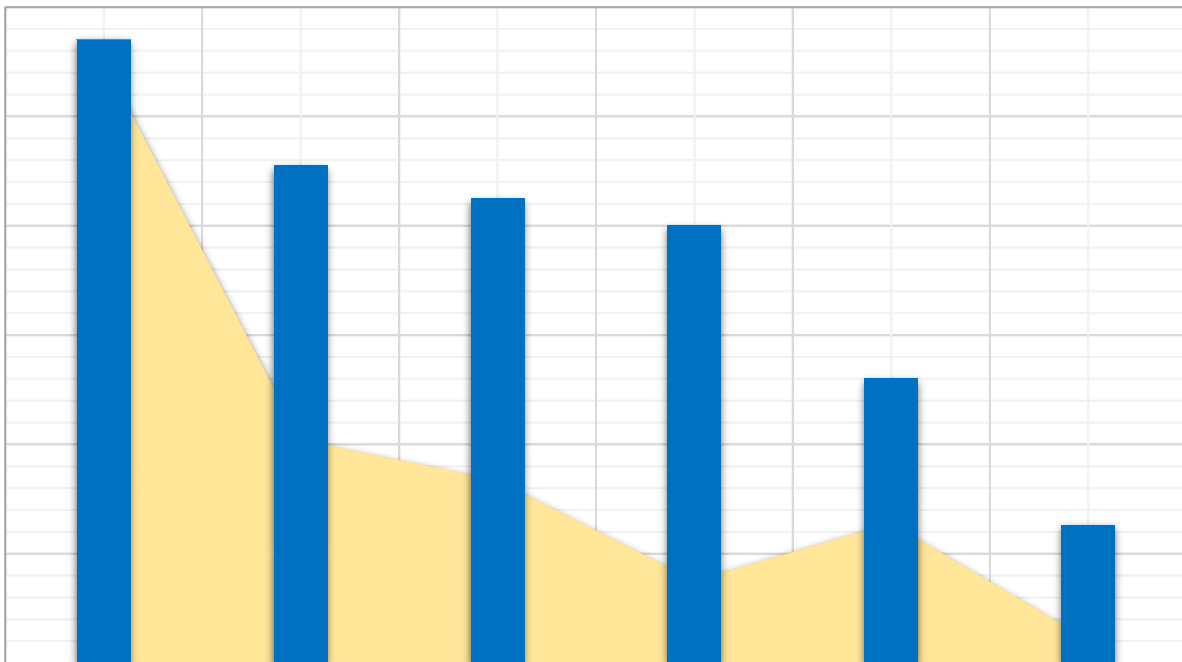




MINISTRY OF HEALTH

VITAL STATISTICS QUARTERLY

REPORT



THIRD QUARTER

2022



VITAL STATISTICS QUARTERLY REPORT

THIRD QUARTER 2022

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ABBREVIATIONS/ACRONYMS

COVID-19	Coronavirus disease 2019
CRD	Chronic respiratory diseases
CVA	Cerebrovascular accidents
CVD	Cardiovascular diseases
ICD	International Classification of Diseases
MOH	Ministry of Health
NBS	National Bureau of Statistics
NCD	Non-Communicable Disease
PHEOC	Public Health Emergency Command Centre
WHO	World Health Organization

