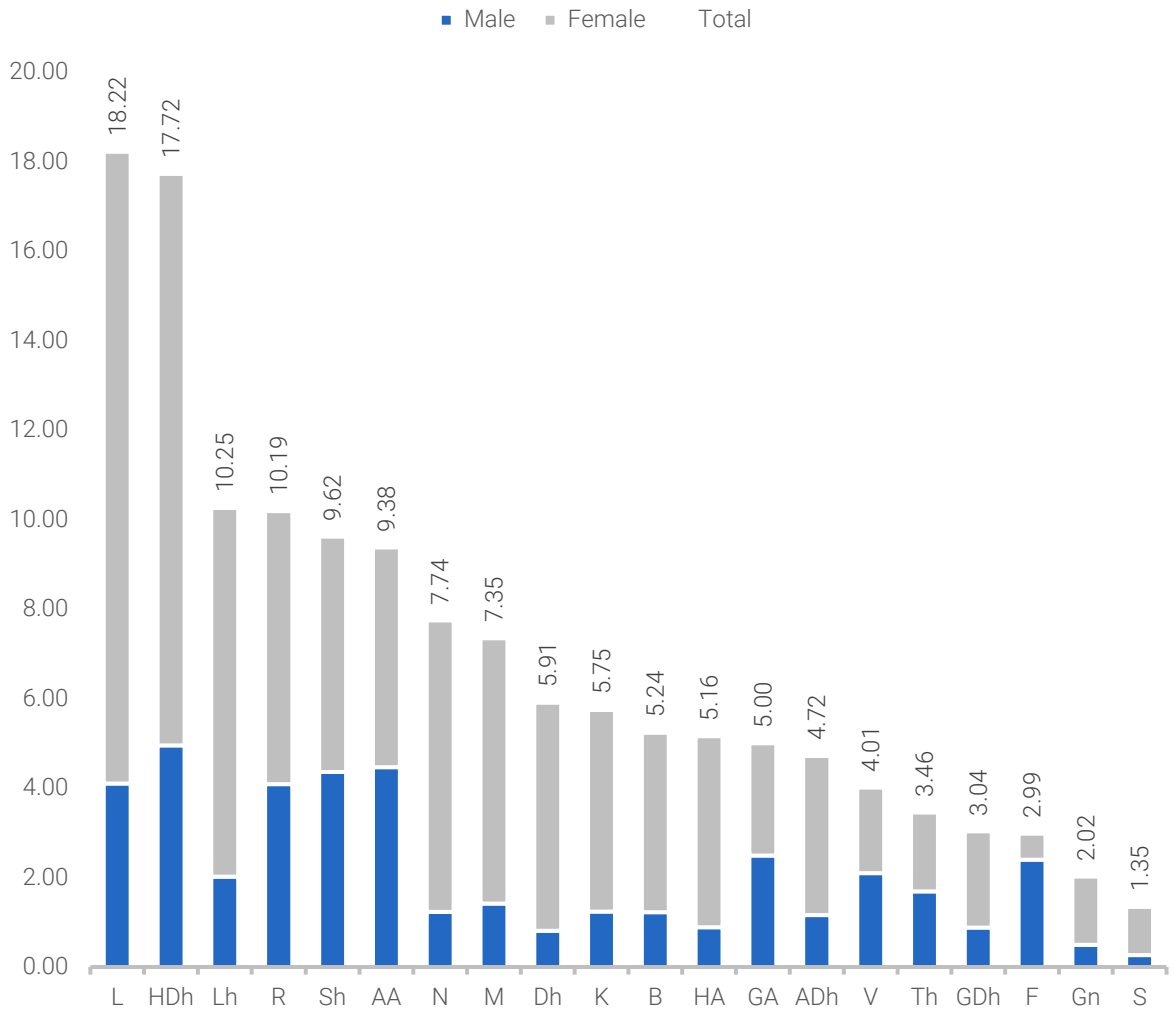


Figure 5-35: Contraceptive usage by region and gender, 2020



The highest contraceptive usage is seen from L, HDh and Lh atoll while it is lowest in S and Gn atoll.

Figure 5-36: Contraceptive usage across atolls, 2020



5.7 THALASSAEMIA

Thalassemias are the commonest single gene disorders in the world and the most common genetic disorder in Maldives (Chiruka, Darbyshire et al. 2011). Maldives has one the highest β-thalassemia prevalence rate in the world.

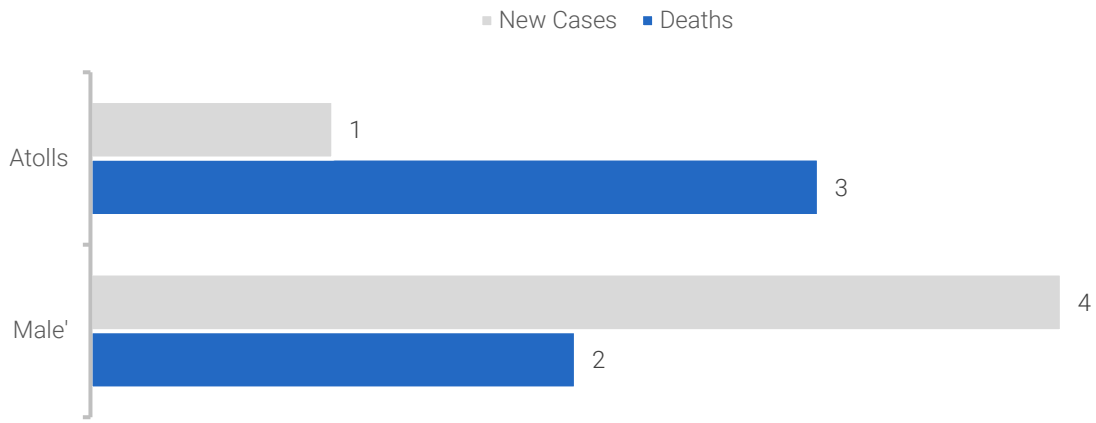
There are equal number of males and females of registered thalassemic at MBS[23], with 10 new cases and 5 deaths in 2020.

Thalassemia

"inherited autosomal recessive disorders characterized by reduced rate of hemoglobin synthesis due to a defect in α or β-globin chain synthesis"

Figure 5-37: Number of cases registered at Maldives Blood Service, 2020

Figure 5-38: Thalassemia new cases and deaths, 2020



[23]Data source: Maldives Blood Services (MBS)

While 5 thalassemia case was registered at MBS in 2020, it can be noted more patients are taking treatment in the atolls (320) compared to GMR (309).

Figure 5-39: Number of thalassemic taking treatment by region, 2020

Table 5-3: Number of new registered thalassemia cases by age group and sex, 2020

Age	Male	Female	Total
Total	1	4	5
< 1 yr	0	2	2
1 - 5	1	1	2
6 - 9	0	0	0
10 - 14	0	0	0
15 - 19	0	0	0
20 - 24	0	0	0
25 - 29	0	0	0
30+	0	1	1

5.8 ANNEXES

Table 5-4: Routine immunization coverage by atolls for the first 6 months of the child, 2020

Atoll		BCG	HepB	Pentavalent Vaccinated			BOPV		
				1st	2nd	3rd	1st	2nd	3rd
HA	Vaccinated	155	143	284	301	344	285	300	340
HA	Eligible Children	192	192	289	311	351			
HA	Coverage %	81	75	98	97	98			
HDh	Vaccinated	527	520	384	420	421	377	414	429
HDh	Eligible Children	573	573	397	428	432			
HDh	Coverage %	92	90.8	96.7	98.1	97.5			
Sh	Vaccinated	139	139	248	252	259	246	254	260
Sh	Eligible Children	143	143	251	257	263			
Sh	Coverage %	97	97	99	98	99			
N	Vaccinated	54	54	227	206	197	224	203	195
N	Eligible Children	59	59	231	215	203			
N	Coverage %	91.5	91.5	98.3	95.8	97			
R	Vaccinated	381	382	342	358	358	342	364	353
R	Eligible Children	390	390	347	362	365			
R	Coverage %	98	98	99	99	98			
B	Vaccinated	135	135	190	183	175	187	183	176
B	Eligible Children	152	152	195	187	181			
B	Coverage %	88.8	88.8	97.4	97.9	96.7			
Lh	Vaccinated	206	206	159	168	164	159	168	164
Lh	Eligible Children	208	208	163	171	170			
Lh	Coverage %	99	99	98	98	97			
K	Vaccinated	26	28	214	214	220	213	215	219
K	Eligible Children	31	31	219	221	224			
K	Coverage %	83.9	90.3	97.7	96.8	98.2			
AA	Vaccinated	68	69	126	136	133	131	136	142
AA	Eligible Children	72	72	129	138	135			
AA	Coverage %	94	96	98	99	99			
ADh	Vaccinated	118	118	169	182	177	165	180	175
ADh	Eligible Children	119	119	171	183	179			
ADh	Coverage %	99.2	99.2	98.8	99.5	98.9			
V	Vaccinated	-	-	25	32	29	34	32	29
V	Eligible Children	-	-	29	35	32			
V	Coverage %	-	-	86	91	91			

Atoll		BCG	HepB	Pentavalent Vaccinated			BOPV		
				1st	2nd	3rd	1st	2nd	3rd
M	Vaccinated	72	72	82	85	93	82	85	93
M	Eligible Children	72	72	82	85	93			
M	Coverage %	100	100	100	100	100			
F	Vaccinated	130	130	82	100	134	82	100	133
F	Eligible Children	130	130	82	100	134			
F	Coverage %	100	100	100	100	100			
Dh	Vaccinated	63	75	92	86	99	83	92	95
Dh	Eligible Children	63	63	92	86	99			
Dh	Coverage %	100	119	100	100	100			
Th	Vaccinated	39	39	158	164	183	158	164	184
Th	Eligible Children	41	41	162	167	186			
Th	Coverage %	95	95	98	98	98			
L	Vaccinated	232	245	261	292	293	261	292	293
L	Eligible Children	232	232	263	295	296			
L	Coverage %	100	105.6	99.2	99	99			
GA	Vaccinated	47	46	158	156	185	168	180	173
GA	Eligible Children	67	67	163	166	189			
GA	Coverage %	70	69	97	94	98			
GDh	Vaccinated	144	144	224	240	219	223	235	227
GDh	Eligible Children	144	144	224	240	220			
GDh	Coverage %	100	100	100	100	99.5			
Gn	Vaccinated	135	135	162	157	159	162	157	158
Gn	Eligible Children	134	134	163	157	159			
Gn	Coverage %	101	101	99	100	100			
S	Vaccinated	283	285	338	332	295	342	332	302
S	Eligible Children	232	232	340	338	296			
S	Coverage %	122	122.8	99.4	98.2	99.7			
GMR	Vaccinated	3,147	3,169	2,030	1,974	1,968	1,960	1,967	1,971
GMR	Eligible Children	3,129	3,129	2,130	1,989	1,978			
GMR	Coverage %	101	101	95	99	100			
Total	Total Vaccinated	6101	6134	5955	6038	6105	5884	6053	6111
Total	Total Eligible	6183	6183	6122	6131	6185	6122	6131	6185
Total	**Coverage %**	**98.7**	**99.2**	**97.3**	**98.5**	**98.7**	**96.1**	**98.7**	**98.8**

Table 5-5: Routine immunization coverage by atolls for the first 6 months of the child, 2020

Atoll		IPV	MR	MMR	DPT Booster	HPV		Td	
						1st	2nd	1st	2nd
HA	Vaccinated	334	549	570	804	667	658	55	55
HA	Eligible Children		356	220	815			56	56
HA	Coverage %		154	259	99			98	98
HDh	Vaccinated	422	459	378	370	76	73	53	53
HDh	Eligible Children		287	357	378			53	53
HDh	Coverage %		159.93	105.88	97.88			100	100
Sh	Vaccinated	261	284	258	268	163	148	34	34
Sh	Eligible Children		147	164	273			34	34
Sh	Coverage %		193	157	98			100	100
N	Vaccinated	195	225	213	239	108	118	70	69
N	Eligible Children		152	168	245			71	71
N	Coverage %		148.03	126.79	97.55			98.59	97.18
R	Vaccinated	352	634	385	407	159	152	56	57
R	Eligible Children		351	347	415			57	57
R	Coverage %		181	111	98			98	100
B	Vaccinated	177	347	197	209	86	80	98	97
B	Eligible Children		213	174	215			98	98
B	Coverage %		162.91	113.07	97.21			100	98.98
Lh	Vaccinated	165	233	170	137	79	73	29	29
Lh	Eligible Children		162	175	157			30	30
Lh	Coverage %		144	97	87			97	97
K	Vaccinated	219	289	252	243	90	87	114	115
K	Eligible Children		119	197	257			115	115
K	Coverage %		242.86	127.92	94.55			99.13	100
AA	Vaccinated	137	224	147	131	58	61	35	34
AA	Eligible Children		157	119	135			35	35
AA	Coverage %		143	124	97			100	97
ADh	Vaccinated	174	292	242	212	102	95	32	31
ADh	Eligible Children		157	132	218			32	32
ADh	Coverage %		185.99	183.33	97.25			100	96.88
V	Vaccinated	30	42	24	12	30	27	10	9
V	Eligible Children		28	21	13			10	10
V	Coverage %		150	114	92			100	90
M	Vaccinated	93	109	100	63	37	32	73	76
M	Eligible Children		78	83	65			76	76
M	Coverage %		139.74	121.17	96.92			96.05	100

Atoll		IPV	MR	MMR	DPT Booster	HPV		Td	
						1st	2nd	1st	2nd
F	Vaccinated	135	115	96	172	14	10	53	53
F	Eligible Children		78	88	178			54	54
F	Coverage %		147	109	97			97	97
Dh	Vaccinated	99	217	110	100	69	61	106	107
Dh	Eligible Children		154	72	105			109	109
Dh	Coverage %		140.91	152.33	95.24			97.25	98.17
Th	Vaccinated	174	372	288	203	102	99	16	15
Th	Eligible Children		227	237	205			17	17
Th	Coverage %		164	122	99			93	87
L	Vaccinated	293	439	276	281	107	103	96	95
L	Eligible Children		289	247	286			97	97
L	Coverage %		151.9	111.74	98.25			98.94	97.91
GA	Vaccinated	182	207	174	146	49	47	420	411
GA	Eligible Children		157	138	148			412	412
GA	Coverage %		132	126	99			102	100
GDh	Vaccinated	225	303	253	170	53	50	169	169
GDh	Eligible Children		197	145	172			173	173
GDh	Coverage %		153.81	174.48	98.84			97.69	97.69
Gn	Vaccinated	158	315	238	193	28	27	73	74
Gn	Eligible Children		254	154	198			76	76
Gn	Coverage %		124	155	97			96	97
S	Vaccinated	298	687	666	834	301	304	260	260
S	Eligible Children		412	266	840			265	265
S	Coverage %		166.75	250.45	99.29			98.11	98.11
GMR	Vaccinated	2,029	3,160	6,037	446	36	34	705	709
GMR	Eligible Children		2,157	3,584	1,269			715	715
GMR	Coverage %		147	168	35			99	99
Total	Total Vaccinated	6152	9502	11074	5640	2414	2339	2557	2552
Total	Total Eligible	6185	6132	7087	6587	2427	2427	2586	2586
Total	**Coverage %**	**99.5**	**155.0**	**156.3**	**85.6**	**99.5**	**96.4**	**98.9**	**98.7**

