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Report on the Status of Health Issues in Mumbai

With a focus on

- Primary Healthcare
- Sensitive Diseases
- Respiratory Diseases
- Healthcare Personnel Data

Image Courtesy : Getty Images

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I. Foreword

Health is one of the key indicators of Human Development. For a local government, it is an essential area of governance, as healthy citizens can effectively contribute to the process of development. In the contemporary age, lifestyle and ecological changes are severely impacting people's health. In this purview, public health policies and programmes must be enacted to address them.

In 2014, total of 2,428 deaths were caused by lifestyle diseases such as diabetes which have risen by 485% to 14,207 in 2022, becoming the leading cause of death in Mumbai. This alarming trend highlights the need to follow the Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines set by the Ministry of Housing and Urban Affairs (MoHUA) to guide urban planning and development across cities and regions. Among these guidelines is the recommendation that at least 10 square meters of open space per person should be available, promoting public health, physical activity, and well-being. However, Mumbai's Development Plan (2014-2034) proposes only 3 square meters of open space per person, a stark shortfall that not only highlights the urgent need for more open spaces but also points to the broader issue of inadequate infrastructure to support the health and well-being of its citizens.

Air quality in Mumbai has been steadily declining in recent years. From 2019 to 2022, the city's average air quality has declined, from Satisfactory (51-100 AQI) to Moderate (101-200 AQI). During the same period (2019 to 2022), there were 33,711 deaths due to 'Major Respiratory Diseases' deaths and 'Respiratory Tuberculosis' further contributed to 13,524 deaths. This highlights the serious threat air pollution poses to the residents of Mumbai. In 2023, the air quality took a further hit as there was not even a single month where the recorded Air Quality Index (AQI) was in the Good category (0-50).

From 2014 to 2022, the highest number of registered sensitive cases in BMC was Diarrhoea. In 2022, 69,904 cases were registered. However, Maharashtra Pollution Control Board (MPCB) report in 2022, rated Mumbai's water quality as Good to Moderate (50-63). While this suggests a generally acceptable standard of water in the city, the high incidence of Diarrhoea calls into question the effectiveness of water management and sanitation systems in preventing waterborne diseases in a metropolis such as Mumbai.

According to the Ministry of Statistics and Programme Implementation's PLFS survey, Maharashtra's population spent 10.7% of their income on medical expenses, which exceeds the national average of 9.7%. This disparity contributes to unequal access to healthcare and increased reliance on private healthcare systems. In case of Mumbai, there is a shortage of 525 dispensaries in BMC's healthcare system as per the URDPFI norms. A total of 191 municipal dispensaries are operational in Mumbai, with 95% of these clinics (181) operating for only 7 hours a day. From 2022 addition of 207 Hindu Hruday Samrat Balasaheb Thackeray (HBT) clinics has been a welcome step to reduce the burden on municipal dispensaries. However, 97 of the 207 HBT clinics operate within the same premises as municipal dispensaries. Additionally, only 6% (13 out of 207) of the HBT clinics are accessible for 14 hours (7:00 AM to 10:00 PM). While the accessibility has improved, the overall coverage has not increased significantly. To better serve all areas, municipal and HBT clinics should operate for 14 hours, especially in wards with large slum populations.

In addition to this, vacancies in BMC dispensaries personnel have risen from 12% in 2014 to 37% in 2023. There arises a question of whether BMC is falling short of resources to overcome these deficiencies. As a result, families are bearing a higher financial burden for healthcare. This highlights the urgent need to strengthen primary healthcare services and better prioritisation of budgets by the BMC.

In the past three years, municipal elections have not been held, and the BMC has been operating without elected representation. As a result, the health committee has not been formed to address important health issues. The overall health situation highlights the need for greater citizen involvement in the city's public health functions. The National Health Management Information System (NHMIS) must be fully operational to ensure the efficient real-time collection of health data, including information on deaths and diseases. To transform Mumbai into a world-class city and improve the health of its citizens, the BMC must prioritise access to open spaces and strengthen primary healthcare services. This will promote healthier lifestyles and help tackle the growing challenge of lifestyle-related diseases.

Milind Mhaske,
CEO, Praja Foundation

II. Acknowledgement

Praja has obtained the data used in compiling this whitepaper through Right to Information Act, 2005. Hence, it is very important to acknowledge the RTI Act and everyone involved, especially the officials who have provided us this information diligently.

We would like to appreciate our stakeholders; particularly, our Elected Representatives & government officials, the Civil Society Organisations (CSOs) and the journalists who utilise and publicise our data and, by doing so, ensure that awareness regarding various issues that we discuss is distributed to a wide-ranging population. We would like to take this opportunity to specifically extend our gratitude to all government officials for their continuous cooperation and support.

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The views and opinions expressed in this report are solely of Praja Foundation and not of our supporters. It does not imply an endorsement from them or any entity they represent.

III. Sources of Data

The sources of information for this study have been collected by filing RTIs (Right to Information) to the relevant departments and through Government Websites:

Data Points	Year	Source
Cause of Death	January 2014 to December 2022	State Bureau of Health Intelligence and Vital Statistics (SBHIVS), Maharashtra State through RTI
Major Diseases	January 2014 to December 2023	Public Health Department (BMC) through RTI
Aapli Chikitsa		
Diagnostic Tests & Samples in Maternity Homes & Municipal Dispensaries	April 2023 to March 2024	Public Health Department (BMC) through RTI
Health Facilities		
Density of Dispensary per population	2023	BMC ESR Report 2023-24
Dispensary Timings	As on 31st December 2023	Public Health Department (BMC) through RTI
Human Resource		
Municipal Health Department and Hospitals	As of 31St December 2023	BMC HR module through RTI
State Hospitals	As of 31St December 2023	Through RTI filed in State Hospitals
Health Budget	2018-19 to 2024-25	BMC Budget Books (BMC Portal)
ER Deliberations		
MLA Questions	2014 to 2023	Vidhan Bhavan through RTI
Government Health Programmes & Schemes		
RNTCP	January 2019 to December 2023	Nikshay Portal as on 28.10.2024 and Mumbai TB cell (RTI)
Health Programmes & Schemes		Data was taken from HMIS for 2018-19 to 2020-21. Data beyond 2020-21 is unavailable as it has not been updated on the HMIS portal

Section A: Health Status of Mumbai

1. Status of SDG Goal 3 in Mumbai from 2015 to 2023

Diseases	Target for 2030	2015	% change	2023
Tuberculosis	0 TB cases/1 lakh population	325 cases	Decrease by 34%	214 cases
HIV	Incidence of 0/per 1,000 uninfected population	0.11%	Decrease by 45%	0.06%
Malaria	End the epidemics of malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	14,977 Cases	Decrease by 11%	13,355 Cases
Dengue		15,341 Cases	Increase by 9%	16,769 Cases
Typhoid		5,209 Cases	Increase by 5%	5,486 Cases
Diarrhoea		1,18,446 Cases	Decrease by 6%	1,11,928 Cases
Hepatitis A		1,582 Cases	Decrease by 20%	1,260 Cases
Hepatitis B		542 Cases	Increase by 3%	558 Cases
Hepatitis C		62 Cases	Increase by 287%	240 Cases
Diabetes	Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	2,544 deaths	Increase by 458%	14,207 deaths (in 2022)
Hypertension		4,486 deaths	Increase by 8%	4,847 deaths (in 2022)
Neo-natal Mortality Rate	12 per 1,000 live births	16	Decrease by 20%	13 (in 2022)
Under 5 Mortality Rate	25 per 1,000 live births	32	Decrease by 15%	27 (in 2022)
Maternal Mortality Rate	70 deaths per 1,00,000 live births	180	Decrease by 62%	68 (in 2022)

2. Total Deaths, Causes of Death and Occurrences of Diseases in Mumbai

Table 1: Total Deaths registered in Mumbai from 2014 to 2022[1]

Type	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Death	93,254	94,706	86,642	89,037	88,852	91,223	1,12,906	1,08,113	94,553
Covid -19 Death	-	-	-	-	-	-	11,116	7,007	804
Overall Death in Mumbai	**93,254**	**94,706**	**86,642**	**89,037**	**88,852**	**91,223**	**1,27,043**	**1,22,290**	**96,424**

Inference:

- Over the past decade (93,254 in 2014 to 94,553 in 2022), the total number of deaths (excluding COVID-19) has gone up but has mostly has stayed steady.
- There was a 13% decrease in total deaths between 2021 and 2022, from 1,08,113 to 94,553.

Table 2: Major Causes of Death(COD) in Mumbai from 2014 to 2022[2]

Cause of Death	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Diabetes (E10-E14)	2,428	2,544	9,088	9,525	10,458	11,491	16,021	15,556	14,207	**91,318**
Major Respiratory Disease [(C30-C39), (J00-J06, J30-J39), (J20-J22, J40-J47), (J10-J18, J60-J98)]	10,009	9,406	9,605	7,478	9,175	9,073	8,478	8,081	8,079	**79,384**
Tuberculosis (A-15,16,17,18,19)	6,589	5,693	6,660	5,449	4,940	4,899	3,720	3,892	3,834	**45,676**
Hypertension (I10-I15)	5,030	4,486	3,557	3,693	3,731	4,066	5,965	5,727	4,847	**41,102**
COVID-19	-	-	-	-	-	-	14,137	14,177	1,871	**30,185**
HIV/AIDS (B20 to B24)	379	346	852	881	822	685	581	617	516	**5,679**
Diarrhoea (A09)	262	169	340	225	251	203	228	195	234	**2,107**
Dengue (A97)	104	129	7	348	239	281	57	202	260	**1,627**
Malaria (B50 TO B54)	112	92	125	100	69	69	121	121	94	**903**
Typhoid (A01)	3	8	8	8	6	11	42	6	19	**111**
Cholera (A00)	1	5	1	0	0	1	0	0	1	**9**
Other Causes of Deaths	64,654	59,095	56,399	56,185	55,409	56,851	57,462	57,264	58,867	**5,22,186**
Total Deaths	**89,571**	**81,973**	**86,642**	**83,892**	**85,100**	**87,630**	**106,812**	**105,838**	**92,829**	**8,20,287**

*** COD data is provided year wise.**

Inference:

- There is a discrepancy in the number of deaths registered as the COD data does not match the total deaths registered in Mumbai as data is sourced from two different sources: BMC and State Bureau of Health Intelligence and Vital Statistics (SBHIVS).

[1] Data as per RTI in BMC.

[2] Data Received from State Bureau of Health Intelligence and Vital Statistics (SBHIVS).

- Total Deaths have increased by 4% from 89,571 deaths in 2014 to 92,829 deaths in 2022.
- Between 2021 &2022, number of deaths by major causes has decreased by 12% from 1,05,838 deaths in 2021 to 92,829 deaths in 2022.
- Over the past decade (2014 to 2022), the leading causes of death in Mumbai were Diabetes (91,318) followed by Major Respiratory Disease (79,384) and Tuberculosis (45,676).
- Moreover, deaths due to diabetes have increased by 485% from 2,428 deaths in 2014 to 14,207 deaths in 2022, while deaths due to Dengue has increased by 150% from 104 deaths in 2014 to 260 deaths in 2022.
- Compared to the last two years, from 2021 to 2022, deaths due to Typhoid increased by 217%,(From 6 to 19) while deaths from Dengue increased by 29% (from 202 to 260), and deaths from Diarrhea increased by 20% (from 195 to 234).

Table 3: Major occurrences of diseases registered from 2014 to 2023 in Government Hospitals, Dispensary and Hindu Hruday Samrat Balasaheb Thackeray Clinics (HBT)

Disease	2014	2015	2016	2017	2018	2019	2020	2021	2022*	2023*	Distribution In % (2014 to 2023)	% change from 2022 to 2023
Diarrhoea	1,19,248	1,18,446	1,04,923	96,200	99,444	93,671	64,189	58,108	69,904	1,11,928	36%	**60%**
Tuberculosis	42,585	41,825	46,422	55,145	49,234	38,943	28,136	31,874	28,741	26,898	15%	**-6%**
Hypertension	36,361	36,273	37,918	34,673	33,970	33,341	26,478	30,011	36,421	65,349	14%	**79%**
Diabetes	45,657	35,098	32,866	31,305	31,480	35,275	28,858	36,616	43,308	49,618	14%	**15%**
Dengue	10,421	15,341	17,523	14,585	19,516	21,769	2,543	7,683	13,742	16,769	5%	**22%**
Malaria	16,117	14,977	11,827	11,320	11,799	8,921	8,503	9,959	10,924	13,355	4%	**22%**
Typhoid	4,785	5,209	4,640	4,487	5,206	6,879	3,905	4,746	7,898	5,486	2%	**-31%**
Hepatitis A	1,974	1,582	1,043	1,235	1,240	1,346	464	446	874	1,260	0.44%	**44%**
HIV/ AIDS	2,898	1,462	2,901	4,472	5,905	8,765	5,130	2,696	1,007	799	1%	**-21%**
Hepatitis B	624	542	567	627	718	793	513	754	983	558	0.25%	**-43%**
Hepatitis C	66	62	81	114	142	148	223	346	544	240	0.07%	**-56%**
Cholera	38	198	112	27	19	11	8	9	62	114	0.02%	**84%**
Total	**2,80,774**	**2,71,015**	**2,60,823**	**2,54,190**	**2,58,673**	**2,49,862**	**1,68,950**	**1,83,248**	**2,14,408**	**2,92,374**		**36%**
COVID-19	-	-	-	-	-	-	80,351	92,048	21,831	514	7%	**-98%**
Total major diseases	**2,80,774**	**2,71,015**	**2,60,823**	**2,54,190**	**2,58,673**	**2,49,862**	**2,49,301**	**2,75,296**	**2,36,239**	**2,92,888**		**24%**

*From October 2022 BMC initiated the Hindu Hruday Samrat Balasaheb Thackeray (HBT) Clinics Schemes, therefore HBT data was considered from 2022.

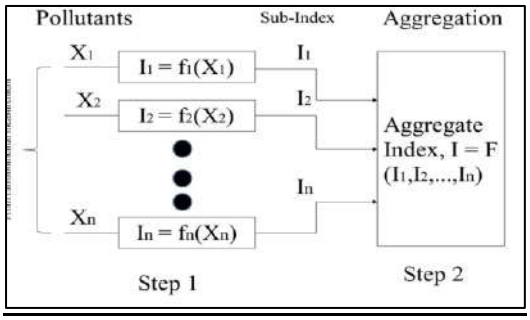
Inferences:

- Over the past decade (2014 to 2023), the top five diseases with the highest number of registered cases in Mumbai were Diarrhea (9,36,061), followed by Tuberculosis (3,89,803), Hypertension (3,70,795), Diabetes (3,70,081) and Dengue (1,39,892).
- There is 24% increase in major disease registration in Mumbai Government Dispensary, Goverment Hospitals and HBT in last two years From 2022 to 2023.
- Moreover, from 2022 to 2023, Cholera cases increased by 84%, while Diarrhoea cases rose by 60% (from 69,904 to 1,11,928), Hypertension increased by 79% (from 36,421 to 65,349) while Malaria also increased by 22% (from 10,924 to 13,355).

3. Comparison of Air Quality Index to Respiratory Diseases

A. Measuring AQI

An Air Quality Index (AQI) is defined as an overall scheme that transforms weighted values of individual air pollution related parameters (SO2, CO, visibility, etc.) into a single number or set of numbers. The result is a set of rules (i.e., set of equations) that translate parameter values into a simple form employing numerical manipulation:



Note: This image has been taken from the 'National Air Quality Index' Report released by the Central Pollution Control Board (2014).

Air Quality Index Standards, According to the Central Pollution Control Board (CPCB)

Colour	AQI	AQI Range	Remark
	Good	0-50	Minimal Impact
	Satisfactory	51-100	May cause minor breathing discomfort in sensitive people
	Moderate	101-200	May make breathing difficult for people with lung diseases and cause discomfort in children, older adults and heart patients
	Poor	201-300	May make breathing difficult after prolonged exposure, and cause discomfort to people with heart diseases
	Very Poor	301-400	May cause respiratory illnesses in people on prolonged exposure. The effect may be more pronounced in those with lung and heart diseases.
	Severe	>400	May cause respiratory problems even in healthy people, and seriously affect those with lung/heart diseases. Even increased breathing during light physical activity can affect health.

B. AQI Status in Mumbai

Table 4: Average Month-wise AQI from January 2019 to December 2023[3]

Month	Average AQI				
	2019	2020	2021	2022	2023
January	195	151	187	173	186
February	161	160	154	160	179
March	121	107	161	160	139
April	79	64	103	115	99
May	66	55	78	128	70
June	59	34	59	51	66
July	46	30	54	58	67
August	51	33	51	63	51
September	38	60	50	46	55
October	77	94	95	91	144
November	119	145	135	162	130
December	148	160	158	191	141
Average Air Quality Index	***92***	***97***	***115***	***125***	***112***

Table 5: Air Quality Compared to Respiratory Deaths from 2019 to 2023

Year	2019	2020	2021	2022	2023
Average Air Quality Levels	**92**	**97**	**115**	**125**	**112**
Total Deaths due to major respiratory diseases	**13,266**	**11,569**	**11,191**	**11,209**	**-**
Respiratory Tuberculosis (A15-A16)	4,193	3,091	3,110	3,130	-
Malignant neoplasm of respiratory and intrathoracic organs (C30-C39)	1,156	962	1,070	1,101	-
Diseases of the Upper Respiratory Tract (J00-J06, J30-J39)	18	26	33	24	-
Lower respiratory diseases (J20-J22, J40-J47)	4,393	4,148	3,728	3,882	-
Other diseases of the respiratory system (J10-J18, J60-J98)	3,506	3,342	3,250	3,072	-

Inference:

- Mumbai's air quality has been worsening, shifting from satisfactory to moderate levels. This pollution is injurious to public health, particularly by causing and aggravating respiratory diseases. The rising number of deaths related to respiratory illnesses highlights the serious threat that air pollution poses to the residents of Mumbai.
- From 2019 to 2022, the city's air quality has steadily declined, and the rise in deaths related to respiratory problems shows the serious danger air pollution poses to Mumbai's residents.
- In 2023, the air quality has taken a severe hit as there was not even a single month where the recorded AQI was in Good catorgory (0-50).

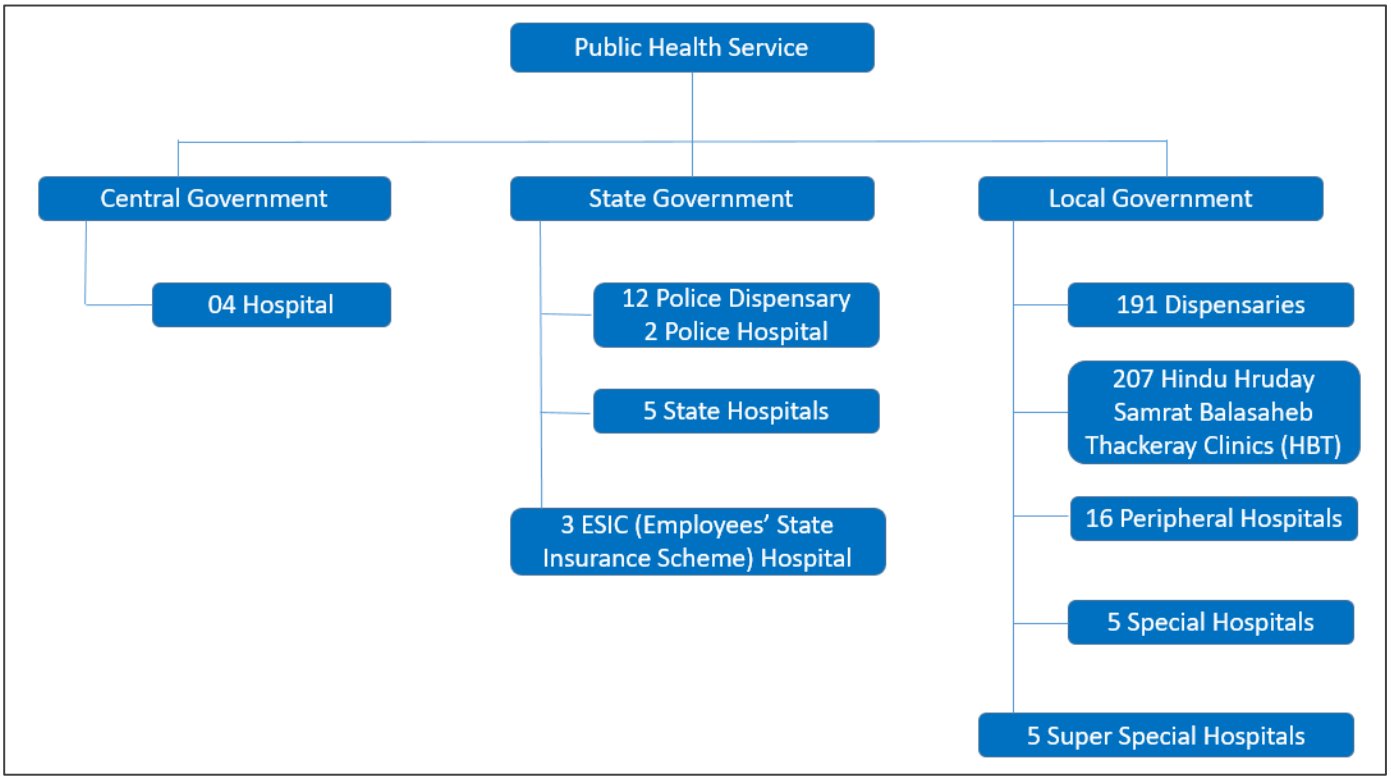
[3]All AQI data has been obtained from: http://cpcb.nic.in/, after approval from the Central Pollution Control Board (CPCB) through an RTI application.

4. Facilities, Human and Financial Resources for Healthcare Systems in Mumbai

An imperative aspect of a strong, well-functioning healthcare system is the strength and adequacy of its budget, infrastructure, and personnel.

4.1. Health Facilities

Figure 1: Number of Government Hospitals, Dispensaries and Clinics in Mumbai[4]



National Building Code (NBC) contains regulations which can be adopted or enacted for use by various departments municipal administrations and public bodies. The NBC code has also been incorporated in the Greater Mumbai Report on Draft Development Plan 2034 (May 2016), BMC. **As per the norms it is recommended there should be 1 dispensary for every 15,000 population.**

The Urban Design Plan Formulation and Implementation (UDPFI) by the Ministry of Housing and Urban Affairs also recommends this norm for cities. Furthermore, in the BMC Budget 2022-23, ₹400 crores have been allocated to developing **200 Hinduhridayasamrat Balasaheb Thackeray primary health centres (PHC)** closer to a citizen's residence.

[4] Refer Annexure 1 for complete list of dispensaries and hospitals

Table 6: Availability of Government Health Facilities in Mumbai in 2023

Ward	Population 2023[5]	Slum Population (in %)[6]	No. of Government Hospitals	Municipal Dispensary (MOH) and Other Police Dispensary	Hindu Hruday Samrat Balasaheb Thackeray Clinics (HBT)	Available Government Dispensaries	Density of government dispensaries to population	Dispensary required as per RC* (1 for 50,000)[7]	Dispensary required as per NBC/UDPFI* (1 For 15,000)[8]
A	1,93,527	34%	4	7	6	**11**	17,593	4	13
B	1,33,147	11%	0	5	4	**6**	22,191	3	9
C	1,73,807	-	0	5	2	**6**	28,968	3	12
D	3,62,826	10%	0	8	1	**8**	45,353	7	24
E	4,11,382	20%	6	13	4	**13**	31,645	8	27
F/N	5,53,376	58%	2	8	10	**12**	46,115	11	37
F/S	3,77,581	26%	5	10	6	**13**	29,045	8	25
G/N	6,26,602	32%	0	10	21	**25**	25,064	13	42
G/S	3,95,130	21%	1	14	9	**19**	20,796	8	26
H/E	5,82,879	42%	1	8	5	**10**	58,288	12	39
H/W	3,21,734	39%	1	5	6	**10**	32,173	6	21
K/E	8,61,794	49%	2	13	16	**24**	35,908	17	57
K/W	7,83,137	15%	1	7	12	**14**	55,938	16	52
L	9,43,738	54%	1	16	15	**22**	42,897	19	63
M/E	8,44,885	30%	1	11	14	**18**	46,938	17	56
M/W	4,30,846	53%	1	6	7	**10**	43,085	9	29
N	6,51,512	62%	2	9	8	**16**	40,720	13	43
P/N	9,84,680	54%	3	12	16	**18**	54,704	20	66
P/S	4,84,833	57%	1	3	5	**6**	80,806	10	32
R/C	5,88,028	19%	2	7	10	**13**	45,233	12	39
R/N	4,51,217	51%	0	7	6	**10**	45,122	9	30
R/S	2,73,022	58%	2	8	13	**14**	19,502	5	18
S	7,78,006	72%	1	8	8	**11**	70,728	16	52
T	3,57,174	33%	3	3	3	**4**	89,294	7	24
Total	**1,25,64,863**	**42%**	**40**	**203**	**207**	**313**	**40,143**	**251**	**838**

*RC: Rindani Committee; NBC: National Building Code; UDPFI: Urban Design Plan Formulation and Implementation

Inference:

- Based on the NBC and UDPFI norm (one dispensary for 15,000 population), Mumbai requires 836 dispensaries, while in 2023, the city had only 313 public/government dispensaries, 63% less than the required number.
- In 2023, not a single ward in Mumbai met the criteria of 1 dispensary for 15,000 population (NBC) criteria.
- Wards H/E, K/W, P/N, P/S, S and T have only 1 dispensary for more than 50,000 population.

[5] BMC Environment status report 2023.
[6] Source: Greater Mumbai Report on Draft Development Plan 2034 (May 2016), BMC
[7] Rindani committee in 1977
[8] Urban Design Plan Formulation and Implementation (UDPFI) and the National Building Code (NBC)

Table 7: Ward wise timimg for the Muncipal Dispensary (MOH) and HBT as on December 2023

Ward	Slum Population (in %)	Muncipal Dispensary (MOH)					HBT Cilnics		Unique Availabe Dipsensary*
		4 Hours	6 Hours	7 Hours	8 Hours	Not Provided	7 Hours	14 Hours	
A	34%			4	2		6		11
B	11%			5			4		6
C	-			5			2		6
D	10%			6			1		8
E	20%	1		12			4		13
F/N	58%			7			9	1	12
F/S	26%			9		1	5	1	13
G/N	32%			9			17	4	25
G/S	21%			13			9		19
H/E	42%			7			4	1	10
H/W	39%			5			6		10
K/E	49%		1	10			16		24
K/W	15%			3	4		12		14
L	54%			15			14	1	22
M/E	30%			11			13	1	18
M/W	53%			6			7		10
N	62%			8			6	2	16
P/N	54%		1	11			15	1	18
P/S	57%			3			5		6
R/C	19%			7			10		13
R/N	51%			7			6		10
R/S	58%			7			13		14
S	72%			8			7	1	11
T	33%			3			3		4
Total	**42%**	**1**	**2**	**181**	**6**	**1**	**194**	**13**	**313**

*Unique Available Dispensaries: Municipal Dispensary(191), Police Dispensary (12) & HBT Clinic (110).