SUMMARY OF VITAL STATISTICS IN Q1- Q3, 2022

Vital Events		Q1-Q3, 2022
Seychelles Population (2021 estimate)		99,258 (51% Male, 49% Female)
Registered Live births		1213 (53% Males, 47% Females)
Registered Deaths		709 (59% Males, 41% Females)
Deaths by Cause	Absolute numbers	% of total deaths
Mortality from Diseases of the Circulatory system⁽¹⁾ <i>(ICD-11: 1-BA0 to 1-BE1) (ICD-10: I00 - I99)</i>	190	27%
Mortality from Neoplasms <i>(ICD-11: 1-2A0 to 1-2F9) (ICD-10: C00 - D48)</i>	118	17%
Mortality from Diseases of the Respiratory system <i>(ICD-11: 1-CA0 to 1-CB6) (ICD-10: J00 - J98)</i>	86	12%
COVID-19 related mortality⁽²⁾ <i>(ICD-11: RA01) (ICD-10: U07.1)</i>	85	12%
External causes of mortality <i>(ICD-11: 1-PA0 to 2-PL0) (ICD-10: V01 - Y89)</i>	57	8%
Diseases of the digestive system <i>(ICD-11: 1-DA0 to 1-DE1) (ICD-10: K00 - K92)</i>	31	4%
Endocrine, nutritional and metabolic diseases <i>(ICD-11: 1-5A0 to 1-5D4) (ICD-10: E00-E88)</i>	29	4%
Diseases of the genitourinary system <i>(ICD-11: 1-GA0 to 1-GC7) (ICD-10: N00-N98)</i>	25	3%
Mortality from Infectious and parasitic diseases <i>(ICD-11: 1-1A0 to 1-1G8) (ICD-10:A00-B99)</i>	18	3%
Other causes of mortality	70	10%

Notes:

(1) CVA as a main cause of death excluded in-line with ICD-11 coding conventions

(2) Deaths that had COVID-19 as part of the series of events leading to death.

1.0 INTRODUCTION

This report summarizes vital events captured by Ministry of Health (MOH) for Q1-Q3 2022. The scope is limited to births and deaths. International Classification of Diseases 10th and 11th revisions are used to code and group causes of death.

The official and legal source for Vital Statistics data in Seychelles is the National Civil Registration Office. However, comparisons and cross-checks were also carried out with records from Seychelles Hospital (wards, maternity and mortuary), hospitals in Praslin and La Digue, as well as Primary Healthcare Centres. The report also draws references from publications of the National Bureau of Statistics (NBS).

New legislation came into effect in 2022 (Civil Status (Amendment) Act 2021), revising methods of reporting of births and deaths. Upon full implementation, the reporting delay between the occurrence of a birth and its registration at Civil Status Office is expected to reduce.

Key points from Q3 2022 Report

- Deaths amongst men were higher across all age-groups in Q1-Q3 2022, indicating more men are dying than women, and at a younger age
- Pneumonia deaths (either tested negative or were not tested for COVID-19) in Q1-Q3 2022 increased by 64% when compared to same period in 2021
- Mortality from external causes in Q1-Q3 2022 are twice as high as same period last year and pre-pandemic years
- We continue to see excess deaths in 2022 compared to pre-pandemic years

2.0 SEYCHELLES POPULATION

The Mid-Year estimated population of Seychelles in 2021 was 99,258; indicating a growth rate of 0.8% over population estimates in 2020. It is important to note that new population estimates based on the just concluded national census results will be released in a special bulletin by NBS in the fourth quarter of 2022.¹ In 2021, 51% of the population were males, while 49% were females with an approximate ratio of 1032 males for every 1000 females. Of the total estimated population, 22% are aged below 15 years while 12% are aged 65 years and above (Annex 1: mid-year population estimates by broad age-groups and sex, 2017-2021).²

3.0 BIRTHS

3.1 Registered Births

There were 432 registered live births in Q3 alone; bringing the total number of registered births from January - September 2022 to 1213, see Table 1.

Table 1 Registered Live Births, January – September 2022

Month	Sex		Total
	Male	Female	
January	37	48	85
February	57	57	114
March	76	57	133
April	77	53	130
May	84	92	176
June	79	64	143
July	82	78	160
August	74	67	141
September	73	58	131
Total	639	574	1213