Table 5-6: Vitamin A and Deworming Given Population by Atoll, 2020

	Vitamin A 1st round		Vitamin A 2nd round		Deworming 1st round		Deworming 2nd round	
Atoll	2-5 yrs	5-13 yrs	2-5 yrs	5-13 yrs	2-5 yrs	5-13 yrs	2-5 yrs	5-13 yrs
HA	981	150	973	150	981	84	981	84
HDH	1,410	997	1,353	1,102	1,394	998	1,431	682
SH	755	-	828	2,440	659	-	848	2,415
N	617	1,442	617	1,442	584	1,417	584	1,417
R	899	5	1,043	2,724	935	5	1,135	2,706
B	645	-	180	410	-	-	180	410
LH	443	564	571	1,247	456	678	529	1,235
K	597	479	238	599	468	513	255	401
AA	492	1,183	459	1,265	521	1,147	488	1,307
A.DH	527	24	518	1,547	499	16	522	1,481
V	80	229	70	31	225	225	76	201
M	267	194	267	194	268	194	268	194
F	273	812	275	930	306	786	306	780
DH	285	447	477	918	285	447	470	871
TH	811	1,941	815	-	811	1,943	815	815
L	893	997	893	997	850	1,069	850	1,069
GA	554	1,200	638	1,504	554	1,200	563	1,194
GDH	1,411	2,468	1,114	1,681	1,413	2,435	1,069	1,617
Gn	164	-	279	1,410	141	-	198	1,208
S	59	723	229	450	127	658	212	450
Male' schools	-	-	-	-	-	-	-	-
Male' city HF	1,969	-	1,378	-	1,838	-	1,318	-
Sub total	**14,132**	**13,855**	**13,215**	**21,041**	**13,315**	**13,815**	**13,098**	**20,537**
Population	**28,811**	**63,375**	**28,811**	**63,375**	**28,811**	**63,375**	**28,811**	**63,375**

Table 5-7: Surveillance diseases by atoll, 2020

Row Labels	Acute Respiratory Infection (ARI)	Viral Fever	Acute Gastroenteritis (AGE)	Conjunctivitis	Chicken pox	Dengue	Measles	Hand-foot-mouth disease (HFMD)	Total
GMR	32,691	13,406	4,962	2,083	254	72	137	31	53,636
HDh	6,085	2,631	1,005	975	39	132	8	15	10,890
R	7,029	1,701	975	1,031	70	6	6	1	10,819
L	4,981	1,565	1,069	1,229	72	6		14	8,936
B	4,346	1,475	590	506	38	19	3	2	6,979
ADh	5,023	913	769	109	29	12	4	-	6,859
S	5,393	574	413	276	50	5	14	36	6,761
HA	4,268	1,196	372	385	52	3	13	9	6,298
Th	3,933	765	447	374	15	7	10	8	5,559
Lh	3,641	56	689	290	24	6	12	-	4,718
Sh	3,070	754	507	189	29	7	4	1	4,561
K	2,068	1,016	620	246	37	1	5	1	3,994
Dh	2,694	677	274	126	16	16	1	2	3,806
Gn	2,221	164	453	392	12	-	1	-	3,243
AA	1,106	1,343	512	161	16	6	3	5	3,152
N	1,938	680	251	216	23	19	2	1	3,130
F	1,937	550	402	127	2	-	1	16	3,035
GDh	1,644	535	180	104	25	7	9	16	2,520
M	1,654	255	156	66	6	2	3	5	2,147
GA	887	461	239	69	9	2	7	-	1,674
V	50	89	7	34	-	-	-	-	180
Total	**96,659**	**30,806**	**14,892**	**8,988**	**818**	**328**	**243**	**163**	**152,897**

Table 5-8: Surveillance diseases by month, 2020

Values	Acute Gastroenteritis (AGE)	Acute Respiratory Infection (ARI)	Chicken pox	Conjunctivitis	Hand-foot-mouth disease (HFMD)	Viral Fever	Dengue	Measles	Grand Total
January	4,366	22,414	211	1,453	75	7,263	70	151	36,003
February	1,656	19,633	141	1,153	29	4,542	50	48	27,252
March	1,214	16,994	193	1,019	48	3,514	40	21	23,043
April	672	5,144	36	431	2	1,611	14	4	7,914
May.	991	2,856	49	401	-	1,430	22	2	5,751
June	838	2,296	30	619	1	1,285	30	8	5,107
July	987	3,074	17	608	2	2,033	29	4	6,754
August	919	2,967	25	624	1	2,167	21	4	6,728
September	767	3,154	28	601	-	1,557	12	1	6,120
October	1,003	5,782	31	644	-	2,251	8	-	9,719
November	808	5,082	24	692	4	1,541	16	-	8,167
December	671	7,263	33	743	1	1,612	16	-	10,339

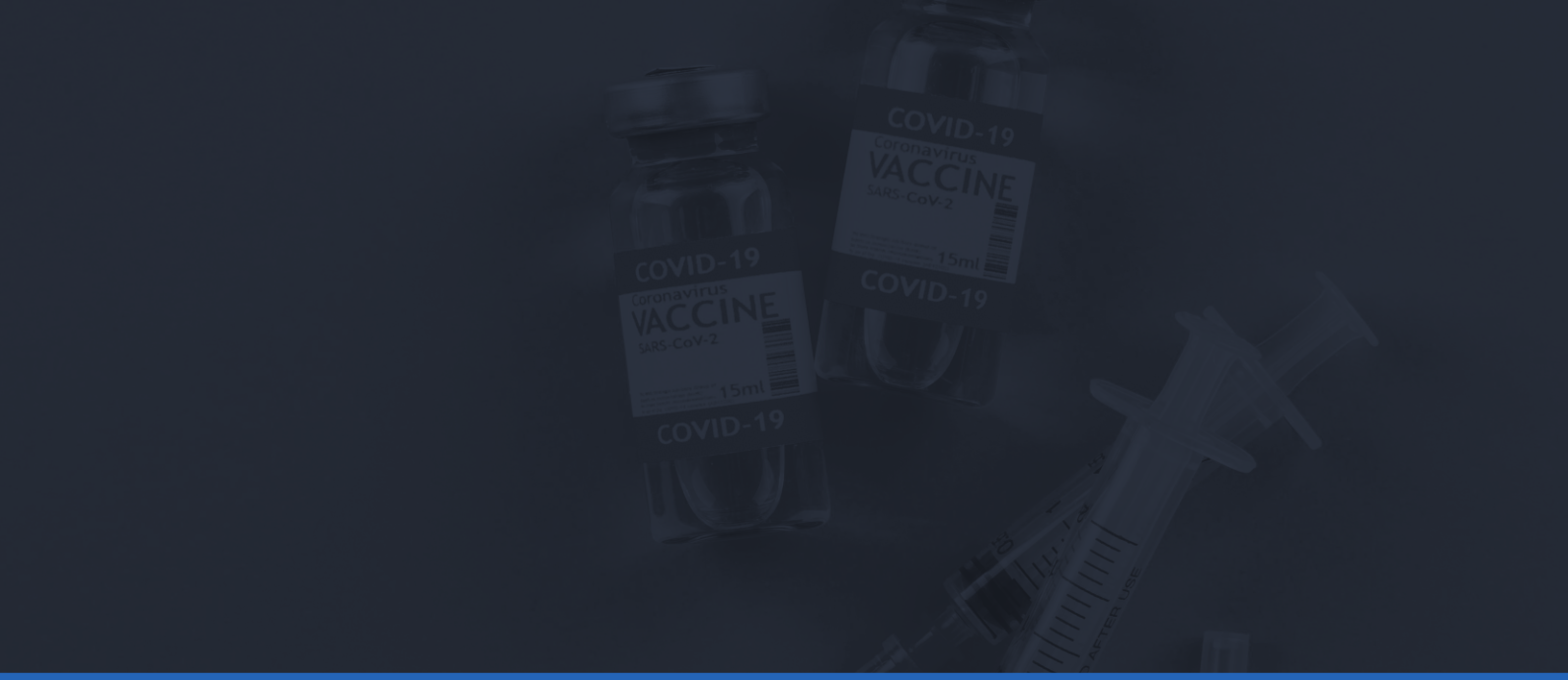
Table 5-9: HIV tests by age group, gender and origin, 2020

Age group/ Gender	ANC	Blood Donor	IDU	Other	Pre-employment	Self-referred	STI	Thalassemia
Jan								
<15 yrs. Males	-	-	-	220	1	-	-	8
<15 yrs Females	-	-	-	37	-	-	-	5
15-25 yrs Males	-	212	-	228	8	1	-	8
15-45 yrs Females	178	15	-	195	8	-	-	5
25-49 yrs Males	-	1,153	6	610	97	1	-	5
25- 49 yrs Females	592	14	-	547	21	-	-	4
>49 yr Males	-	56	-	377	9	-	-	-
>49 yr Females	24	1	-	339	3	-	-	-
Expats tested	1	78	-	697	2,676	-	-	-
Total Positives	-	-	-	-	3	-	-	-
Feb								
<15 yrs Males	-	-	-	197	-	-	-	4
<15 yrs Females	-	-	-	36	-	-	-	5
15-25 yrs Males	-	165	-	167	8	1	-	5
15-45 yrs Females	170	19	-	147	7	2	-	5
25-49 yrs Males	-	995	6	459	52	9	-	2
25- 49 yrs Females	575	22	-	509	24	-	-	3
>49 yr Males	-	70	-	326	8	1	-	-
>49 yr Females	32	-	-	284	-	-	-	-
Expats tested	1	143	-	415	2,833	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Mar								
<15 yrs Males	-	-	-	60	-	-	-	5
<15 yrs Females	1	-	-	25	-	-	-	6
15-25 yrs Males	-	181	-	153	12	1	-	5
15-45 yrs Females	209	12	-	121	5	1	-	3
25-49 yrs Males	-	1,058	-	355	72	2	-	-
25- 49 yrs Females	610	15	-	364	20	1	-	3
>49 yr Males	-	52	-	268	7	-	-	1
>49 yr Females	35	-	-	216	-	-	-	-
Expats tested	2	66	-	141	565	-	-	-
Total Positives	-	-	-	1	-	-	-	-
Apr								
<15 yrs Males	-	-	-	10	1	-	-	2
<15 yrs Females	-	-	-	6	-	-	-	3
15-25 yrs Males	-	234	-	26	-	-	-	1
15-45 yrs Females	141	12	-	29	5	-	-	1
25-49 yrs Males	-	1,073	6	101	14	3	-	-
25- 49 yrs Females	516	5	-	118	1	-	-	-
>49 yr Males	-	105	-	87	2	-	-	-
>49 yr Females	19	23	-	91	-	-	-	-

Age group/ Gender	ANC	Blood Donor	IDU	Other	Pre-employment	Self-referred	STI	Thalassemia
Expats tested	3	31	-	163	47	-	-	-
Total Positives	-	-	-	-	-	-	-	-
May								
<15 yrs Males	-	-	-	20	-	-	-	1
<15 yrs Females	-	-	-	7	-	-	-	1
15-25 yrs Males	-	103	-	14	5	-	-	1
15-45 yrs Females	157	2	-	13	8	-	-	-
25-49 yrs Males	-	595	-	78	5	-	-	-
25- 49 yrs Females	477	1	-	65	-	-	-	1
>49 yr Males	-	76	-	72	2	-	-	-
>49 yr Females	19	-	-	69	-	-	-	-
Expats tested	7	1	-	36	18	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Jun								
<15 yrs Males	-	-	-	41	1	-	-	3
<15 yrs Females	1	-	-	22	-	-	-	3
15-25 yrs Males	-	215	-	40	-	-	-	6
15-45 yrs Females	242	18	-	73	4	-	-	3
25-49 yrs Males	-	1,204	-	189	27	1	-	1
25- 49 yrs Females	592	24	-	186	7	-	-	-
>49 yr Males	-	89	-	162	1	-	-	-
>49 yr Females	29	-	-	160	2	-	-	-
Expats tested	9	13	-	14	180	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Aug								
<15 yrs Males	-	-	-	52	3	-	-	1
<15 yrs Females	1	1	-	20	1	-	-	-
15-25 yrs Males	-	178	-	72	3	-	-	4
15-45 yrs Females	159	4	-	94	2	-	1	3
25-49 yrs Males	-	1,081	1	213	83	-	-	-
25- 49 yrs Females	486	11	-	282	37	-	4	1
>49 yr Males	-	104	-	235	14	-	-	-
>49 yr Females	23	-	-	193	1	-	-	-
Expats tested	13	23	-	126	336	-	-	-
Total Positives	-	-	-	1	-	-	-	-
Sep								
<15 yrs Males	-	-	-	49	-	-	-	2
<15 yrs Females	-	-	-	22	2	-	-	1
15-25 yrs Males	-	180	2	63	9	1	-	2
15-45 yrs Females	123	5	-	66	4	2	-	2
25-49 yrs Males	-	1,194	4	222	84	-	-	-
25- 49 yrs Females	547	10	-	219	27	-	-	-
>49 yr Males	-	96	-	282	23	-	-	-