(For more details about Dispensary & HBT timing refer page no. 131, Annexure 5, table no. 4)

Inference:

- Out of the 191 public dispensaries, only 3% (6 dispensaries) are accessible for 8 hours, while 95% (181 dispensaries) are open for only for 7 hours.
- Nine wards F/N, L, M/W, N, P/N, P/S, R/N, R/S and S have more than 50% slum population, however these wards do not have sufficient dispensaries as per NBC norms.
- 194 Hindu Hruday Samrat Balasaheb Thackeray (HBT) clinics are open for 7 hours and 13 HBT Clinics are open for 14 hours.
- 97 of 207 HBT clinics are functioning in existing municipal dispensary spaces after the dispensaries close for the day, therefore only 110 HBT clinics are operating in unique locations.

4.2. Human Resources

Table 8: Presentage of Vacancy in State Hospitals in Mumbai

Post	2014	2015	2016	2017	2018	2020	2021	2023
Medical	60%	56%	65%	59%	55%	45%	79%	60%
Para-Medical	24%	27%	27%	25%	27%	30%	33%	39%
Nursing Staff	22%	12%	12%	16%	18%	23%	36%	21%
Administration	27%	25%	30%	28%	30%	31%	34%	46%
Labour	30%	30%	25%	21%	21%	28%	30%	33%
Lecturer in Medical College	66%	73%	62%	59%	66%	79%	46%	83%
Overall Personnel	**27%**	**23%**	**22%**	**22%**	**23%**	**27%**	**36%**	**29%**

Inferences:

- The average vacancy for medical staff stands at 62%, which is quite high, especially considering the essential role medical professionals play in healthcare delivery.
- The vacancy for Para-Medical staff has increased from 24% in 2014 to 39% in 2023.
- The vacancy for Administrative staff has increased from 27% in 2014 to 46% in 2023.

Table 9: Presentage of Vacancy in Municipal Hospitals in Mumbai

Post	2014	2015	2016	2017	2018	2020	2021	2023
Medical	35%	37%	29%	39%	43%	43%	38%	46%
Para-Medical	35%	29%	28%	30%	33%	33%	43%	48%
Nursing Staff	11%	13%	8%	19%	13%	13%	14%	16%
Administration	23%	23%	28%	28%	29%	29%	36%	43%
Labour	18%	20%	23%	25%	28%	28%	46%	42%
Lecturer in Medical College	17%	22%	30%	39%	38%	38%	49%	41%
Overall Personnel	**18%**	**20%**	**20%**	**26%**	**26%**	**26%**	**36%**	**36%**

Inferences:

- The overall vacancy increased from 18% in 2014 to 36% in 2023. This indicates a growing overall shortage of hospital staff in municipal hospitals.
- Medical and para-medical vacancies have significantly increased, with medical staff vacancies rising from 35% to 46% and para-medical vacancies rising from 35% to 48%.
- Administration staff vacancies have also seen a notable rise, from 23% in 2014 to 43% in 2023, which could affect hospital management, logistics, and overall efficiency.

Table 10: Sanctioned and Available Personnel in State Hospitals in Mumbai as of 31st December 2023

Post	Sanction	Available	% of Vacant Post
Medical	81	32	60%
Lecturer	109	18	83%
Para- Medical	208	127	39%
Nursing Staff	2,445	1,934	21%
Total Medical Personnel	**2,843**	**2,111**	**26%**
Administration	188	102	46%
Labour	1,962	1,323	33%
Total	**2,150**	**1,425**	**34%**
Overall Personnel	**4,993**	**3,536**	**29%**

Inferences:

- As of December 2023, 60% of medical positions in state hospitals were vacant.
- As of December 2023, 83% of lecturer positions in medical posts were vacant, while 39% of paramedical positions remained unfilled.
- Overall, 26% of medical personnel staff positions and 46% of administrative positions were vacant during the same period.

Table 11: Sanctioned and Available Personnel in Municipal Hospitals in Mumbai as of 31st December 2023

Post	Sanction	Available	% of Vacant Post
Medical	2,101	1,127	46%
Lecturer	898	531	41%
Para- Medical	2,192	1,136	48%
Nursing Staff	4,953	4,167	16%
Total Medical Personnel	**10,144**	**6,961**	**31%**
Administration	1,638	937	43%
Labour	5,632	3,275	42%
Total	**7,270**	**4,212**	**42%**
Overall Personnel	**17,414**	**11,173**	**36%**

Inference:

- Vacant posts in the overall BMC Health facilities is 36% as of December 2023 in municipal hospitals.
- Of which, 46% vacant post are in medical staff (directly treating patients) and 48% and 16% vacant post are in para-medical and nursing staff respectively as on December 2023.
- The vacancy of labour staff in BMC health facilities is 42% as of 2023, which can impact the cleanliness and hygiene of BMC's facilities.

Table 12: Sanctioned and Available Personnel in BMC Dispensaries as on 31st Dec 2023

Ward	Medical			Para Medical			Labour			Overall		
	S	A	% of Vacant Post	S	A	% of Vacant Post	S	A	% of Vacant Post	S	A	% of Vacant Post
A	14	9	36%	11	4	64%	16	5	69%	70	34	51%
B	11	7	36%	10	7	30%	24	13	46%	73	40	45%
C	18	8	56%	17	8	53%	26	15	42%	112	56	50%
D	14	8	43%	2	2	0%	18	8	56%	76	47	38%
E	32	15	53%	25	12	52%	57	29	49%	164	79	52%
F/N	14	11	21%	17	7	59%	38	21	45%	105	64	39%
F/S	16	11	31%	16	7	56%	32	19	41%	111	70	37%
G/N	5	5	0%	4	3	25%	10	6	40%	73	45	38%
G/S	21	11	48%	19	11	42%	35	11	69%	109	55	50%
H/E	0	0	0%	0	0	0%	0	0	0%	0	0	0%
H/W	13	7	46%	15	2	87%	28	19	32%	90	52	42%
K/E	10	10	0%	14	14	0%	3	3	0%	27	27	0%
K/W	20	14	30%	37	9	76%	64	32	50%	170	79	54%
L	17	14	18%	22	14	36%	47	34	28%	124	90	27%
M/E	13	10	23%	17	10	41%	34	26	24%	92	67	27%
M/W	20	17	15%	25	19	24%	72	48	33%	123	90	27%
N	14	11	21%	14	12	14%	35	21	40%	94	71	24%
P/N	10	12	-20%	12	21	-75%	22	26	-18%	44	68	-55%
P/S	7	5	29%	3	1	67%	17	8	53%	54	33	39%
R/C	14	10	29%	15	6	60%	38	26	32%	98	62	37%
R/N	11	7	36%	3	3	0%	12	8	33%	46	28	39%
R/S	10	7	30%	16	5	69%	18	9	50%	79	49	38%
S	12	9	25%	17	11	35%	40	29	28%	97	69	29%
T	3	3	0%	7	7	0%	6	6	0%	19	19	0%
Total	**319**	**221**	**31%**	**338**	**195**	**42%**	**692**	**422**	**39%**	**2,050**	**1,294**	**37%**

Note: S- Sanction, A- Available

Inference:

- There is 31% vacancy of medical personnel and 42% vacancy in para-medical staff in BMC dispensaries as on Dec 2023.
- C, E and G/S ward dispensaries have 56%, 53% and 48% vacancy respectively in medical staff as of Dec 2023.
- Wards with large slum populations should have least vacancy of medical personnel considering the higher number of patients availing the health facilities.

4.3. Aapli Chikitsa

Background: The Standing Committee of the Brihanmumbai Municipal Corporation (BMC) approved the 'Aapli Chikitsa' scheme on 16th January 2019. Under this scheme, Mumbaikars can avail pathology/diagnostic facilities at a low cost. Experts are considering it as a milestone in the field of health. After much deliberations, it has been approved.

Objective: In the new system, along with dispensaries, 16 hospitals in the suburbs (where facilities are not available now) will have the facility of blood tests. This service will be available 24 hours in these hospitals. There are 139 types of tests included in the scheme; comprising of 101 basic tests and 38 advance tests. Patients from low-income groups can avail this facility free of cost and while the rest would have to pay a minimum cost (refer to Annexure 6 for rates). This reduced the burden and overcrowding in hospitals as well.

The time taken for each test varies accordingly; the test report is received in 6 hours to 5 weeks. **Under the Aapli Chikitsa scheme, Thyrocare and Metropolis have been given contracts as service providers**, of which Thyrocare caters to the Central and Western suburban areas of Mumbai city, while Eastern suburban areas are managed by Metropolis.

Table 13: Number of basic and advanced tests conducted in 2022 and 2023 by region and facility type

Type	Region	2022		2023[9]	
		Basic Test	Advanced Test	Basic Test	Advanced Test
Dispensary, HBT (313)[10]	City	89,142	0	2,53,727	37,527
	Western Suburb	1,08,014	0	2,15,671	35,292
	Eastern Suburb	76,827	0	3,61,619	19,773
Maternity Home	City	27,036	2,008	40,043	2,814
	Western Suburb	40,399	848	45,576	6,274
	Eastern Suburb	34,116	2,007	51,563	2,886
5 Spl. Hospital	City	15,076	410	13,619	2,843
5 UHCS	City	14,413	1,240	11,839	2,898
	Western Suburb	3,897	0		
	Eastern Suburb	4,430	0		
16 Peripheral Hospitals	Western Suburb	85,774	10,182	55,572	18,995
	Eastern Suburb	1,32,979	14,137	1,16,417	27,534
B.Y.L. Nair Hospital	City	269	300	-	-
Cooper Hospital	Western Suburb	4,126	762	14,344	5,662
Richardson & Crudas, Bycalla	City	576	18	-	-
	Eastern Suburb	1,247	67	-	-
BKC	Western Suburb	386	77	-	-
Nesco	Western Suburb	3,761	3,329	-	-
Total		**6,42,468**	**35,385**	**11,79,990**	**1,62,498**

[9] Data from March 2023 to December 2023.
[10] HBT data was included from the year 2023

Inferences:

- In year 2023, under the Aapli Chikitsa Scheme, a total of 11,79,990 basic tests and 1,62,498 were advance tests.
- Increase in testing numbers increases diagnoses of diseases, coverage of HBT clinics should be extended to all districts thereby reducing the load on Hospitals.
- Granualar data of tests are not being maintained after 2019-20 and moreover, BMC does not maintain the type of tests taken by the citizens, which can help in identifying the rising cases or disease in an area.

4.4. Health Budgets[11]

Table 14: Total Budget Estimates and Actuals[12] of BMC Health Budget from 2018-19 to 2024-25 (in crores)

Heads		Revenue Expenditure			Total Revenue Expenditure	Total Capital Expenditure	Total Health	Total BMC Budget	% of Health Budget to Total Budget
		BMC Health Department	Municipal Hospitals	Other					
2018-19	B.E	717	2,180	8	2,905	732	3,637	23,519	15%
	A	598	1,889	5	2,492	339	2,832	-	-
	U (%)	83%	87%	60%	86%	46%	78%	-	-
2019-20	B.E	837	2,499	9	3,345	806	4,151	30,030	14%
	A	691	2,163	7	2,861	395	3,256	-	
	U (%)	83%	87%	76%	86%	49%	78%	-	
2020-21	B.E	808	2,396	8	3,211	1,049	4,260	31,183	14%
	A	1,811	2,380	7	4,198	599	4,797	-	
	U (%)	224%	99%	90%	131%	57%	113%	-	
2021-22	B.E	940	2,574	9	3,522	1,206	4,729	39,039	12%
	A	1,874	2,565	7	4,446	885	5,331	-	
	U (%)	199%	100%	81%	126%	73%	113%	-	
2022-23	B.E	1,164	3,100	8	4,273	2,661	6,934	45,941	15%
	A	1,263	2,745	7	4,015	897	4,912	-	
	U (%)	108%	89%	84%	94%	34%	71%	-	
2023-24	B.E	1,301	3,318	10	4,629	1,680	6,309	52,554	12%
2024-25	B.E	1,520	3,943	12	5,474	1,717	7,191	59,897	12%

B.E : Budget Estimates, A: Actuals, U: Utilisation

Inference:

- Out of the total budget estimates of 2024-25 (Rs. 59,897 crores), 12% (Rs. 7,191 crores) has been allocated for the BMC health budget.
- The budget trend shows that revenue expenditure on primary healthcare (dispensaries and programmes that falls under the BMC Health department) is considerably lesser than the revenue expenditure on hospitals.
- Total Capital Expenditure Budget Estimates increased by 135% from 732 crores 2018-19 to 1,717 crores in 2024-25.
- However, the utilisation of these funds has remained low from 46% in 2018-19 to 34% in 2022-23.

[11] https://portal.mcgm.gov.in/irj/portal/anonymous/qlBudgetapp

[12] Actuals are from Budget Estimate Books of the BMC of subsequent years.

Table 15: Revenue Budget Estimates and Actuals[13] of BMC Health Department from 2018-19 to 2024-25 (in crores)

Heads		BMC Health Department							
		Establishment expenses	Administrative expenses	Operation and maintenance	Interest and Finance charges	Programme expenses	Revenue grants contribution and subsidies	Transfer to reserve funds	Total Revenue Expenditure
2018-19	B.E	454	56	106	1	7	92	1	717
	A	437	36	75	1	1	36	1	598
	U (%)	96%	65%	71%	0%	16%	39%	0%	83%
2019-20	B.E	577	65	127	1	8	57	1	837
	A	506	34	86	1	2	55	9	691
	U (%)	88%	52%	67%	0%	28%	97%	0%	83%
2020-21	B.E	510	107	117	1	8	65	1	808
	A	498	101	1,050	0	3	135	0	1,811
	U (%)	98%	95%	901%	0%	34%	207%	0%	224%
2021-22	B.E	557	103	112	0	6	161	0	940
	A	519	81	1,130	0	3	120	0	1,874
	U (%)	93%	79%	1005%	0%	49%	74%	0%	199%
2022-23	B.E	592	135	265	0	10	162	0	1,164
	A	556	111	330	0	3	230	0	1,263
	U (%)	94%	83%	125%	0%	33%	142%	0%	108%
2023-24	B.E	647	239	264	0	20	132	0	1,301
2024-25	B.E	662	310	383	0	18	147	0	1,520

B.E : Budget Estimates, A: Actuals, U: Utilisation

Inference:

- Budget estimates of the Total Revenue Expenditure for 2024-25 has increased by 112% from 2018-19.
- Budget estimates of Administration expenses increased by 454% while Operations & Maintenance increased by 261% from 2018-19 to 2024-25 in BMC. Health Department. The COVID-19 pandemic had an adverse impact on health facilities from 2019-20 to 2021-22.
- The utilisation of programme expenses of the health department is consistently low, at 16% in 2018-19 to 33% in 2022-23.
- Although average utilisation of Establishment Expenses from 2018-19 to 2023-24 have remained constant at 92%, the vacancy in municipal dispensaries has risen from 17% in 2014 to 37% in 2023.

[13] Actuals are from Budget Estimate Books of the BMC of subsequent years.

Table 16: Revenue Budget Estimates and Actuals[14] of BMC Hospitals from 2018-19 to 2024-25 (in crores)

Heads		BMC Hospitals							
		Establishment expenses	Administrative expenses	Operation and maintenance	Interest and Finance charges	Programme expenses	Revenue grants contribution and subsidies	Transfer to reserve funds	Total Revenue Expenditure
2018-19	B.E	1,527	146	495	0	11	1	0	2,180
	A	1,353	78	362	0	4	0	0	1,889
	U (%)	89%	53%	73%	0%	36%	51%	0%	87%
2019-20	B.E	1,771	166	551	0	11	1	0	2,499
	A	1,604	112	341	0	4	0	0	2,163
	U (%)	91%	67%	62%	0%	36%	49%	0%	87%
2020-21	B.E	1,658	183	543	0	11	1	0	2,396
	A	1,710	100	442	0	4	0	0	2,380
	U (%)	103%	55%	81%	0%	36%	61%	0%	99%
2021-22	B.E	1,943	154	469	0	8	0	0	2,574
	A	1,826	137	476	0	4	1	0	2,565
	U (%)	94%	89%	102%	0%	52%	145%	0%	100%
2022-23	B.E	2,259	313	519	0	9	1	0	3,100
	A	1,978	180	436	0	5	1	0	2,745
	U (%)	88%	57%	84%	0%	55%	64%	0%	89%
2023-24	B.E	2,381	329	596	0	11	1	0	3,318
2024-25	B.E	2,685	340	905	0	12	1	0	3,943

B.E : Budget Estimates, A: Actuals, U: Utilisation

Inference:

- Utilisation of Programme expenses though increased by 36% in 2018-19 to 55% in 2022-23. Establishment expenses was over utilised - 103% in 2020-21, reduced to 88% in 2022-23.
- Total Revenue Expenditure utilisation increased from 87% in 2018-19 to 89% in 2022-23.

[14] Actuals are from Budget Estimate Books of the BMC of subsequent years.

5. Deliberations by Elected Representatives on Health in Mumbai

Table 17: Health issues raised by MLAs from 2014 to 2023

Issues	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Budget	0	1	0	1	0	0	0	0	0	4
Cemeteries/Crematorium related	2	13	13	4	9	1	0	2	3	14
Epidemic/Sensitive Diseases	9	70	61	27	67	50	12	12	36	28
Diabetic/Hypertension	*0*	*2*	*0*	*1*	*1*	*0*	*1*	*0*	*0*	*0*
Malaria/Dengue	*6*	*9*	*6*	*9*	*14*	*2*	*1*	*4*	*6*	*4*
Diarrhoea/Typhoid/Cholera	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Tuberculosis	*0*	*14*	*7*	*3*	*18*	*1*	*7*	*0*	*0*	*9*
Compensation/Rehabilitation	0	0	1	0	0	1	0	0	0	0
Dispensary/Municipal Hospital/ State Hospital	0	6	1	1	0	15	0	0	0	0
Equipment	4	6	4	23	12	0	8	1	11	7
Fogging	0	0	0	1	2	0	0	0	0	0
Food Poison	0	0	3	0	2	0	0	0	0	0
Health Education/Institute	0	3	6	4	1	1	1	0	6	2
Health Insurance	0	0	0	0	2	0	0	1	0	0
Health Related Issues	15	27	45	28	58	18	9	7	9	19
Health Service Related	0	10	10	27	16	3	41	4	2	12
Human Resource	9	20	24	12	19	20	4	8	37	27
Infrastructure	22	45	14	35	67	4	15	18	33	57
License Related	7	2	5	4	16	0	0	3	0	9
Maternity homes/Primary Health Centre (PHC)	0	5	0	1	2	0	2	0	0	0
Malnutrition	0	1	0	0	0	0	0	0	0	0
Medical Examination of Students	0	0	1	0	0	0	0	0	2	0
Mortality Rate	1	1	6	1	3	4	0	0	0	4
Pollution	0	0	1	1	0	0	0	0	0	0
Private Health Services	1	2	16	13	5	2	0	14	2	7
Quacks	0	0	0	0	3	2	10	0	0	0
Reforms in health policies	0	0	0	0	1	0	0	0	0	0
Schemes/Policies in Health	6	2	5	3	2	13	0	1	11	4
Scams/Corruption	0	7	1	0	0	2	2	19	13	18
Treatment/Medicines	8	15	11	6	22	5	10	4	21	15
Total (related to Mumbai)	**84**	**236**	**228**	**192**	**309**	**141**	**114**	**94**	**186**	**227**
Health Questions (State)	**237**	**526**	**487**	**571**	**641**	**172**	**175**	**281**	**495**	**911**
Total Health Questions Asked	**321**	**762**	**715**	**763**	**950**	**313**	**289**	**375**	**681**	**1,138**

(**Note:** One question/issue may be related to multiple sub-issues in health and is counted issue wise, hence total questions raised does not equal issue wise total).

Inference:

- From 2014 to 2023, a total of 372 questions were raised by MLAs on Epidemic/Sensitive Diseases, which was only 21% of the overall 10-year deliberation related to Mumbai, while only 1% (23) of questions were related to BMC Hospitals, State Hospitals and dispensaries, etc.
- Only 3% and 6% of MLA deliberations were on health policies and treatment medicines related to Mumbai respectively from 2014 to 2023.
- Only 4 questions related to health were raised by MLAs in the Assembly from 2014 to 2023. MLAs should raise more questions regarding budget allocation, outcomes of BMC run programmes and Staff Appointment subjects.

6. Recommendations

Data Management

- There is a need for a robust and functioning Health Management Information System (HMIS) that maintains data on various diseases, patients registered and other health related services and indicators.
- Cause of Death data should be maintained on a real-time basis. Furthermore, data should also be accessible to all tiers of the government.
- Duplication of data through various agencies within the BMC (such as TB cell, EPID cell, ward wise Medical Officer of Health, etc.) needs to be streamlined to ensure that uniform data for a particular disease is made available across agencies.
- Additionally, all health data that is maintained, must be effectively utilised by various health policy & planning agencies.

Improve Access to Healthcare Facilities in Mumbai

- While Aapli Chitksa is being implemented at the Municipal dispensaries, there is a need to further improve primary healthcare facilities in the city with more such initiatiative.
- The norms recommended by the NBC and UDPFI should be followed to ensure that there is an adequate number of dispensaries available for the public.
- There is a need to understand the actual requirement of healthcare services in all wards so that an adequate number of medical personnel are available in all of BMCs Healthcare Departments. This will further increase access to primary healthcare services in the city.

Budget Allocation and Spending:

- An outcome-based budget should be incorporated to ensure a targeted development in the overall healthcare sector of the city.
- The budget must focus on allocating sufficient funds to improve the primary and preventive healthcare services by increasing the number of dispensaries, the timings, as well as the available medical personnel.
- The capital budget should also be utilised effectively to create efficient and adequate health infrastructure in the city**.**

Deliberations

- Elected Representatives (ERs) must carry out citizen-centric deliberations in the public health committee meetings that target the existing major issues related to health in the city. The absence of people's representative for more than two years now has impacted deliberations.
- Deliberations should also include data-centric discussion on the diseases that lead to the highest deaths in Mumbai, such as diabetes, malaria, tuberculosis, etc.
- ER's should raise the issues of vacancies of Medical personnel in Muncipal Hospitals and Dispensaries for their optimum functioning.
- ERs must advocate for better primary healthcare infrastructure and the adequate number of medical personnel while also ensuring that these services are accessible to the citizens for longer hours, to increase access for the working populace.

Section B. Status of Registered Diseases/Ailments in Govt. Hospitals and Dispensaries in Mumbai

A. Communicable Diseases[15]

1. Diarrhoea

Table 18: Number of Diarrhoea cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	89,237	1,05,502	93,416	85,524	87,217	85,862	61,377	54,606	61,744	52,867
BMC hospitals	26,608	9,573	7,798	6,747	8,318	5,743	1,838	2,244	6,051	7,213
HBT Clinics	-	-	-	-	-	-	-	-	695	50,297
State hospitals	1,158	1,325	1,691	1,985	2,064	1,644	800	1,066	487	425
Other government dispensaries/hospitals	2,245	2,046	2,018	1,944	1,845	422	174	192	927	1,126
Total Cases	1,19,248	1,18,446	1,04,923	96,200	99,444	93,671	64,189	58,108	69,904	1,11,928
Population /Total Cases	105	106	120	131	126	134	196	216	180	112
Number of Deaths due to Diarrhoea in Mumbai										
Total Deaths	262	169	340	225	251	203	228	195	234	-
Total Cases/Total Deaths	455	701	309	428	396	461	282	298	299	-

Inference:

- Total Diarrhoea cases decreased by 6% from 1,19,248 in 2014 to 1,11,928 in 2023.
- Proportion of Diarrhoea cases registered in BMC hospitals decreased from 22% (26,608) in 2014 to 6% (7,213) in 2023.

[15] Communicable diseases are infectious diseases transmissible (as from person to person) by direct contact with an affected individual or the individual's discharges or by indirect means (as by a vector).

Table 19: Ward Wise Diarrhoea Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[16]
A	1,858	1,442	1,123	1,496	1,995	1,526	976	1,136	1,030	1,296	**13,878**	717
B	1,901	1,610	1,173	1,176	1,369	1,132	696	651	1,042	1,175	**11,925**	896
C	2,924	2,842	2,789	2,837	3,110	2,318	1,612	2,010	1,761	344	**22,547**	1297
D	5,048	6,262	6,795	2,521	469	99	91	141	10	0	**21,436**	656
E	2,586	3,245	2,931	3,755	3,806	5,561	4,087	5,118	5,207	5,365	**41,661**	1013
F/N	1,596	1,704	2,186	2,889	2,894	2,012	1,240	1,874	3,071	1,048	**20,514**	371
F/S	3,682	4,016	4,967	4,337	4,088	3,391	2,323	1,717	2,247	483	**31,251**	828
G/N	2,837	3,258	5,452	6,715	5,680	5,856	3,843	3,250	3,580	2,854	**43,325**	691
G/S	4,792	5,215	5,567	5,540	7,842	8,529	6,370	5,017	7,950	7,839	**64,661**	1636
H/E	6,938	7,433	6,371	6,462	5,039	2,797	1,613	1,572	3,247	2,261	**43,733**	750
H/W	1,963	2,303	1,741	1,422	1,481	934	787	880	885	1,278	**13,674**	425
K/E	9,928	8,734	5,617	5,289	5,703	3,951	2,988	2,700	2,424	3,092	**50,426**	585
K/W	3,048	2,504	1,876	2,312	2,216	2,492	2,431	2,365	2,343	1,941	**23,528**	300
L	9,832	12,046	12,009	12,026	11,505	10,915	7,530	6,125	5,966	5,538	**93,492**	991
M/E	4,462	11,562	6,396	4,561	5,758	5,806	4,466	3,967	4,673	4,504	**56,155**	665
M/W	1,931	1,961	1,792	1,253	1,594	1,203	970	571	2,580	1,811	**15,666**	364
N	8,211	9,891	8,383	4,567	4,901	7,374	5,293	4,444	2,306	1,221	**56,591**	869
P/N	3,016	3,303	3,393	1,946	3,225	4,305	4,135	3,888	3,006	2,697	**32,914**	334
P/S	1,046	688	676	688	688	1,160	897	799	610	431	**7,683**	158
R/C	3,849	3,959	2,591	3,512	3,926	4,093	2,892	2,340	2,428	2,428	**32,018**	544
R/N	746	2,078	1,868	2,164	1,826	1,253	777	548	1,410	1,622	**14,292**	317
R/S	1,244	1,458	1,389	1,001	15	2,189	948	963	969	456	**10,632**	389
S	3,750	5,091	4,192	5,543	6,328	5,638	3,434	1,685	2,060	2,206	**39,927**	513
T	2,049	2,897	2,139	1,512	1,759	1,328	978	845	939	977	**15,423**	432

*Calculated as per capita ward population

Inferences:

- The ward wise Diarrhoea cases registered in BMC dispensaries stated that G/S (64,661), E (41,661) and C (22,547) wards have registered some of the highest Diarrhoea cases as per the ward's population.
- Furthermore, in wards R/N, E and G/S Diarrhoea cases have increased by 117%, 107% and 64% from 2014 to 2023 respectively.