Data Source: Department of Civil Status

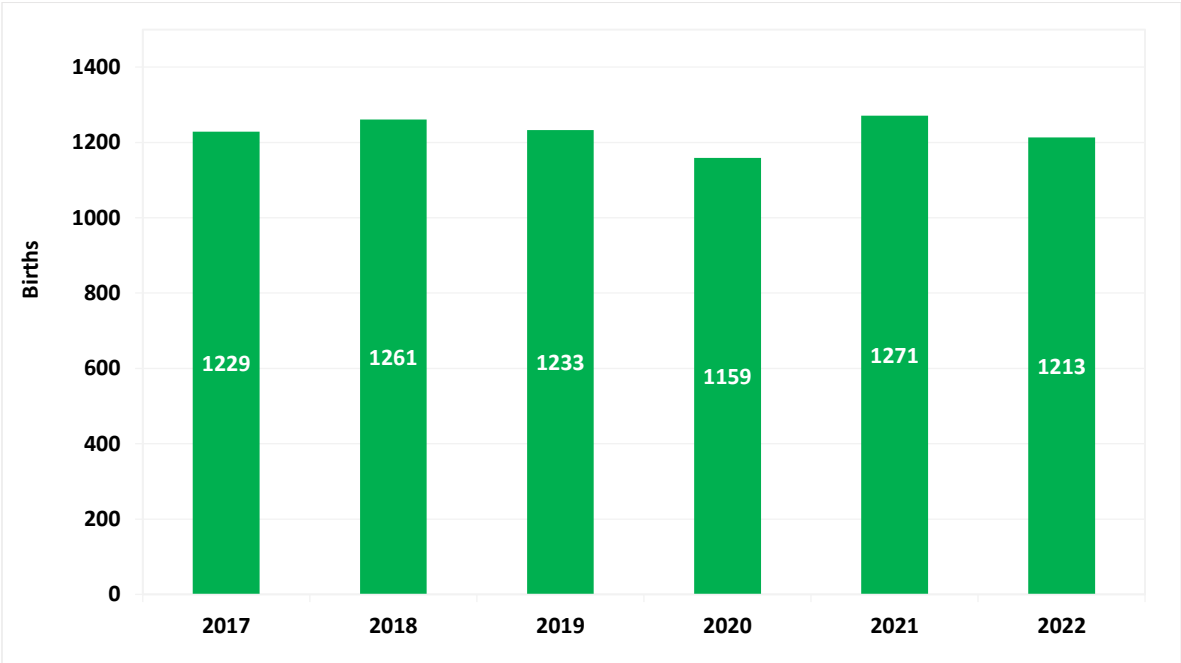
Note: Registered birth figures for June are updated from Q2 2022 report

¹ National Bureau of Statistics. (2022). Statistical Bulletin: Population and Vital Statistics, Mid-Year Population Estimates. Catalogue Number: Population 2022/2. Seychelles. Retrieved from: <https://www.nbs.gov.sc/downloads/population-abridged-version/download>

² National Bureau of Statistics. (2021). Statistical Bulletin: Population and Vital Statistics, Mid-Year Population Estimates. Catalogue Number: Population 2021/2. Seychelles. Retrieved from: <https://www.nbs.gov.sc/downloads/mid-2021-population-estimates/download>

The number of registered births in Q1-Q3 2022 is fairly similar to previous years (Figure 1).

Figure 1 Registered Live Births in Q1-Q3, 2017-2022



Data Source: Department of Civil Status/ NBS

3.2 Births in Hospital

Seychelles Hospital and other government-owned hospitals (Anse Royale, Praslin and La Digue) recorded 1188 births (1182 live births and 6 stillbirths) in Q1-Q3 2022 (Table 2).

The difference in the number of hospital births and registered births, is a consequence of the current law that allows up till 30 days after delivery to register births at the Civil Status Office. Therefore, some births in a particular month may be registered in the next month.

Table 2 Hospital Maternity Statistics (Mahe, Praslin & La Digue) in Q1-Q3, 2021- 2022

Vital Events	Q1-Q3, 2021	Q1-Q3, 2022
Total births (live and still births)	1308	1242
Total live births	1299	1236
<i>Live births > 37 weeks</i>	<i>1219</i>	<i>1159</i>
<i>Live births < 37 weeks</i>	<i>80</i>	<i>77</i>
Total stillbirths	9	6
<i>Stillbirths > 37 weeks</i>	<i>2</i>	<i>0</i>
<i>Stillbirths < 37 weeks</i>	<i>7</i>	<i>6</i>
Birth Before Arrival	14	10
Babies with low birth weight (< 2.5kg)	111	110

Data Source: Maternity Ward Statistics, 2021-2022

Note: The discrepancy with the number of registered births is due to the fact that legally, parents have 30 days to register births after delivery.