Age group/ Gender	ANC	Blood Donor	IDU	Other	Pre-employment	Self-referred	STI	Thalassemia
>49 yr Females	26	-	-	200	3	-	-	-
Expats tested	7	35	-	162	420	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Oct								
<15 yrs Males	-	-	-	52	-	-	-	2
<15 yrs Females	-	-	-	37	-	-	-	2
15-25 yrs Males	-	218	-	67	2	-	-	3
15-45 yrs Females	148	9	-	87	2	-	1	1
25-49 yrs Males	-	1,073	5	271	27	-	-	-
25- 49 yrs Females	451	15	-	245	9	1	-	1
>49 yr Males	-	89	-	292	5	-	-	-
>49 yr Females	21	-	-	240	1	-	-	-
Expats tested	14	51	-	51	442	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Nov								
<15 yrs Males	-	-	-	185	-	-	-	1
<15 yrs Females	2	-	-	43	-	-	-	-
15-25 yrs Males	-	224	1	96	3	-	-	4
15-45 yrs Females	181	8	-	106	-	-	1	3
25-49 yrs Males	-	1,104	18	324	7	-	-	-
25- 49 yrs Females	507	21	-	333	5	3	-	-
>49 yr Males	-	73	3	289	4	-	-	-
>49 yr Females	5	2	-	254	-	-	-	-
Expats tested	4	17	-	97	368	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Dec								
<15 yrs Males	-	5	-	271	-	-	-	-
<15 yrs Females	-	-	-	31	-	-	-	-
15-25 yrs Males	-	230	-	91	1	-	-	1
15-45 yrs Females	159	10	-	115	3	-	-	-
25-49 yrs Males	-	1,106	-	333	9	-	-	-
25- 49 yrs Females	450	20	-	459	15	-	-	1
>49 yr Males	-	34	-	279	-	-	-	-
>49 yr Females	15	-	-	233	1	-	-	-
Expats tested	3	13	-	58	486	-	-	-
Total Positives	-	-	-	-	-	-	-	-
Jul								
<15 yrs Males	-	-	-	62	-	-	-	1
<15 yrs Females	-	-	-	21	-	-	-	-
15-25 yrs Males	-	277	1	48	3	-	-	5
15-45 yrs Females	171	20	-	65	1	-	-	3
25-49 yrs Males	-	1,025	1	213	18	-	-	-
25- 49 yrs Females	505	30	-	130	2	-	-	-

Age group/ Gender	ANC	Blood Donor	IDU	Other	Pre-employment	Self-referred	STI	Thalassemia
>49 yr Males	-	27	-	197	3	-	-	-
>49 yr Females	33	1	-	152	1	-	-	1
Expats tested	7	35	-	27	263	-	-	-
Total Positives	-	-	-	1	-	-	-	-
Total <15 yrs Males	-	5	-	1,219	6	-	-	30
Total <15 yrs Females	5	1	-	307	3	-	-	26
Total 15-25 yrs Males	-	2,417	4	1,065	54	4	-	45
Total 15-45 yrs Females	2,038	134	-	1,111	49	5	3	29
Total 25-49 yrs Males	-	12,661	47	3,368	495	16	-	8
Total 25- 49 yrs Females	6,308	188	-	3,457	168	5	4	14
Total >49 yr Males	-	871	3	2,866	78	1	-	1
Total >49 yr Females	281	27	-	2,431	12	-	-	1
Total Expats tested	71	506	-	1,987	8,634	-	-	-
Total Positives 2020	-	-	-	3	3	-	-	-



COVID-19 IN MALDIVES

6. COVID-19 IN MALDIVES

In Maldives, the first COVID-19 case was an imported case from a traveler, following which another 19 cases were reported that were linked to imported cases from travelers. The first community case was detected on 15 April 2020 and by 5 January 2021, there have been 13,905 confirmed cases of COVID-19 with 48 deaths. Thus, this chapter is focused on presenting information on epidemiology, surveillance and health system monitoring indicators during COVID-19 pandemic in 2020.

In Maldives, the surveillance of COVID-19 cases was carried out by strengthening 3T's adopted (Test, Trace and Treat (through isolation or quarantine and care), their contacts and monitor disease trends over time.

Comprehensive national surveillance for COVID-19 required the adaptation and reinforcement of existing national systems, where appropriate, and the scale-up of additional capacities. Digital technologies for rapid reporting, contact tracing, data management and analysis supported these capacities. Robust comprehensive surveillance was maintained even in areas where transmission has been suppressed or controlled, with few or no cases. It was critical that new cases and clusters of COVID-19 infection be detected rapidly before widespread transmission occurs.

A comprehensive timeline of the timeline of measures and actions are attached with the annex.

6.1 PRIORITY INDICATORS TO BE USED TO MONITOR LOCKDOWN EASE PLAN

Following the government of Maldives decision to consider easing the lockdown which was imposed in Greater Male' Area since 15th April 2020, discussions were initiated in May 2020 to develop a lock down ease plan. This was an initiative undertaken by the National Emergency Operating Center during which it was decided to utilize a 3-phased ease approach. In order to transition from each phase, based on international guidelines, the following indicators were selected and used to measure the current COVID-19 situation of the country on a weekly basis. Each of this indicator was attached to a score that indicates the risk level imposed to the community. A cumulative score of these indicators was then used to inform policy makers whether we should move forward with ease or impose further restrictions if a particular score was maintained for 2 consecutive weeks.

Figure 6-1: Priority Ease Plan Indicators – Staging

INDICATOR	STAGE 1 (CAUTIONARY ALERT)	STAGE 2 (RESTRICTIVE MEASURES)	STAGE 3 (STRICT CONTAINMENT)
Positive Samples From Flu Clinics (Epidemiological Indicator)	5 – 9 %	10 – 19%	20 or more %
Number of COVID-19 Deaths (Epidemiological Indicator)	2 – 3 deaths in a week	4 – 6 deaths in a week	7 or more deaths in a week
Doubling Time (Epidemiological Indicator)	14 – 11 days	10 – 7 days	Less than 7 days
Percentage of Unlinked Cases (Surveillance Indicator)	20 – 29%	30 – 39%	40 or more %
Percentage of Occupied Hospital Beds (Health System Indicator)	30 – 59 %	60 – 79 %	80 or more %
ALLOCATED SCORE	**01**	**02**	**03**

Based on the score it was then decided further actions.

Figure 6-2: weekly scoring classification

SCORE	INTERPRETATION
A total score of **less than 5**	MOVE FORWARD
A total score between **5 to 9**	RESTRICTIVE MEASURES
A total score of **10 or more**	STRICT CONTAINMENT MEASURES

6.2 COVID-19 POSITIVE CASES

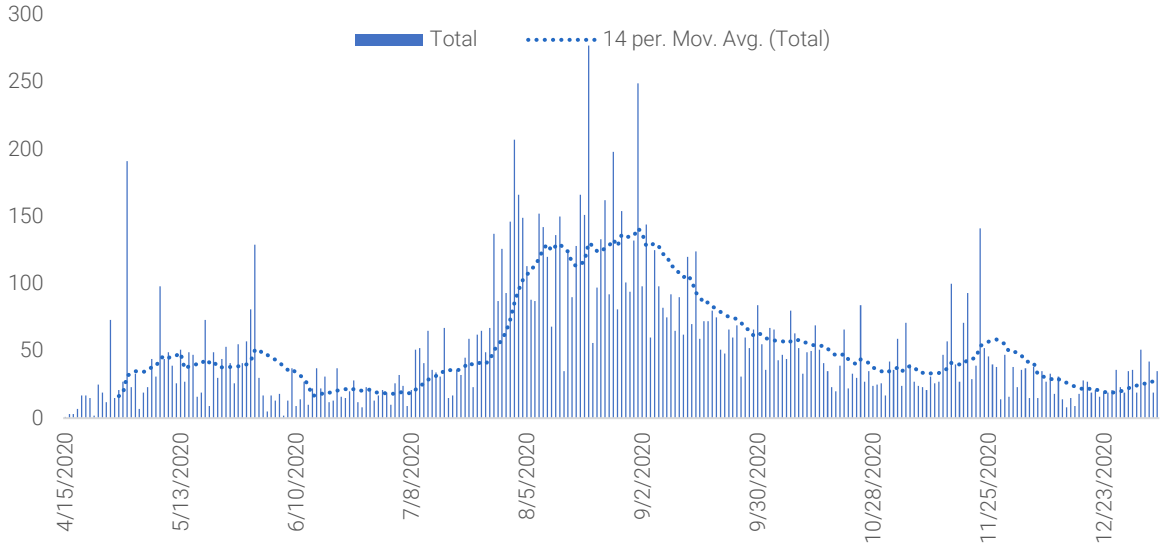
In Maldives, various tests were made available for diagnosis of COVID-19 available including RT-PCR, antigen and antibody testing.

More commonly, a nosopharyngeal swab PCR test for COVID-19 was used for diagnosing COVID-19. A positive test means determined the diagnosis of COVID-19. A negative test means you probably did not have COVID-19 at the time of the test. Thus, in this chapter data for 2020 starting from the first community case detected on 15 April 2020, is presented for 38 weeks i.e., 5 January 2021.

What is a PCR test?

PCR means polymerase chain reaction. It's a test to detect genetic material from a specific organism, such as a virus. The test detects the presence of a virus if you have the virus at the time of the test.

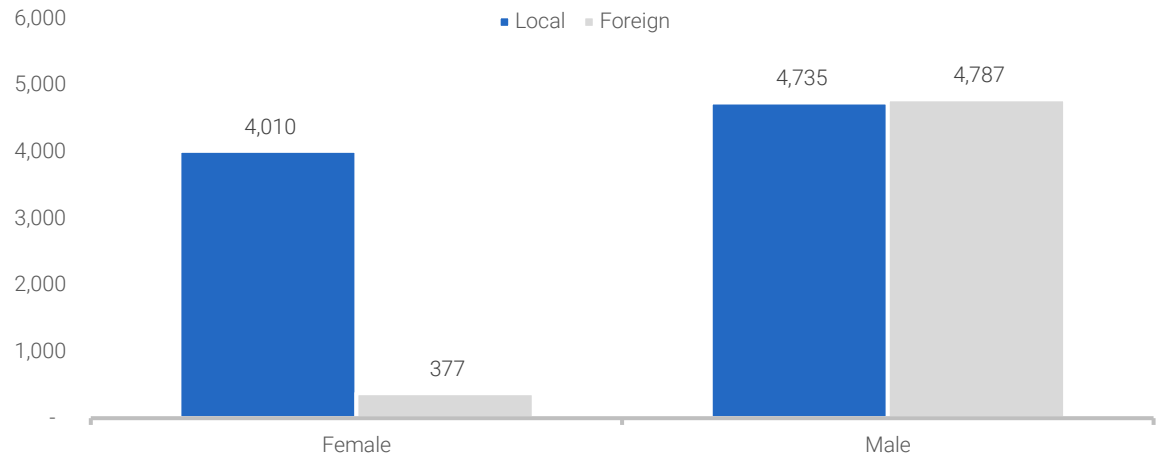
Figure 6-3: Total COVID-19 patients and 14 day moving average, 2020



The total number of positive cases showed that there were two waves in 2020, first from 15th April to 2nd June 2020 and the second wave from 8th July to 7th October 2020. The highest peak was during August to September 2020.

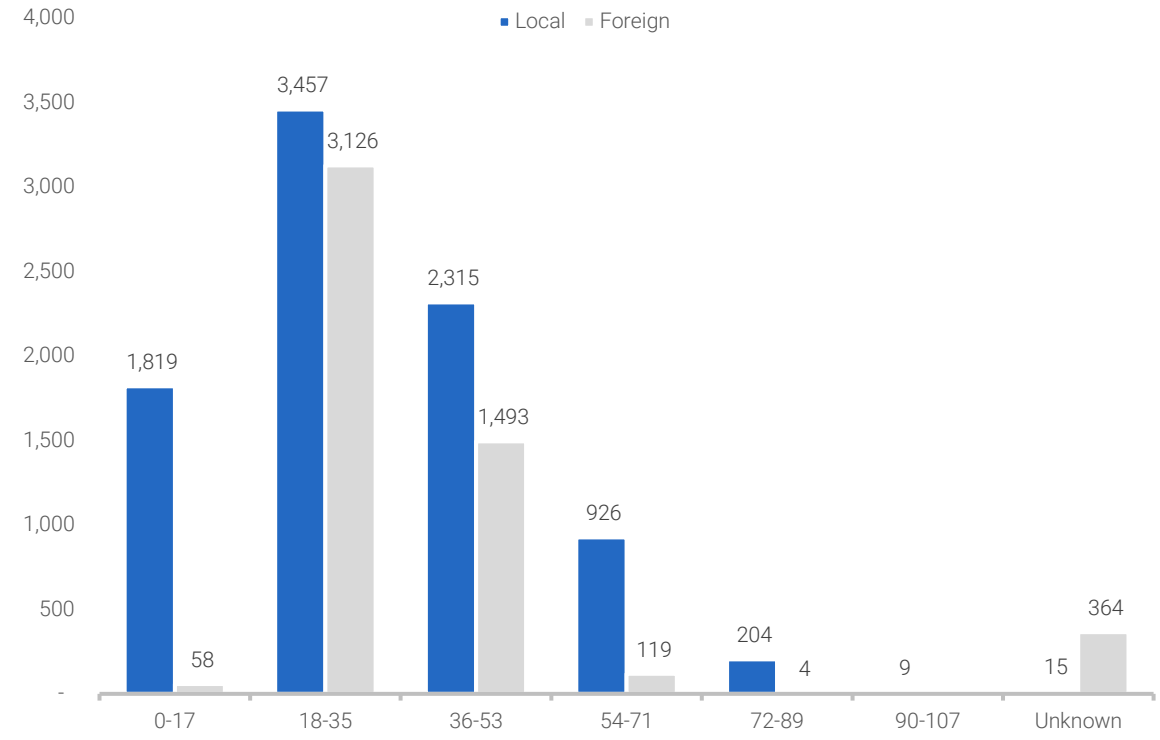
Based on the total number of cases it showed that there were more than 68% of males (9,522).

Figure 6-4: COVID-19 patients by gender and origin, 2020



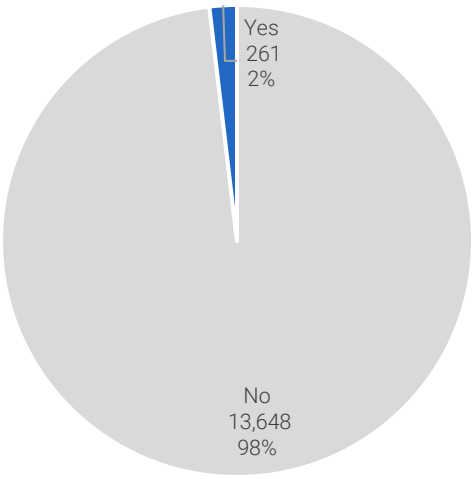
Although the number of total males is similar for both local and foreign, the total positive for local is 63%.