[16]BMC Environment status report 2023.

Table 20: Age-wise deaths due to Diarrhoea in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Diarrhoea (A09)	**2014**	114	10	25	40	69	4	**262**
	2015	52	5	18	33	61	0	**169**
	2016	77	14	28	59	162	0	**340**
	2017	54	8	18	34	111	0	**225**
	2018	62	10	19	43	117	0	**251**
	2019	48	5	15	26	109	0	**203**
	2020	39	9	11	43	126	0	**228**
	2021	37	8	12	30	108	0	**195**
	2022	50	7	21	41	115	0	**234**

Inference:

- Total deaths due to Diarrhoea decreased by 11% from 262 in 2014 to 234 in 2022.
- The proportion of Diarrhoea deaths in children from 0 to 4 years was 21% in 2022.
- The deaths above 60 years and above were highest at 49% in 2022.

2. Tuberculosis

Table 21: Number of Tuberculosis cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	8,191	7,828	6,961	5,881	6,236	6,997	5,718	8,071	6,609	7,617
BMC hospitals	32,454	31,614	37,170	45,963	40,274	30,470	21,526	22,465	20,965	18,478
HBT Clinics	-	-	-	-	-	-	-	-	5	288
State hospitals	1,445	1,935	1,841	2,727	2,220	1,363	777	1,180	961	373
Other government dispensaries/hospitals	495	448	450	574	504	113	115	158	201	142
Total Cases	42,585	41,825	46,422	55,145	49,234	38,943	28,136	31,874	28,741	26,898
Population /Total Cases	295	300	271	228	255	323	447	394	437	467
Number of Tuberculosis due to Tuberculosis in Mumbai										
Total Deaths	6,589	5,693	6,660	5,449	4,940	4,899	3,720	3,892	3,834	-
Total Cases/Total Deaths	6	7	7	10	10	8	8	8	7	-

Inferences:

- Total Tuberculosis cases decreased by 37% from 42,585 in 2014 to 26,898 in 2023.
- The proportion of Tuberculosis cases registered in BMC hospitals remained high in 2014 to 2023.

RNCTP programme adopted World Health Organisation's (WHO) guidelines and implemented the DOTS strategy as the efficient and cost-effective approach for controlling TB. DOTS since its inception is trying to shift the TB cure from the patient to the healthcare system. This is done through strategies of DOTS developed by WHO: sustained political and financial commitment; diagnosis by quality ensured sputum-smear microscopy; Standardised short-course anti-TB treatment (SCC) given under direct and supportive observation (DOT); helps to ensure the right drugs are taken at the right time for the full duration of treatment; a regular, uninterrupted supply of high-quality anti-TB drugs; standardised recording and reporting; helps to keep track of each patient and to monitor overall programme performance.

Table 22: Implementation Status of RNTCP programme in Mumbai from 2019 to 2023[17]

Years (year in which case registered)	2019	2020	2021	2022	2023
No. of notified cases under Nikshay (Public and Private) diagnosis[18] *(from Nikshay Portal)*	60,477	43,298	59,124	63,567	61,844
No. of notified cases under Nikshay (Public and Private) resident [19] (*from TB cell through RTI)*	49,628	38,305	40,776	55,284	56,645
Total Cases registered and provided DOTS treatment (a) (New and Retreatment Cases) *(from TB cell through RTI)*	22,703	16,683	22,099	50,586	47,839
MDR Cases registered under RNTCP *(from BMC website)[20]*	4,212	2,589	5,208	2,692	3,008
XDR Cases registered under RNTCP *(from BMC website)*	315	51	134	42	28
% of TB Drug Resistance (MDR and XDR) cases	20%	16%	24%	5%	6%
Defaulters from DOTS Programme *(from TB cell through RTI)* ***(b)***	1,285	543	557	1427	119
Defaulter cases in % (b*100/a)	6%	3%	3%	3%	0.2%
Number of deaths under BMC's TB Control Unit(RNTCP) *(from TB cell through RTI)*	1,674	1,352	1,770	3,363	2,287
Number of deaths under BMC's Registration of Births and Deaths. *(from BMC and state government through RTI)*	4,899	3,720	3,892	3,834	NA

NA: Data was not available from the respective sources for that year.

Inference:

- From 2019 to 2023, the average of total notified cases under Nikshay portal (Public and Private) from Mumbai TB cell was 57,662. However, from 2019 to 2023, on average only 55% (31,982) of 57,662 were registered under RNTCP for DOTS treatment.
- Of the total cases registered, the percentage of drug-resistant TB cases (MDR and XDR) decreased from 20% in 2019 to 6% in 2023. The percentage of defaulter cases decreased from 6% in 2019 to 0.2% in 2023.

[17] As on 28.10.2024

[18] (https://reports.nikshay.in/Reports/TBNotification#DistrictData) Total notified cases on the Nikshay portal (public and private) are referred to as 'diagnosed' cases, which are total diagnosed cases in the city's facilities, available on the Nikshay portal for the years 2019 and 2023.

[19] Whereas total notified cases under Nikshay (public and private) categorised as 'resident' cases, got from the TB cell, Mumbai are those cases followed up by the cell for treatment, for all patients who are resident in the city, available for the year 2019 and 2023.

[20] MDR and XDR data from RTI

Table 23: Ward Wise Tuberculosis Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[21]
A	366	340	201	280	268	179	113	158	121	314	**2,340**	121
B	117	104	249	73	106	-	-	-	10	3	**662**	71
C	141	146	86	77	96	154	70	139	120	122	**1,151**	66
D	245	221	188	186	177	161	111	166	175	88	**1,718**	47
E	589	425	412	280	200	156	135	193	231	176	**2,797**	68
F/N	304	418	171	154	191	276	168	285	207	218	**2,392**	43
F/S	359	280	180	196	200	392	287	356	213	124	**2,587**	69
G/N	412	385	485	427	521	529	448	726	613	2237	**6,783**	108
G/S	194	389	231	242	258	314	209	503	194	176	**2,710**	69
H/E	522	544	638	625	558	714	663	829	313	352	**5,758**	99
H/W	246	224	216	187	187	155	100	164	172	14	**1,665**	52
K/E	679	538	351	264	246	317	254	292	455	361	**3,757**	44
K/W	271	252	176	206	169	177	124	164	275	229	**2,043**	26
L	1188	1338	1406	819	768	981	734	1013	859	749	**9,855**	104
M/E	113	93	146	156	212	216	196	220	314	446	**2,112**	25
M/W	146	206	129	113	199	-	-	-	151	126	**1,070**	35
N	206	178	116	96	139	192	142	235	408	349	**2,061**	32
P/N	231	228	265	236	607	843	623	752	617	618	**5,020**	51
P/S	69	46	22	11	16	112	108	196	80	67	**727**	15
R/C	206	175	196	192	221	237	239	353	277	274	**2,370**	40
R/N	109	157	177	179	247	179	210	228	262	165	**1,913**	42
R/S	555	418	475	264	78	415	488	830	291	229	**4,043**	148
S	557	494	327	483	425	298	296	269	183	138	**3,470**	45
T	366	229	118	135	147	-	-	-	68	42	**1,105**	44

*Calculated as per capita ward population

Note: (-) the data was not provided

Inferences:

- The ward wise tuberculosis cases registered in BMC dispensaries stated that R/S (4,043), A (2,340)and G/N (6,783) wards have registered some of the highest tuberculosis cases as per the ward's population.
- Furthermore, in wards G/N, M/E and P/N tuberculosis cases have increased by 443%, 295% and 168% respectively from 2014 to 2023, while all other showed some decline in cases.

[21]BMC Environment status report 2023.

Table 24: Age-wise deaths due to Tuberculosis in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Tuberculosis (A15-A16, A17, A18-A19)	**2014**	1,602	313	1,511	1,773	1,191	199	**6,589**
	2015	50	338	1,710	2,166	1,429	0	**5,693**
	2016	56	428	2,051	2,251	1,874	0	**6,660**
	2017	57	380	1,673	1,881	1,458	0	**5,449**
	2018	39	346	1,404	1,753	1,398	0	**4,940**
	2019	37	340	1,436	1,737	1,349	0	**4,899**
	2020	27	325	1,126	1,280	962	0	**3,720**
	2021	29	359	1,053	1,407	1,044	0	**3,892**
	2022	21	301	1,016	1,391	1,105	0	**3,834**

Inferences:

- Total deaths due to TB decreased by 42% from 6,589 in 2014 to 3,834 in 2022.
- The proportion of TB deaths between the ages of 20 to 59 years was high at 63% in 2022.

3. Dengue

Table 25: Number of Dengue cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	651	1,371	941	732	1,085	2,544	332	1,200	2,415	1,738
BMC hospitals	7,847	11,592	13,039	11,276	15,926	17,361	1,465	4,908	9,396	11,550
HBT Clinics	-	-	-	-	-	-	-	-	21	885
State hospitals	1,515	1,788	2,541	1,674	1,471	1,141	454	1,019	357	647
Other government dispensaries/hospitals	408	590	1,002	903	1,034	723	292	556	1,553	1,949
Total Cases	10,421	15,341	17,523	14,585	19,516	21,769	2,543	7,683	13,742	16,769
Population /Total Cases	1,206	819	717	861	644	577	4,941	1,635	914	749
Number of Deaths due to Dengue in Mumbai										
Total Deaths	104	129	7	348	239	281	57	202	260	-
Total Cases/Total Deaths	100	119	2,503	42	82	77	45	38	53	-

Inference:

- Total dengue cases increased by 61% from 10,421 in 2014 to 16,769 in 2023.
- Dengue cases registered in BMC dispensaries increased from 167% (651) in 2014 to (1,738) in 2023.
- However, the proportion of dengue cases registered in BMC hospitals decreased 75% (7,847) in 2014 to 69% (11,550) in 2023.

Table 26: Ward Wise Dengue Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[22]
A	47	137	42	36	19	71	3	4	86	26	**471**	24
B	52	42	25	25	27	21	1	15	48	24	**265**	22
C	18	14	26	45	52	25	5	14	128	32	**359**	21
D	33	53	89	32	25	61	1	0	3	8	**305**	9
E	25	42	3	6	11	31	21	62	93	13	**307**	7
F/N	53	28	35	45	45	72	18	93	75	16	**480**	9
F/S	34	22	11	20	7	31	3	89	84	127	**428**	11
G/N	64	32	9	17	19	112	28	92	98	42	**513**	8
G/S	0	1	9	13	46	120	12	22	130	49	**402**	10
H/E	22	67	0	21	59	90	24	30	68	73	**454**	9
H/W	12	13	16	73	30	45	3	5	68	46	**311**	10
K/E	52	164	193	144	180	233	6	130	249	173	**1,524**	18
K/W	34	11	2	0	0	8	4	2	73	48	**182**	2
L	9	31	125	14	15	253	9	11	98	99	**664**	7
M/E	24	2	0	21	23	311	35	30	66	65	**577**	8
M/W	3	3	27	0	6	5	1	6	146	123	**320**	8
N	26	155	64	6	56	267	10	91	227	216	**1,118**	17
P/N	12	56	3	12	62	201	22	82	184	83	**717**	7
P/S	2	15	3	2	0	46	67	84	49	32	**300**	7
R/C	19	31	53	37	33	68	2	17	20	18	**298**	5
R/N	23	131	111	106	154	222	11	140	142	99	**1,139**	25
R/S	58	9	0	0	75	191	6	60	107	40	**546**	20
S	28	308	95	52	115	56	39	103	131	237	**1,164**	15
T	1	4	0	5	26	4	1	18	42	49	**146**	5

*Calculated as per capita ward population

Inferences:

- The ward wise dengue cases registered in BMC dispensaries stated that R/N (1,139), A (471) and B (265) wards have registered some of the highest dengue cases as per the ward's population.

[22]BMC Environment status report 2023.

Table 27: Age-wise deaths due to Dengue in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Dengue (A97)	**2014**	20	12	38	16	17	1	**104**
	2015	7	25	47	27	23	0	**129**
	2016	0	1	2	4	0	0	**7**
	2017	48	61	86	73	80	0	**348**
	2018	13	50	74	43	59	0	**239**
	2019	34	44	78	62	63	0	**281**
	2020	5	12	17	9	14	0	**57**
	2021	7	37	72	43	43	0	**202**
	2022	19	36	76	62	67	0	**260**

Inference:

- Total deaths due to dengue increased by 150% from 104 in 2014 to 260 in 2022.
- The proportion of dengue deaths between the ages of 20 to 59 years was quite high at 53% in 2022.

4. Malaria

Table 28: Number of Malaria cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	4,131	3,453	2,997	3,223	3,222	2,576	3,681	3,609	4,803	2,063
BMC hospitals	10,082	9,526	6,802	6,529	6,670	4,770	3,091	4,072	5,141	7,444
HBT Clinics	-	-	-	-	-	-	-	-	4	2,831
State hospitals	861	1,179	1,309	927	1,347	1,112	940	1,579	306	408
Other government dispensaries/hospitals	1,043	819	719	641	560	463	791	699	670	609
Total Cases	16,117	14,977	11,827	11,320	11,799	8,921	8,503	9,959	10,924	13,355
Population /Total Cases	780	839	1,062	1,110	1,065	1,408	1,478	1,262	1,150	941
Number of Deaths due to Malaria in Mumbai										
Total Deaths	112	92	125	100	69	69	121	121	94	-
Total Cases/Total Deaths	144	163	95	113	171	129	70	82	116	-

Inference:

- Total malaria cases have increased by 22% from 10,924 in 2022 to 13,355 in 2023.
- Malaria cases registered in BMC dispensaries decreased from 50% (4,131) in 2014 to (2,063) in 2023.
- While proportion of cases registered in BMC hospitals also got decreased from 63% in 2014 to 56% 2023.

Table 29: Ward Wise Malaria Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[23]
A	199	160	134	248	430	372	383	309	2382	202	**4,819**	249
B	31	26	31	27	80	20	28	24	10	25	**302**	23
C	119	86	84	168	137	87	159	77	251	48	**1,216**	70
D	88	103	60	46	33	22	45	91	100	34	**622**	17
E	118	43	93	107	148	210	398	368	181	121	**1,787**	43
F/N	190	168	147	113	84	71	116	123	135	127	**1,274**	23
F/S	986	842	481	838	679	421	710	528	355	274	**6,114**	162
G/N	284	165	170	121	117	119	180	277	278	172	**1,883**	30
G/S	66	74	152	83	416	312	940	655	458	287	**3,443**	87
H/E	199	138	146	103	90	44	33	46	16	23	**838**	14
H/W	193	123	120	100	114	76	48	42	41	47	**904**	28
K/E	322	325	142	156	130	95	70	99	153	106	**1,598**	19
K/W	139	139	165	268	235	198	106	64	42	49	**1,405**	18
L	271	213	130	119	78	43	14	24	38	53	**983**	10
M/E	155	87	204	62	70	72	52	60	43	56	**861**	10
M/W	62	55	36	45	33	42	25	42	51	69	**460**	11
N	162	149	97	89	56	44	36	39	46	80	**798**	12
P/N	88	87	166	170	90	56	67	66	80	58	**928**	9
P/S	50	52	26	34	24	135	153	528	16	24	**1,042**	21
R/C	105	95	90	54	34	30	45	32	22	52	**559**	10
R/N	74	84	69	45	28	18	1	14	11	26	**370**	8
R/S	70	79	70	87	32	20	22	32	19	12	**443**	16
S	122	121	132	90	50	44	39	38	27	41	**704**	9
T	38	39	52	50	34	25	11	31	48	77	**405**	11

*Calculated as per capita ward population

Inferences:

- The ward wise malaria cases stated that A (4,819), F/S (6,114) and G/S (3,443) wards have registered some of the highest malaria cases to the ward's population.
- Furthermore, in wards G/S and T malaria cases have increased by 335% and 103% from 2014 to 2023.

[23]BMC Environment status report 2023.

Table 30: Age-wise deaths due to Malaria in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Malaria (B50-B54)	**2014**	17	13	36	28	18	0	**112**
	2015	4	8	27	31	22	0	**92**
	2016	3	11	33	42	36	0	**125**
	2017	1	9	23	25	42	0	**100**
	2018	5	3	16	16	29	0	**69**
	2019	1	3	20	18	27	0	**69**
	2020	0	4	21	38	58	0	**121**
	2021	2	10	23	33	53	0	**121**
	2022	0	1	20	29	44	0	**94**

Inferences:

- Total deaths due to malaria decreased by 16% from 112 in 2012 to 94 in 2022.
- The proportion of malaria deaths between the ages of 60 Years and above was the highest at 47% in 2022.

5. **Typhoid**

Table 31: Number of Typhoid cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	478	513	495	301	414	1,132	1,727	2,328	3,962	1,936
BMC hospitals	3,718	4,114	3,033	2,500	2,748	3,694	1,490	1,264	2,413	2,322
HBT Clinics	-	-	-	-	-	-	-	-	94	698
State hospitals	183	273	634	820	861	1,632	435	889	1,056	304
Other government dispensaries/hospitals	406	309	478	866	1,183	421	253	265	373	226
Total Cases	4,785	5,209	4,640	4,487	5,206	6,879	3,905	4,746	7,898	5,486
Population /Total Cases	2,626	2,412	2,708	2,800	2,414	1,827	3,218	2,647	1,591	2,290
Number of Deaths due to Typhoid in Mumbai										
Total Deaths	3	8	8	8	6	11	42	6	19	
Total Cases/Total Deaths	1,595	651	580	561	868	625	93	791	416	

Inference:

- Total Typhoid cases increased by 15% from 4,785 in 2014 to 5,486 in 2023.
- Typhoid cases registered in BMC dispensaries increased from 305% (478) in 2014 to (1,936) in 2023.
- Furthermore, the proportion of Typhoid cases registered in BMC hospitals decreased from 78% (3,718) in 2014 to 42% (2,322) in 2023.

Table 32: Ward Wise Typhoid Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[24]
A	3	1	3	0	1	67	18	28	180	55	**356**	18
B	7	0	0	0	0	0	5	5	242	46	**305**	23
C	8	4	1	7	3	15	93	184	172	28	**515**	30
D	1	0	0	0	0	0	0	0	0	0	**1**	0
E	16	27	5	3	6	60	222	434	275	57	**1,105**	27
F/N	95	77	39	1	1	8	12	75	165	23	**496**	9
F/S	0	0	0	0	0	45	43	137	190	50	**465**	12
G/N	0	1	22	52	99	152	311	323	481	204	**1,645**	26
G/S	0	0	0	0	0	19	33	76	357	79	**564**	14
H/E	113	120	95	78	57	213	113	102	47	116	**1,054**	18
H/W	0	3	1	0	0	4	2	0	12	3	**25**	1
K/E	0	0	0	0	0	56	175	133	628	359	**1,351**	16
K/W	33	24	21	2	7	103	99	73	43	25	**430**	5
L	18	34	30	52	103	44	2	27	30	88	**428**	5
M/E	5	23	4	1	9	8	10	18	37	39	**154**	2
M/W	67	86	204	59	93	0	36	92	94	97	**828**	21
N	9	8	3	4	0	10	10	3	32	73	**152**	2
P/N	6	0	1	1	0	17	47	41	405	139	**657**	7
P/S	22	19	11	8	3	120	156	146	128	44	**657**	14
R/C	17	27	32	17	28	47	234	234	65	3	**704**	12
R/N	43	38	22	14	2	1	41	63	353	100	**677**	15
R/S	0	0	0	2	2	143	51	32	0	101	**331**	12
S	14	19	1	0	0	0	0	6	17	173	**230**	3
T	1	2	0	0	0	0	14	96	9	34	**156**	4

*Calculated as per capita ward population

Inference:

- The ward wise Typhoid cases registered in BMC dispensaries stated that C (515), E (1,105) and G/N (1,645) wards have registered the highest Typhoid cases as per the ward's population.

[24]BMC Environment status report 2023.

Table 33: Age-wise deaths due to Typhoid in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Typhoid Fever (A01)	**2014**	2	0	1	0	0	0	**3**
	2015	2	0	3	2	1	0	**8**
	2016	0	1	3	2	2	0	**8**
	2017	1	3	2	1	1	0	**8**
	2018	0	3	1	0	2	0	**6**
	2019	0	1	3	1	6	0	**11**
	2020	1	1	9	15	16	0	**42**
	2021	0	1	2	2	1	0	**6**
	2022	1	2	5	2	9	0	**19**

Inference:

- Total deaths due to Typhoid increased by 553% from 3 in 2014 to 19 in 2022.
- The proportion of Typhoid deaths in adults from 60 years and above was 47% in 2022.

6. HIV

Table 34: Number of HIV/AIDS cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	133	80	121	215	228	1,301	730	1,314	471	448
BMC hospitals	2,330	1,010	2,478	3,814	4,376	6,198	3,923	530	255	161
HBT Clinics	-	-	-	-	-	-	-	-	1	4
State hospitals	295	220	218	242	1,169	1,138	391	696	57	74
Other government dispensaries/hospitals	140	152	84	201	132	128	86	156	223	112
Total Cases	2,898	1,462	2,901	4,472	5,905	8,765	5,130	2,696	1,007	799
Population /Total Cases	4,336	8,594	4,331	2,810	2,128	1,434	2,449	4,661	12,478	15,726
Number of Deaths due to HIV in Mumbai										
Total Deaths	379	346	852	881	822	685	581	617	516	
Total Cases/Total Deaths	8	4	3	5	7	13	9	4	2	

Inferences:

- Total HIV cases decreased by 72% (from 2,898 to 799) between 2014 and 2023.
- HIV cases registered in BMC dispensaries increased from 237% (133) in 2014 to (448) in 2023.
- The proportion of HIV cases registered in BMC hospitals decreased from 80% (2,330) in 2014 to 20% (161) in 2023.

Table 35: Ward Wise HIV Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[25]
A	40	27	10	9	10	0	0	4	44	47	**191**	10
B	1	0	0	0	1	0	0		1	2	**5**	0
C	0	1	0	0	0	0	0	3	6	2	**12**	1
D	0	1	0	1	7	3	2	3	10	5	**32**	1
E	0	0	1	1	2	1	0	1	6	4	**16**	0
F/N	22	12	12	16	31	56	25	33	33	34	**274**	5
F/S	0	2	6	9	3	5	4	10	9	1	**49**	1
G/N	0	0	3	5	8	9	5	4	9	4	**47**	1
G/S	13	3	2	5	4	3	2	1	6	3	**42**	1
H/E	20	4	4	5	9	237	94	225	11	44	**653**	11
H/W	0	0	0	0	0	12	1	2	1	3	**19**	1
K/E	3	0	0	3	9	8	6	26	32	23	**110**	1
K/W	0	0	0	1	26	11	12	8	8	19	**85**	1
L	0	0	5	18	17	25	11	353	137	11	**577**	6
M/E	2	0	0	93	15	781	446	451	68	43	**1,899**	22
M/W	5	4	4	3	4	0	0	0	9	8	**37**	1
N	0	0	2	2	2	8	7	12	15	106	**154**	2
P/N	0	0	1	5	21	20	3	4	18	7	**79**	1
P/S	0	0	0	0	0	77	74	144	0	0	**295**	8
R/C	7	1	8	12	11	13	8	12	8	6	**86**	1
R/N	0	0	5	9	16	10	15	7	11	9	**82**	2
R/S	0	6	23	2	5	12	8	5	14	5	**80**	3
S	20	19	35	12	22	10	7	6	13	6	**150**	2
T	0	0	0	4	5	0	0	0	2	56	**67**	2

*Calculated as per capita ward population

Inferences:

- The ward wise HIV cases registered in BMC dispensaries stated that M/E (1,899), H/E (653) and A (191) wards have registered some of the highest HIV cases as per the ward's population.

[25]BMC Environment status report 2023.

Table 36: Age-wise deaths due to HIV in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Human Immunodeficiency Virus (HIV) (B20-B24)	**2014**	98	14	99	132	31	5	**379**
	2015	1	10	103	207	25	0	**346**
	2016	3	36	273	463	77	0	**852**
	2017	6	26	269	513	67	0	**881**
	2018	2	32	231	486	71	0	**822**
	2019	1	29	195	373	87	0	**685**
	2020	2	19	160	334	66	0	**581**
	2021	3	19	152	348	95	0	**617**
	2022	0	10	112	320	74	0	**516**

Inference:

- Total deaths due to HIV Increased by 36% from 379 in 2014 to 516 in 2022.
- The proportion of HIV deaths between the ages of 40 to 59 years was quite high at 62% in 2022.

7. Cholera

Table 37: Number of Cholera cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	0	0	82	19	2	3	8	3	39	8
BMC hospitals	27	188	22	7	15	6	0	6	6	50
HBT Clinics	-	-	-	-	-	-	-	-	0	49
State hospitals	11	4	8	1	1	0	0	0	0	4
Other government dispensaries/ hospitals	0	6	0	0	1	2	0	0	17	3
Total Cases	38	198	112	27	19	11	8	9	62	114
Population /Total Cases	3,30,654	63,459	1,12,186	4,65,365	6,61,309	11,42,260	15,70,608	13,96,096	2,02,659	1,10,218
Number of Deaths due to Cholera in Mumbai										
Total Deaths	1	5	1	0	0	1	0	0	1	-
Total Cases/Total Deaths	38	40	112	0	0	11	0	0	62	-

Inference:

- Total Cholera cases registered in Mumbai increased by 200%, an increase from 38 in 2014 to 114 in 2023.
- The number of cholera cases registered in BMC dispensaries increased from 0 cases in 2014 to 8 cases in 2023.