4.0 DEATHS

4.1 Registered Deaths

There were 709 registered deaths (59% Males, 41% Females) in Q1-Q3 2022 (Table 3).

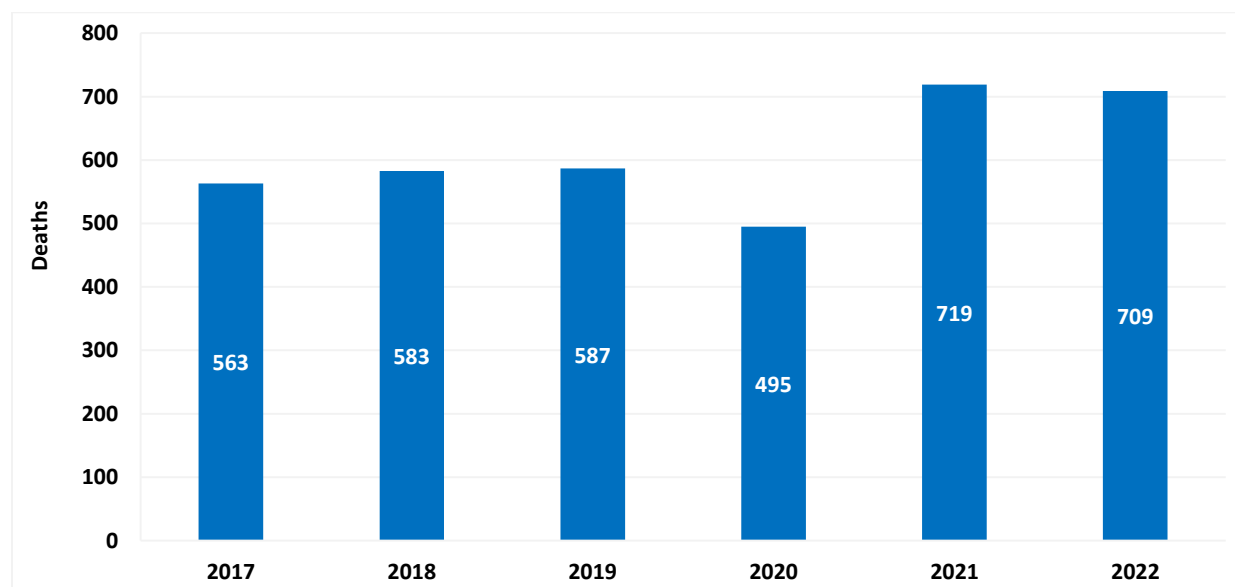
Table 3 Registered Deaths by Sex, January – September 2022

Month	Sex		Total
	Male	Female	
January	48	59	107
February	48	32	80
March	51	23	74
April	40	36	76
May	51	29	80
June	48	32	80
July	49	29	78
August	47	28	75
September	39	20	59
Total	421	288	709

Data Source: Department of Civil Status/ NBS

The deaths recorded in Q1-Q3 2022 were higher than the number of deaths recorded during the same period pre-pandemic (Figure 2).

Figure 2 Registered Deaths in Q1-Q3, 2017-2022



Data Source: Department of Civil Status/ NBS

Infant deaths (age <1year) accounted for 3% of total deaths in Q1-Q3 2022, while 60% of total deaths were persons in the age-group 65 years and above. There were disproportionately more deaths among men in all age-groups (Table 4).

Table 4 Registered Deaths by Age-Group and Sex, Q1-Q3, 2022

Age-group (Years)	Sex		Total
	Male	Female	
<1	12	6	18
1-4	3	2	5
5-14	5	0	5
15-24	9	2	11
25-44	50	25	75
45-64	123	50	173
65& +	219	203	422
Total	421	288	709

Data Source: Department of Civil Status/ NBS

Deaths amongst men were higher across all age-groups in 2022, indicating more men are dying than women, and at a younger age. Of the 709 deaths reported, Six (4 Males, 2 Females) died abroad but were registered in-country.

Among the 709 people who died, 32 (29 Males, 3 Females) were Non-Seychellois, representing 5% of total deaths (Table 5).