Figure 6-5: COVID-19 patient by age groups and origin, 2020



It is also notable that majority of the COVID-19 cases were among younger adults who had no major comorbidities and the disease was mild.

Figure 6-6: Percent of COVID-19 with comorbidities, 2020



The data for the remaining of the chapter is presented on three areas 1) Epidemiological, 2) Surveillance and 3) Health System indicators.

6.3 EPIDEMIOLOGY OF COVID-19

COVID-19 has now spread to all the atolls of Maldives. The pace at which the disease spread in 2020, since the first community spread case on 15 April 202, is unprecedented. This review of the epidemiology of COVID-19 summarizes the burden of infection, transmission dynamics, and other related epidemiological features for the Maldives.

6.3.1 FLU POSITIVITY

Flu positivity is defined as percentage of positive cases of flu samples from patients showing symptoms of flue tested positive for COVID-19 by PCR test for a given week. This is a priority indicator for monitoring and informing decisions on public health measures. The following thresholds table is used for decision making.

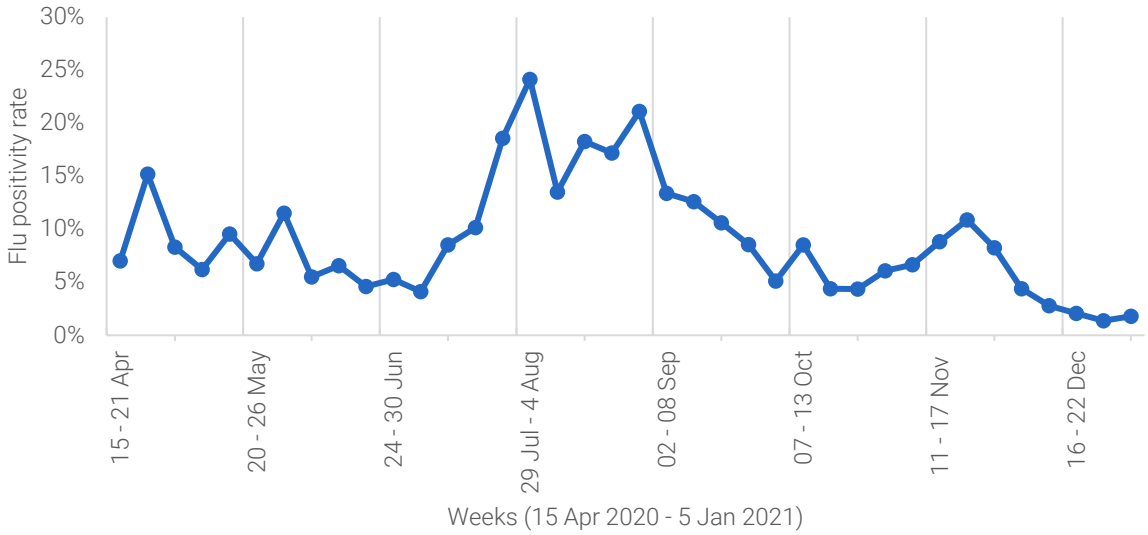
Table 6-1: Thresholds – Flu Positivity Rate for COVID-19

Threshold 1	Threshold 2	Threshold 3
1-3%	3-4%	>5%

Equation 6-1: Flu positivity for COVID-19

$$Flu\ positivity = \frac{Sum\ of\ positive\ cases\ from\ flu\ clinic\ samples\ tested\ for\ a\ given\ week}{Total\ number\ of\ flu\ clinic\ samples\ tested\ for\ a\ given\ week} x\ 100$$

Figure 6-7: Timeline of flu positivity for COVID-19 by week, 2020



6.3.2 DEATHS DUE TO COVID-19

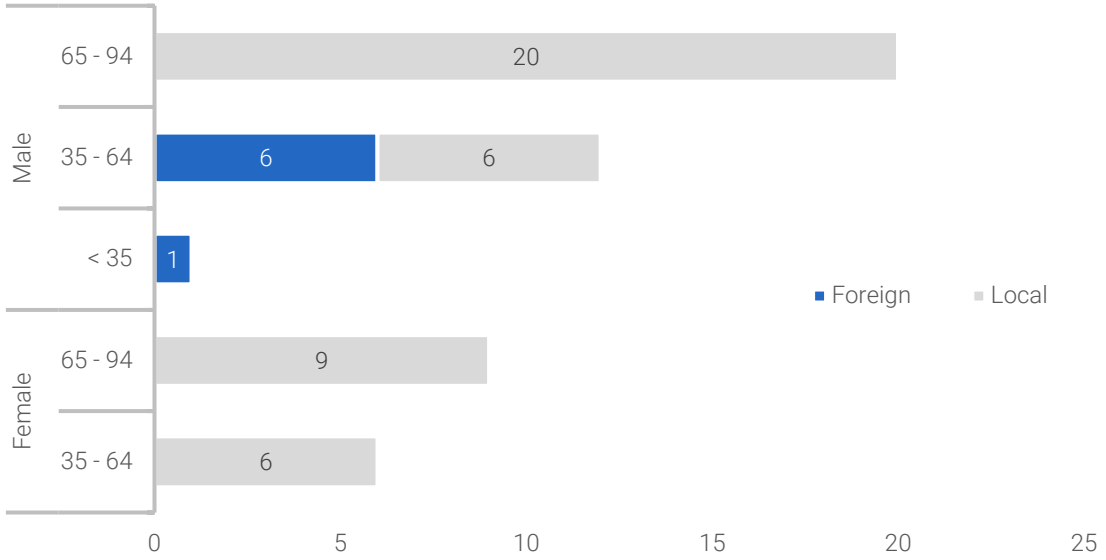
Death of a COVID-19 confirmed cases are counted as deaths due to COVID-19. In 2020, there were a total of 48 COVID-19 deaths of which 69% were males

Table 6-2: COVID-19 death by gender and ethnicity, 2020

Origin	Female	Male	Total
Foreign	-	7	7
Local	15	26	41
Grand Total	**15**	**33**	**48**

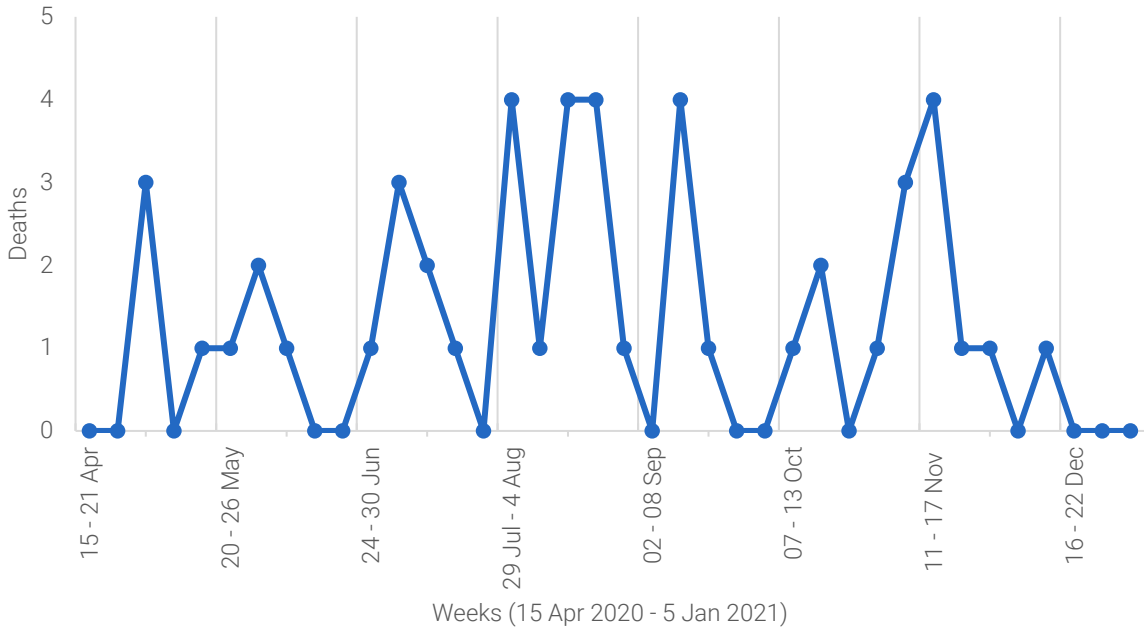
When disaggregated by age, more than 60% (29 deaths) were at the age group 65 and above. It is also notable that there were no female deaths in 2020 among foreigners.

Figure 6-8: COVID-19 deaths by age groups, gender and ethnicity, 2020



At a maximum, there were 4 deaths in a week in 2020.

Figure 6-9: COVID-19 deaths by week, 2020



6.3.3 HOSPITALSATION RATE

Hospitalization rat is defined by new hospital admissions as a percentage of new COVID-19 cases reported for a given week. This is a priority indicator for monitoring and informing decisions on public health measures. The following thresholds table is used for decision making.

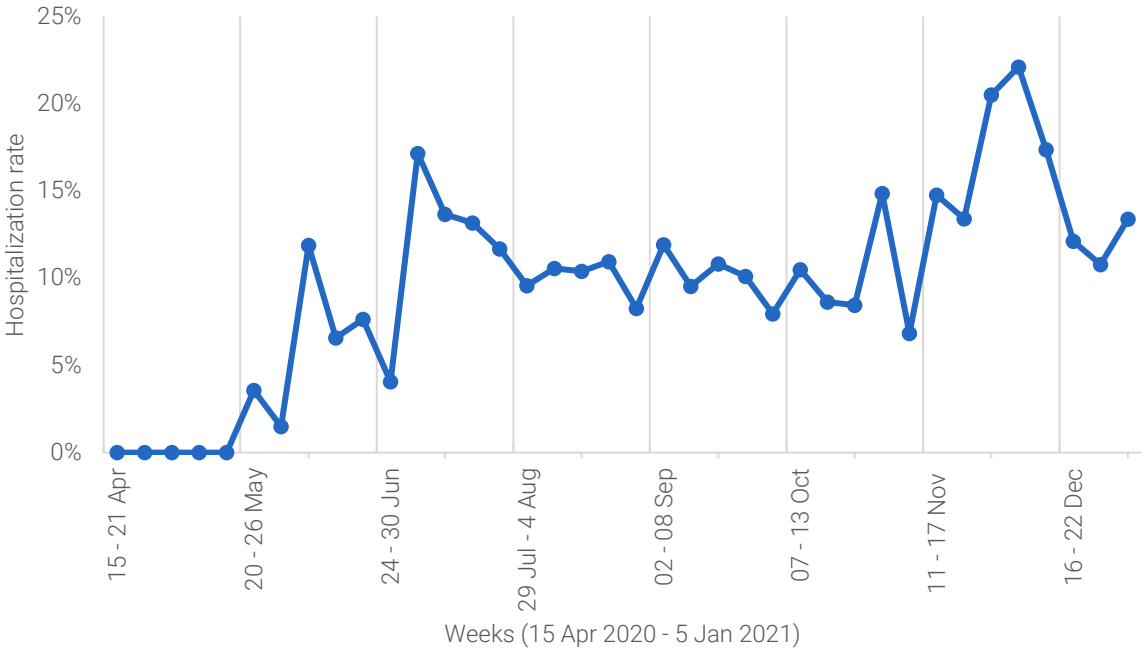
Table 6-3: Thresholds – Hospitalization Rate

Threshold 1	Threshold 2	Threshold 3
10-15%	16-25%	>25%

Equation 6-2: Hospitalization rate

$$Hospitlization\ rate = \frac{Sum\ of\ New\ admissions\ for\ the\ Week}{Sum\ of\ New\ cases\ for\ the\ Week} x\ 100$$

Figure 6-10: Hospitalization rate of COVID-19 cases by week, 2020



6.3.4 RATE OF CHANGE IN COVID-19 CASES

The rate change in COVID-19 cases in defined as percentage increase/decrease of new covid-19 cases reported for a given week when compared to previous week. This is a priority indicator for monitoring and informing decisions on public health measures. The following thresholds table is used for decision making.

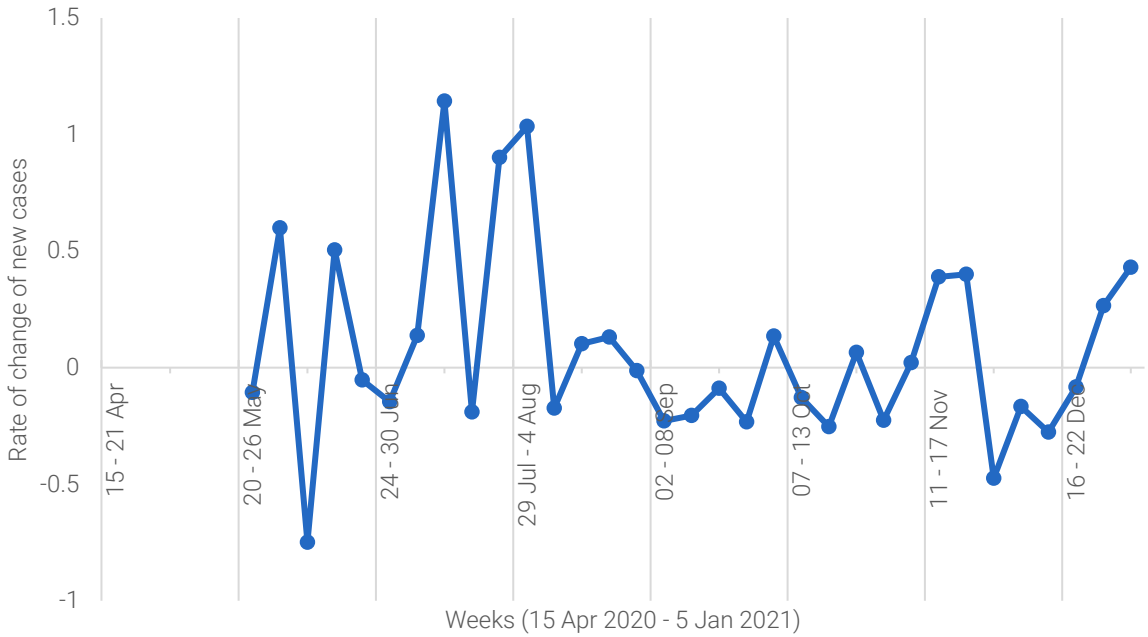
Table 6-4: Thresholds – Rate Change

Threshold 1	Threshold 2	Threshold 3
5-9%	30-50%	>50%

Equation 6-3: Rate of change of Covid-19 cases

$$Newly\ identified\ COVID-19\ cases\ \ (Rate\ of\ Change\ of\ New\ Cases\ by\ Week) = \frac{Sum\ of\ the\ Cases\ in\ Current\ Week\ (Wk1) - \ Sum\ of\ previous\ week\ (Wk2)}{Sum\ of\ the\ Cases\ in\ Current\ Week\ (Wk1)} x100$$

Figure 6-11: Rate of change in COVID-19 cases, 2020



6.3.5 SAMPLE POSITIVITY RATE

The sample positivity rate is defined by the percentage of samples positive for COVID-19 from the total PCR samples tested for a given week. This is a priority indicator for monitoring and informing decisions on public health measures. The following thresholds table is used for decision making.