Table 38: Age-wise deaths due to Cholera in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Cholera (A00)	2014	0	0	0	1	0	0	1
	2015	0	1	1	2	1	0	5
	2016	0	0	0	1	0	0	1
	2017	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0
	2019	0	1	0	0	0	0	1
	2020	0	0	0	0	0	0	0
	2021	0	0	0	0	0	0	0
	2022	0	0	0	0	1	0	1

B. Non-Communicable Diseases[26]

1. Hypertension

Table 39: Number of Hypertension cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	13,914	16,903	19,921	15,546	15,052	18,619	14,969	17,689	20,444	21,313
BMC hospitals	16,462	8,114	4,534	5,152	5,919	9,480	7,435	6,727	5,832	4,661
HBT Clinics	-	-	-	-	-	-	-	-	457	32,331
State hospitals	889	949	1,087	3,055	3,734	3,499	2,051	3,432	2,421	643
Other government dispensaries/hospitals	5,096	10,307	12,376	10,920	9,265	1,743	2,023	2,163	7,267	6,401
Total Cases	36,361	36,273	37,918	34,673	33,970	33,341	26,478	30,011	36,421	65,349
Population /Total Cases	346	346	331	362	370	377	475	419	345	192
Number of Deaths due to Hypertension in Mumbai										
Total Deaths	5,030	4,486	3,557	3,693	3,731	4,066	5,965	5,727	4,847	
Total Cases/Total Deaths	7	8	11	9	9	8	4	5	8	

Inference:

- Total Hypertension cases increased by 80% from 36,361 in 2014 to 65,349 in 2023.
- Hypertension cases registered in BMC dispensaries increased from 53% (13,914) in 2014 to (21,313) in 2023.

[26]Non-communicable diseases, are those which cannot be transmitted from one person to another, these tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors.

Table 40: Ward Wise Hypertension Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[27]
A	782	555	445	231	155	1,709	1,202	1,068	2,623	546	**9,316**	481
B	295	223	465	313	505	555	374	344	208	205	**3,487**	262
C	425	517	530	618	1,100	1,228	1,044	2,995	274	255	**8,986**	517
D	91	190	220	360	199	192	151	143	108	199	**1,853**	51
E	545	1,480	1,621	597	810	320	298	404	393	528	**6,996**	170
F/N	397	554	1,045	721	576	594	583	743	514	922	**6,649**	120
F/S	167	245	585	324	247	253	215	302	294	447	**3,079**	82
G/N	1,266	1,843	1,342	1,018	936	2,136	1,611	2,234	2,692	1,071	**16,149**	258
G/S	80	96	269	276	390	1,343	961	867	1,124	1,867	**7,273**	184
H/E	378	1,017	1,192	982	955	432	338	418	1,431	777	**7,920**	136
H/W	136	158	145	165	157	99	168	205	167	785	**2,185**	68
K/E	629	1,015	1,058	661	654	1,306	923	1,147	452	1,025	**8,870**	103
K/W	1,196	1,258	2,260	2,154	1,126	919	650	924	1,289	2,096	**13,872**	177
L	1,953	1,750	1,489	1,278	1,554	2,212	2,349	2,096	755	1,255	**16,691**	177
M/E	681	1,216	2,113	1,527	1,499	1,059	1,206	803	3,831	4,099	**18,034**	213
M/W	239	271	278	177	298	208	175	132	245	520	**2,543**	59
N	541	480	671	745	304	782	548	576	1,464	1,144	**7,255**	111
P/N	113	238	418	543	543	831	672	690	752	938	**5,738**	58
P/S	154	134	104	76	76	49	84	104	240	208	**1,229**	25
R/C	601	737	1,217	1,060	1,151	687	358	272	430	694	**7,207**	123
R/N	105	540	237	230	237	140	165	181	302	478	**2,615**	58
R/S	2,378	1,150	597	662	838	713	439	600	444	456	**8,277**	303
S	536	995	1,350	646	574	687	348	328	284	561	**6,309**	81
T	226	241	270	182	168	165	107	113	128	237	**1,837**	51

*Calculated as per capita ward population

Inference:

- The ward wise Hypertension cases registered in BMC dispensaries stated that C (8,986), A (9,316) and R/S (8,277) wards have registered the highest Hypertension cases as per the ward's population.
- Furthermore, in wards H/W, K/E and M/W Hypertension cases have increased by 370%, 127% and 112% from 2022 to 2023 respectively.

[27]BMC Environment status report 2023.

Table 41: Age-wise deaths due to Hypertension in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Hypertension (I10-I15)	2014	1,276	14	81	597	2,942	120	5,030
	2015	15	4	77	776	3,614	0	4,486
	2016	2	9	124	540	2,882	0	3,557
	2017	4	6	97	585	3,001	0	3,693
	2018	1	4	106	554	3,066	0	3,731
	2019	2	10	90	649	3,315	0	4,066
	2020	4	5	146	1,098	4,712	0	5,965
	2021	0	11	156	1,055	4,505	0	5,727
	2022	0	9	131	811	3,896	0	4,847

Inference:

- Total deaths due to Hypertension Decreased by 4% from 5,030 in 2014 to 4,847 in 2022.
- The proportion of Hypertension deaths in adults from 40 to 60 years and above was 97% in 2022.

2. Diabetes

Table 42: Number of Diabetes cases registered in government dispensaries and hospitals in Mumbai from 2014 to 2023

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BMC dispensaries	15,492	16,001	17,635	14,652	14,132	19,803	17,848	22,681	28,071	20,885
BMC hospitals	25,454	10,885	4,412	4,494	5,260	8,390	5,934	5,862	5,612	3,976
HBT Clinics	-	-	-	-	-	-	-	-	335	19,154
State hospitals	1,063	846	907	2,918	3,654	3,301	1,852	3,042	3,029	676
Other government dispensaries/hospitals	3,648	7,366	9,912	9,241	8,434	3,781	3,224	5,031	6,261	4,927
Total Cases	45,657	35,098	32,866	31,305	31,480	35,275	28,858	36,616	43,308	49,618
Population /Total Cases	275	358	382	401	399	356	435	343	290	253
Number of Deaths due to Diabetes in Mumbai										
Total Deaths	2,428	2,544	9,088	9,525	10,458	11,491	16,021	15,556	14,207	-
Total Cases/Total Deaths	19	14	4	3	3	3	2	2	3	-

Inferences:

- Total Diabetes cases Increased by 9% from 45,657 in 2014 to 49,618 in 2023.
- Diabetes cases registered in BMC dispensaries increased from 35% (15,492) in 2014 to (20,885) in 2023.

Table 43: Ward Wise Diabetes Cases Registered in BMC dispensaries for the years 2014 to 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total	Average Cases*/ 1,00,000 Population[28]
A	120	143	104	115	169	1,692	2,489	2,504	3,309	471	**11,116**	574
B	374	711	750	832	544	514	443	360	264	218	**5,010**	376
C	117	116	367	426	863	1,076	819	3,169	408	215	**7,576**	436
D	65	55	164	156	96	161	127	158	150	144	**1,276**	35
E	555	726	735	907	765	254	262	315	489	628	**5,636**	137
F/N	560	387	421	515	446	1,350	602	1,106	909	779	**7,075**	128
F/S	61	110	303	220	166	159	216	400	396	391	**2,422**	64
G/N	1,695	2,638	1,417	852	582	699	500	904	3,236	1,198	**13,721**	219
G/S	24	59	313	190	303	981	824	1,155	1,500	1,254	**6,603**	167
H/E	286	481	1,017	1,014	1,211	376	215	444	768	570	**6,382**	109
H/W	104	194	157	176	179	121	227	283	229	961	**2,631**	82
K/E	657	531	777	494	560	2,450	1,914	2,161	880	875	**11,299**	131
K/W	1,012	570	1,391	1,436	776	728	645	926	1,037	1,581	**10,102**	129
L	1,036	1,190	1,261	1,219	1,607	1,929	1,690	1,880	2,403	1,406	**15,621**	166
M/E	419	1,487	1,979	1,259	1,243	1,421	1,645	1,192	5,596	4,627	**20,868**	247
M/W	150	217	253	220	265	205	201	220	417	538	**2,686**	62
N	418	471	2,014	702	385	1,777	2,008	2,134	2,542	994	**13,445**	206
P/N	105	506	472	567	730	997	1,032	974	945	1,127	**7,455**	76
P/S	118	158	125	80	81	84	138	222	346	372	**1,724**	36
R/C	187	393	1,160	1,089	1,179	599	320	313	583	571	**6,394**	109
R/N	134	1,093	400	380	337	331	348	273	366	451	**4,113**	91
R/S	6,764	2,154	732	878	963	1,037	532	687	658	630	**15,035**	551
S	287	1,475	1,192	792	590	653	525	657	402	620	**7,193**	92
T	244	136	131	133	92	209	126	244	238	264	**1,817**	51

*Calculated as per capita ward population

Inference:

- The ward wise Diabetes cases registered in BMC dispensaries stated that A (11,116), R/S (15,035) and C (7,576) wards have registered some of the highest Diabetes cases as per the ward's population.
- Furthermore, in wards H/W K/W and S Diabetes cases have increased by 320%, 52% and 54% from 2022 to 2023 respectively.

[28]BMC Environment status report 2023.

Table 44: Age-wise deaths due to Diabetes in Mumbai for the years 2014 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Diabetes (E10-E14)	**2014**	556	7	24	383	1,393	65	**2,428**
	2015	2	4	59	594	1,885	0	**2,544**
	2016	3	6	96	1,772	7,211	0	**9,088**
	2017	5	11	112	1,884	7,513	0	**9,525**
	2018	8	7	122	2,109	8,212	0	**10,458**
	2019	3	11	121	2,325	9,029	2	**11,491**
	2020	5	19	193	3,555	12,249	0	**16,021**
	2021	8	19	208	3,310	12,011	0	**15,556**
	2022	2	17	167	2,836	11,185	0	**14,207**

Inference:

- Total deaths due to Diabetes increased by 485% from 2,428 in 2014 to 14,207 in 2022.
- The proportion of Diabetes deaths in adults from 40 to 60 years and above was 99% in 2022.

C. Diseases Causing Infant and Children Deaths

Table 45: Total deaths from Age 0 to 19 in Mumbai from 2014 to 2022

Year	Up to 1 year	1-4 years	5-9 years	10-14 years	15-19 years	Total 0-19 years
2014	11,221	13,147	554	566	1,220	26,708
2015	4,109	753	496	580	1,338	7,276
2016	4,025	929	540	690	1,578	7,762
2017	3,838	969	510	658	1,614	7,589
2018	3,564	806	521	636	1,549	7,076
2019	3,262	799	464	694	1,403	6,622
2020	2,508	478	344	460	1,137	4,927
2021	2,553	637	371	577	1,189	5,327
2022	2,905	623	427	582	1,306	5,843

Inference:

- Total deaths in age 0 to 19 decreased by 78% from 26,708 in 2014 to 5,843 in 2022.
- The proportion of total deaths in infants up to 1 year was 48% in 2021 and 50% in 2022.

Table 46: Some Causes of deaths from Age 0 to 19 from 2014 to 2022

Causes of Death	Year	Up to 1 year	1-4 years	5-9 years	10-14 years	15-19 years	Total 0-19 years
Hypoxia, Birth Asphyxia and Other Respiratory Conditions (P20-P28)	**2014**	587	17	5	5	0	614
	2015	517	0	0	0	0	517
	2016	972	0	0	0	0	972
	2017	1072	0	0	0	0	1,072
	2018	923	0	0	0	0	923
	2019	964	0	0	0	0	964
	2020	733	1	0	0	0	734
	2021	709	0	1	0	0	710
	2022	827	0	0	0	0	827
All Other Conditions Originating in the Perinatal Period (P00-P04, P29-P54, P56-P57, P60-P96)	**2014**	172	17	3	2	0	194
	2015	178	0	0	0	0	178
	2016	641	0	0	0	0	641
	2017	758	0	0	0	0	758
	2018	698	0	0	0	0	698
	2019	667	2	0	0	0	669
	2020	623	0	0	0	0	623
	2021	562	0	0	0	0	562
	2022	707	0	0	0	0	707

Causes of Death	Year	Up to 1 year	1-4 years	5-9 years	10-14 years	15-19 years	Total 0-19 years
Pneumonia (J12-J18)	**2014**	632	489	58	38	67	1,284
	2015	528	140	57	39	61	826
	2016	459	95	31	36	48	669
	2017	199	94	38	24	33	388
	2018	273	84	26	28	26	437
	2019	151	75	26	19	33	304
	2020	80	28	18	20	22	168
	2021	95	55	9	14	25	198
	2022	138	56	20	21	25	260
Dengue (A90)	**2014**	10	10	5	4	3	32
	2015	2	5	6	7	12	32
	2016	0	0	0	0	1	1
	2017	21	27	20	21	20	109
	2018	2	11	18	15	17	63
	2019	19	15	12	11	21	78
	2020	2	3	5	4	3	17
	2021	1	6	13	13	11	44
	2022	8	11	10	14	12	55
Other protein-energy malnutrition (E42-E46)	**2014**	6	1	0	1	0	8
	2015	1	2	1	0	0	4
	2016	18	16	4	1	0	39
	2017	17	9	0	3	0	29
	2018	11	14	3	1	2	31
	2019	5	11	5	3	0	24
	2020	5	10	3	0	1	19
	2021	5	8	0	0	1	14
	2022	4	10	1	2	1	18
Other Anaemias (D50-D55, D57-D64)	**2014**	66	113	7	11	8	205
	2015	18	12	4	8	5	47
	2016	35	21	11	12	21	100
	2017	23	19	11	12	25	90
	2018	19	15	12	11	23	80
	2019	7	15	11	13	12	58
	2020	15	5	12	15	15	62
	2021	10	9	4	11	13	47
	2022	19	22	13	9	11	74

Inferences:

- COD data shows an increase in protein-energy malnutrition in children (0 to 19 years) by 125% from 8 deaths in 2014 to 18 deaths in 2022.
- Deaths condition originating in the perinatal period increased by 264% from 194 in 2014 to 707 in 2022.

D. Key Mortality Rates

Table 47: Births and Deaths Rate in Mumbai from 2017 to 2023

Indicators	2017	2018	2019	2020	2021	2022	2023
M.Y.E.P Population	1,27,36,036	1,27,82,429	1,28,28,821	1,28,75,213	1,29,21,605	1,29,67,996	1,30,14,388
Live Births	1,55,386	1,51,187	1,48,898	1,20,188	1,13,778	1,33,805	1,30,562
Birth Rate (Births per 1000 population)	12.20	11.83	11.61	9.33	8.81	10.32	10.03
Still Births	1,684	1,396	904	1,131	1,072	658	519
Total Deaths	89,037	88,852	91,223	1,11,942	1,08,113	94,553	93,255
Death Rate (Deaths per 1000 population)	6.99	6.95	7.11	8.69	8.37	7.29	7.17

Table 48: Mother and Child Death Indicators in Mumbai from 2017 to 2023[29]

Indicators	2017	2018	2019	2020	2021	2022	2023
Neo-Natal Deaths (less than 28 days)	2,563	2,239	2,186	1,858	1,675	1,846	1,657
Neo-Natal Mortality Rate (deaths per 1000 live births)	16.49	14.81	14.68	15.46	14.72	13.80	12.69
Infant Deaths (Less than 1 year)	4,079	3,723	3,430	2,649	2.601	2,962	2,832
Infant Mortality Rate (deaths per 1000 live births)	26.25	24.63	23.04	22.04	22.86	22.14	21.69
Under 5 Mortality/Child Deaths (less than 5 years)	5,020	4,529	4,221	3,123	3,280	3,566	3,507
Under 5 Morality rate (deaths per 1000 live births)	32.31	29.96	28.35	25.98	28.83	26.65	26.86
Maternal Deaths	236	218	257	197	95	92	89
Maternal Mortality Rate (per 1,00,000 live births)	152	144	173	164	83	69	68

Inference:

- In 2023, the number of still births reported decreased by 69% from 1,684 in 2017 to 519 in 2023.
- Similarly, Sustainable Development Goal's (SDG) National MMR target for 2030 is 70 and Mumbai can achieve this target soon as the MMR has decreased from 152 in 2017 to 68 in 2023.
- Similarly, the Under- 5 mortality rate (U5MR) National target under SDGs is 25 as adopted, however, the U5MR increased from 26 in 2020 to 27 in 2023.

[29] Neo-natal mortality rate, Infant Mortality Rate, and Under 5 Mortality Rates are calculated based on number of deaths of a calendar year by number of live births in that year.

E. Recommendations

1. **Data Management at Ward Level**

   Ward level data on occurrences of diseases, COD and facilities provided under various schemes should be maintained wards wise. This will allow the BMC to decentralise health management and make targeted interventions to handle health issues of the citizens at the ward level.

2. **Achieving the SDG Goals**

   As we move closer to 2030, stringent measures need to be taken to meet the SDG targets adopted by the country. BMC needs to regularly monitor its performance through HMIS on the SDG indicators to meet the targets by 2030. Data driven decisions, effective framing and utilisation of the budget, and appropriate allotment of infrastructure and human resources need to be ensured to strengthen the primary and preventive healthcare systems and meet the healthcare requirements of the city.

3. **Strengthen and Equip Dispensaries and Maternity Homes**

   There is a need to improve dispensary facilities for preventive and primary care by including beds and equipment to provide proper care to patients. Primary health care should be able to provide integrated primary care with specialist services for diseases including mental health and nutrition counselling and diagnostic services. Additionally, primary health care units (dispensaries) can act as local level agencies to monitor health in the community/locality.

Section C: SDG and Government Health Programmes & Schemes

1. Analysis of Government Health Programmes/Schemes Implemented in Mumbai

The report aims to analyse the implementation of healthcare schemes and programmes in the city by tracking the related data of incidence and morbidity of diseases that the schemes aim to tackle to see if there are any gaps in the scheme or the implementation of the scheme and to provide suggestions for improvement.

Policy-Making on Health in India

The Constitution of India delegates the responsibility of the provision of healthcare to the state governments. Every state is responsible for "raising the level of nutrition and the standard of living of its people and the improvement of public health" as among its primary duties. However, policymaking related to public healthcare is divided between the Central and State Governments. While the Central Government is responsible for addressing healthcare issues with a wider reach, such as prevention of major diseases and all-encompassing family welfare, the State Governments handle targeted aspects such as local hospitals, public health, promotion, and sanitation.

Overall Health Policy Framework

National Health Policy

The approach taken by the health sector has been guided by the National Health Policy (NHP) 1983, the NHP, 2002, and most recently, the NHP, 2017. The goal, as set out by the NHP 2017 is "the attainment of the highest possible level of health and wellbeing for all at all ages, through a preventive and promotive health care orientation in all developmental policies, and universal access to good quality health care services without anyone having to face financial hardship as a consequence."[30] The policy recognises the pivotal importance of Sustainable Development Goals (SDGs) and strives to achieve them by increasing access, improving quality, and lowering the cost of healthcare delivery.

National Health Mission

The National Health Mission (NHM) – is a flagship programme of the Ministry of Health and Family Welfare that supports States/UTs to strengthen their health care systems to provide universal access to equitable, affordable, and quality health care services. The NHM seeks to improve and strengthen the healthcare system of the country through its focused components namely Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCH+A), Communicable and Non-Communicable Diseases.

The National Health Urban Mission NUHM aimed to focus on three levels of improvement namely community-level outreach programs, urban health center level infrastructure and existing health system improvement, and secondary/tertiary level public-private partnerships. The onus of executing these improvement plans was allotted to municipal governments, with the additional duty of improving the social determinants that impact health such as sanitation, drinking water, and nutrition.

[30] https://www.nhp.gov.in/nhpfiles/national_health_policy_2017.pdf

AYUSH

Ministry of AYUSH focuses on the medical systems that have historically been practiced in India such as Ayurveda, Yoga, and Naturopathy, Unani, Siddha, and Homeopathy (acronym, AYUSH). Due to the growing challenges in the medical field regarding Non-Communicable Diseases (NCDs), lifestyle disorders, long-term diseases, multi-drug resistant diseases, and the emergence of new diseases, there was a great curiosity to understand the principles and practice of AYUSH. Therefore, in 1995, with the objective of optimal and focused development of these systems, the Department of Indian Medicine and Homeopathy (ISM and H) was created in the Union Ministry of Health and Family Welfare. In 2003, this Department was renamed as Department of AYUSH. In 2014, it was turned into a separate Ministry of AYUSH[31].

The objectives of AYUSH is to upgrade the educational standards of Indian Systems of Medicines and Homoeopathy colleges in the country, to strengthen existing research institutions and to ensure a time-bound research programme on identified diseases for which these systems have an effective treatment, to draw up schemes for promotion, cultivation, and regeneration of medicinal plants used in these systems, and to evolve Pharmacopoeial standards for Indian Systems of Medicine and Homoeopathy drugs.

Drugs and Medicines

With regards to medical drug pricing, regulation, and supply, two important policies come into place; The Drug Price Control Orders Act (DPCO), and The National Pharmaceutical Pricing Authority (NPPA).

The Drug Price Control Orders Act (DPCO) is an order issued by the government under the "Essential Commodities Act" which enables it to fix the prices of some essential bulk drugs and their formulations. The objective of the DPCO is to ensure the availability of essential and lifesaving prophylactic medicine of good quality at a reasonable price. Every few years, the Ministry of Health and Family Welfare, in consultation with experts, draws up a National List of Essential Medicines (NLEM). These medicines come under price control under the Drug Price Control Order (DPCO). In addition, under Para 19 of the DPCO, 2013, the government has special powers to bring any item of medical necessity under price controls. As an example, this provision was used to regulate the prices of cardiac stents and knee implants.

The National Pharmaceutical Pricing Authority (NPPA) established by the Government of India in 1997 under the Department of Pharmaceuticals (DoP), Ministry of Chemicals and Fertilizers works as an independent regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices. The functions of the NPPA include implementing and enforcing the provisions of the Drugs (Prices Control) Order by the powers delegated to it. It also maintains data on production, exports, and imports, market share of individual companies for bulk drugs and formulations, and undertakes/sponsors relevant studies in respect of pricing of drugs/pharmaceuticals. Lastly, the NPPA is in charge of rendering advice to the Central Government on changes/ revisions in drug policies[32].

[31] https://www.ayush.gov.in/

[32] http://www.nppaindia.nic.in/en/

Analysing Health Programmes/Schemes

Apart from these policy directives, the Central and State Governments have created various detailed policies and programmes to tackle the varied health problems faced. To ensure that these policies are on the path to meeting their intended outcomes, it is important to empirically analyse them. This section aims to analyse the major Central, State, and Local Government policies being implemented in Mumbai, and gauge whether our public healthcare system is accessible and suggests improvements or interventions if required.

The schemes are divided into 5 main categories namely: (1) Communicable diseases, (2) Non-Communicable diseases (NCD), (3) Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCHA+), (4) Nutrition and (5) Insurance schemes. The logic of dividing the schemes as such was laid out by the NHP, 2017. Each scheme studied contains information such as the year of implementation, a background of the scheme, the objectives of the scheme, targets it had set out to meet, the beneficiaries of the scheme, and the implementation status of the scheme (i.e. relevant and recent data about the outcomes of the scheme).
Note: The section includes an analysis of only major schemes that are being implemented in Mumbai.

Note : Data for policies and schemes is sourced from HMIS, though data has not been updated in HMIS since 2020-2021. Praja filed an RTI with the DHS Mumbai head office to obtain this data, and DHS Mumbai forwarded the RTI to the Public Health Department, BMC. However, the Public Health Department did not provide the data in the HMIS format. Praja has filed a first appeal in this regard.