Table 5 Registered Deaths by Nationality and Sex, Q1- Q3, 2022

Nationality	Non-Seychellois	Seychellois	Total
Male	29	392	421
Female	3	285	288
Total	32	677	709

Data Source: Department of Civil Status

Table 6 shows registered deaths by months and the percentage distribution based on location (place) of death.

Table 6 Registered Deaths by Location (Place) of Death, Q1-Q3, 2022

	Total Deaths	% Deaths in Hospital	% Deaths in COVID-19 Isolation Facility*	% Deaths in Community
Jan-Sept 2022	709	51%	9%	40%
January	107	50%	20%	30%
February	80	49%	15%	36%
March	74	44%	4%	52%
April	76	51%	3%	46%
May	80	56%	5%	38%
June	80	54%	1%	45%
July	78	55%	-	45%
August	75	52%	-	48%
September	59	58%	-	42%

Data Source: Department of Civil Status/ MOH Hospital Statistics

*Note: the dedicated COVID-19 facility (Family Hospital, Perseverance) was closed in June 2022).

Table 7 shows registered deaths in Q1-Q3 2022 on the Islands (Mahe, Praslin, La Digue and other Islands).

Table 7 Registered Deaths on the Islands (Mahe, Praslin and La Digue), Q1- Q3, 2022

Q1-Q3 2022	Mahe	Praslin	La Digue	Other Islands /Died Abroad
Q1	234	12	6	9
Q2	212	12	4	8
Q3	188	17	2	5
Total	634	41	12	22
Total Deaths	709			

Data Source: Department of Civil Status

4.2 Causes of Death

The main causes of mortality in Seychelles have been the same for several years (prior to the COVID-19 pandemic). In 2022, diseases of the circulatory system remain the leading cause of death, accounting for 203 deaths. Second leading was Neoplasm and COVID-19 related deaths moving from second place in 2021 to fourth place in 2022 (Table 8).

Table 8 Comparison of Causes of Death in Q1-Q3, 2019-2022

ICD-10 Block Codes	ICD-11 Block Codes	Leading Causes of death	January - September			
			2019	2020	2021	2022
		Total Deaths	587	495	719	709
I00 - I99	1-BA0 to 1-BE1	Diseases of the Circulatory system ⁽¹⁾	186	190	208	190
C00 - D48	1-2A0 to 1-2F9	Neoplasms	111	86	100	118
J00 - J98	1-CA0 to 1-CB6	Diseases of the Respiratory system	98	81	69	86
U07.1	RA01	COVID-19 related deaths ⁽²⁾	-	-	149	85
V01 - Y89	1-PA0 to 2-PL0	External causes of mortality	36	26	25	57
K00 - K92	1-DA0 to 1-DE1	Diseases of the digestive system	28	22	27	31
E00 - E88	1-5A0 to 1-5D4	Endocrine, nutritional and metabolic diseases	12	14	36	29
N00 - N98	1-GA0 to 1-GC7	Diseases of the genitourinary system	18	23	27	25
A00 - B99	1-1A0 to 1-1G8	Infectious and parasitic diseases	35	19	16	18
		Others causes of death	63	34	62	70

Notes:

(1) CVA as a main cause of death excluded in-line with ICD-11 coding conventions

(2) Include deaths that had COVID-19 as part of the series of events leading to death

COVID-19 Deaths

COVID-19 continues to be an important cause of death, however, the number of registered COVID-19 related deaths in Q1-Q3 of 2022 was less than that registered in 2021 (as shown above in Table 8). The majority of those who died from COVID-19 in 2022 were men.

There were 85 (48 Males, 37 Females) registered COVID-19 related deaths in Q1- Q3 2022 (Table 9). A total of 260 (140 Males, 120 Females) COVID-19 related deaths have been registered from January 2021 to September 2022.

Table 9 Registered COVID-19 related deaths, Q1- Q3, 2022

Age-group (Years)	Sex		Total
	Male	Female	
25-44	4	3	7
45-64	14	3	17
65& +	30	31	61
Total	48	37	85

Data source: Department of Civil status

Furthermore, PHEOC reported six COVID-19 deaths in Q1-Q3 2022 (cumulative total of 170 from start of the pandemic). PHEOC reports COVID-19 deaths where there is both (1) laboratory confirmation and (2) clinical syndrome leading to death are consistent with COVID-19 illness and/or its known complications.