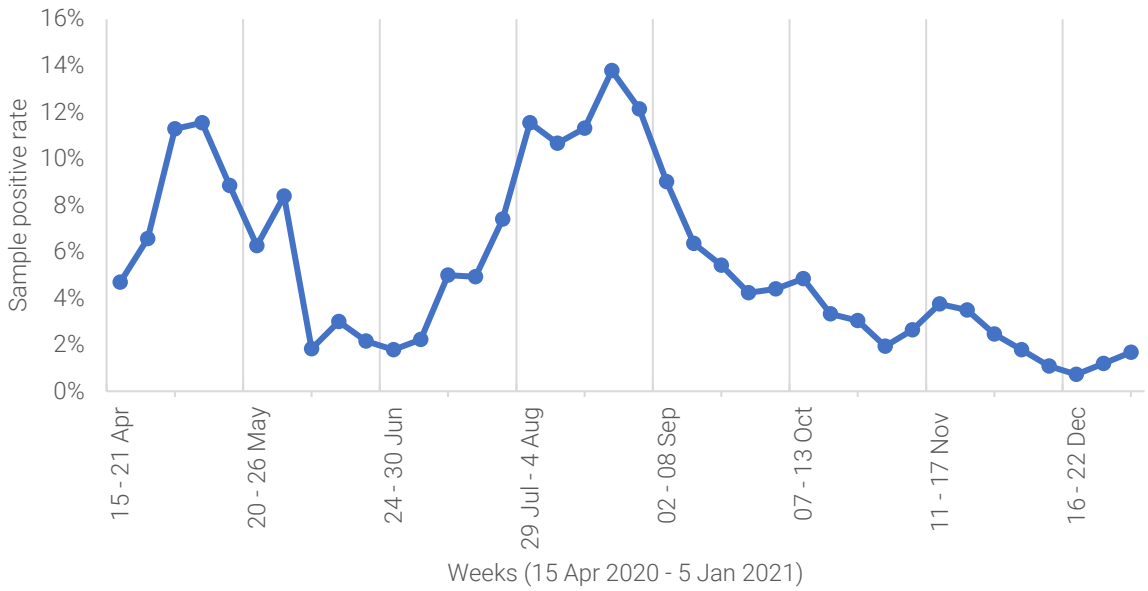
Table 6-5: Thresholds – Sample Positivity Rate

Threshold 1	Threshold 2	Threshold 3
3-4%	5-10%	>10%

Equation 6-4: Sample Positive rate

$$Sample\ Positive\ Rate = \frac{Sum\ of\ new\ positives\ for\ the\ given\ week}{Total\ number\ of\ PCR\ samples\ tested\ for\ given\ week} x100$$ [24]

Figure 6-12: Sample positivity rate for COVID-19 by week, 2020



[24]Total number of samples tested is taken excluding repeat sample of positive person for the given week

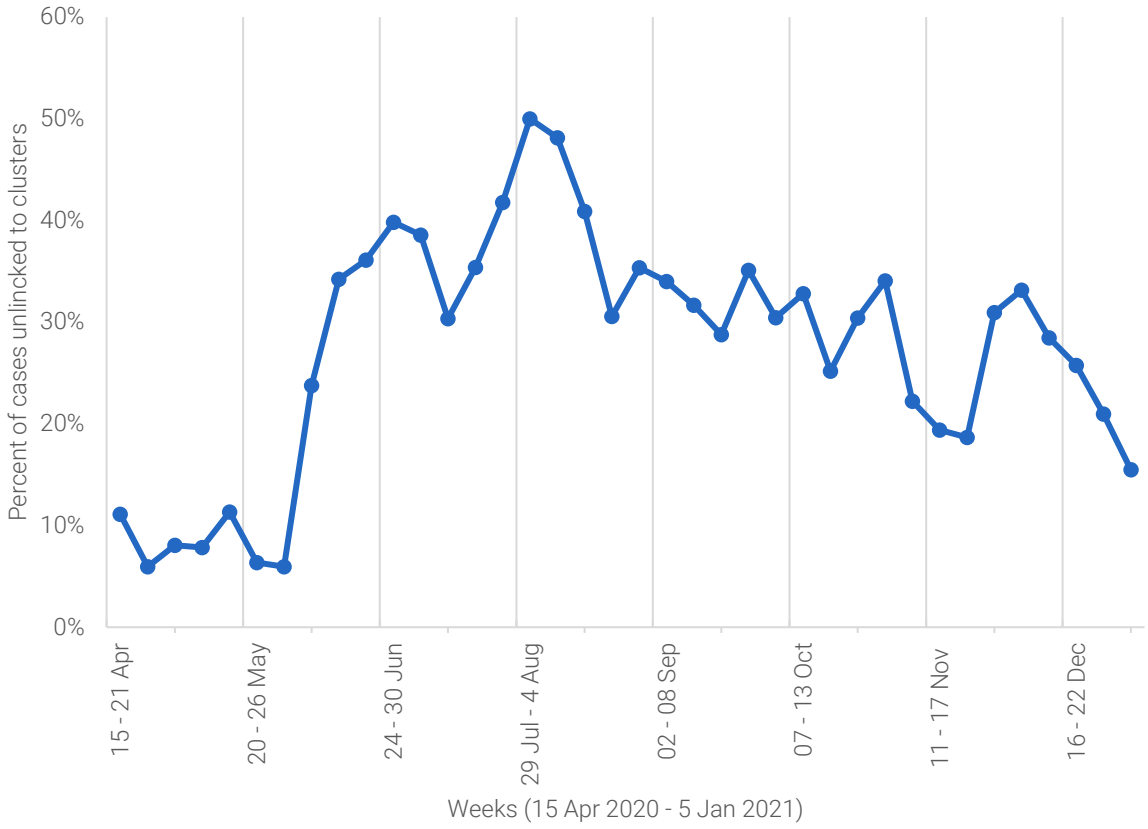
6.3.6 UNLINKED CASES

Any positive case which is not linked to a previous positive case or cluster is defined as an unlinked case.

Equation 6-5: Percent of unlinked cases of COVID-19

$$Cases\ unlinked\ to\ an\ existing\ case\ or\ cluster = \frac{Total\ number\ of\ cases}{Cases\ unlinked\ to\ cluster}\ x\ 100$$

Figure 6-13: Percent of unlinked cases to a cluster by week, 2020



6.4 HEALTH SYSTEM MONITORING

Delivering health care for both COVID-19 affected individuals, as well those with other acute and chronic conditions, with limited access to healthcare facilities and services, were challenges for the health systems in low- and middle-income countries, including Maldives, which require immediate measures for health system strengthening across areas of response. In preparation for COVID-19 designated hospital beds were prepared across the country with a total of 393 hospital beds, (250 beds in GMR and 143 in the atolls) and 110 critical care beds (ICU/HDU beds) of which 40 were in GMR and 70 across the atolls.

6.4.1 OCCUPIED HOSPITAL BEDS

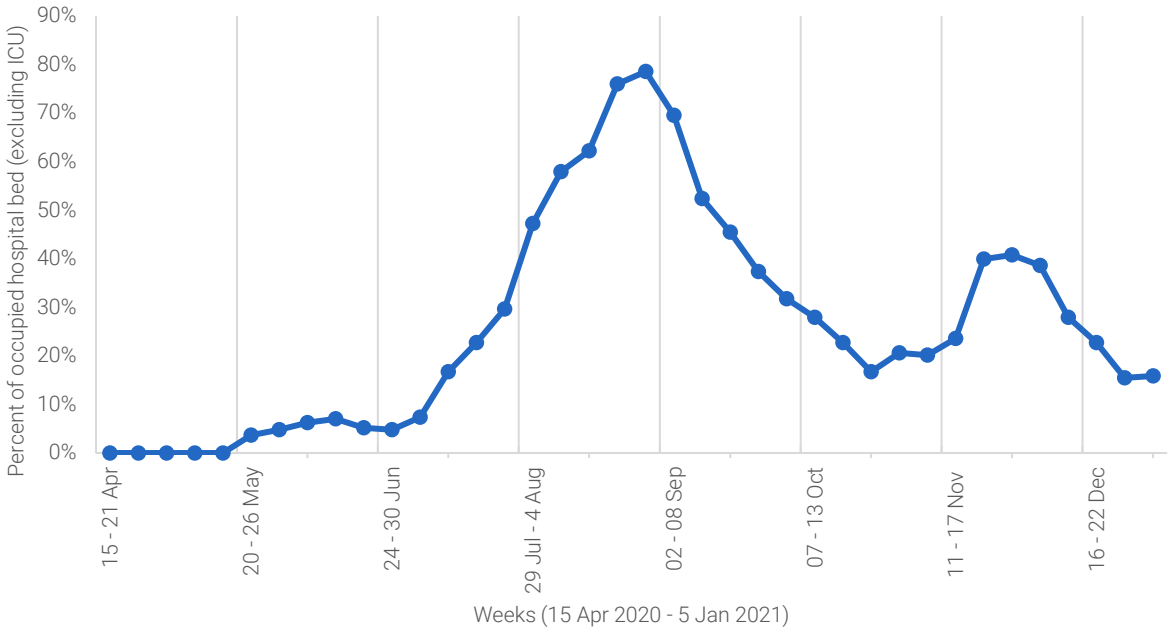
An occupied bed is an available hospital bed where there is a COVID-19 patient physically in the bed or the bed is being retained for a patient (e.g., when the patient is receiving treatment).

Equation 6-6: Percentage of occupied hospital beds

$$Percent\ of\ occupied\ hospital\ beds = \frac{Maximum\ number\ of\ COVID-19\ patients\ admited}{Total\ number\ of\ hospital\ beds\ available\ for\ cases}$$

Thus, it can be seen that by the end of August 2020, almost 80% hospital beds available for COVID-19 cases were occupied.

Figure 6-14: Percent of occupied hospital beds with COVID-19 cases by week, 2020



6.4.2 OCCUPIED ICU BEDS

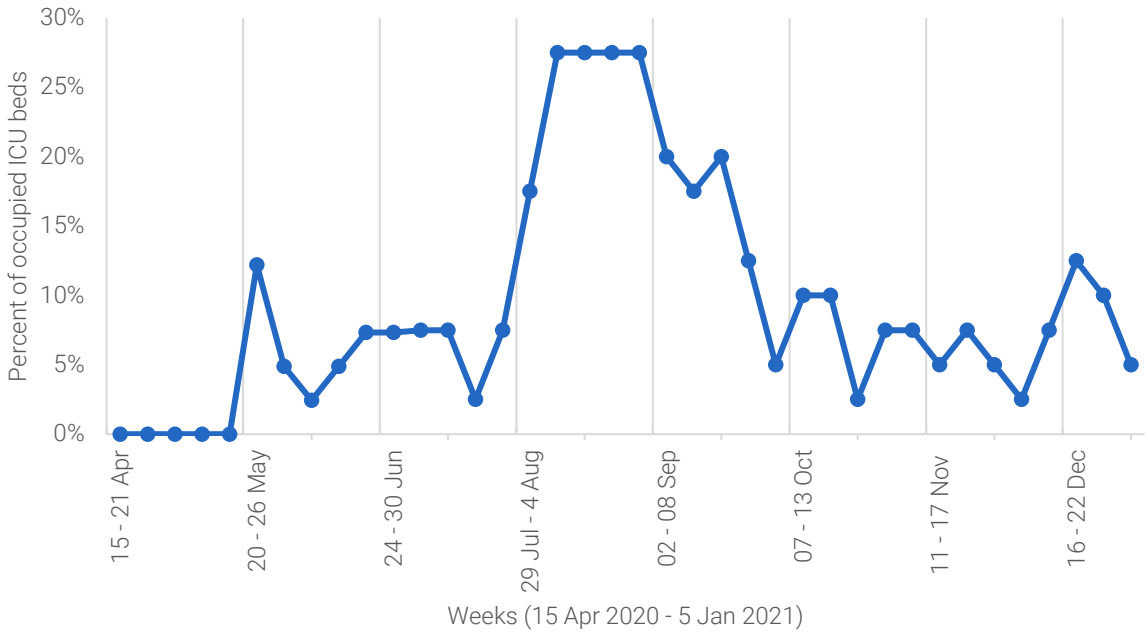
Hospital beds that can support critically ill or injured patients, including ventilator support – normally these beds are stationed at Intensive Care Units (ICU) of the health facilities.

Equation 6-7: Percentage of occupied ICU beds

$$Percent\ of\ occupied\ ICU\ beds = \frac{Maximum\ number\ of\ CODID-19\ patients\ admited\ in\ ICU}{Total\ number\ of\ ICU\ Beds\ avaialable\ for\ cases}$$

Similar to occupied hospital beds, ICU occupancy also reach almost 30% in August 2020.