Table 49: Summary Table of Major Health Programmes/Schemes implemented in Mumbai

Name of the Scheme	Implementing Body	Targets	Status
Communicable Diseases			
Revised National Tuberculosis Control Programme	Mumbai District TB societies under MCGM	Prevalence of less than 1 case per 1 lakh population.	214 cases per 1 lakh population in 2023
National Aids Control Programme	Mumbai District Aids Control Society (MDACS) under MCGM	To reduce new infections by 50%	25% decrease in new cases detected from 2022 to 2023
Urban Malaria Scheme	BMC Public Health Department	Reduction in transmission and morbidity due to malaria	13,350 malaria cases
The National Vector Borne Disease Control Programme	BMC Public Health Department	Elimination of malaria by 2030 and Reduction in cases of dengue	16,768 dengue cases
National Leprosy Eradication Programme	BMC Public Health Department	Prevalence of less than 1 case per 10,000 population Elimination by 2018.	Prevalence rate of 0.25/10,000 of the population as of March 2017

Non-Communicable Diseases			
Non-Communicable Disease Programme	BMC Public Health Department	To reduce morbidity due to NCDs.	49,618 diabetes cases as of 2023 65,349 hypertension cases as of 2023
National Programme for Control of Blindness	Mumbai District Blindness Society	To reduce the prevalence of blindness to 0.3% of the population by 2020	Data not available
Mental Health			
National Mental Health Programme	State-level Mental Health Cell at Directorate of Health Services Mumbai	Prevention and treatment of mental and neurological disorders and their associated disabilities	**41,159** number of mental health cases as of 2020-21
RMNCHA+			
Pulse Polio Programme	BMC Public Health Department	100% Vaccine Coverage	Average number of children with OPV and IPV dosage is 1,58,870 (2018-19 to 2021-21) 0 Polio deaths in 2022
Mission Indradhanush and Intensified Mission Indradhanush	BMC Public Health Department	To achieve over 90% immunisation coverage	Out of 11 vaccines included, more focus is needed on vaccine coverage for Diarrhoea and Tuberculosis (54 and 41 deaths in 2022)
Janani Suraksha Yojana	Maharashtra State Government	To reduce the Neonatal Mortality	13 deaths/1000 live births as of 2023
		To reduce Maternal Mortality	68 (deaths per 1,00,000 live births) as of 2023
Janani Shishu Suraksha Karyakram	Maharashtra State Government	Timely access to health care for newborns and pregnant women	Number of Pregnant Women who registered for antenatal care decreased by 8% from 2019-20 to 2020-21.
Pradhan Mantri Matru Vandana Yojana	Maharashtra State Government	Cash incentives to pregnant women	No data available
Rashtriya Bal Swasthya Karyakram	Maharashtra State Government	30 health conditions for early detection in children	Deaths are caused due to other diseases such as tuberculosis, pneumonia, septicemia and nervous disorders (879 deaths) and Hypoxia, Asphyxia and other Conditions Originating in the Perinatal Period that mainly affect infants (1,534 deaths) have not been included as of 2022

School Health Scheme	BMC Medical Officer of School Department	Medical Inspection (Primary Screening) of students in government institutions	26% (84,247) of BMC students were examined in 2021-22
Urban Reproductive and Child Health Programme	BMC Public Health Department	To improve reproductive health and bring gender parity in family planning measures	33,633 Sexually Transmitted Infections reported as of 2020-21 99.91% family planning interventions were targeted towards females as of 2020-21
Nutrition			
National Iron Plus Initiative for Anemia Control	Maharashtra State Government	To reduce anemia in females by 50 percent	5,354 pregnant women reported severely anaemic as of 2020-21
Integrated Child Development Services	ICDS Commissionerate, Maharashtra	To improve the nutritional and health status of children in the age group 0-6 years	3,389 severely underweight children as of 2020-21
Mid-Day Meal Scheme	BMC Public Health Department	Improve the effectiveness of primary education by improving the nutritional status of all primary school children	The scheme is being implemented in all Municipal Schools in Mumbai
Insurance			
Ayushman Bharat Pradhan Matri Jan Aarogya Yojana	Maharashtra State Government	To provide medical care to 10.74 crore households.	45,121 persons enrolled in 2020-21, of which 85% (38,381) of them were beneficiaries under the schemes
Mahatma Jyotiba Phule Jan Aarogya Yojana	Maharashtra State Government	To provide insurance policy coverage to beneficiaries in Maharashtra	

1.1 Communicable Disease Schemes

Communicable diseases, also known as infectious diseases or transmissible diseases, are illnesses that result from the infection, presence and growth of pathogens (viruses, bacteria, fungi) in an individual human host.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State			
City	• National Leprosy Eradication Programme • National AIDS control Programme • Revised National Tuberculosis Control Programme • National Vector Borne Disease Control Programme • Urban Malaria Scheme		

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *0 TB cases/1 lakh population by 2030* [1]

Status: *214 cases /1 lakh population in 2023* [2]

KEY FINDINGS [3]

- *The deaths caused due to Tuberculosis (TB) have fallen over the years. In 2022, only 62.78% of total TB deaths occurred in the age group between 20-59 years. In children and youth (0 to 19 years), 322 deaths were reported in 2022.*
- *Positive cases detected for Malaria increased from 0.5% in 2019-20 to 1.4% in 2020-21 even though the number of blood smears examined for the same fell by 54% from 2019-20 to 2020-21.*
- *65% decrease was seen in the Rapid Diagnostic Test (RDT) conducted from 2019-20 to 2020-21, while the proportion of positive cases increased from 3.4% in 2019-20 to 7.9% in 2020-21.*
- *In 2020-21, 65% of total HIV tests for females were done on pregnant women, out of which 0.13% tested positive. However, among non-pregnant females tested, those positive increased from 1.3% in 2019-20 to 1.5% in 2020-21.*

[1] SDG India Index, Niti Aayog [2] RTI from Mumbai TB Cell [3] HMIS and RTI Data

1.1.1 Revised National Tuberculosis Control Programme

Year:

1997

Background:

Tuberculosis (TB) is a disease caused by bacteria called Mycobacterium Tuberculosis. It mainly affects the lungs but can also affect other parts of the body such as lymph nodes, the brain, bones, kidneys, etc. TB spreads through the air. When a person suffering from pulmonary TB coughs or sneezes, infectious pathogens are spread in the air through droplets. The National TB Control Programme (NTCP)[33] was started in 1962 to address the problem of high morbidity in TB but had limited success with only a 30-40% treatment completion rate amongst patients put on treatment. Because of this, the Government of India started the Revised National TB Control Programme (RNTCP) with a Directly Observed Treatment Short-course (DOTS) strategy at few selected sites in 1993[34].

Drug-resistant TB, that is Multi-Drug Resistant TB (MDR-TB) and Extensively Drug-Resistant TB (XDR-TB) is a form of TB which is resistant to at least four of the core anti-TB drugs, (isoniazid and rifampicin, fluoroquinolones (such as levofloxacin or moxifloxacin), and to at least one of the three injectable second-line drugs (amikacin, capreomycin or kanamycin).) MDR-TB and XDR-TB both take substantially longer to treat than ordinary (drug-susceptible) TB, and require the use of second-line anti-TB drugs, which are more expensive and have more side effects than the first-line drugs used for drug-susceptible TB.

As per the guidelines of the Central Government, RNTCP has been implemented in Maharashtra since 1997-98 in a phased manner. To implement this programme effectively, the State TB Society and 79 District/City TB Societies have been established. Detailed planning for implementation of the programme is done at State and District levels.

The Central TB division launched **Nikshay Portal** in 2012. Nikshay is a web-based platform for the monitoring of TB patients under the Revised National Tuberculosis Programme (RNTCP). The two broad objectives of Nikshay are to create a database of all TB patients including Multi-Drug Resistant TB cases across India and to use this database for monitoring and research purposes at all levels for controlling TB.

Target:

To control the spread and incidence of cases of TB. TB is said to be in control if the prevalence rate of the disease is below 1 per lakh of the population. The NHP 2017 aims to achieve and maintain a cure rate of >85% in new sputum-positive patients for TB and reduce the incidence of new cases, to reach elimination status by 2025.

Objectives:

1. To achieve a 90% notification rate for all TB cases.
2. To achieve a 90% success rate for all new and 85% for re-treatment cases.
3. To significantly improve the successful outcomes of treatment of Drug-Resistant TB cases.
4. To achieve decreased morbidity and mortality of HIV associated TB
5. To improve outcomes of TB care in the private sector

[33] https://www.nhp.gov.in/revised-national-tuberculosis-control-programme_pg
[34] https://tbcindia.gov.in/WriteReadData/NSP%20Draft%2020.02.2017%201.pdf

Beneficiaries:

All persons infected with TB or at a high risk of getting the infection. 31182.60

Implementation Status in Mumbai:

Table 50: Notified TB cases in Mumbai from 2019 to 2023 as per Nikshay portal as on 28.10.2024

	2019	2020	2021	2022	2023	% change from 2019 to 2023
Public	33,566	21,759	27,620	25,496	22,902	-32%
Private	26,911	21,539	31,504	38,071	38,942	45%
Total	**60,477**	**43,298**	**59,124**	**63,567**	**61,844**	**2%**

Table 51: Age-wise deaths due to TB in Mumbai for the years 2019 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Tuberculosis (A15-A16, A17, A18-A19)	**2019**	37	340	1,436	1,737	1,349	0	4,899
	2020	27	325	1,126	1,280	962	0	3,720
	2021	29	359	1,053	1,407	1044	0	3,892
	2022	21	301	1,016	1,391	1105	0	3,834

Inference:

- The number of TB cases notified in public and private hospitals has increased by 2% from 2019 to 2023.
- Even though Nikshay claims to have a database of MDR and XDR TB patients, the same is not accessible for public.
- Although deaths caused due to tuberculosis have fallen over the years, in 2022 63% of the total TB deaths have occurred in the productive population of the age group 20-59 years.
- 322 deaths due to TB in children and youth (0 to 19 years) were also reported in 2022, highlighting the need for tackling the determinants of the disease such as poor housing, high density of population per sq. km, etc.

RNCTP programme adopted World Health Organisation's (WHO) guidelines and implemented DOTS strategy as the efficient and cost-effective approach for controlling TB. DOTS since its inception is trying to shift the TB cure from the patient to the healthcare system. This is done through strategies of DOTS developed by WHO: sustained political and financial commitment; diagnosis by quality ensured sputum-smear microscopy; Standardised short-course anti-TB treatment (SCC) given under direct and supportive observation (DOT); helps to ensure the right drugs are taken at the right time for the full duration of treatment; a regular, uninterrupted supply of high-quality anti-TB drugs; standardised recording and reporting; helps to keep track of each patient and to monitor overall programme performance.

Table 52: Implementation Status of RNTCP programme in Mumbai from 2019 to 2023

Years (year in which case registered)	2019	2020	2021	2022	2023
No. of notified cases under Nikshay (Public and Private) diagnosis[35] *(from Nikshay Portal)*	60,477	43,298	59,124	63,567	61,844
No. of notified cases under Nikshay (Public and Private) resident [36] **(***from TB cell through RTI)*	49,628	38,305	40,776	55,284	56,645
Total Cases registered and provided DOTS treatment (a) (New and Retreatment Cases) *(from TB cell through RTI)*	22,703	16,683	22,099	50,586	47,839
MDR Cases registered under RNTCP *(from BMC website)*[37]	4,212	2,589	5,208	2,692	3,008
XDR Cases registered under RNTCP *(from BMC website)*	315	51	134	42	28
% of TB Drug Resistance (MDR and XDR) cases	20%	16%	24%	5%	6%
Defaulters from DOTS Programme *(from TB cell through RTI)* ***(b)***	1,285	543	557	1,427	119
Defaulter cases in % (b*100/a)	6%	3%	3%	3%	0.2%
Number of deaths under MCGM's TB Control Unit(RNTCP) *(from TB cell through RTI)*	1,674	1,352	1,770	3,363	2,287
Number of deaths under MCGM's Registration of Births and Deaths. *(from BMC and state government through RTI)*	4,899	3,720	3,892	3,834	NA

NA: Complete data was not available from the respective sources for that year.

Inference:

- From 2019 to 2023, the average of total notified cases under Nikshay portal (Public and Private) from Mumbai TB cell was 57,662.
- However, from 2019 to 2023, on average only 55% (31,982) of 57,662 were registered under RNTCP for DOTS treatment.
- Of the total cases registered, the percentage of drug-resistant TB cases (MDR and XDR) decreased from 20% in 2019 to 6% in 2023.
- The percentage of defaulter cases decreased from 6% in 2019 to 0.2% in 2023.

[35] The total notified cases on the Nikshay portal (public and private) used for public access are referred to as 'diagnosed' cases, which are total diagnosed cases in the city's facilities, available on the Nikshay portal for the years 2017 and 2019.
[36] Whereas the total notified cases under Nikshay (public and private) categorised as 'resident' cases, got from the TB cell, Mumbai are those cases followed up by the cell for treatment, for all patients who are resident in the city, available for the year 2018 and 2019.
[37]MDR and XDR data from RTI.

1.1.2 National Aids Control Programme

Year:

1992

Background:

The National AIDS Control Programme (NACP)[38] is being implemented as a comprehensive programme for the prevention and control of HIV/AIDS in India. Over time, the focus has shifted from raising awareness to behaviour change, from a national response to a more decentralised response, and to increase the involvement of NGOs and networks of people living with HIV (PLHIV).

- The NACP I started in 1992 was implemented to slow down the spread of HIV infections to reduce morbidity, mortality, and impact of AIDS in the country.
- In 1999, the second National AIDS Control Project (NACP II) was launched to reduce the spread of HIV infection in India and to increase India's capacity to respond to HIV/AIDS on a long-term basis.
- NACP III was launched in 2007 to halt and reverse the epidemic over its five-year period.
- NACP IV, launched in 2012, aimed to accelerate the process of reversal and further strengthen the epidemic response in India through a cautious and well-defined integration process over the next five years.

The NHP 2017 sets out the goal to achieve the global target of 2020 set by the Joint United Nations Programme on HIV/AIDS (UNAIDS) which is also termed as the target of 90:90:90[39] for HIV/AIDS i.e. 90% of all people living with HIV know their HIV status, 90% of all people diagnosed with HIV infection receive sustained antiretroviral therapy and 90% of all people receiving antiretroviral therapy will have viral suppression[40].

In Mumbai, the NACP is implemented by the Mumbai District Aids Control Society (MDACS), an autonomous body established in 1998 by MCGM. It employs a multi-sectoral approach, collaborating with the general Health System, other Government departments, NGOs/CBOs, and the private sector.

Objectives:

To halt and reverse the epidemic in India by integrating programmes for prevention, care, support, and treatment through a four-pronged strategy i.e.:

1. Prevent infections through coverage of high-risk groups with targeted interventions (TIs) and scaled-up interventions in the general population.
2. Provide greater care, support, and treatment to a larger number of PLHA.
3. Strengthen the infrastructure, systems, and human resources in prevention, care, support, and treatment programmes at district, state, and national levels.
4. Strengthen the nationwide Strategic Information Management System.

Target:

To reduce the rate of incidence by 60 percent in the first year of the programme in high prevalence states to obtain the reversal of the epidemic, and by 40 percent in the vulnerable states to stabilise the epidemic. In Mumbai, the target is to reduce new infections by 50% (2007 Baseline of NACP III)[41]

[38] http://naco.gov.in/nacp
[39] https://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf
[40] https://main.mohfw.gov.in/sites/default/files/24%20Chapter%20496AN2018-19.pdf
[41] http://naco.gov.in/sites/default/files/Annual%20Report%20NACO-2018-19%20%281%29.pdf

Beneficiaries:

All persons afflicted by HIV/AIDS and those at high risk of contracting the disease.

Implementation Status in Mumbai:

Table 53: HIV cases tested and positive in Mumbai from 2018-19 to 2020-21

HIV/AIDS Cases		2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Total Male	Tested	2,60,102	2,38,330	-8%	1,17,092	-51%
	Positive	3,965	3,813	-4%	1,716	-55%
	%	1.5%	1.6%	0.08%	1.47%	-0.1%
Total Female	Tested	3,58,726	3,75,714	5%	2,06,093	-45%
	Positive	2,575	2,271	-12%	1,225	-46%
	%	0.7%	0.6%	-0.1%	0.59%	-0.01%
Pregnant Women (Out of the Total Female)	Tested	2,02,820	2,15,867	6%	1,34,107	-38%
	Positive	245	248	1%	180	-27%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Table 54: Age-wise deaths due to HIV in Mumbai for the years 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Human Immunodeficiency Virus (HIV) (B20-B24)	2018	2	32	231	486	71	0	822
	2019	1	29	195	373	87	0	685
	2020	2	19	160	334	66	0	581
	2021	3	19	152	348	95	0	617
	2022	0	10	112	320	74	0	516

Inference:

- In 2020-2021, during the COVID 19 pandemic, the number of HIV tests conducted fell by 51% for males and 45% for females.
- The proportion of males (1.47%) tested positive is higher than females (0.59%) in 2020-21.
- In 2020-21, 65% of total tests for females were on pregnant women, out of which 0.13% tested positive.
- However, among non-pregnant females tested, those who tested positive increased from 1.3% in 2019-20 to 1.5% in 2020-21.
- From 2018-19 to 2020-21, males constitute on an average 61% of total HIV-positive cases, yet in 2020-21 only 36% of total tests were for males.
- Thus, more focus needs to be laid to increase HIV testing for males as well.
- Though the number of positive cases has been decreasing, interventions need to be made to analyse high-risk areas for HIV, early detection and provide medical support and treatment.

1.1.3 Urban Malaria Scheme

Year:

1971

Background:

Due to the high prevalence of Malaria (due to stagnating water), a plan to initiate anti-larval and anti-parasitic measures were created to abate malaria transmission in urban areas, the central government approved a scheme for malaria prevention in 1971 and named as Urban Malaria Scheme[42] which is complementary to the National Vector Borne Disease Control Programme. In Mumbai, it is implemented by the BMC Surveillance Department[43].

Objectives:

1. To prevent deaths due to Malaria.
2. Reduction in transmission and morbidity due to Malaria.

Target:

Reduction of the disease to a tolerable level in which the human population can be protected from malaria transmission with the available means.

Beneficiaries:

Those afflicted with Malaria and at high risk of contracting Malaria.

Implementation Status in Mumbai:

Table 55: Testing and cases for Malaria in Mumbai from 2018-19 to 2020-21[44]

Criteria	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Total Blood Smears Examined for Malaria	14,04,777	14,26,624	2%	6,55,514	-54%
Malaria (Microscopy Tests) - Positive	9,363	7,599	-19%	9,015	19%
% of Positive Cases	0.7%	0.5%	-0.1%	1.4%	1%
RDT (Rapid diagnostic test) conducted for Malaria	1,99,457	2,40,422	21%	83,495	-65%
Malaria (RDT) - Positive	6,669	8,178	23%	6,608	-19%
% of Positive Cases	3.3%	3.4%	0.1%	7.9%	5%
Total Malaria Cases	**16,032**	**15,777**	**-2%**	**15,623**	-1%
Hospitalised Cases	7,940	7,067	-11%	5,037	-29%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

[42] https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=529&lid=3822

43https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Surveillance/AIM.pdf

[44] Microscopy is inexpensive and allows the identification of species and parasite density. However, the quality of microscopy-based diagnosis is frequently inadequate due to a variety of reasons. Microscopy has low sensitivity when performed by poorly trained personnel and may result in the over- or under-diagnosis of malaria, with excessive use of anti-malarial drugs or negligent treatment, which invariably contributes to malaria morbidity and the development of resistance. Malaria rapid diagnostic tests (RDTs) assist in the diagnosis of malaria by providing evidence of the presence of malaria parasites in human blood. RDTs are an alternative to diagnosis based on clinical grounds or microscopy, particularly where good quality microscopy services cannot be readily provided. Malaria RDTs detect specific antigens (proteins) produced by malaria parasites in the blood of infected individuals.

Inference:

- The number of blood smears examined for Malaria fell by 54% from 2019-20 to 2020-21, however, positive cases detected from these microscopy tests increased from 0.5% in 2019-20 to 1.4% in 2020-21.
- A similar decrease was seen in the RDT tests conducted from 2019-20 to 2020-21, while the proportion of positive cases increased from 3.4% in 2019-20 to 7.9% in 2020-21.
- The total number of malaria cases decreased by 1% from 2019-20 to 2020-21, but with the rise in the proportion of positive cases for the same period, it is necessary to increase the number of malaria tests, for identified trends in the number of malaria cases in Mumbai.

Table 56: Age-wise deaths due to Malaria in Mumbai for the years 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Malaria (B50-B54)	2018	5	3	16	16	29	0	69
	2019	1	3	20	18	27	0	69
	2020	0	4	21	38	58	0	121
	2021	2	10	23	33	53	0	121
	2022	0	1	20	29	44	0	94

Inference:

Malaria deaths have remained constant from 2018 to 2022 showing that the Urban Malaria Scheme has to undertake a more holistic approach by increasing testing as well as investing in social determinants such as sanitation and fogging to tackle the disease more effectively.

1.1.4 The National Vector Borne Disease Control Programme

1.1.4.1. Malaria

Year:
2003

Background:
The National Vector Borne Disease Control Programme is implemented by the BMC Surveillance Department which works for the prevention and control of malaria in Mumbai[45]. The control of malaria in the urban areas is a complementary programme in line with National Vector Borne Disease Control Programme (NVBDCP)[46] in rural areas.

Objectives:

1. To actively search for malaria patients and ensure the provision of complete radical treatment to control the spread of malaria
2. Reduction of the disease to a tolerable level in which the human population can be protected from malaria transmission with the available means
3. Prevention of malaria-related deaths
4. Reduction in transmission and morbidity

Target:
The target for this scheme is to eliminate malaria by 2030.

Beneficiaries:
Those afflicted with Malaria and at high risk of contracting Malaria (High risk is measured by the Epidemiological Cell after analysing disease trends on the spread of diseases in communities).

[45] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Surveillance/AIM.pdf
[46] https://main.mohfw.gov.in/sites/default/files/5201617.pdf

1.1.4.2 Dengue

Year:

2003

Background:

Dengue Fever is caused by four antigenically related but distinct dengue virus serotypes transmitted by the infected mosquitoes, Aedes Aegypti. According to the National Vector Borne Disease Control Programme, Dengue infections have historically peaked during the monsoon and post-monsoon months in India (July-October). This is because areas where rainwater collects or is stored present themselves as high-risk breeding grounds for dengue.[47] It is implemented by the BMC Surveillance Department.

Objectives:

1. Surveillance for disease and outbreaks
2. Early diagnosis and prompt case management
3. Vector control through community participation and social mobilisation
4. Capacity building for the effective control over the transmission of the disease

Target:

No target is mentioned

Beneficiaries:

All those afflicted with dengue or at risk of contracting dengue

Implementation Status in Mumbai:

Table 57: Testing and cases of Dengue in Mumbai from 2018-19 to 2020-21

Testing and Cases	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
RDT (Rapid diagnostic tests) Test Positive	29,378	28,031	-5%	5,129	-82%
Enzyme- Linked Immuno Sorbent Assay (ELISA) Test Positive	5,157	7,349	43%	3,943	-46%
Total Dengue Cases	34,535	35,380	2%	9,072	-74%
Cases with Hospitalisation	17,698	16,702	-6%	1,300	-92%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

[47] https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=443&lid=3720

Inference:

- The number of positive RDT tests for dengue reduced by 82% from 2019-20 to 2020-21. It shows that there could have been a decline in the number of tests carried out for Dengue during the pandemic.
- The total number of reported dengue cases has also decreased from 35,380 in 2019-20 to 9,072 in 2020-21 (74% decline).
- Hospitalisation cases for dengue decreased by 92% from 2019-20 to 2020-21.
- Further, the proportion of hospitalised cases with relation to the total dengue cases decreased from 47% in 2019-20 to 14% in 2020-21.
- It is unlikely that this fall is due to an actual decrease in dengue cases but could be attributed to the high non-availability of beds due to the larger number of COVID cases during that period.
- To understand the reality in Mumbai, increasing testing for dengue fever can be carried out in the following years.

Table 58: Age-wise deaths due to Dengue in Mumbai for the years 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Not Stated	Total
Dengue (A97)	**2018**	13	50	74	43	59	0	**239**
	2019	34	44	78	62	63	0	**281**
	2020	5	12	17	9	14	0	**57**
	2021	7	37	72	43	43	0	**202**
	2022	19	36	76	62	67	0	**260**

Inference:

Total deaths related to dengue increased from 202 in 2021 to 260 in 2022, with highest in the age group of 20-39 years.

1.1.5 National Leprosy Eradication Programme

Year:
1983

Background:
The National Leprosy Eradication Programme (NLEP) aimed to reduce the burden of leprosy in the country. The country achieved the goal of leprosy elimination as a public health problem (i.e. prevalence rate of less than 1 case/ 10,000 population) at the national level by December 2005, as set out by The NHP 2002. The NHP 2017 sets out the goal to achieve and maintain the elimination status of leprosy. In Mumbai, the NLEP is integrated with general healthcare services. Leprosy cases are detected by the general health workers who then refer suspected leprosy patients to a medical officer at a PHC for diagnosis who are expected to diagnose the case within seven days.[48]

Objectives:

1. Elimination of leprosy by strengthening disability prevention and medical rehabilitation of persons affected by leprosy.
2. Reduction in the level of stigma associated with leprosy.

Target:
Prevalence of less than 1 case per 10,000 population in all districts of the country. Elimination of leprosy by 2018. Elimination of the proportion of Grade-2 cases amongst new cases keeping in mind the global goal of reduction of Grade 2 disability to less than 1 per million by 2020.

Beneficiaries:
Afflicted leprosy patients and those at high risk of contracting leprosy

Implementation Status in Mumbai: The national prevalence rate as of March 2017 was 0.82/10,000 population. In Mumbai, the prevalence rate as mentioned on the BMC website as of March 2017 was 0.25/10,000 of the population[49]. Though we have already surpassed our target of less than 1/10000 of the population, concerted efforts will need to continue to eliminate the disease- data shows 53 reported cases in government health services in 2018-19.

[48] http://clinicalestablishments.gov.in/WriteReadData/516.pdf
[49] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/National%20Leprosy%20Eradication%20Programme.pdf

1.2. Non-Communicable Diseases Schemes

Non Communicable Diseases, also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioral factors.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State			
City	National Programme for Control of Blindness		NCD Control Programme

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *To reduce by one third premature mortality from NCDs by 2030.*[1]

Status: *The deaths due to diabetes have increased by 458% while due to hypertension has increased by 8% from 2015 to 2022*

KEY FINDINGS[3]

- *NCD Programme covers diabetes, which is a major cause of death in Mumbai (14,207 deaths in 2022).*
- *Other NCDs such as neoplasms (10,354 deaths in 2022) and respiratory diseases (6,978 deaths in 2022) also account for major causes of NCD-related deaths. However, they are not covered under the NCD Programme in MCGM.*
- *Similarly, while hypertension is covered under the NCD Programme, it accounts for only 4,847 of the total 29,252 deaths due to heart and circulatory system-related diseases in 2022.*

[1] SDG Index India, Niti Aayog [2&3] Cause of Death Data through RTI

1.2.1 Non-Communicable Disease Control Programme

Year:

2010

Background:

The Non-Communicable Disease Programme for Diabetes and Hypertension is currently implemented by the Non-Communicable Disease Cell (NCD cell), BMC at the stage of Primary Health Care. Although the NCD cell is set up in Mumbai this is not under the National Programme for Prevention and Control of Cancer Diabetes Cardiovascular Diseases and Stroke implemented in Maharashtra which only covers 6 districts namely Amravati, Bhandara, Chandrapur, Gadchiroli, Wardha, and Washim.[50]

The functions of the NCD Cell in Mumbai include:

1. To keep a check on growing morbidity and mortality due to NCDs
2. To provide facilities for screening, detection, treatment, and referral for Diabetes and Hypertension at all BMC dispensaries
3. To create and enforce referral linkages with secondary and tertiary hospitals
4. To undertake community awareness campaigns using various forms of media and methods to create awareness and promote screening amongst the general population
5. To conduct camps at the community level to create awareness and promote early screening of NCDs[51]

Objectives:

1. To prevent and control NCDs in the city of Mumbai.
2. Presently primarily for diabetes and hypertension goal is to create awareness about NCD, promote screening amongst the general population of Mumbai
3. To strengthen early diagnosis and treatment for Diabetes and Hypertension
4. Keep a check on growing morbidity and mortality due to NCDs

Target:

Community awareness regarding NCDs and lifestyle changes among citizens to reduce the morbidity due to NCDs. The NHP 2017 also sets out the goal to reduce premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases by 25% by 2025.

Beneficiaries:

Individuals suffering from diabetes or hypertension, at risk of contracting either disease or at risk of mortality of either disease (Risk factors include: being obese, having a family history of diabetes, high levels of stress, pregnancy, having TB, or any other immunocompromised condition).