Pneumonia Deaths

Pneumonia (either tested negative or were not tested for COVID-19) accounted for 9% of all registered deaths in Q1-Q3 2022. There were 64 deaths (35 Males, 29 Females) with pneumonia as the main cause; an increase compared to 39 deaths recorded in the same period in 2021.

The age-group 65 years and above, accounted for most pneumonia deaths in Q1-Q3 2022 (45 out of 64 deaths). There is inadequate information to report on types of pneumonia and their causative agents.

It is possible that many pneumonia deaths are actually secondary to COVID-19 infection, where a person presents with later stage of disease, where COVID-19 tests are often negative. Together, COVID-19 and pneumonia deaths attribute to 171 deaths in Q1-Q3 2022 (24% of all deaths).

External Causes of Mortality

There were 57 deaths from external causes in Q1-Q3 2022; twice as high as same period last year and pre-pandemic years. Table 10 shows deaths from external causes in Q3 of the last four years.

Table 10 Comparison of External Causes of Mortality, Q1-Q3, 2019-2022

External Causes of Mortality	2019	2020	2021	2022
Road Traffic Accident	7	10	3	15
Falls	9	4	8	8
Accidental drowning and submersion	5	5	4	11
Exposure to smoke, fire and flames	1	0	0	2
Accidental poisoning by and exposure to noxious substances	0	1	0	1
Intentional self-harm	6	1	8	11
Homicide	2	1	2	5
Other external causes of mortality	6	4	0	4
Total	36	26	25	57

4.3 Excess Deaths

Excess mortality is defined as the gap between observed and expected deaths *from* all causes (mostly during a crisis), above and beyond what we would have expected to see under ‘normal’ conditions. It attempts to describe how the number of deaths during the on-going COVID-19 pandemic compares to pre-pandemic average. This approach provides a general measure of the impact of the crisis on the mortality rate because it includes all deaths regardless of their cause.

Table 11 and Figure 3 show deaths before the pandemic (2015-2019) and comparison of the historical average of monthly deaths with deaths in years 2020, 2021 and 2022. We continue to see excess deaths in 2022 compared to pre-pandemic years.

Table 11

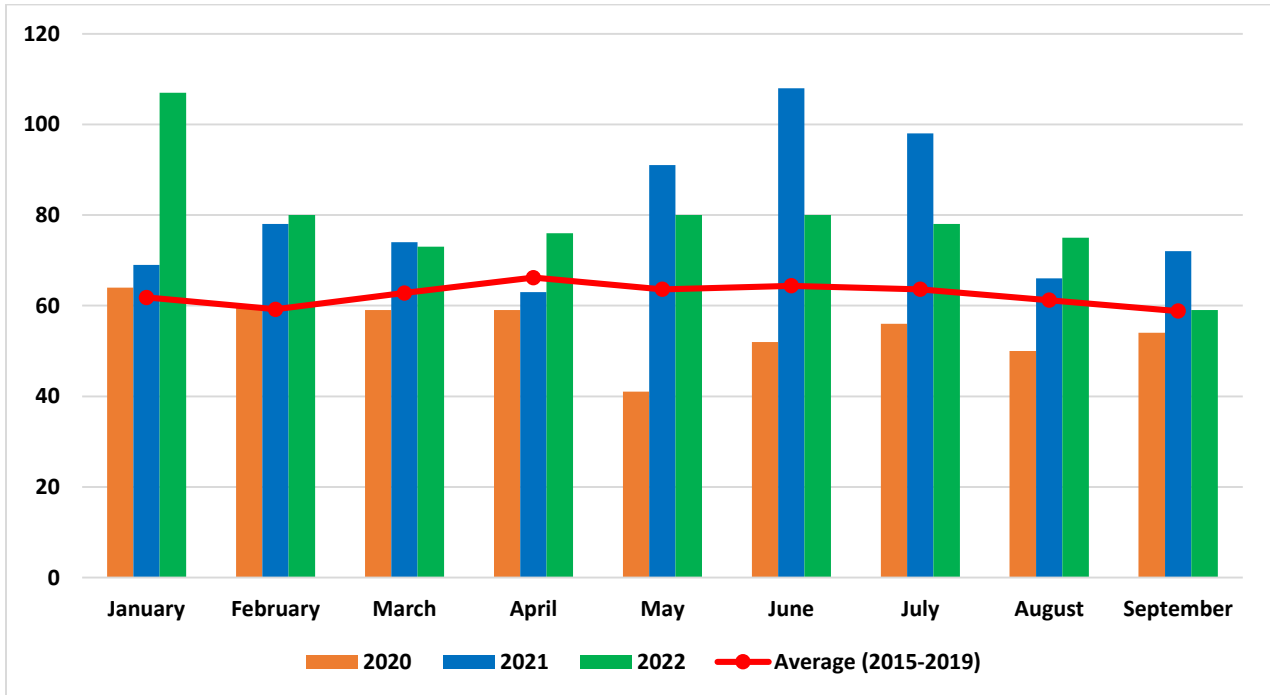
Registered Deaths from January to September, 2015-2022