Figure 6-15: Percent of occupied ICU beds by week, 2020

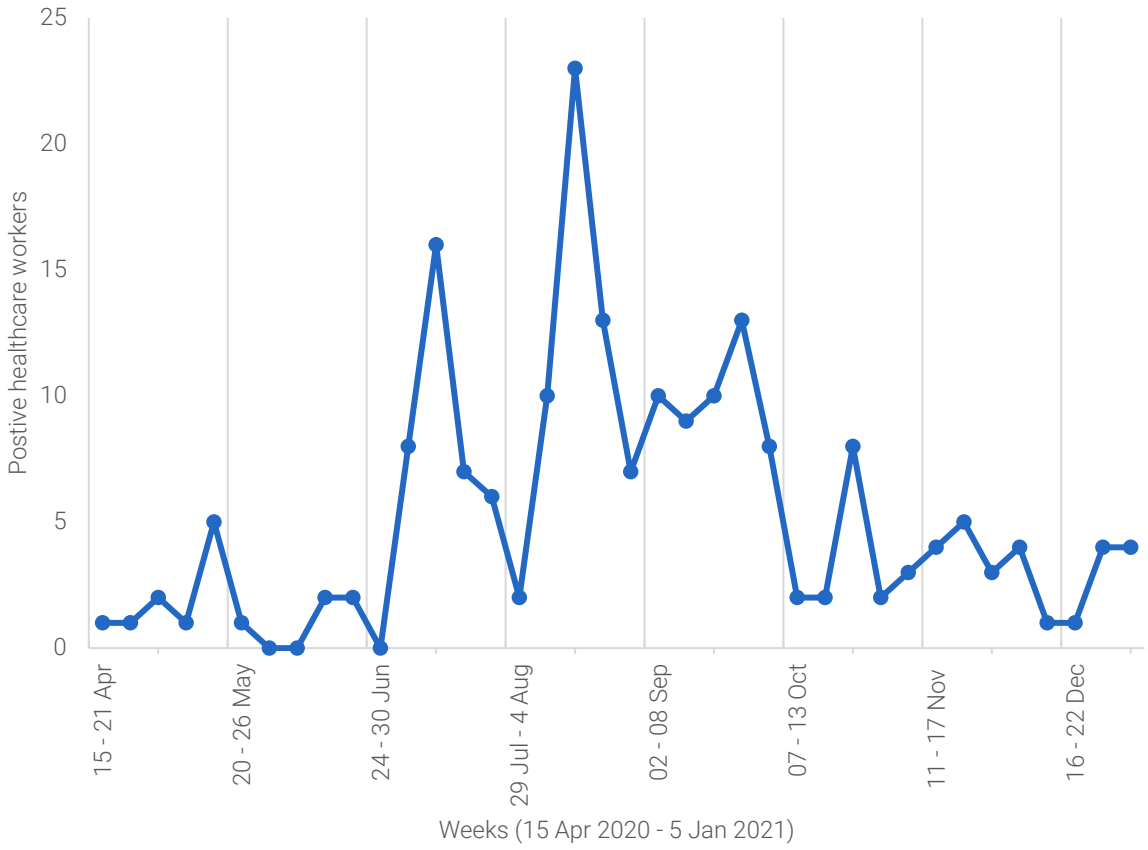


6.4.3 POSITIVE HEALTHCARE WORKER

Identification of a COVID-19 positive healthcare workers in service were considered as a positive health care worker. The following groups of health care workers were counted in this manner;

- Community health professionals (in service)
- General Doctors
- Medical Laboratory Professionals
- Nurses
- Radiographers
- Specialists
- Rapid Response Team (RRT - patient transport and sampling)

Figure 6-16: Number of COVID-19 positive healthcare workers by week, 2020



6.5 ANNEXES

Table 6-6: Timeline of activity – measures and actions taken during COVID-19, 2020

Date	Activity
6-Jan	Initial briefing by HPA to senior team of Moh regarding current global situation of COVID-19 and advise to countries by WHO
12-Jan	Initial risk assessment for Maldives conducted
19-Jan	Revised risk assessment done – showed high risk of having a COVID-19 outbreak in Maldives within the months of Jan to Mar 2020
20-Jan	First press release to the public COVID-19 national response guideline developed by HPA Training and awareness for different national stakeholders initiated
21-Jan	First HECC meeting held with Multi-Agency Coordination (MAC) group for COVID-19
22-Jan	First press briefing by Minister of Health Thermal screening set up in Velana International Airport – using one camera First Technical Advisory Committee [TAC] meeting held
26-Jan	Thermal camera installed in Addu Airport
27-Jan	COVID-19 screening facility established in Hulhumale' Pre-school
29-Jan	First multi-agency table top exercise conducted Identification and operationalization of a temporary isolation room in Velana International Airport
30-Jan	WHO declared COVID-19 outbreak as a Public Health Emergency of International Concern First suspected case (symptomatic with travel history to China) in Maldives. Case moved to Funadhoo for Isolation Health Emergency Operation Center [EOC] established and operationalized within Ministry of Health
31-Jan	02 asymptomatic locals returning from China were quarantined in Farukolhu Quarantine Facility and two symptomatic locals with travel history to China were isolated in Funadhoo Islolation Facility. Temporary banning of all direct and inbound flights from mainland China
1-Feb	Approval from NIV Pune, India received for testing and 7 samples were sent for testing. Technical Advisory Group [TAG] was formed and initial meeting held
3-Feb	All 7 samples sent to India for testing were negative for COVID-19 Restricted entry of all persons (all nationalities except Maldivians) who had travelled from or transited through main land China in the past 14 days. Maldivians to spend 14 days in quarantine upon arrival.
5-Feb	Allocated quarantine location/room in each in habited island and identified rapid response teams to attend to COVID-19 cases. Focal points from each health facility were identified for communication. Also, a protocol was developed for communication of cases from island level.

9-Feb	12 rooms fully furnished and operational in Farukolhu Quarantine Facility
18-Feb	7 Maldivian evacuated from Wuhan, China arrived Maldives after completing the 14-day quarantine period at the Chawla camp at New Delhi, India.
20-Feb	COVID-19 local testing capacity was developed in Maldives with the support from WHO with donation of laboratory test kits for COVID-19.
26-Feb	Banned direct travelers / travelers who had visited Iran within the past 14 days as a precautionary measure against COVID-19 Announced effective from 3rd March 2020 ban of direct travellers / travellers who had visited "red alert" areas of South Korea such as Daegu, Gyeongbuk, Busan, Seoul, Gyeonggi and Gyeongnam within the past 14 days as a precautionary measure against COVID-19 Temporarily banned arrival and docking of cruise lines to Maldives as a further preventive measure against COVID-19 Quick reference Standard Operating Procedures (SOPs) developed under COVID-19 response guideline by Technical Advisory Group
29-Feb	First locally tested case; a case presented with pneumonia was tested in IGMH. Personal Protective Equipment (PPEs) stock and other disinfecting and sterilizing products sent to all atolls and buffer stock kept at STO
01-Mar	Suspension of extracurricular activities in schools
03-Mar	Multi-agency full scale simulation exercise (drill) held in Male' – for case identified within Male' city Joint statement released by HPA and NDMA on establishment of national emergency operation center [NEOC] Public release of national risk alert levels COVID-19 with actions to be taken in each risk level Revised the travel restriction to South Korea to limit entry of passengers and crew with a travel history to South Korean regions of North Gyeongsang province and south Gyeongsang province in the last 14 days- in effect from 3rd March. Guideline for preparing business continuity plans developed.
06-Mar	First imported case linked to a tourist that stayed in Kuredu Island Resort and Spa. This was the first resort that was put under monitoring and contacts isolated and tested. A symptomatic tourist holidaying at V. Thinadhoo was transferred to Farukolhu Quarantine Facility. Following this V. Thinadhoo became the first inhabited island to put under monitoring.
07-Mar	First positive cases linked to imported case reported. They were two individuals in Kuredu Island Resort and Spa. Travelers from Italy have been banned since 7th March 2020 (23:59 hours).
08-Mar	Two individuals (an Italian couple) holidaying in Bathala Island Resort tested positive for COVID-19.
09-Mar	Two individuals (foreigners) in Kuredhu Island Resort and SPA tested positive for COVID-19. Villivaru Quarantine Facility was operationalized; Announced that effective from 10th March 2020 to 24th March 2020, Maldives banned direct travellers / travellers who had visited Bangladesh within the past 14 days as a precautionary measure against COVID-19.
10-Mar	First admitted cases at DH-11. They were 2 Italians (the elderly couple from bathala resort) who required close monitoring and further treatment. Establishment of a Flu Clinic and Senahiya Military Hospital targettiing symptomatic individuals with no travel history. Establishment of a 24 hour operational travel clinic [Behind SinaMale']
11-Mar	Flu Clinic for expatriates established in Hulhumale'
12-Mar	First declaration of State of Public Health Emergency by Minister of Health. This was declared under the discretionary powers vested in the Minister of Health by the section 33 of the 7/2012 Public Health Act and will be effective for a period of 30 days from 12 Mar 2020

13-Mar	Island Safari became the first Safari that was placed under monitoring following the identification of 02 symptomatic tourists on board. Following the State of Public Health Emergency declaration on 12th March 2020, the following actions were taken to curb the spread of COVID-19: 1. Banning the use of public grounds and parks in the Greater Male' Region until further notice 2. Banning of all and any excursion activity from islands, tourist resorts, safaris, guest houses for a period of 10 days throughout the country.
14-Mar	A circular has been released from Civil Service Commission [CSS] detailing the actions that will be taken by CSS in providing services based on different alert levels. Allocation of Velidhoo as a quarantine facility Following the State of Public Health Emergency declaration on 12th March 2020, the following actions were taken to curb the spread of COVID-19: 1. Banning travelling from and to resorts from 18:00 hours onwards for 14 days 2. Banning of check-in for tourists to any guest houses and city hotels in the Greater Male' area from 00:00 hours onwards for 14 days 3. Universities and Colleges will be closed for two weeks.
15-Mar	Allocation of Kuda Bandos as a quarantine facility
16-Mar	HPA circular number 2020/10- Closure of all cinemas from 16th March 2020 for two weeks. HPA Circular number 2029/9 -Closure of schools, tuition centres and quran classes for an additional week Hulhule' Island Hotel operationalized as a quarantine facility The Ministry of Education released a new circular to extend school closing for additional week
17-Mar	HPA Circular 2020/11: Starting from 17th March 2020, 16:00 hours check-ins to all guest houses/city hotels across the country by foreigners/tourists to be halted for a period of 14 days. The Government of Maldives has decided to close government offices from 19th March to 26th March 2020. This includes closure of banks as well. The Government of Maldives has decided to reduce the salaries of political appointees by 20 percent. The Government of Maldives has decided to reduce the government expenditure up to 1 billion rufiyaa Announcement - All passengers and crew with travel history to Malaysia within the last 14 days will not be allowed to enter or to transit through the Maldives effective from 17th March 2020, 18:00 hours. Announcement - All passengers and crew with travel history to the United Kingdom within the last 14 days will not be allowed to enter or to transit through the Maldives effective from 19th March 2020.
18-Mar	HPA Circular Number 2020/14: The following travel/movement restrictions has been imposed for a period of 10 days starting from 18th March 2020; Cessation of any person travelling from resorts to inhabited islands Cessation of any person travelling from an inhabited island to resorts Cessation of any person travelling from one resort to another. HPA Circular Number 2020/13: Starting from 18th March 2020, 17:00 hours any individual who breach the isolation or quarantine instruction given by HPA will be fined up to 5000 MVR and their personal information (name) will be publicised. HPA Circular Number 2020/12: Beginning from 18th March 2020, 00:00 hours (midnight) all Maldivians who arrived to Maldives from U.S.A will be quarantined for 14 days and any Maldivian who arrive from a country/territory etc that had not been placed under travel restriction by Maldives will be home isolated for a period of 14 days. Policy decision was made on closure of spas and banning of Sheesha

19-Mar	HPA Circular Number 2020/15: Effective from 19th March 2020, 00:00 hours (midnight), yacht and safaris from all countries will be temporarily banned from arriving to Maldives and docking at any ports in Maldives. Sheesha services of cafes and restaurant(at public establishments)to be banned effective from 00:00 hours on 21st March 2020 Excluding the spas in resorts, all other spas will be closed effective from 00:00 hours on 19th March 2020. This includes spas in saloons.
20-Mar	HPA Circular Number 2020/18: All dine-in services will be temporarily suspended from all food service providers in Male', Vilimale' and Hulhumale' area (cafe/hotaa, restaurant, etc), effective from 00:00 hours on 22nd March 2020, excluding takeaway and delivery service.
21-Mar	HPA Circular Number 2020/19: Effective from 21st March 2020, 16:00 hours, all passengers travelling to Maldives by air except for tourists checking-in to resorts will be quarantined for 14 (fourteen) days at a designated facility by the government.
	HPA Circular Number 2020/21; Effective from 22nd March 2020, excursions from any place including islands, resorts, safaris and guesthouses to be ceased to an indefinite period (This cancels HPA Circular Number 2020/2 and 2020/4) HPA Circular Number 2020/20; Effective from 22nd March 2020, all passengers arriving to Maldives by air (except tourists) will be placed in a government designated quarantine facility for a period of 14 days. (This cancels HPA Circular Number 2020/19) Establishment of a flu clinic at Villimale'
22-Mar	Decision was made to change Hulhule' Quarantine Facility to an isolation facility. Decision was made for TAG team to initiate training of Rapid Response Teams beginning from 24 Mar A multi-agency drill was conducted as a further preparedness measure for COVID-19 outbreak. During the press-conference held today: Schools, colleges, universities and public offices to be closed for another 1 week Granting of on arrival visa to be temporary halted starting from 27th March 2020 (Friday) The travel restrictions imposed on resort staff will be upheld for a period of 14 days after the departure of the last guest from the resort. During this period the staff will be quarantined in their respective resorts. Repayment of bank loans will be delayed for 6 months and the amount to be paid will be reduced by 20 percent for further 6 months. Banks to release 308 million Rufiyaa to resorts. Repayments of loans given to farmers to be extended/delayed for 6 months Housing scheme loans given by HDFC to be delayed/extended for 6 months To assist in financial challenges incurred by small businesses by BML and HDFC working together to introduce new loans for such businesses. 40 percent will be reduced from electricity and 30 percent will be reduced from the Water bill for April and May. Plans being made to establish a trading platform with support from STO to assist farmers to sell their produce. Repayments of student loans will be delayed/extended for a period of 6 months
27-Mar	First Maldivian imported case reported – an arrival from UK in Holiday Island quarantine facility at time of testing and being declared positive
28-Mar	Ministry of Islamic Affairs Circular Number 142-C1/CIR/2020/20: The duration of suspension of mass prayers in the Greater Male' Area, all resorts and in all islands under monitoring (or travel restriction) has been extended until Asr Prayer of 4th April 2020.
29-Mar	HPA Circular Number 2020/24; Effective from 29th March 2020, 00:00 hours (Midnight), all gyms, exercises classes and any other similar classes and group sessions to be temporarily closed.