[50] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=bDfNKKgG7mQ=

[51] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Annexure-A%20NCD.pdf

Implementation Status in Mumbai:

Table 59: Cases of Diabetes and Hypertension from 2018-19 to 2020-21

Cases	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Diseases covered under the NCD programme					
Diabetes	2,46,073	2,49,034	1%	1,75,615	-29%
Hypertension	1,79,353	1,91,529	7%	1,49,281	-22%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

The NCD scheme focuses on interventions for diabetes and hypertension. In 2020-21, the cases registered for these two diseases have decreased from 2019-20 to 2020-21.

Table 60: Age-wise Deaths due to Major NCD diseases in Mumbai from 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Disease Of The Circulatory System (I00-I99)	**2018**	92	118	1,071	5,346	19,335	**25,962**
	2019	96	103	1,037	5,651	20,185	**27,072**
	2020	49	69	1,031	6,107	22,759	**30,015**
	2021	44	93	1,161	6,226	22,328	**29,852**
	2022	56	101	1,100	6,347	21,648	**29,252**
Diabetes (E10-E14)	**2018**	8	7	122	2,109	8,212	**10,458**
	2019	3	11	121	2,325	9,031	**11,491**
	2020	5	19	193	3,555	12,249	**16,021**
	2021	8	19	208	3,310	12,011	**15,556**
	2022	2	17	167	2,836	11,185	**14,207**
Neoplasms (Cancer) (C00-D48)	**2018**	116	292	704	3,165	5,796	**10,073**
	2019	116	289	728	3,168	6,002	**10,303**
	2020	84	186	544	2,663	5,345	**8,822**
	2021	98	202	643	2,888	5,577	**9,408**
	2022	86	234	719	3,271	6,044	**10,354**
Diseases of the Respiratory System (J00-J98)	**2018**	488	177	466	1,191	5,632	**7,954**
	2019	360	170	480	1,316	5,591	**7,917**
	2020	195	125	488	1,455	5,253	**7,516**
	2021	248	129	416	1,424	4,794	**7,011**
	2022	293	172	464	1,201	4,848	**6,978**

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Hypertension (I10-I15)	**2018**	1	4	106	554	3,066	**3,731**
	2019	2	10	90	649	3,315	**4,066**
	2020	4	5	146	1098	4,712	**5,965**
	2021	0	11	156	1055	4,505	**5,727**
	2022	0	9	131	811	3,896	**4,847**
Diseases of the Nervous system (G00-G98)	**2018**	147	165	249	440	1,536	**2,537**
	2019	134	166	237	396	1,609	**2,542**
	2020	92	126	178	363	1,483	**2,242**
	2021	128	136	209	358	1,428	**2,259**
	2022	115	173	224	405	1,508	**2,425**

Inference:

- NCD Programme covers diabetes which is a major cause of death in Mumbai (14,207 deaths in 2022).
- Other NCDs such as neoplasms (10,354 deaths in 2022) and respiratory diseases (6,978 deaths in 2022) also account for major causes of NCD related deaths.
- However, they are not covered under the NCD programme in BMC.
- Similarly, while hypertension is covered under the NCD programme, it accounts for only 4,847 of the total 29,252 deaths due to heart and circulatory system-related diseases in 2022.

1.2.2 National Programme for Control of Blindness

Year:

1976

Background:

The Government of India started the National Programme for Control of Blindness (NPCB) to strengthen the systems to reduce preventable blindness, promote awareness, and increase institutional capacity[52]. The implementation of the programme was decentralised in 1994-95 with the formation of the District Blindness Society in every district expected to enhance the coverage and improve the quality of eye care services[53].

Objectives:

1. To reduce the backlog of avoidable blindness through identification and treatment of curable blindness at primary, secondary, and tertiary levels, based on the assessment of the overall burden of visual impairment in the country;
2. Develop and strengthen the strategy of NPCB for "Eye Health for All" and prevention of visual impairment; through the provision of comprehensive universal eye-care services and quality service delivery;
3. Strengthening and up-gradation of Regional Institutes of Ophthalmology (RIOs) to become centre of excellence in various subspecialties of ophthalmology and also other partners like Medical College, District Hospitals, Sub-district Hospitals, Vision Centres, NGO Eye Hospitals;
4. Strengthening the existing infrastructure facilities and developing additional human resources for providing high-quality comprehensive Eye Care in all Districts of the country;
5. To enhance community awareness on eye care and lay stress on preventive measures; Increase and expand research for prevention of blindness and visual impairment;
6. To secure the participation of Voluntary Organisations/Private Practitioners in delivering eye care.

Target:

1. To reduce the prevalence of blindness from 1.49% (in 1986-89) to 0.3% by 2020.
2. To establish infrastructure and efficiency levels in the programme to be able to cater to new cases of blindness each year to prevent future backlog.

Beneficiaries:

Individuals with moderate or severe visual impairment, visual acuity of less than 3/60 (Snellen) or its equivalent, corneal blindness, etc.

Implementation Status in Mumbai:

No data was available in the public domain regarding cases of blindness, the number of ophthalmologists, or facilities for the same.

[52] https://dghs.gov.in/content/1354_3_NationalProgrammeforControlofBlindnessVisual.aspx#:~:text=Introduction-,National%20Programme%20for%20Control%20of%20Blindness%20and%20Visual%20Impairment%20(NPCB%26VI,blindness%20to%200.3%25%20by%202020.

[53] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/NPCB%20Information%2017-18%20English.pdf

1.3. Mental Health Schemes

Mental health includes our emotional, psychological, and social well-being and is not just the absence of mental illnesses.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State	National Mental Health Programme		
City			

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *Promote mental health and well-being.*[1]

Status: *41,159 number of mental health cases in 2020-21.*[2]

KEY FINDINGS[3]

- *Since the inception of the Mental Health Care Act, people seeking medical interventions for mental health have declined by 63% from 2018-19 to 2020-21.*
- *During the lockdown, it was seen that a lot of focus was on the importance of mental health care, however, the number of mental health cases dropped by 55% from 2019-20 to 2020-21.*
- *The "Impact on COVID-19" survey also highlighted that a majority of 84% respondents faced various mental health issues but did not discuss their problems with anyone.*
- *There is a need to include Mental health services in general health facilities as well as in schemes that target children and young adults.*

[1] SDG Index, Niti Aayog [2] HMIS Data [3] HMIS and RTI Data

1.3.1 National Mental Health Programme

Year:

1982

Background:

The National Mental Health Programme (NMHP)[54] was launched by the Central government keeping in mind the prevalence of mental illnesses in the community, and the absolute inadequacy of mental healthcare infrastructure in the country to cope with the increasing disease burden. It was recognised that persons with mental illness constitute a vulnerable section of society and are subject to discrimination; families bear disproportionate financial, physical, mental, emotional, and social burden of providing treatment and care for their relatives with mental illness; persons with mental illness should be treated like other persons with health problems; the environment around them should be made conducive to facilitate recovery rehabilitation and full participation in society.

The District Mental Health Programme was added to the Programme in 1996. The Programme was re-strategised in 2003 to include two schemes- the modernisation of state mental hospitals and up-gradation of psychiatric wings of medical colleges/general hospitals. The Manpower Development Scheme (Scheme-A and B) became part of the Program in 2009.

In 2017, the Mental Health Care Act was passed to provide for mental healthcare and services for persons living with mental illness and to protect, promote and fulfill the rights of such persons during delivery of mental healthcare and services and for matters connected therewith or incidental thereto. This Act superseded the previously existing Mental Health Act, 1987[55].

In Maharashtra,[56] there is an independent 'Mental Health Cell' operative in the Directorate of Health Services and The Addl. Director Health Services (Mental Health) is the nodal officer of this programme.

Objectives:

1. To make mental health services available, along with the other health services in the remote and rural population of the country.
2. To delegate various tasks and responsibilities to the suitable personnel in the general health services, in an appropriate way in case of mental health services.
3. To incorporate mental health services with other general health services and to make mental health services, an integral part of general health services.
4. To associate mental health knowledge and services, in social development schemes in general.
5. To ensure people's participation in delivering and developing mental health care services in society.

Target:

1. Prevention and treatment of mental and neurological disorders and their associated disorders.
2. Use of mental health technology to improve general health services.
3. Application of mental health principles in total national development to improve quality of life.

[54] https://www.nhp.gov.in/national-mental-health-programme_pg
[55] https://nhm.gov.in/images/pdf/National_Health_Mental_Policy.pdf
https://nhm.gov.in/WriteReadDatas/pdf/programmes/NMHP/District_Level_Activities.pdf
[56] https://www.arogya.maharashtra.gov.in/

Beneficiaries:

Individuals living with neuropsychiatric disorders. According to Mental Healthcare Act 2017: "Mental illness" means a substantial disorder of thinking, mood, perception, orientation, or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, mental conditions associated with the abuse of alcohol and drugs, but does not include mental retardation which is a condition of arrested or incomplete development of mind of a person, especially characterised by subnormality of intelligence.

Implementation Status in Mumbai:

Table 61: Mental Health cases in Public Institutions from 2018-19 to 2020-21

Cases	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Total Number mental health cases	1,10,257	90,674	-18%	41,159	-55%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- Since the inception of the Mental Health Care Act in 2017, in the last three years' people seeking medical interventions for mental health have declined by 63% from 2018-19 to 2020-21.

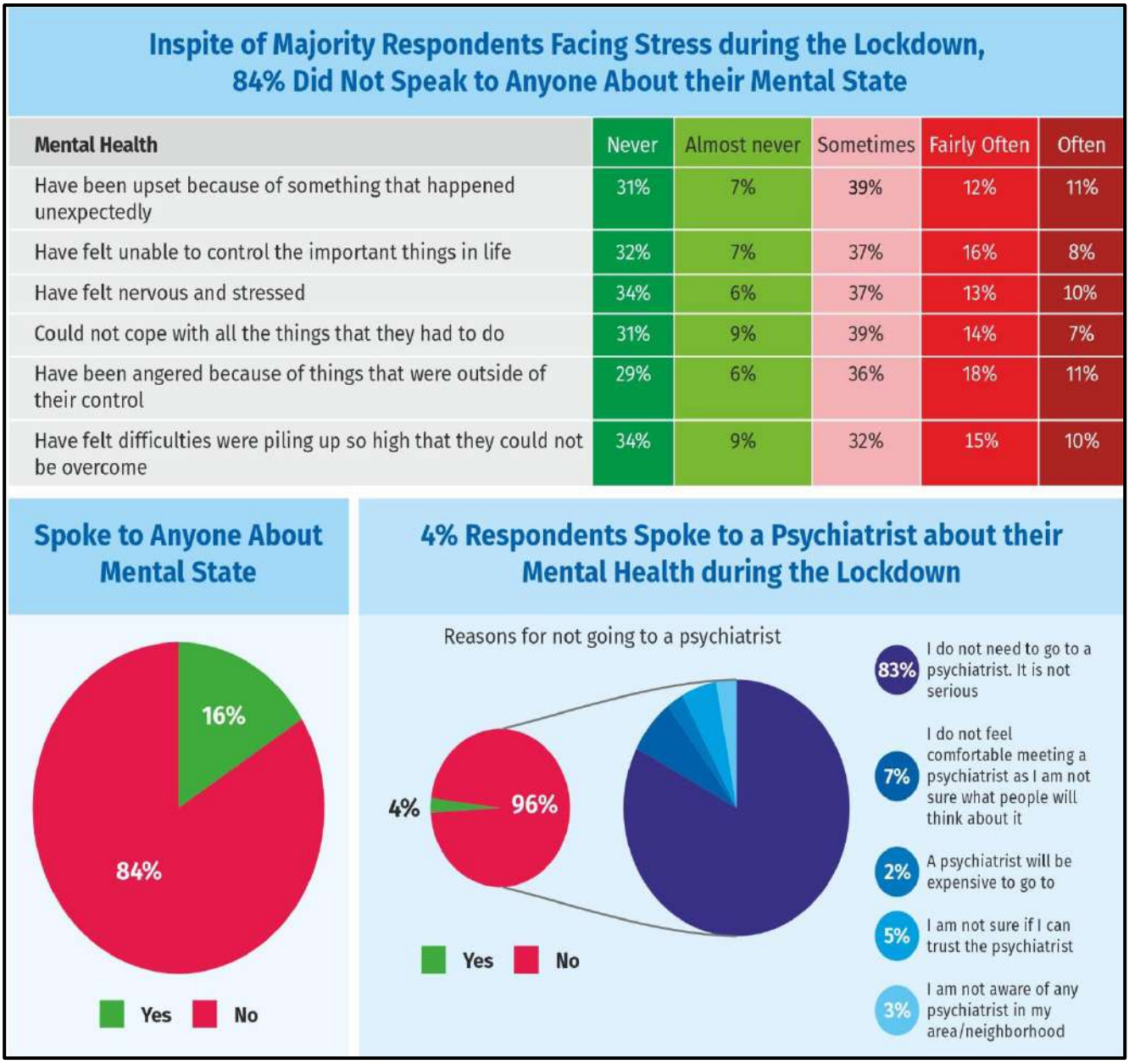
Table 62: Age wise Deaths due to mental disorders in Mumbai from 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 and Above Years	Total
Mental and behavioural disorders (F01-F99)	**2018**	10	18	63	134	259	**484**
	2019	7	30	78	134	226	**475**
	2020	3	14	80	153	240	**490**
	2021	10	17	100	195	244	**566**
	2022	8	12	107	225	244	**596**
Suicide (X60-X84)	**2018**	0	3	8	1	1	**13**
	2019	0	1	4	0	1	**6**
	2020	0	0	1	1	0	**2**
	2021	0	0	1	0	0	**1**
	2022	0	0	1	2	0	**3**

Inference:

- The number of deaths for mental and behavioural disorders has increased from 484 deaths in 2018 to 596 deaths in 2022. Also, these deaths have increased adults between the ages of 20-39 and 40-59 from 2018 to 2022.

Figure 2: Impact of COVID 19 on Mental Health of people in Mumbai*



*Link to the study

Inference:

- The "Impact on COVID-19" survey also highlighted that a majority of 84% respondents faced mental health issues but did not discuss their problems with anyone.
- Only 4% of the respondents spoke to a physiatrist about their mental health during the lockdown.
- Out of the remaining 96% respondents, 83% did not consider their stress a serious matter and 7% did not feel comfortable to consult a physiatrist.
- There is a need to create awareness among the citizens about the myths and stigmas associated with mental health care and encourage residents to come forward and seek medical attention.

1.4. Reproductive, Maternal, Neonatal, Child and Adolescent Health (RMNCHA+) Schemes

RMNCHA+ schemes comprise the following policy components, Maternal and Child survival, and Child and Adolescent Health, Reproductive and Sexual Health.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State	• Janani Suraksha Yojana • Janani Shishu Suraksha Karyakram • Rashtriya Bal Swasthya Karyakram • Pradhan Mantri Matru Vandana Yojana		
City	• Pulse polio programme • Mission Indradhanush and Intensified Mission Indradhanush • Urban Reproductive and Child Health Programme		School Health Scheme

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *Reduce Maternal Mortality Rate to 70 by 2030 and Under 5 Mortality Rate to 25 by 2030.*[1]

Status: *Maternal Mortality Rate was 164 and Under 5 Mortality Rate was 26 in 2020.*[2]

KEY FINDINGS[3]

Child Health

- *The average number of children with OPV and IPV dosage in Mumbai decreased from 1,69,465 in 2019-20 to 1,58,870 in 2020-21.*
- *There is a need to focus on better outreach of vaccines for Diarrhoea and TB (50 and 49 child deaths respectively in 2019) while continuing vaccination for others to keep the mortality low.*
- *Rashtriya Bal Swasthya Karyakram does not include the deaths such as tuberculosis, pneumonia, septicemia, and nervous disorders (1,082 deaths) apart from hypoxia, asphyxia, and other conditions originating in the perinatal period that mainly affects infants (1,633 deaths).*

Maternal Health

- *The number of Pregnant Women (PW) who registered for antenatal care decreased by 20% from 2018-19 to 2020-21. Furthermore, the number of PW given IFA tablets decreased by 14% from 2018-19 to 2019-20 and further decreased by 6% from 2019-20 to 2020-21.*

[1] SDG India Index, Niti Aayog [2] MCGM MIS Cell [3] HMIS and RTI Data

- *Janani Shishu Suraksha Karyakram data from 2019-20 to 2020-21, shows a decrease (of 7%) in the number of pregnant women provided free medicines and diagnostics under the scheme.*
- *The maternal mortality Rate (death per 1,00,000 live births) has shown a decrease from 173 in 2019 to 68 in 2023. This, however, is much higher than the SDG goal set, which is 70 deaths per 1,00,000 live births.*

Reproductive Health

- *On an average, 69% of the total Reproductive Tract Infections (RTI) / Sexually Transmitted Infections (STI) cases (from 2018-19 to 2020-21) were reported in females showing that the burden of sexually transmitted infections is mostly for females.*
- *IUCD insertion (excluding Post Abortion IUCD and Postpartum IUCD) shows an increase of 4% from 2019-20 to 2020-21 and Antara dosages showed an average decrease of 58% for the same period. A decrease of 40% in the number of emergency contraceptive pills (ECP) distributed for the same period was also noticed.*
- *The large decrease in Emergency Contraceptive Pills ECP and other contraceptive measures distributed shows that a significant proportion of the female population did not have access to contraceptive measures during the pandemic.*
- *Even with the huge decrease in interventions in 2020-21, female contraceptive interventions made up an average of 99.82% of all family planning interventions from 2018-19 to 2020-21. On the other hand, male contraceptive interventions only made up 0.18% on an average.*

1.4.1 Pulse Polio Programme

Year:
1995

Background:
With the global initiative of eradication of polio following the World Health Assembly resolution in 1988, the Pulse Polio Immunisation Programme was launched in India in 1995. Children in the age group of 0-5 years were administered polio drops during the national and sub-national immunisation rounds (in high-risk areas) every year. About 172 million children are immunised during each National Immunisation Day (NID)[57]. The WHO removed India from the list of countries with active endemic wild poliovirus transmission after India reported its last case in 2011[58].

Objectives:
The Pulse Polio Initiative was started to achieve a hundred percent coverage under Oral Polio Vaccine. It aimed to immunize children through improved social mobilisation, plan mop-up operations in areas where poliovirus has almost disappeared, and maintain a high level of morale among the public.

Target:
The target of this programme is to reach every eligible child through the dual booth immunisation strategy and house to house immunisation component.

Beneficiaries:
All children up to five years of age.

[57] https://www.nhp.gov.in/pulse-polio-programme_pg#:~:text=About%20172%20million%20children%20are,country%20(25th%20May%202012)
[58] https://main.mohfw.gov.in/sites/default/files/18604854648148966448 1.pdf

Implementation Status in Mumbai:

Table 63: Number of Polio Immunisations in Mumbai from 2018-19 to 2020-21[59]

Polio Immunisations	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of Children Administered Oral Polio vaccines (OPV 0)	1,59,737	1,62,510	2%	1,29,729	-20%
Number of Children Administered Oral Polio vaccines (OPV 1)	1,67,847	1,74,522	4%	1,59,934	-8%
Number of Children Administered Oral Polio Vaccine (OPV 2)	1,62,840	1,72,820	6%	1,59,937	-7%
Number of Children Administered Oral Polio Vaccine (OPV 3)	1,67,836	1,77,978	6%	1,69,487	-5%
Number of Children Administered Oral Polio Vaccine (OPV Booster)	1,64,264	1,77,450	8%	1,69,609	-4%
Number of Children Administered Inactivated Polio Vaccine 1 (IPV 1)	1,36,688	1,58,858	16%	1,57,106	-1%
Number of Children Administered Inactivated Polio Vaccine 2 (IPV 2)	1,29,496	1,62,119	25%	1,66,290	3%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Table 64: Deaths due to Polio in Mumbai from 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Acute Poliomyelites (A80)	**2018**	0	1	5	1	1	**8**
	2019	0	0	0	0	0	**0**
	2020	0	0	0	0	0	**0**
	2021	0	0	0	0	0	**0**
	2022	0	0	0	0	0	**0**

Inference:

- For full immunisation, at least 3 OPV and 2 IPV doses are required. Average number of children with OPV and IPV dosage decreased from 1,69,465 in 2019-20 to 1,58,870 in 2020-21.
- 8 deaths due to polio were reported in Mumbai in 2018, while in 2020 to 2022, 0 deaths were reported.
- Thus, as WHO removed India from the list of countries with active endemic wild poliovirus transmission in 2011, efforts should continue to improve our immunisation rates and coverage every year.

[59] There are two vaccines for polio: The Oral Polio Vaccine (OPV) and the Inactivated Polio Vaccine (IPV). OPV is taken orally as drops and can be easily administered. It does not require a trained health worker. OPV is still the main preventive measure against polio. IPV is given through an injection by a trained health worker. In countries still using OPV, IPV does not replace the OPV vaccine, but is used with OPV to strengthen a child's immune system and protect them from polio.
In India, For the purpose of monitoring and evaluating the programme, a child below 1 year of age who has received one dose of BCG, Measles/MR along with 3 doses of OPV, Pentavalent Vaccine and two doses of IPV is said to be fully immunized.
https://nhm.gov.in/New_Updates_2018/NHM_Components/Immunization/Guildelines_for_immunization/FAQ_on_Immunization_for_Health_Workers-English.pdf

1.4.2 Mission Indradhanush and Intensified Mission Indradhanush

Year:

2014

Background:

Mission Indradhanush[60] an intensification strategy for immunisation (Refer to Annexure 9 for details of India's immunisation policies), aimed at providing all the vaccines under the Universal Immunisation Programme and ensuring full immunisation for children up to two years of age and pregnant women. To further intensify the immunisation programme and accelerate full immunisation coverage to over 90% by 2018, the Intensified Mission Indradhanush (IMI) was launched in 2017. IMI acts as a supplemental aggressive action plan to cover all left-outs and dropouts in select districts and urban cities with low routine immunisation coverage in a specific time-frame[61]. IMI 2.0 came into place in 2019 and was scheduled to carry out 4 rounds of immunization till March 2020. Under the Universal Immunization Programme, as per the guidelines of GOI, Public Health Department BMC offers protection against 11 Vaccine-Preventable Diseases, Polio, Hepatitis B, TB, Diphtheria, Pertussis, Tetanus, H- Influenza B, Measles, Rubella, Mumps, and Rotavirus induced diarrhoea[62].

Objectives:

1. Mission Indradhanush (MI) was launched to improve immunisation coverage by reaching out to partially immunised and unimmunised children and pregnant women.
2. To increase full immunization coverage to 90% and sustain the coverage through immunization system strengthening. The IMI camps will be conducted in identified high-risk areas of Mumbai as per the guidelines of GOI which include Underserved, Un-served areas, Pockets with Vaccine Refusal communities, areas with an outbreak of Vaccine-Preventable diseases, and High-risk areas identified during pulse Polio Rounds such as Construction Sites, Migratory areas.

Target:

To increase full immunization coverage to 90% and sustain it through Rapid Interventions (RI)

Beneficiaries:

Children below 5 years of age, pregnant women

Implementation Status in Mumbai:

According to the data provided by the official IMI Website, 96% of all children in Mumbai targeted for immunisation under IMI 2.0 have been vaccinated.[63] However, this number is much lower than the annual vaccinations reported under the HMIS for various diseases.

[60] https://www.nhp.gov.in/mission-indradhanush1_pg

[61] https://nhm.gov.in/New_Updates_2018/NHM_Components/Immunization/Guildelines_for_immunization/Mission_Indradhanush_Guidelines.pdf

[62] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Expanded%20Program%20of%20Immunization/INTENSIFIED%20MISSION%20INDRADHANUH%202.0%20English.pdf

[63] https://imi2.nhp.gov.in/report/coverage?State_ID=16

Table 65: Deaths from Diseases of Vaccines covered under Mission Indradhanush for Age 0 to 9 from 2018 to 2022

Causes Of Death	Years	Upto 1 year	1 -4 years	5 - 9 years
Acute Poliomyelites (A80)	2018	0	0	0
	2019	0	0	0
	2020	0	0	0
	2021	0	0	0
	2022	0	0	0
Acute Hepatitis B (B16)	2018	0	0	0
	2019	0	0	0
	2020	0	0	0
	2021	0	0	0
	2022	0	0	0
Tuberculosis (A15-A19)	2018	14	25	36
	2019	10	27	12
	2020	7	20	19
	2021	5	24	20
	2022	9	12	20
Diphtheria (A36)	2018	1	1	3
	2019	1	1	11
	2020	0	1	1
	2021	0	1	3
	2022	0	0	1
Whooping Cough (A37) Pertussis	2018	5	0	0
	2019	1	0	0
	2020	0	0	0
	2021	0	0	0
	2022	0	0	0
Tetanus (A33, A34, A35)	2018	1	3	4
	2019	0	4	6
	2020	0	0	0
	2021	1	6	2
	2022	1	2	2

Causes Of Death	Years	Upto 1 year	1 -4 years	5 - 9 years
Influenza (J10- J11)	2018	0	1	0
	2019	1	3	1
	2020	0	0	0
	2021	0	1	0
	2022	0	1	0
Measles (B05)	2018	2	4	2
	2019	0	0	0
	2020	0	0	0
	2021	0	0	0
	2022	4	8	1
All Other Types Of Viral Diseases (A70-A74, A81.A87-A89,A95,B00-B02,B04,B06-B09.B25-B34)*	2018	2	3	3
	2019	9	5	5
	2020	1	1	3
	2021	3	3	3
	2022	2	3	3
Diarrhoea and Gastroenteritis Of Presumed Infectious Origin (A09)	2018	45	17	5
	2019	40	8	2
	2020	26	13	2
	2021	25	12	4
	2022	36	14	4

Note (*) - Includes Rubella and Mumps

Inference:

- In all the other vaccines covered under MI and IMI scheme, the cause of death data shows less than 20 deaths in 2022.
- Thus, there needs to be specific focus on TB and Diarrhoea, while continuing vaccination for others to keep the mortality low as can be seen from this table.

1.4.3 Janani Suraksha Yojana

Year:

2005

Background:

Janani Suraksha Yojana (JSY) is a "safe motherhood" intervention under the NHM. The objective of its implementation is to reduce maternal and neonatal mortality by promoting institutional deliveries among poor pregnant women[64]. It is a centrally sponsored scheme, which integrates the two components of cash assistance with delivery and post-delivery care. The scheme focuses on poor pregnant women in states that have less than 25% institutional delivery rates (named as the Low Performing States or LPS). In addition to the distribution of monetary assistance, the scheme aims at providing quality maternity services to pregnant women by preparing a micro-birth plan for efficient coordination of all childbirth-related activities[65]. The scheme is implemented by the state government through facilities provided under the scheme in Medical Colleges, Urban health posts & urban family welfare centers under Municipal Councils / Corporations, Corporation Hospitals, and all government-granted hospitals.[66]

Objectives:

1. To collect all necessary documents from the beneficiary for eligibility under JSY.
2. To issue prescribed JSY Cards to beneficiaries by compiling all required information.
3. To provide for and /or aid the beneficiary in receiving at least four Antenatal Care (ANC) check-ups to give health services including Injectable Tetanus (TT) and Iron Folic Acid (IFA) tablets.
4. To motivate the beneficiary towards an institutional delivery, either at a government health institution or at an accredited private health institution
5. To facilitate the opening of bank accounts for eligible JSY beneficiaries to receive the aforementioned JSY cash benefit.