	2015	2016	2017	2018	2019	Average (2015-2019)	2020	2021	2022	% difference (2022 compared to average 2015- 2019)
Jan-Sept (2015-2022)	528	547	563	583	587	562	495	719	709	+26%
January	52	52	61	64	80	62	64	69	107	+73%
February	50	56	65	58	67	59	60	78	80	+36%
March	69	68	53	57	67	63	59	73	74	+17%
April	63	72	52	77	67	66	59	63	76	+15%
May	46	54	81	70	67	64	41	92	80	+25%
June	78	53	61	72	58	64	52	107	80	+25%
July	59	68	63	65	63	64	56	98	78	+22%
August	60	60	78	61	47	61	50	67	75	+23%
September	51	64	49	59	71	59	54	72	59	+0%

Data Source: Department of Civil Status/ NBS

Figure 3

Registered Deaths (2020-2022) compared to Historical Average of Deaths (2015-2019)



Data Source: Department of Civil Status/ NBS

ANNEX

ANNEX 1. Mid-year Population Estimates by Broad Age-Group and Sex, 2017-2021

Sex / Age-group (Years)	2017	2018	2019	2020	2021
<u>MALES</u>	<u>48,793</u>	<u>49,259</u>	<u>49,665</u>	<u>50,061</u>	<u>50,413</u>
0-14	9,825	10,155	10,592	10,781	10,988
15-24	4,182	4,029	3,949	4,071	4,389
25-54	23,715	23,700	23,234	22,931	22,680
55-64	7,078	7,225	7,314	7,229	6,922
65+	3,993	4,150	4,576	5,049	5,434
<u>FEMALES</u>	<u>47,050</u>	<u>47,503</u>	<u>47,960</u>	<u>48,401</u>	<u>48,845</u>
0-14	9,411	9,724	9,936	10,158	10,497
15-24	3,524	3,627	3,703	3,986	4,215
25-54	21,710	21,181	20,708	20,276	19,763
55-64	7,158	7,444	7,773	7,841	7,887
65+	5,247	5,527	5,840	6,140	6,483
<u>BOTH SEXES</u>	<u>95,843</u>	<u>96,762</u>	<u>97,625</u>	<u>98,462</u>	<u>99,258</u>
0-14	19,236	19,879	20,528	20,939	21,485
15-24	7,706	7,656	7,652	8,057	8,604
25-54	45,425	44,881	43,942	43,207	42,443
55-64	14,236	14,669	15,087	15,070	14,809
65+	9,240	9,677	10,416	11,189	11,917
<u>BOTH SEXES</u>					
%					
0-14	20.1	20.5	21.0	21.3	21.6
15-24	8.0	7.9	7.8	8.2	8.7
25-54	47.4	46.4	45.0	43.9	42.8
55-64	14.9	15.2	15.5	15.3	14.9
65+	9.6	10.0	10.7	11.4	12.0

Source: NBS

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