30-Mar	HPA Circular Number 2020/26; Cancels the HPA circular 2020/22 dated 25th March 2020 and withholds the following travel.movement restrictions effective from 30 March 2020 until informed otherwise: Cessation of any person travelling from resorts to inhabited islands Cessation of any person travelling from an inhabited island to resorts Cessation of any person travelling from one resort to another. The following conditions need to be met by those who are in resorts that wish to travel to another island; If there are tourists in the resorts, the staff/individual who wish to travel should have completed 14 days quarantine period in a designated area in the resort and have completed the exit screening and have tested negative for COVID-19. After 14 days of the last tourist leaving the resort. This is applicable to resorts where no positive or suspected COVID-19 case has been identified. HPA Circular Number 2020/25; Effective from 30th March 2020, all cinemas and theaters across the country to be closed until informed otherwise.
31-Mar	HPA Circular 2020/27: Effective from 31st March 2020, 18:00 hours check-ins to all guest houses/city hotels across the country by foreigners/tourists to be halted until otherwise informed. (Note: this could be regarded as an extension of previous HPA Circular 2010/11)
1-Apr	HPA Circular 2020/28; Effective from 2nd April 2020, 12:00 hours, the following measures will be in place in Greater Male' Area; Restriction on going out in public between 17:00 to 20:00 hours Restriction on public transportation (including bus and ferry) between 17:00 to 20:00 hours Restriction on public gathering of more than three people at all other times. HPA Circular 2020/29; Effective from 2 April 2020, 12:00 hours: Shops in the Greater Male' Area will be closed from 23:00 to 6:00 hours. Take-away service from cafes/restaurants in Greater Male' Area to be halted from 00:00 to 06:00 hours Construction work in the Greater Male' Area to be halted from 17:00 to 06:00 hours.
4-Apr	Tavel clinic (behind SinaMale') changed to a flu clinic. A general medicine clinic has been established for eldery (aged 60 years and above) in IGMH The Ministry of Economic Development regulated the maximum price of 4 products; red onions, regular potatoes, yellow dhaal and white eggs. Repatriation flights from Colombo and Cochin are scheduled to operate on 5th and 6th April 2020.
5-Apr	Isolation/Quarantine Exit Survey was rolled out and those exit facilities after completing their quarantine period have started completing this survey.
6-Apr	Handbook on guidelines to prevent COVID-19 in work environment was released
9-Apr	HPA Circular Number 2020/32; Effective from 9th April 2020, 17:00 hours the following amendments have been brought to the HPA Circular Number 2020/28; Lifting the restrictions imposed for the public to be on streets between 17:00 - 20:00 hours in Greater Male' Area (Male', Hulhumale' and Villimale') Banning of more that 3 people to gather in one public place in all hours in Greater Male' Area. HPA Circular Number 2020/31; From 12th April 2020 onwards schools, universities, colleges, tuition centers, homes-based tuitions, quran classes and other forms of educational/ training institutions to be closed for a period of 1 week.
10-Apr	Declaration Number 2020/2: The state of Public Health Emergency has been extended until 30th April 2020.

	HPA Circular Number 2020/33: Effective from 10th April 2020, people in resorts and safaris can travel to other islands under specific conditions.
11-Apr	A guidance document for resorts and safaris seeing clearance has been developed and published
15-Apr	Confirmation of first community transmission case With the confirmation of the first community transmitted case in Male' (i.e. not linked to any imported case). Greater Male' Area alert level has increased to "Red". HPA Circular Number 2020/34: Effective from 15th April 2020 15:30 hours, complete restriction of movement and stopping of public transport services has been implemented in Greater Male' Area (Male', Hulhumale', Villimale') for 24 hours
16-Apr	HPA Circular Number 2020/35: 15th April's movement restriction imposed on Greater Male' Area (Male', Hulhumale' and Villimale') have been extended for another 24 hours.
17-Apr	Cases continues to increase – five community transmission cases till date HPA Circular Number 2020/38: All those who have arrived at atolls from the Greater Male' region (Male', Vilimale', Hulhumael', Gulhifalhu and Thilafushi) to be isolated for 14 days.
18-Apr	HPA Circular Number 2020/37: 15th April's movement restriction imposed on Greater Male' Area (Male', Hulhumale' and Villimale') have been extended for another 14 days.
20-Apr	31 Maldivian from Bangladesh and 15 Maldivians from Nepal, who are medical students/doctors in training, arrived on a flight of Bangladesh Armed Forces. A team of doctors and medical officers sent by the Bangladesh Government also arrived on this flight.
25-Apr	Dhamanaveshi Circular Number: DV/2020/13; Dhamanveshi will be open from 3rd May 2020 onwards in order to give essential vaccination (i.e. vaccines in the National Vaccination schedule) for children below the age of 18 years. This service will be provided on appointment basis Validation of Police Laboratory was completed and they have started testing of COVID-19 samples.
26-Apr	Starting from 26th April 2020 onwards, all screening positive cases will also be considered as confirmed cases. This decision was taken by IGMH lab after they discussed this issue with WHO.
27-Apr	Maldives Customs Circus Newsletter No: 2020/13; Effective from 26th April 2020, import duty and processing fees for medical items; Hazmat suits, medical goggles, surgeon's caps, shoe cover, gowns and coveralls have been waived by the president. This is an addition to previously waived items; hand sanitizers, face shields, protective masks, hand wash, protective gloves and disinfectants.
29-Apr	HPA Circular Number 2020/40: The duration of the movement restriction imposed on Greater Male' Area (Male', Hulhumale' and Villimale') through 17th April's circular have been extended for another 14 days.
30-Apr	First COVID-19 related death was recorded in Maldives. The deceased was an 82-year-old, local female. Declaration 2020/3; The state of Public Health Emergency has been extended until 30 May 2020. Revised the Strategy for COVID-19 SOP has been developed for preparation of dead body and funeral procedure for a suspected or confirmed case of COVID-19 infection
01-May	A criteria has been established for resort owners who wish to travel to Maldives and stay at their own resorts without going to 14 days of facility-based quarantine
05-May	First foreign/expat death reported. This was a 22 year old Bangladesh male.
07-May	Initiation of preparation for lockdown-exit/ease plan
17-May	Gazetting the amendment to the regulation number 26-R/2020 stipulating the protocols to publicize names of individuals in order to protect public health
23-May	Testing strategy for COVID-19 has been revised Criterias for exit testing of expatriates in containment sites has been developed

26-May	"COVID-19 aai gulhigen taxi ambulance beynun kurumuge usool" (i.e. guideline on the use of taxi ambulances due to COVID-19) was published today.
30-May	Regulation on the management of people who died from a dangerous disease (Regulation Number: "R-34/2020" was gazetted today. Amendments to the "COVID-19 aai gulhigen geygai quarantine kurumge usool" (guideline on home quarantine related to COVID-19) was published today.
31-May	Regulation on Isolation and Quarantine facilities (Regulation number: R-35/2020) was gazetted today.
01-Jun	"Mask elhumugai amalukuraane gothuge usool" (guideline on the proper use of masks) was published today.
03-Jun	"Aammu Sih'hathuge kuh'li nurahkaluge haalatheh dhimaavejje nama amalukuraane gothuge gavaaidhu" (Regulation on the procedures to follow during a state of public health emergency) - Regulation Number 2020/R-40 was published today.
05-Jun	Updated Exit strategy for expatriates in containment areas were finalized today Infection prevention measures at the workplace (non-health care setting) were finalized today.
06-Jun	A guideline titled "COVID-19 aai gulhigen Male' gai furabandugai vaa faraiythah rah rashah gos geygai quarantine kurumuge usool" (loose translation: guideline related to home quarantining of individuals stranded in Male' due to COVID-19 after they return to their home islands) was published today. De-isolation criteria (criteria for removal from transmission-based precaution) was finalized today
07-Jun	First patient was admitted to Hulhumale' Medical Facility. The patient is a Maldivian, Male who was transferred from Treetop Hospital Strategy for early case detection and testing prioritization was finalized today
10-Jun	A web book was developed and published today with the aim of teaching children about COVID-19. This book is targeting children aged 8-11 years.
11-Jun	HPA Circular Number: 45/2020: Restrictive measures of Male' lockdown have been extended until 14th June 2020 with this some ease measures will be implemented since the lockdown
12-Jun	General Information regarding phase II - measures to ease lockdown was published today
13-Jun	A guideline titled "COVID-19 aai gulhigen Male' gai furabandugai vaa faraiythah rah rashah gos geygai quarantine kurumuge usool" (loose translation: guideline related to home quarantining of individuals stranded in Male' due to COVID-19 after they return to their home islands) was amended today.
14-Jun	"COVID-19 aai gulhigen kan'du mathee ulhan'dhu faharuge hidhumaiy foarukoh dhinumugai amalu kuran jehey gothuge usool" (loose translation: guideline on provision of sea transport service related to COVID-19) was published today. "COVID-19 aai gulhigen ehgamu ulhan'dhu thakuge hidhumaiy foarukoh dhinumugai amalu kuranjehey gothuge usool" (loose translation: Guideline on provision on land transportation service related to COVID-19) was also published today. A Guideline on workplace safety during COVID-19 was also published today. HPA Circular No: 2020/46: Effective from 15th June - 30th June 2020, amendments have been made by easing some of the restrictive measures imposed on the Greater Male' Area. HPA Circular No: 2020/47: Under this circular, effective from 15th June 2020, all special measures taken related to COVID-19 on other islands (except Greater Male' Area) will be cancelled. General Information Regarding Phase II measures to ease lock down was published Ministry of Islamic Affairs Circular No: 142-CI/CIR/2020/45: Effective from Magrib Prayer of 14th June 2020, amendments have been brought to the circular (142-CI/CIR/2020/40) published on 28th May 2020. Hence, all Masjids in the Greater Male' Area will be open for individual praying (i..e Mass prayers in Masjid's are still restricted).
15-Jun	Recommendation on travel related home quarantine was finalized today

16-Jun	Updated exit strategy for people in containment areas was finalized today Recommendation on COVID-19 related test kits was finalized today
17-Jun	"COVID-19 aai gulhigen gym adhi fitness centaru thakugai amalukuranvee gothuge usool" (loose translation: SOP on preventive measures to be taken at gyms and fitness centres related to COVID-19) was published today. "COVID-19 pandemic gai sih'hee kuh'li haalathu gai vaige magunnai kan'duge magun balimeehun eh'rashun aneh rashah ufulumugai amalukuranvee gothuge usool" (loose translation: Guideline on patient transportation during COVID-19) was published today
20-Jun	"COVID-19 aai gulhigen kaaboa thaketheege hidhumaiy'dhey than thanugai amalukuran vee gothuge usool" (loose translation: SOP for food establishments during COVID-19) was published today.
21-Jun	TAG had recommended to continue the provision of ASANDHA cover for online clinics (Addu Equatorial Hospital had processed their first COVID-19 sample at AEH laboratory using a rapid PCR (bio fire) Machine.
23-Jun	President HEP Ibrahim Mohamed Solih held a press conference today. During this conference, HEP announced that Maldives' borders are planned to be opened from 15tth July 2020 onwards.
29-Jun	A ceremony (via zoom) was held to inaugurate the testing of COVID-19 in Atoll Health Facilities tonight. HEP Ibrahim Mohamed Solih visited NEOC headquarters today. During his speech, he mentioned that from 1st July onwards COVID-19 response coordination will be handed over from Defense Minister to Minister of Health. Declaration 2020/5; The state of Public Health Emergency has been extended until 14th Juny 2020 "COVID-19 aai gulhigen boa koshaa than thanaai, saloon thakugai amalu kuran v gothuge usool" (loose translation: SOP on prevention measures to be taken in saloons & barbershops during COVID-19) was published today
30-Jun	Last NEOC meeting was held today.
01-Jul	Phase 3 of lock down ease was commenced today
03-Jul	A TAG decision was taken to recommend high risk groups to stay at home during COVID-19 community transmission
04-Jul	"COVID-19 ge au aammu haalathugai Ministry of Healthaai Ministry ge dhashun hingaa department thakaai division thakuge muvazzafun amalukuran jehey gothuge usool (loose translation: SOP for staff working in Ministry of Health & other department & division under MoH) was finalized today. Revised version of guideline on workplace safety during COVID-19 was published today. A document related to public health interventions to reduce the risk of transmission of COVID-19 in the tourism sector was published today.
08-Jul	A Drill was held at Velana International Airport today with all stakeholders to check the preparedness for opening of borders and arrivals Of Tourists By 15th July 2020.
09-Jul	Final inspection checklist for areas that will be used for the special/mass inspection planned from 12th July onwards has been published today. The areas included in the checklist is; General section (includes information related to permits) Information of COVID-19 Food service providers Gyms & fitness centers Barbershops & Salons Shops Market area
11-Jul	Home quarantine guideline revised according to eases proposed by TAG for travel related home quarantine. This will be effective from 15th July 2020.

12-Jul	Inspection of businesses in greater male' area against HPA guidelines will be conducted on 12 - 13 July by HPA, MFDA, MRC, Male' City Council, MED, Police, WAMCO & Thilafushi Corporation.
15-Jul	The state of public health emergency have been extended until 7th August 2020 (Declaration No: 6/2020). "COVID-19 ge haalathaai gulhigen aammu khidhumaiy'thah foarukoh dhinumugai eh rashun aneh rashah dhathuru kurumugai amalukuran v gothuge usool" (loose translation; "a guideline on transportation between islands for the provision of public services) have been published today.
18-Jul	TAG recommendation for quarantine of Maldivians and foreigners who travel from abroad to Maldives after border reopens was finalized today. One of the recommendations was to implement mandatory 14-day home quarantine for local individuals who are arriving to Maldives Travel related home quarantine procedure for those travelling from abroad returning to Male' and travelling from Male' to other islands were published today
31-Jul	Gazette Notice Number 51/2020: Effective from 1st August 2020, it is mandatory to wear masks in public in the greater Male' area. Daily Inspection programme led by Maldives Police Service started today in Male', Hulhumale and Villimale'.
04-Aug	Government Notice: 2020/53: special measures to be in place to prevent the spread of COVID-19 in Maldives. These measures include: A curfew from 10 PM to 5 AM until further notice in greater Male' region Gathering of more than 5 people not allowed in public places/spaces It is MANDATORY to wear masks in islands with cases of COVID-19 It is MANDATORY to wear a mask while travelling by air and sea It is ADVISED to wear a mask in islands without cases of COVID-19 DINE-IN & TAKEAWAY allowed until 9:30 PM in Cafe's and restaurants & Shops are allowed to stay open until 9:30 PM Masks to be worn at all times EXCEPT for when eating in cafe's and restaurants Number of customers allowed in the premises to be displayed in shops and businesses It is advised to shop once a week You are allowed to travel TO Male' city for essential services You are allowed to travel OUT OF Male' city if you travelled for an essential service For offices, it is advised to work from home, if possible and prefer online meetings and do not have communal breaks during work hours Team sports and practice sessions are NOT ALLOWED Sports tournaments and other events are NOT ALLOWED Maintain 3 feet while exercising. Only groups of 5 are allowed to exercise together Do not visit other houses When going out refrain from going out with people of other households When going out refrain from going out with people of other households It is advised to have gatherings and events online Supply boats going to islands to be registered with the island councils Supply boat crew members are NOT ALLOWED to disembark on greater Male' area ports Designated areas to be established for entering islands for supply boats Designated areas to be established for accepting packages sent to Male' city from supply boats.
07-Aug	The state of public health emergency has been extended until 6th September 2020 (Declaration No: 7/2020).