Target:

To reduce the Maternal and Neonatal Mortality rate by promoting institutional deliveries among beneficiaries from BPL, SC, and ST families in rural and urban areas.

Beneficiaries:

All SC/ST women, all pregnant women delivering in government facilities and accredited private facilities in the Low Performing States, and BPL Pregnant women in the High Performing States (HPS). Since Maharashtra is under the HPS, only pregnant women under BPL are eligible for the scheme.

[64] https://nhm.gov.in/WriteReadData/l892s/97827133331523438951.pdf

[65] https://www.ilo.org/dyn/travail/docs/683/JananiSurakshaYojanaGuidelines/MinistryofHealthandFamilyWelfare.pdf

[66] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=xO3DHbQ/Sx0=

Implementation Status in Mumbai:

Table 66: Births and Deaths Rate in Mumbai from 2019 to 2023

Indicators	2019	2020	2021	2022	2023
M.Y.E.P Population[67]	1,28,28,821	1,28,75,213	1,29,21,605	1,29,67,996	1,30,14,388
Live Births	1,48,898	1,20,188	1,13,778	1,33,805	1,30,562
Birth Rate (Births per 1000 population)	11.61	9.33	8.81	10.32	10.03
Still Births	904	1,131	1,072	658	519
Total Deaths	91,223	1,11,942	1,08,113	94,553	93,255
Death Rate (Deaths per 1000 population)	7.11	8.69	8.37	7.29	7.17

Table 67: Mother and Child Death Indicators in Mumbai from 2019 to 2023[68]

Indicators	2019	2020	2021	2022	2023
Neo-Natal Deaths (less than 28 days)	2,186	1,858	1,675	1,846	1,657
Neo-Natal Mortality Rate (deaths per 1000 live births)	14.68	15.46	14.72	13.80	12.69
Infant Deaths (Less than 1 year)	3,430	2,649	2,601	2,962	2,832
Infant Mortality Rate (deaths per 1000 live births)	23.04	22.04	22.86	22.14	21.69
Under 5 Mortality/Child Deaths (less than 5 years)	4,221	3,123	3,280	3,566	3,507
Under 5 Morality rate (deaths per 1000 live births)	28.35	25.98	28.83	26.65	26.86
Maternal Deaths	257	197	95	92	89
Maternal Mortality Rate (per 1,00,000 live births)	173	164	83	69	68

Note: Data needed to calculate the mortality rate was not available in HMIS, hence the above data is taken from BMC MIS[69]**.**

Inference:

- In 2023, the number of still births reported decreased by 43% from 904 in 2019 to 519 in 2023.
- Similarly, Sustainable Development Goal's (SDG) National MMR target for 2030 is 70. Even though there is a decreasing trend in MMR in the last 4 years, the picture is quite grim at 68 in 2023.
- Similarly, the Under- 5 mortality rate (U5MR) National target under SDGs is 11 as adopted and the current U5MR is 27 in Mumbai.

[67] MYEP Population – Mid Year Election List of Population

[68] Neo-natal mortality rate, Infant Mortality Rate, Under 5 Mortality Rate and Maternal Mortality Rate are calculated based on number of deaths of a calendar year by number of live births in that year.

[69] https://www.mcgm.gov.in/irj/portal/anonymous/qlvitalstatsreport

1.4.4 Janani Shishu Suraksha Karyakram

Year:

2011

Background:

Reducing maternal and infant mortality is a key role of Reproductive and Child Health (RCH) under the NHM. To enable this, the Government of India launched the Janani Shishu Suraksha Karyakram (JSSK) for the benefit of pregnant women who access Government health facilities for delivery. The scheme entitles all pregnant women delivering in public health institutions to a no-expense delivery (for both cesarean and natural deliveries), free drugs and consumables, diagnostics, blood tests, travel to and from the healthcare facility, and a balanced diet for the duration of their stay. Similarly, it entitles all sick new-borns to access public health institutions for healthcare till 30 days after birth.[70] It is implemented by the state government by providing services under the scheme through primary health centers, sub-district hospitals, district hospitals, government medical college hospitals, etc.[71]

Objectives:

The objective of the JSSK Programme is that every pregnant woman and sick infant upto the age of 1 year gets timely access to the health care system for the required antenatal, intra-natal, postnatal care, immunisation, and diagnostics free of cost.

Target:

To cover 1 crore pregnant women and sick new-borns accessing the public health system every year.

Beneficiaries:

All pregnant women delivering in Government health institutions in both rural and urban areas.

[70] https://www.nhm.gov.in/images/pdf/nrhm-updates/presentations/11th_sep/jssk_dc_mh.pdf

[71] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=E0/L/wULlww=

Implementation Status in Mumbai:

Table 68: Antenatal Care and Deliveries in Mumbai from 2018-19 to 2020-21

Indicators		2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Antenatal Care						
Total number of pregnant women (PW) registered for ANC		2,20,969	1,91,247	-13%	1,76,750	-8%
Out of the total ANC registered, number registered within 1st trimester (within 12 weeks)		97,363	1,06,164	9%	1,10,623	4%
Number of PW given TT1		1,20,271	1,28,695	7%	1,03,220	-20%
Number of PW given TT2		1,10,566	1,03,684	-6%	90,485	-13%
Number of PW given TT Booster		58,194	62,358	7%	65,324	5%
Number of PW given 180 Iron Folic Acid (IFA) tablets		1,87,817	1,60,879	-14%	1,51,367	-6%
Number of PW given 360 Calcium tablets		1,78,129	1,57,736	-11%	1,45,438	-8%
Number of PW given one Albendazole tablet after 1st trimester		1,16,400	1,03,263	-11%	1,18,564	15%
Number of PW received 4 or more ANC check ups		1,59,671	1,59,686	0.01%	1,47,012	-8%
Deliveries						
Number of Institutional Deliveries conducted (Including C-Sections)	**Public**	68,739	68,936	0.29%	51,325	-25.55%
	Private	78,718	78,886	0.21%	76,944	-2.46%
Number of Home Deliveries attended by Skill Birth Attendant (SBA) Doctor/Nurse /ANM)	**Public**	2	4	100%	8	100%
	Private	0	0	-	0	-
Number of Home Deliveries attended by Non SBA (Trained Birth Attendant (TBA) /Relatives/etc.)	**Public**	29	37	27.59%	40	8.11%
	Private	0	0	-	0	-
Total	**Public**	68,770	68,977	0.30%	51,373	-25.52%
	Private	78,718	78,886	0.21%	76,944	-2.46%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- The absolute number of institutional deliveries conducted in government facilities has reduced by 26% from 2019-20 to 2020-21.
- With regards to antenatal care, the number of Pregnant Women (PW) who registered for antenatal care decreased by 20% from 2018-19 to 2020-21.
- The number of PW given their TT Booster showed a marginal increase from 2018-19 to 2019-20.
- The number of PW given IFA tablets decreased by 14% from 2018-19 to 2019-20 and further decreased by 6% from 2019-20 to 2020-21.
- Antenatal care and the health of the mother during pregnancy is a vital element of ensuring the health of the new-born but interventions such as IFA tablets and TT injections have shown a decrease in the most recent years, the ideal scenario would be a sustained annual increase in every aspect of antenatal care.

Table 69: Services provided to Infants under JSSK in Mumbai from 2018-19 to 2020-21

Services for Infants	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Free Medicines	62,392	58,955	-6%	1,63,103	177%
Free Diagnostics	21,377	36,839	72%	81,665	122%
Free Home to facility transport	0	1	-	0	-100%
Inter facility transfers when needed	259	378	46%	1,311	247%
Free Drop Back home	0	12	-	4	-67%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Table 70: Services provided to Pregnant women under JSSK in Mumbai from 2018-19 to 2020-21

Services for Pregnant women (PW)	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Free Medicines	1,40,863	1,82,115	29%	1,69,903	-7%
Free Diet	1,40,863	1,30,682	-7%	51,225	-61%
Free Diagnostics	1,40,863	1,82,115	29%	1,69,894	-7%
Free Home to facility transport	0	0	-	0	-
Inter facility transfers when needed	1,290	1,426	11%	6,103	328%
Free Drop Back home	0	0	-	9	-

P.N: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it

Inference:

- Data showed a decrease of 7% from 2019-20 to 2020-21 in the number of pregnant women provided free medicines and diagnostics under the scheme. Measures must be taken to ensure all pregnant women receive adequate and quality healthcare and nutrition.
- In contrast, the number of infants who were provided free medicine and diagnostics has shown a massive increase of 177% and 122% respectively from 2019-20 to 2020-21. This is a good sign and efforts must be made to ensure that it is maintained and annually increased, so that infants are provided with the medicines and nutrition for good development.
- In 2020-21, inter-facility transfers for both mothers and infants has also increased by a larger proportion under this scheme.

1.4.5 Pradhan Mantri Matru Vandana Yojana

Year:

2017

Background:

The Pradhan Mantri Matru Vandana Yojana (PMMVY) Maternity Benefit Programme was implemented in all the districts of the country following the provisions of the National Food Security Act, 2013[72] to improve the overall health and wellbeing of women through cash transfers during and after their pregnancy.

Objectives:

1. To provide partial compensation for the wage loss in terms of cash incentives to enable women to take adequate rest before and after delivery of the first living child.
2. To promote improved health-seeking behavior amongst the Pregnant Women and Lactating Mothers (PW and LM) through the compensatory cash benefit.

Target:

To provide a cash incentive to pregnant women for health.

Beneficiaries:

1. All Pregnant Women and Lactating Mothers, excluding PW and LM who are in regular employment with the Central Government or the State Governments or PSUs or those who receive similar benefits under any law for the time being in force
2. All eligible Pregnant Women and Lactating Mothers who have their pregnancy on or after 01.01.2017 for the first child in the family.

Implementation Status in Mumbai:

No details of implementation were available in the public domain.

[72] https://wcd.nic.in/sites/default/files/PMMVY%20Scheme%20Implemetation%20Guidelines%20. 0.pdf

1.4.6 Rashtriya Bal Swasthya Karyakram (RBSK)

Year:

2013

Background:

Rashtriya Bal Swasthya Karyakram (RBSK) envisages Child Health Screening and Early Intervention Services for early identification of medical conditions and link to care, support, and treatment. Children diagnosed with any of the 30 identified illnesses (Refer Annexure 8) receive follow up including surgeries at the tertiary level, free of cost under the NHM. The new borns are screened for birth defects in health facilities by service providers and during the home visits by ASHAs (0-6 weeks), whereas dedicated Mobile Health Teams carry out screening of all children in the preschool age enrolled at Anganwadi centers at least twice a year (6 weeks to 6 years) besides screening of all children studying in Government and Government aided schools (6 - 18 years)[73].

Objectives:

To improve the overall quality of life of children through early detection and intervention for children from birth to 18 years to cover defects at birth, childhood diseases, deficiencies, development delays, and disability.

Target:

To cover 30 identified health conditions for early detection, free treatment, and management through dedicated mobile health teams placed in every block in the country.

Beneficiaries:

All children of 0-6 years of age group in rural areas and urban slums, in addition to older children upto 18 years of age enrolled in classes 1st to 12th in Government and Government aided schools.

[73] http://cghealth.nic.in/nhmcg/Informations/RMNCH/7Rastriya_Bal_Swaasthya_karyakaram.pdf

Implementation Status in Mumbai:

Table 71: Screening of Children under RBSK from 2018-19 to 2020-21

Indicators	2018-19	2019-20	2020-21
Number of new-born screened for defects at birth (as per RBSK)	55,595	57,963	NA
Number of children screened by RBSK mobile health teams at Anganwadi	2,68,755	2,53,928	NA
Number of children screened by RBSK mobile health teams at Government and Government aided schools	2,27,778	1,71,119	NA
Number of children with disease/deficiency/developmental delay	13,408	12,152	NA
Number of Children provided Medical Intervention	6,542	4,952	NA
Number of Children provided Surgical Intervention	35	66	NA

NA – Not available

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- In 2019-20, under the RBSK scheme, 2,53,928 children were screened at Anganwadis and 1,71,119 children were screened at Government and Government aided schools of which 12,152 needed medical attention.
- However, for the year 2020-21, the HMIS data showed that 0 children were screened, however, RBSK mobile health teams should have taken measures to carry out screening for children in Anganwadis and in the vicinity of the school.

Table 72: Total deaths from Age 0 to 19 in Mumbai from 2018 to 2022

Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
2018	3,564	806	521	636	1,549	7,076
2019	3,262	799	464	694	1,403	6,622
2020	2,508	478	344	460	1,137	4,927
2021	2,553	637	371	577	1,188	5,326
2022	2,905	623	427	582	1,306	5,843

Table 73: Major Causes of deaths from Age 0 to 19 in 2018 & 2022

Causes of Death	Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Hypoxia, Birth Asphyxia and Other Respiratory Conditions (P20-P28)	2018	923	0	0	0	0	923
	2019	964	0	0	0	0	964
	2020	733	1	0	0	0	734
	2021	709	0	1	0	0	710
	2022	827	0	0	0	0	827
All Other Conditions Originating in the Perinatal Period (P00-P04, P29-P54, P56-P57, P60-P96)	2018	698	0	0	0	0	698
	2019	667	2	0	0	0	669
	2020	623	0	0	0	0	623
	2021	562	0	0	0	0	562
	2022	707	0	0	0	0	707
Congenital Malformations of the Circulatory System (Q20-Q28, Q31)	2018	421	77	21	20	15	554
	2019	331	59	15	14	10	429
	2020	260	29	4	14	8	315
	2021	304	43	9	11	8	375
	2022	320	60	22	15	7	424
Cleft Lip and Cleft Palate (Q35-Q37)	2018	1	0	0	0	0	1
	2019	3	1	0	0	0	4
	2020	3	0	0	0	0	3
	2021	3	1	0	0	0	4
	2022	2	0	0	0	0	2
Event of undetermined Intent (Y10-Y34)	2018	0	0	1	0	0	1
	2019	0	0	0	0	1	1
	2020	0	0	0	0	2	2
	2021	0	0	0	0	0	0
	2022	0	0	0	0	1	1
Tuberculosis(A15-A19)	2018	5	6	13	40	191	255
	2019	4	9	5	47	186	251
	2020	7	20	19	74	232	352
	2021	5	24	20	104	235	388
	2022	9	12	20	74	207	322
Pneumonia (J12-J18)	2018	273	84	26	28	26	437
	2019	151	75	26	19	33	304
	2020	80	28	18	20	22	168
	2021	95	55	9	14	25	198
	2022	138	56	20	21	25	260
All Other Congenital Malformations, Deformations and Chromosomal Abnormalities Not Elsewhere (Q18, Q32-Q34, Q38-Q99)	2018	248	25	7	5	3	288
	2019	228	24	9	9	1	271
	2020	171	13	3	3	5	195
	2021	193	24	8	2	8	235
	2022	203	9	5	7	4	228

Causes of Death	Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Other injuries of Specified, Unspecified and Multiple Body Regions (SOO-SOI, S05, S09-S11, S1S-S16,S19,S21,S25,S29,S31,S35, S39-S41, S45-S46,S49-S51, S55-SS6, S59-S61, S65-S66, S69 S71, S75-S76, S79-S81, S8S-S86, S89-S91, S95 S96, S99, T00, T01, T06-T07, T09, T11 and T13-T14)	2018	18	26	20	33	164	261
	2019	8	30	11	30	145	224
	2020	4	15	12	15	84	130
	2021	3	17	18	25	89	152
	2022	7	22	18	28	140	215
All other diseases of the nervous system (G10-G25, G31, G35-G37, G43-G98)	2018	56	37	32	34	42	201
	2019	45	41	32	33	59	210
	2020	28	29	21	28	33	139
	2021	38	40	33	27	31	169
	2022	33	38	35	37	49	192
Septicaemia(A40-A41)	2018	106	35	10	7	13	171
	2019	132	22	10	10	17	191
	2020	51	22	13	7	15	108
	2021	60	25	13	16	11	125
	2022	59	11	8	9	18	105
Dengue (A90)	2018	2	11	18	15	17	63
	2019	19	15	12	11	21	78
	2020	2	3	5	4	3	17
	2021	1	6	13	13	11	44
	2022	8	11	10	14	12	55
Diarrhoea (A09)	2018	45	17	5	1	4	72
	2019	40	8	2	0	3	53
	2020	26	13	2	3	4	48
	2021	25	12	4	0	4	45
	2022	36	14	4	2	1	57
Other Viral Hepatitis (B15, B17-B19)	2018	0	2	3	5	5	15
	2019	0	2	1	4	2	9
	2020	1	2	3	1	5	12
	2021	2	6	1	0	6	15
	2022	0	0	4	0	3	7
Human Immuno-deficiency Virus (HIV) (B20-B24)	2018	2	0	2	12	18	34
	2019	0	1	5	10	14	30
	2020	0	2	0	7	12	21
	2021	3	0	0	7	12	22
	2022	0	0	1	4	5	10

Causes of Death	Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Other protein-energy malnutrition (E42-E46)	2018	11	14	3	1	2	31
	2019	5	11	5	3	0	24
	2020	5	10	3	0	1	19
	2021	5	8	0	0	1	14
	2022	4	10	1	2	1	18
Diabetes mellitus (E10-E14)	2018	4	4	1	2	4	15
	2019	1	2	2	3	6	14
	2020	1	4	3	5	11	24
	2021	0	8	2	5	12	27
	2022	1	1	2	7	8	19
Malaria (B50-B54)	2018	0	5	0	0	3	8
	2019	0	1	0	0	3	4
	2020	0	0	0	2	2	4
	2021	1	1	1	3	6	12
	2022	0	0	0	0	1	1
Hypertension (I10-I15)	2018	0	1	1	0	3	5
	2019	0	2	3	2	5	12
	2020	1	3	0	1	4	9
	2021	0	0	0	5	6	11
	2022	0	0	3	1	5	9
Typhoid (A01)	2018	0	0	1	1	1	3
	2019	0	0	0	1	0	1
	2020	0	1	0	1	0	2
	2021	0	0	0	0	1	1
	2022	0	1	1	0	1	3
Acute Myocardial infarction (I21-I22)	2018	0	1	0	1	3	5
	2019	0	0	1	1	6	8
	2020	1	0	0	1	4	6
	2021	0	0	0	0	5	5
	2022	0	1	0	0	3	4
Nutritional marasmus (E41)	2018	0	0	0	0	0	0
	2019	0	0	0	0	1	1
	2020	0	0	0	0	0	0
	2021	0	0	0	0	0	0
	2022	0	0	0	0	0	0
All other nutritional deficiencies (E50-E64)	2018	0	1	0	0	0	1
	2019	0	2	0	0	0	2
	2020	2	2	1	0	1	6
	2021	9	3	0	1	0	13
	2022	5	1	0	0	0	6

Causes of Death	Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Acute Poliomyelitis (A80)	2018	0	0	0	1	0	1
	2019	0	0	0	0	0	0
	2020	0	0	0	0	0	0
	2021	0	0	0	0	0	0
	2022	0	0	0	0	0	0
Kwashiorkor (E40)	2018	0	0	0	0	0	0
	2019	0	0	0	0	0	0
	2020	0	0	0	1	0	1
	2021	0	0	0	0	0	0
	2022	0	0	0	0	0	0
Cholera(A00)	2018	0	0	0	0	0	0
	2019	0	0	1	0	0	1
	2020	0	0	0	0	0	0
	2021	0	0	0	0	0	0
	2022	0	0	0	0	0	0
Acute Hepatitis B (B16)	2018	0	0	0	0	1	1
	2019	0	0	0	0	0	0
	2020	0	0	0	0	0	0
	2021	0	0	0	0	0	0
	2022	0	0	0	0	0	0
Acute rheumatic fever and chronic rheumatic heart diseases (I00-I09)	2018	1	0	1	5	10	17
	2019	0	1	1	10	8	20
	2020	1	0	1	2	4	8
	2021	0	0	0	2	3	5
	2022	0	3	1	2	4	10
Convulsions not Elsewhere Classified (R56)	2018	1	0	0	0	0	1
	2019	0	0	1	1	0	2
	2020	0	0	0	0	0	0
	2021	2	1	2	1	1	7
	2022	3	0	1	0	1	5
Other Anaemias (D50-D55, D57-D64)	2018	19	15	12	11	23	80
	2019	7	15	11	13	12	58
	2020	15	5	12	15	15	62
	2021	10	9	4	11	13	47
	2022	19	22	13	9	11	74
Other Causes	2018	700	377	295	329	626	2,327
	2019	631	403	281	380	563	2,258
	2020	481	240	192	214	452	1,579
	2021	512	307	201	269	453	1,742
	2022	508	290	224	288	500	1,810

Causes of Death	Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Total Deaths	2018	3,534	738	472	551	1,174	6,469
	2019	3,236	726	434	601	1,096	6,093
	2020	2,496	442	312	418	919	4,587
	2021	2,542	590	339	516	941	4,928
	2022	2,889	562	393	520	1,007	5,371

Inference:

- Of the major causes of death among children in the age of 0 to 19, congenital diseases, malnutrition, anemia and rheumatic diseases are included in RBSK.
- However, deaths caused due to other diseases such as tuberculosis, pneumonia, septicemia and nervous disorders (879 deaths) have also affected children but are not being included.
- Similarly, Hypoxia, Asphyxia and other Conditions Originating in the Perinatal Period that mainly affect infants (1,534 deaths) have not been included.
- Maximum deaths have been seen to occur in new-born children and teenagers between the age of 15-19 years. Targeted measures must be undertaken to ensure deaths under these causes are controlled.

1.4.7 School Health Scheme

Year:

1938

Background:

The M.O (Schools) Department has been functioning since 1938. The department of Medical Officer (Schools) conducts a Primary medical screening of students of BMC Primary, Secondary and Special schools. The M.O (Schools) Department comprises:

i. The medical unit (Medical Officers and Health Visitors) working in schools

ii. The school Clinic unit (School Clinic Organizer and Assistant School Clinic Organiser) working at 7 hospitals (5 Teaching and 2 Peripheral). The reports created by these units are submitted to the Education and Health departments[74].

Objectives:

1. Medical Inspection (Primary Screening) of students. Every year each medical unit is allotted a specific no. of schools in one or more wards to be completed successively one after the other in an academic year.
2. Students with defects/deficiency/diseases are referred to municipal dispensary/hospital /school clinics in hospitals
3. To ensure that follow-up treatments of referred students are conducted (especially those with major problems who require treatment for a longer duration).
4. To promote and improve the health Education of Parents, Students, Teachers and staff through Meetings, IEC Materials, and Virtual classrooms. Topics included in this are Monsoon illnesses, Nutrition, Anemia, etc.

Target:

No specific target mentioned

Beneficiaries:

Primary and secondary students in public schools

[74] https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/School%20Health%20Department/Program%20Outline%20English.pdf

Implementation Status in Mumbai:

Table 74: Number of diseases/ailments found in Health Check-ups in Municipal Schools from 2018-19 to 2022-23

Diseases/Ailments	2018-19	2019-20	2020-21	2021-22	2022-23	% change from 2018-19 to 2022-23
Dental Caries	96,658	68,668	Due to Covid-19 health check-up is not done	27,220	67,527	-30%
Dental Others	18,710	13,334		7,376	13,597	-27%
Scabies	1,063	797		204	637	-40%
Leprosy (New)	4	4		2	3	-25%
Skin Other	19,612	12,851		5,722	15,639	-20%
Lymphadenopathy	4,466	2,452		997	3,676	-18%
Speech	1,728	1,182		708	1,615	-7%
Eye Conditions	5,148	4,559		1,760	4,862	-6%
Eye (Defective Vision)/ Refractory error	13,590	13,192		5,955	13,965	3%
Otorrhoea	1,590	1,101		356	1,752	10%
Ear Other defects	23,478	14,038		8,674	18,416	-22%
Nose Defects	15,279	10,671		3,176	10,100	-34%
Thyroid	49	21		32	35	-29%
Throat Other Defects	4,174	3,181		1,319	6,627	59%
Splenomegaly	3	1		0	1	-67%
Vitamin A Deficiency	2,212	760		323	271	-88%
Night blindness	7	2		0	1	-86%
Vitamin B,C,D Deficiency	1,652	1,371		555	1,649	-0.18%
Rheumatic Heart Disease (RHD) (New)	3	2		2	4	33%
Heart & Circulation	284	239		120	379	33%
TB (New)	179	102		105	160	-11%
Lung Other Defects	2,219	872		373	1,363	-39%
Orthopedic Defects	1,317	979		603	956	-27%
Mental Defects	1,646	1,023		701	1,375	-16%
Pallor/Anemia	3,106	5,566		2,044	8,142	162%
Underweight	7,383	7,512		3,488	9,478	28%
Worms	894	1,375		353	1,536	72%
Other Defects	19,619	32,034		17,975	44,404	126%
Total Defects	2,46,073	1,97,889		90,143	2,28,170	-7%
Total No. of students Examined	2,26,066	1,74,464		84,247	2,37,922	5%

Inference:

- For 2020-21, the RTI reply received by the department (Annexure 11), that mentions “zero” children were screened during the pandemic.
- Thus, children suffering from diseases as seen in 2019-20 have been undiagnosed due to the restrictions placed in schools within Mumbai.

1.4.8 Urban Reproductive and Child Health Programme

Year:

1997

Background:

The Reproductive Health and Child Health Programme seek to cover the reproductive health of individuals at every stage. This includes promoting women's health and safe motherhood (including the safe management of unwanted pregnancy and abortion), women's development, child health (including child survival and child development), adolescent health including sexuality development, adolescence education and vocational education, effective family planning (ensuring information regarding informed choice, counselling, gender equality and greater male participation in the child-rearing process), prevention, detection and management of Reproductive Tract Infections, Sexually Transmitted Infections, HIV/ AIDS and cancers of the reproductive system, prevention and management of infertility and other reproductive disorders, and the reproductive health care of elderly persons. The provision of health care under the RCH program is mainly focused on urban areas and for the upliftment of vulnerable individuals living in slums.