08-Aug	Amendment to the regulation (R-35/2020) related to isolation & quarantine facilities has been published today (R-76/2020). This amendment stipulates the penalties that will be imposed to those who do not abide by the isolation & quarantine measures imposed in Maldives.
06-Sep	The state of public health emergency has been extended until 6th October 2020 (Declaration No: 8/2020).
21-Sep	4th round of mass inspection of government and private offices & public transport systems in the greater Male' area was initiated today.
17-Dec	Circular/Iulaan number 2020/60: Amendments have been brought to the measures taken for COVID-19 - Sports competitions, special ceremonies & events can be held in accordance with the COVID-19 safety guidelines by HPA
18-Dec	"COVID-19 in rah'kaatherivumah kulhivaruthah beyvumugai amalukuranvee gothuge usool" (loose translation:COVID-19 safety guidelines for conducting sports) were published today. "COVID-19 ge haalathugai bah'dhaluvun thakaai rasmiyyaathuthakaai haflaathakaai harakaiythah beyvumugai amalukuran vee gothuge usool" (loose translation: COVID-19 safety guidelines for conducting meetings, ceremonies & events) were published today. Circular/Iulaan number 2020/61: Amendments have been brought to the measures taken for COVID-19. Hence, effective from 18th Dec, the 08:00pm to 4:00am curfew has been lifted.
21-Dec	"Aammu Sih'hathuge kuh'li nurahkaluge haalathugai director general of public health angaa engun thakaa hilaafuvaa faraithakaai medhu fiyavalhu elhumugai amalukuraaane gothuge usool" (loose translation: guideline on taking action against those who violates the director general of public health's notices during the state of public health emergency) was published today
26-Dec	(IUL)23-L/452/2020/6 - Effective from 27 December 2020, a 10 day home quarantine is mandatory for locals and work visa holders who had been to UK within 14 days prior to arriving in Maldives or had transited for more than12 hours in UK. A PCR test to be taken on 5th and 10th day since arrival to Maldives.

Table 6-7: COVID-19 positive cases, by gender, age and origin, 2020

Ethnicity/Age group	Female		Total females	Male		Total males	Total
	No	Yes		No	Yes		
Local	3,887	123	4,010	4,620	115	4,735	8,745
0-17	868	6	874	933	12	945	1,819
18-35	1,536	28	1,564	1,872	21	1,893	3,457
36-53	1,009	32	1,041	1,242	32	1,274	2,315
54-71	395	44	439	450	37	487	926
72-89	74	13	87	106	11	117	204
90-107	2		2	5	2	7	9
Unknown	3		3	12		12	15
Foreign	374	3	377	4,767	20	4,787	5,164
0-17	23		23	35		35	58
18-35	196	2	198	2,920	8	2,928	3,126
36-53	107	1	108	1,375	10	1,385	1,493
54-71	27		27	92		92	119
72-89	2		2	2		2	4
Unknown	19		19	343	2	345	364
Total	**4,261**	**126**	**4,387**	**9,387**	**135**	**9,522**	**13,909**

Table 6-8: COVID-19 Indicators -1, 202

#	Date	Doubling Time	Deaths	Hospitalization Rate			Sample Positive Rate			Healthcare Workers
Week No.			Total	Sum of new admissions for the Week (a)	Sum of new cases for the week (b)	a/b * 100	No. of new positives for the given week (a)	Total no. of samples tested-week (b)	(a/b) *100	
1	15 - 21 Apr	3	-			0%	63	1,342	5%	1
2	22 - 28 Apr	4	-			0%	167	2,547	7%	1
3	29 Apr - 5 May	6	3			0%	323	2,863	11%	2
4	6 - 12 May	11	-			0%	331	2,868	12%	1
5	13 - 19 May	19	1			0%	282	3,189	9%	5
6	20 - 26 May	23	1	9	252	4%	252	4,026	6%	1
7	27 May - 02 Jun	20	2	6	403	1%	403	4,798	8%	-
8	03 - 09 Jun	79	1	12	101	12%	101	5,536	2%	-
9	10 - 16 Jun	64	-	10	152	7%	152	5,080	3%	2
10	17 - 23 Jun	80	-	11	144	8%	144	6,661	2%	2
11	24 - 30 Jun	116	1	5	123	4%	123	6,869	2%	-
12	1 - 7 Jul	85	3	24	140	17%	140	6,279	2%	8
13	8 - 14 Jul	39	2	41	300	14%	300	6,003	5%	16
14	15 - 21 Jul	58	1	32	243	13%	243	4,932	5%	7
15	22 - 28 Jul	34	-	54	462	12%	462	6,247	7%	6
16	29 Jul - 4 Aug	19	4	90	940	10%	940	8,144	12%	2
17	05 - 11 Aug	34	1	82	777	11%	777	7,287	11%	10
18	12 - 18 Aug	33	4	89	856	10%	855	7,559	11%	23
19	19 - 25 Aug	34	4	106	968	11%	965	6,999	14%	13
20	26 Aug - 01 Sep	39	1	79	956	8%	953	7,850	12%	7
21	02 - 08 Sep	58	-	88	738	12%	738	8,183	9%	10
22	09 - 15 Sep	76	4	56	587	10%	587	9,230	6%	9
23	16 - 22 Sep	100	1	53	490	11%	489	9,031	5%	10
24	23 - 29 Sep	124	-	38	376	10%	373	8,803	4%	13

#	Date	Doubling Time	Deaths	Hospitalization Rate			Sample Positive Rate			Healthcare Workers
Week No.			Total	Sum of new admissions for the Week (a)	Sum of new cases for the week (b)	a/b * 100	No. of new positives for the given week (a)	Total no. of samples tested- week (b)	(a/b) *100	
25	30 Sept - 06 Oct	139	-	34	427	8%	426	9,678	4%	8
26	07 - 13 Oct	137	1	39	372	10%	368	7,599	5%	2
27	14 - 20 Oct	222	2	24	278	9%	273	8,208	3%	2
28	21 - 27 Oct	206	-	25	296	8%	281	9,265	3%	8
29	28 Oct - 03 Nov	237	1	34	229	15%	159	8,232	2%	2
30	04 - 10 Nov	242	3	16	234	7%	205	7,785	3%	3
31	11 - 17 Nov	170	4	48	325	15%	261	6,946	4%	4
32	18 - 24 Nov	124	1	61	455	13%	288	8,238	3%	5
33	25 Nov - 01 Dec	279	1	49	239	21%	230	9,361	2%	3
34	02 - 08 Dec	311	-	44	199	22%	191	10,689	2%	4
35	09 - 15 Dec	466	1	25	144	17%	127	11,801	1%	1
36	16 - 22 Dec	438	-	16	132	12%	116	16,081	1%	1
37	23 - 29 Dec	366	-	18	167	11%	149	12,530	1%	4
38	30 Dec - 05 Jan 2021	301	-	32	239	13%	207	12,398	2%	4

Table 6-9: COVID-19 Indicators -2, 2020

#	Date	Flu Positivity			Newly identified COVID-19 cases (Rate of Change of New Cases by Week)			Percentage of Occupied Hospital Beds (Excluding ICU Beds)		
Week No.		Samples taken from flu clinic	Samples Positive	Flu positivity	Sum of previous week (Wk2)	Sum of the Cases in Current Week (Wk1)	Wk1-Wk2/Wk1	Maximum number of Patients admitted	Total Number of Beds	Percentage of Occupied Hospital Beds
1	15 - 21 Apr	414	29	7%						0%
2	22 - 28 Apr	316	48	15%						0%
3	29 Apr - 5 May	445	37	8%						0%
4	6 - 12 May	467	29	6%						0%
5	13 - 19 May	596	57	10%						0%
6	20 - 26 May	311	21	7%	282	252	-11%	10	271	4%
7	27 May - 02 Jun	313	36	12%	252	403	60%	13	271	5%
8	03 - 09 Jun	382	21	5%	403	101	-75%	17	271	6%
9	10 - 16 Jun	366	24	7%	101	152	50%	19	271	7%
10	17 - 23 Jun	370	17	5%	152	144	-5%	14	271	5%
11	24 - 30 Jun	436	23	5%	144	123	-15%	13	271	5%
12	1 - 7 Jul	218	9	4%	123	140	14%	19	259	7%
13	8 - 14 Jul	891	76	9%	140	300	114%	39	233	17%
14	15 - 21 Jul	877	89	10%	300	243	-19%	53	233	23%
15	22 - 28 Jul	958	178	19%	243	462	90%	69	233	30%
16	29 Jul - 4 Aug	1,143	276	24%	462	940	103%	110	233	47%
17	05 - 11 Aug	1,756	237	13%	940	777	-17%	135	233	58%
18	12 - 18 Aug	1,394	255	18%	777	856	10%	145	233	62%
19	19 - 25 Aug	1,482	255	17%	856	968	13%	177	233	76%
20	26 Aug - 01 Sep	1,553	328	21%	968	956	-1%	183	233	79%
21	02 - 08 Sep	1,030	138	13%	956	738	-23%	162	233	70%
22	09 - 15 Sep	825	104	13%	738	587	-20%	122	233	52%
23	16 - 22 Sep	802	85	11%	538	490	-9%	106	233	45%

#	Date	Flu Positivity			Newly identified COVID-19 cases (Rate of Change of New Cases by Week)			Percentage of Occupied Hospital Beds (Excluding ICU Beds)		
Week No.		Samples taken from flu clinic	Samples Positive	Flu positivity	Sum of previous week (Wk2)	Sum of the Cases in Current Week (Wk1)	Wk1-Wk2/Wk1	Maximum number of Patients admitted	Total Number of Beds	Percentage of Occupied Hospital Beds
24	23 - 29 Sep	983	84	9%	490	376	-23%	87	233	37%
25	30 Sept - 06 Oct	1,117	57	5%	376	427	14%	74	233	32%
26	07 - 13 Oct	1,151	98	9%	427	372	-13%	65	233	28%
27	14 - 20 Oct	891	39	4%	372	278	-25%	53	233	23%
28	21 - 27 Oct	710	31	4%	278	296	6%	39	233	17%
29	28 Oct - 03 Nov	511	31	6%	296	229	-23%	48	233	21%
30	04 - 10 Nov	465	31	7%	229	234	2%	47	233	20%
31	11 - 17 Nov	419	37	9%	234	325	39%	55	233	24%
32	18 - 24 Nov	524	57	11%	325	455	40%	93	233	40%
33	25 Nov - 01 Dec	473	39	8%	455	239	-47%	95	233	41%
34	02 - 08 Dec	501	22	4%	239	199	-17%	90	233	39%
35	09 - 15 Dec	288	8	3%	199	144	-28%	65	233	28%
36	16 - 22 Dec	387	8	2%	144	132	-8%	53	233	23%
37	23 - 29 Dec	292	4	1%	132	167	27%	36	233	15%
38	30 Dec - 05 Jan 2021	281	5	2%	167	239	43%	37	233	16%

Table 6-10: COVID-19 Indicators -3, 2020

#	Date	Percentage of Occupied ICU Beds			Number of cases unlinked to an existing cluster		
Week No.		Maximum number of Patients admitted in ICU	Total Number of ICU Beds	ICU Bed Occupancy Rate	Total number of cases	Cases unlinked to clusters	% of cases unlinked to clusters
1	15 - 21 Apr			0%	63	7	11%
2	22 - 28 Apr			0%	168	10	6%
3	29 Apr - 5 May			0%	323	26	8%
4	6 - 12 May			0%	331	26	8%
5	13 - 19 May			0%	282	32	11%
6	20 - 26 May	5	41	12%	252	16	6%
7	27 May - 02 Jun	2	41	5%	403	24	6%
8	03 - 09 Jun	1	41	2%	101	24	24%
9	10 - 16 Jun	2	41	5%	152	52	34%
10	17 - 23 Jun	3	41	7%	144	52	36%
11	24 - 30 Jun	3	41	7%	123	49	40%
12	1 - 7 Jul	3	40	8%	140	54	39%
13	8 - 14 Jul	3	40	8%	300	91	30%
14	15 - 21 Jul	1	40	3%	243	86	35%
15	22 - 28 Jul	3	40	8%	462	193	42%
16	29 Jul - 4 Aug	7	40	18%	940	470	50%
17	05 - 11 Aug	11	40	28%	777	374	48%
18	12 - 18 Aug	11	40	28%	856	350	41%
19	19 - 25 Aug	11	40	28%	968	296	31%
20	26 Aug - 01 Sep	11	40	28%	956	338	35%
21	02 - 08 Sep	8	40	20%	738	251	34%
22	09 - 15 Sep	7	40	18%	587	186	32%
23	16 - 22 Sep	8	40	20%	490	141	29%
24	23 - 29 Sep	5	40	13%	376	132	35%

#	Date	Percentage of Occupied ICU Beds			Number of cases unlinked to an existing cluster		
Week No.		Maximum number of Patients admitted in ICU	Total Number of ICU Beds	ICU Bed Occupancy Rate	Total number of cases	Cases unlinked to clusters	% of cases unlinked to clusters
25	30 Sept - 06 Oct	2	40	5%	427	130	30%
26	07 - 13 Oct	4	40	10%	372	122	33%
27	14 - 20 Oct	4	40	10%	278	70	25%
28	21 - 27 Oct	1	40	3%	296	90	30%
29	28 Oct - 03 Nov	3	40	8%	229	78	34%
30	04 - 10 Nov	3	40	8%	234	52	22%
31	11 - 17 Nov	2	40	5%	325	63	19%
32	18 - 24 Nov	3	40	8%	455	85	19%
33	25 Nov - 01 Dec	2	40	5%	239	74	31%
34	02 - 08 Dec	1	40	3%	199	66	33%
35	09 - 15 Dec	3	40	8%	144	41	28%
36	16 - 22 Dec	5	40	13%	132	34	26%
37	23 - 29 Dec	4	40	10%	167	35	21%
38	30 Dec - 05 Jan	2	40	5%	239	37	15%

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