Objectives:

1. To improve the health status of the urban poor community through the provision of quality integrated primary health care services.
2. To strengthen the existing urban health infrastructure through the upgradation of existing facilities.
3. To support the development of a referral system for institutional deliveries, emergency obstetric care and terminal method of family planning.
4. To promote the involvement of NGOs / Private sector facilities in the provision of primary health care services and as part of the referral system.
5. Integration of the existing health infrastructure with the proposed urban health programme.

Target:

No specific target has been mentioned in the programme document

Beneficiaries:

Pregnant women, infants, adolescents, families, the elderly; vulnerable individuals living in slums

Implementation Status in Mumbai:

Table 75: Reproductive Tract /Sexually Transmitted Infections (RTI/STI) Cases in Mumbai from 2018-19 to 2020-21*

RTI/STI Cases		2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Male	Identified	15,703	11,406	-27%	9,695	-15%
	Treatment Initiated	13,257	11,327	-15%	9,309	-18%
Female	Identified	29,280	27,566	-6%	23,938	-13%
	Treatment Initiated	25,318	27,502	9%	23,888	-13%
Total	Identified	44,983	38,972	-13%	33,633	-14%
	Treatment Initiated	38,575	38,829	1%	33,197	-15%

(*) Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- 69% of the total RTI/STI cases on average (from 2018-19 to 2020-21) were reported in females.
- This shows that the burden of sexually transmitted infections is concentrated towards females and has a direct relation to the misuse or failure to use effective contraceptives.
- The number of STI cases has decreased in females from 29,280 in 2018-19 to 23,938 in 2020-21 and has decreased for males from 15,703 to 9,695 in the same period.
- On average, treatment for STI/RTI was initiated for 93% males out of the identified cases and for 95% females out of the identified cases from 2018-19 to 2020-21.

Table 76: Family planning methods (Female) from 2018-19 to 2020-21[75]

Family Planning Female	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of Interval IUCD Insertions (excluding PPIUCD and PAIUCD)	35,411	29,699	-16%	30,875	4%
Number of Postpartum (within 48 hours of delivery) IUCD insertions	8,438	8,510	1%	10,162	19%
Number of Post Abortion (within 12 days of spontaneous or surgical abortion) IUCD insertions	1,195	1,395	17%	970	-30%
Number of IUCD Removals	4,021	4,399	9%	1,869	-58%
Number of complications following IUCD Insertion	125	196	57%	161	-18%
Injectable Contraceptive-Antara Program- First Dose	2,993	1,552	-48%	841	-46%
Injectable Contraceptive-Antara Program- Second Dose	1,192	600	-50%	253	-58%
Injectable Contraceptive-Antara Program- Third Dose	783	315	-60%	86	-73%
Injectable Contraceptive-Antara Program- Fourth or more than four	765	496	-35%	222	-55%
Number of Combined Oral Pill cycles distributed	3,68,930	3,74,090	1%	3,57,197	-5%
Number of Emergency Contraceptive Pills (ECP) given	522	1,928	269%	1,162	-40%
Number of Centchroman (weekly) pill strips distributed	1,423	5,746	304%	8,292	44%
Number of Tubectomies	19,263	17,659	-8%	11,805	-33%
Failures following female sterilization	11	4	-64%	3	-25%
Deaths following female sterilization	0	0	-	0	-

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

[75] Refer Annexure 12 for details of each of the contraceptive methods

Table 77: Family planning methods (Male) from 2018-19 to 2020-21

Family planning: Male	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of Condom pieces distributed	53,72,124	39,19,138	-27%	44,62,141	14%
Number of Non Scalpel Vasectomy (NSV) / Conventional Vasectomy conducted	185	116	-37%	49	-58%
Failures following male sterilization	0	0	-	0	-
Deaths following male sterilization	0	0	-	0	-

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- With regards to family planning interventions for women, IUCD insertions (excluding PPIUCD and PAIUCD) show an increase of 4% from 2019-20 to 2020-21 and Antara dosages showed an average decrease of 58% and a decrease of 40% in the number of emergency contraceptive pills (ECP) distributed for the same period.
- Male contraceptive interventions also showed a decrease of 58% from 2019-20 to 2020-21. The number of condom pieces distributed increased by 14% from 2019-20 to 2020-21.
- The large decrease in ECP and other contraceptive measures distributed shows that a significant proportion of the female population did not have access to contraceptive measures during the pandemic.

Table 78: Percentage of female contraceptive interventions to male contraceptive interventions from 2018-19 to 2020-21

Total Contraceptives by Gender	2018-19	2019-20	2020-21
Total contraceptives	70,225	60,342	55,263
Female contraceptives total	70,040	60,226	55,214
Percentage of female contraceptive interventions	99.74%	99.81%	99.91%
Male contraceptives total	185	116	49
Percentage of male contraceptive interventions	0.26%	0.19%	0.09%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Total female contraceptives include the number of Tubectomies, IUCD insertions, Number of Injectable Contraceptive, while the total male contraceptives include the number of Non-Scalpel Vasectomies (NSV)/ Conventional Vasectomy conducted

Inference:

- Even with the huge decrease in female contraceptive interventions in 2020-21, they made up to an average of 99.82% of all family planning interventions from 2018-19 to 2020-21, whereas male contraceptive interventions only made up 0.18% of the total.
- Awareness in understanding contraceptive measures especially among males must be carried to reduce the burden of conducting contraceptive procedures on females.

Table 79: Medical Termination of Pregnancy (MTP) in Mumbai from 2018-19 to 2020-21

MTP	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
MTP up to 12 weeks of pregnancy	22,585	18,623	-18%	15,269	-18%
MTP more than 12 weeks of pregnancy	1,356	1,643	21%	914	-44%
Post Abortion/ MTP Complications Identified	20	7	-65%	3	-57%
Post Abortion/ MTP Complications Treated	6	3	-50%	1	-67%
Number of women provided with post abortion/ MTP contraception	2,564	2,742	7%	1,263	-54%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- Concerning institutional abortions and MTP; MTP's beyond 12 weeks of pregnancy has steadily been decreasing over the last three years. Moreover, complications related to abortions have also decreased.
- This shows that efforts are being made to provide safe interventions for unwanted pregnancies. However, treatments for post-abortion complications have also decreased. This is a shortcoming that needs to be addressed, as complications such as these can have long-term consequences for the woman.

1.5. Nutritional Schemes

Nutrition is recognised as one of the most important social determinants of health. Malnutrition, especially micronutrient deficiencies, restricts survival, growth and development. It contributes to morbidity and mortality in vulnerable populations, resulting in substantial diminution in productive capacity in adulthood and consequent reduction in overall well-being.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State	• Integrated Child Development Services • National Iron Plus Initiative for Anemia Control		
City	Mid-Day Meal Scheme		

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: ***Reduce percentage of pregnant women aged 15 to 49 years who are anemic (11g/dl) to 23.57% by 2030***[1]

Status: ***HMIS reports show that out of total pregnant women registered for ante-natal care, 47% reported anemic (less than 11g/dl) in 2020-21.***[2]

KEY FINDINGS[3]

- *The number of tests conducted for anemia has decreased by 46% from 2019-20 to 2020-21, however, the proportion of positive cases to the total cases remains almost constant (6.3% in 2019 and 6.4% in 2020).*
- *The number of pregnant women who tested positive for moderate anemia showed a decrease of 20% from 2019-20 to 2020-21. While the number of women who tested positive for severe anemia increased by 5% in the same period.*
- *ICDS coverage in 2020-21 (during the pandemic) had increased by 14% for infants (up to 71 months) from 2019-20 to 2020-21 and a similar increase of 11% was also noticed for pregnant women and lactating mothers with the Supplementary Nutrition Packages (SNP) Coverage.*

[1] SDG India Index, Niti Aayog [2] HMIS Data [3] HMIS Data and Monthly Progress Report of ICDS

1.5.1 National Iron Plus Initiative for Anemia Control

Year:

2013

Background:

Anemia is a serious public health challenge in India. The National Family Health Survey-3 (NFHS-3)[76] data suggests that anemia is widely prevalent among all age groups, and is particularly high among the most vulnerable – nearly 58 percent among pregnant women, 50 percent among non-lactating women, 56 percent among adolescent girls (15–19 years), 30 percent among adolescent boys and around 80 percent among children under 3 years of age and 70% below 5 years of age[77]. In young children, iron deficiency is due to increased iron requirement during periods of rapid growth. In addition, infant and toddler diets are often poor in bioavailable iron, particularly post-weaning. Children who suffer from anemia have delayed psychomotor development and impaired performance; in addition, they have a 5–10-point deficit in intelligence quotient. Iron deficiency can cause significant central nervous system (CNS) damage even in the absence of anemia. There seems to be a vulnerable period for these damages particularly between 9 and 18 months of age[78].

The National Iron+ Initiative was launched by the Adolescent Division of the Ministry of Health and Family Welfare (MoHFW), Government of India to target this challenge.

Objectives:

1. To bring to the attention of program managers of health and health-related activities the serious negative consequences of anemia for the health and physical, mental, and economic productivity of individuals and populations
2. To layout IFA supplementation protocols across the life cycle (preventive strategy)
3. To define a minimum standard treatment protocol for facility-based management of mild, moderate and severe anemia segregated by levels of care (curative strategy)
4. To broadly identify platforms of service delivery and indicate roles of service providers

Target:

One of the goals for the 12th Five Year Plan is to reduce anemia in girls and women by 50 percent.

(The National Iron+ Initiative will reach the following age groups for supplementation or preventive programming: Bi-weekly iron supplementation for preschool children 6 months to 5 years Weekly supplementation for children from 1st to 5th grade in Govt. and Govt. Aided schools Weekly supplementation for out of school children (5–10 years) at Anganwadi Centres Weekly supplementation for adolescents (10–19 years) Pregnant and lactating women Weekly supplementation for women in reproductive age[79]

Beneficiaries:

Children, adolescents, women of reproductive age, pregnant and lactating women (Dosages are different for all)

Implementation Status in Mumbai:

[76] http://rchiips.org/nfhs/NFHS-3%20Data/VOL-1/India_volume_I_corrected_17oct08.pdf
[77] https://www.nhp.gov.in/national-iron-plus-initiative-for-anemia-control_pg
[78] https://nhm.gov.in/images/pdf/programmes/wifs/guidelines/Guidelines_for_Control_of_Iron_Deficiency_Anaemia.pdf
[79] http://www.nrhmhp.gov.in/sites/default/files/files/Iron%20plus%20initiative%20for%206%20months%20-5%20years.pdf

Table 80: Iron and Folic Acid (IFA) tablets provided under Weekly Iron and Folic Acid Supplementation (WIFS) Programme from 2018-19 to 2020-21

WIFS	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of children covered under WIFS JUNIOR (6 - 10 years) provided 4-5 IFA tablets in schools	5,87,416	10,76,810	83%	3,34,646	-69%
Number of out of school children (6-10 years) given 4-5 IFA tablets at Anganwadi Centres	4,32,002	10,93,056	153%	2,75,070	-75%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Table 81: Anemia prevalence rate and interventions from 2018-19 to 2020-21

Anemia	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of Haemoglobin (Hb) tests conducted	17,33,436	16,79,665	-3%	9,07,087	-46%
Out of the total number of Hb tests done, Number having Hb < 7 mg	81,890	1,05,422	29%	58,402	-45%
Number of children (6-59 months) provided 8-10 doses (1ml) of IFA syrup (Bi weekly)	40,118	1,80,362	350%	1,39,309	-23%
Number of mothers provided full course of 180 IFA tablets after delivery	1,02,812	1,03,464	1%	97,642	-6%
Number of PW given 180 Iron Folic Acid (IFA) tablets	1,87,817	1,60,879	-14%	1,51,367	-6%
Girls (6th -12th class) provided 4 IFA tablets in schools	2,72,390	1,57,298	-42%	0	-100%
Boys (6th -12th class) provided 4 IFA tablets in schools	2,77,118	1,56,537	-44%	0	-100%
Number of out of school adolescent girls (10-19 years) provided 4 IFA tablets at Anganwadi Centres	2,60,180	2,10,853	-19%	1,62,875	-23%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- The number of tests conducted for anemia has decreased by 46% from 2019-20 to 2020-21.
- Individuals tested positive for severe anemia have also decreased by 45% from 2019-20 to 2020-21, however, the proportion of positive cases to the total cases remains almost constant.
- Overall medications and doses for children and mothers have drastically fallen during the Covid 19 pandemic as compared to the previous year.

Table 82: Incidence of anemia in pregnant women (PW) from 2018-19 to 2020-21

Anemia in Pregnant Women (PW)	2018-19	2019-20	% change from 2018-19 to 2019-20	2020-21	% change from 2019-20 to 2020-21
Number of PW registered for ANC	2,20,969	1,91,247	-13%	1,76,750	-8%
Number of PW having moderate Anemia	1,06,378	97,385	-8%	78,075	-20%
Number of PW having severe Anemia	5,967	5,082	-15%	5,354	5%
% of PW with anemia to total PW registered	51%	54%	3%	47%	-7%
Number of PW treated having severe anemia	4,741	4,778	1%	5,418	13%
Number of PW with hypertension	6,994	7,095	1%	8,586	21%

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Anemia is measured by the Haemoglobin (Hb) level per decilitre of blood. For women, normal Hb levels range from 12.1 to 15.1gm/dl, and for men they range from 13.8 to 17.2gm/dl. Moderate anemia is characterised by Hb levels testing between 7.1-10.9gm/dl, and severe anemia is characterised by Hb levels testing below 7gm/dl[80].

Table 83: Age wise number of deaths caused due to anemia in Mumbai from 2018 to 2022

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 and Above Years	Total
Thalassaemia and other Anemias (D50-D55, D56, D57-D64)	**2018**	34	55	69	95	511	764
	2019	22	45	66	115	506	754
	2020	20	46	75	148	548	837
	2021	19	37	69	154	585	864
	2022	42	46	67	131	572	858

Inference:

- The number of pregnant women who tested positive for moderate anemia showed a decrease of 20% from 2019-20 to 2020-21. While the number of women who tested positive for severe anemia increased by 5% in the same period.
- However, when compared to the total pregnant women registered for ANC the number of anemic cases decreased by 7% in 2020-21.
- The number of pregnant women with Hypertension has increased by 21% from 2019-20 to 2020-21
- Total deaths related to anemia have reduced although the number is quite high at 858 in 2022. Anemia-related deaths in the child and adolescent age (5 to 19 years) have decreased from 55 in 2018 to 46 in 2022.

[80] https://www.nhp.gov.in/disease/blood-lymphatic/iron-deficiency-anemia#:~:text=Normal%20Hemoglobin%20Levels%3A%20Hemoglobin%20is,13.8%20to%2017.2%20gm%2Fdl

1.5.2. Integrated Child Development Services

Year:

1975

Background:

Integrated Child Development Services (ICDS) Scheme is one of the flagship programmes of the Government of India as a response to the challenge of providing pre-school non-formal education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other. The beneficiaries under the Scheme are children in the age group of 0-6 years, pregnant women and lactating mothers[81]. In Mumbai, it has been implemented by the State Government through Anganwadi Centres. The Package of services provided by ICDS includes supplementary nutrition, Vitamin-A, Iron and Folic Acid, immunisation, health check-ups, referral services, treatment of minor illnesses, nutrition and health education to women, pre-school education of children in the age group of 3-6 years, and convergence of other supportive services like water supply, sanitation, etc.

Objectives:

1. To improve the nutritional and health status of children in the age group 0-6 years
2. To lay the foundation for proper psychological, physical and social development of the child; to reduce the incidence of mortality, morbidity, malnutrition and school dropout
3. To achieve effective coordination of policy and implementation amongst the various departments to promote child development
4. To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

Target:

The scheme is aimed at improving the health, nutrition and education of the target community.

Beneficiaries:

All children below 6 years of age, pregnant women and lactating mothers. Women in the age group of 15-44 years. Adolescent girls in selected blocks.

[81] https://darpg.gov.in/sites/default/files/ICDS.pdf

Implementation Status in Mumbai:

Table 84: ICDS Coverage from 2018-19 to 2020-21[82]

Indicators		2018-19	2019-20	2020-21
Supplementary Nutrition Packages (SNP) Coverage	6-35 Months	93,000	1,19,536	1,42,690
	36-71 Months	1,66,909	1,66,821	1,83,475
	Pregnant women	9,856	13,570	14,205
	Lactating mother	11,939	15,556	17,990
Pre-school education (PSE) Coverage (36-71 month attended for 16 or more days)	Girls	67,915	70,522	58,030
	Boys	69,455	71,461	60,505
Nutritional Status (0-5 Years Children)	Total Children Weighed	2,86,992	2,86,041	1,91,571
	Normal Grade	2,38,143	2,37,594	1,59,230
	Moderately underweight	46,136	44,214	28,953
	Severely underweight	2,713	4,233	3,389

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Table 85: ICDS personnel in Mumbai from 2018-19 to 2020-21

Year	AWC Sanc.	AWC Func.	CDPO Sanc.	CDPO In position	Supervisor sanc.	Supervisor In position	AWW Sanc	AWW In position	AWH Sanc	AWH In position
2018-19	5,130	5,130	33	20	206	129	5,130	4,977	5,130	4,316
2019-20	5,130	5,130	33	18	206	124	5,130	4,925	5,130	4,249
2020-21	5,135	5,135	33	17	206	119	5,135	4,925	5,135	4,103

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inference:

- The number of Anganwadi Workers (AWW) in position dropped from 4,977 in 2018-19 to 4,925 in 2020-21.
- The number of severely underweight children decreased from 4,233 in 2019-20 to 3,389 in 2020-21 and so has proportion to total children weighed decreased by 33% from 2019-20 to 2020-21.
- ICDS coverage in 2020-21 (during the pandemic), had increased by 14% for infants (up to 71 months) from 2019-20 to 2020-21 and a similar increase of 11% was also noticed for pregnant women and lactating mothers with the Supplementary Nutrition Packages (SNP) Coverage.

[82]https://icds.gov.in/Forms/View_MPR.aspx

1.5.3. Mid-Day Meal Scheme

Year:
1995

Background:
Malnutrition is widely prevalent in India amongst growing children. Especially within children of the school-going age group, nutritional deficiencies are worryingly prevalent. Not only does malnutrition give rise to morbidity and mortality, but it also prevents a child from developing into a healthy, fully functional adult and harms learning levels[83]. Hence, the National Programme of Nutritional Support to Primary Education (commonly known as the Mid-Day Meal Scheme) was launched as a Centrally Sponsored Scheme on 15th August 1995 to boost the Universalisation of Primary Education by increasing enrolment, retention and attendance and simultaneously impacting on the nutrition of students in primary classes.

Objectives:
1. Improving the nutritional status of children in classes I – VIII in government, local body and government-aided schools.
2. Encouraging poor children, belonging to disadvantaged sections, to attend school more regularly and help them concentrate on classroom activities.
3. Providing nutritional support to children of the primary stage in drought-affected areas.

Target:
The target of the scheme is to help improve the effectiveness of primary education by improving the nutritional status of all primary school children.

Beneficiaries:
All children studying in government, local body and government-aided primary and upper primary schools and the EGS/AIE centres (including Madarsa and Maqtabs supported under SSA of all areas across the country as of 2007)

Implementation Status in Mumbai:
The scheme is being implemented in all Municipal Schools in Mumbai, but there is no data available regarding the quality of food provided.

[83] http://mdm.nic.in/mdm_website/#

1.6. Insurance Schemes

Health insurance schemes financed by the Central Government or State Governments provide health services to insurance holders, covering a wide range of services, treatments, operations, and medical interventions, insured up to a certain amount with the aim of reducing out of pocket expenditures for catastrophic health events.

The table depicts the making and implementation of major programmes/schemes in Mumbai

Government	Central	State	City
Central			
State	Ayushman Bharat-Pradhan Mantri Jan Aarogya Joyana	Mahatma Jyotiba Phule Jan Aarogya Yojana	
City			

PROGRAMME MAKING PROGRAMME IMPLEMENTATION

KEY FINDINGS[1]

- *In Maharashtra, Pradhan Mantri Jan Aarogya Yojana was launched in integration with Mahatma Jyotiba Phule Jan Arogya Yojna and was implemented on mixed Insurance and an assurance Mode on 1st April 2020*
- *1,24,769 individuals in Mumbai have enrolled for this insurance scheme from 2018-19 to 2020-21.*
- *From these, 87% (1,08,338) of the total enrolled, have been beneficiaries of the insurance schemes.*
- *During the pandemic in 2020-21, from the 45,121 enrolled, 85% of them were beneficiaries under these insurance schemes.*

[1] *RTI Data*

6.1 Ayushman Bharat- Pradhan Mantri Jan Aarogya Yojana/ Mahatma Jyotiba Phule Jan Aarogya Yojana

Year:

2018

Background:

Ayushman Bharat Ayushman Bharat, a flagship scheme of the Government of India, was launched as recommended by the NHP 2017, to achieve the vision of Universal Health Coverage (UHC). Ayushman Bharat adopts a continuum of care approach, comprising of two interrelated components, which are Health and Wellness Centres (HWCs)[84] Pradhan Mantri Jan Arogya Yojana (PM-JAY)[85]

The second pillar of Ayushman Bharat – the Pradhan Mantri Jan Arogya Yojana (PMJAY) aims to provide secondary and tertiary hospitalisation care cover of Rs 5 lakh per household per year for about 1,400 procedures at the public and private hospitals. While the primary and preventive care, along with the screening of suspected individuals will be provided at the AB-HWCs, secondary and tertiary care will be provided at the public health facilities, the District Hospitals, Medical colleges and private hospitals empaneled by AB-PMJAY.

In Maharashtra, PMJAY was launched in integration with Mahatma Jyotiba Phule Jan Arogya Yojna and was implemented on mixed Insurance and Assurance Mode. The Integrated Mahatma Jyotiba Phule Jan Arogya Yojana (MJPJAY) and Ayushman Bharat-Pradhan Matri Jan Arogya Yojana (AB-PMJAY) was launched in the state on 1st April 2020.

Objectives:

Disease prevention and health promotion to curb the increasing epidemic of non-communicable diseases.
Create a system of demand-led health care reforms that meet the immediate hospitalisation needs of the eligible beneficiary family in a cashless manner thus insulating the family from catastrophic financial shock.

Target:

To create 1.5 lakh HWC's by 2022 (The targets set out are in a phased manner ie: 15000 HWC's by 2018-19, 40000 by 2019-20, 70000 by 2020-21, 1.1 lakhs by 2021-22, and 1.5 lakhs by December 2022)
To provide medical care to 10.74 crore households

Beneficiaries:

PM-JAY has been rolled out for the bottom 40 percent of the poor and vulnerable population. In absolute numbers, this is close to 10.74 crore households. The inclusion of households is based on the deprivation and occupational criteria of the Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas, respectively. This number also includes families that were covered in the Rashtriya Swasthya Bima Yojana (RSBY) but were not present in the SECC 2011 database. Even though PM-JAY uses the SECC as the basis of eligibility of households, many States are already implementing their health insurance schemes with a set of beneficiaries identified. Thus, States have been provided the flexibility to use their database for PM-JAY. However, they will need to ensure that all the families eligible based on the SECC database are also covered. (Refer to Annexure 13 for other Exclusions and Inclusions)

[84] https://ab-hwc.nhp.gov.in/
[85] https://pmjay.gov.in/

Implementation Status in Mumbai:

Table 86: Number of Individuals enrolled and beneficiaries under the Insurance schemes

Year	No. of Enrolled	No. of Beneficiaries	% of beneficiaries to no of enrolled
2018-19	26,146	23,435	90%
2019-20	53,502	46,522	87%
2020-21	45,121	38,381	85%
Total	**1,24,769**	**1,08,338**	**87%**

Note: Data from 2020-21 onwards is unavailable on the HMIS website as they haven't updated it.

Inferences:

- 1,24,769 persons have enrolled in the Mahatma Jyotiba Phule Jan Aarogya Yojana (MJPJAY) and Ayushman Bharat insurance schemes from 2018-19 to 2020-21, of which 87% (1,08,338) have been beneficiaries of these schemes
- The number of persons enrolled have increased from 26,146 in 2018-19 to 53,502 in 2019-20. However, this number declined from 53,502 in 2019-20 to 45,121 in 2020-21. During the pandemic in 2020-21, out of the 45,121 persons enrolled, 85% (38,381) of them were beneficiaries under these insurance schemes

2. Sustainable Development Goals

The Sustainable Development Goals (SDGs) is a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The Goal 3: Good Health and Well-being to ensure healthy lives and promote well-being for all at all ages. India adopted the SDG goals and the target on 2015 at the UN General Assembly

The year 2020 was the fifth anniversary of the adoption of SDGs**. The following components related to status of health in Mumbai have thus been analysed based on the relevant SDG targets. This can showcase why there is a need for policy planning agencies to incorporate the SDG targets. So that stringent measures can be formulated to map how effective a programme implementation is carried out for various health preventions in Mumbai and in the country. Also, we only have nine years left to achieve theses SDG goals, hence, it is imperative to plan, frame, make necessary changes and implement the new/existing schemes so that it aims to achieve the adopted SDG goals.**

Table 87: SDG Goal 3 targets adopted by India and their status in Mumbai

Criteria	Parameters	Target	Status
Human Resource	Skilled health professionals' density	45 Total physicians, nurses and midwives per 10,000 population	**8 medical staff** per 10,000 population
Communicable Disease	Tuberculosis	0 TB cases/1 lakh population by 2030 under SDG and 0 TB cases/1 lakh population by 2025 under Revised National Tuberculosis Control Programme	**214 cases**/1 lakh population in 2023
	HIV	HIV incidence of 0/per 1,000 uninfected population	0.06/per 1,000 uninfected population
	Other Communicable/ Epidemics	End the epidemics of malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	**13,355** malaria cases **16,769** dengue cases
Non-Communicable Disease	Non-Communicable Disease	Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	The deaths due to diabetes has increased by **36%** from 2018 to 2022 The deaths due to hypertension has increased by **30%** from 2018 to 2022
	Mental Health		**41,159** number of mental health cases as of 2020-21

			Increase in the number of deaths caused by mental and behavioral disorders by **23%** from 484 in 2018 to 596 in 2022.
RMNCHA+	Neo-natal mortality	Reduce to at least as low as 12 per 1,000 live births	**13** (deaths per 1000 live births) as of 2023
	Infant and Child Health	Under-5 mortality to at least as low as 25 per 1,000 live births	**27** per 1,000 live births as of 2023
	Maternal Health	Reduce Maternal Mortality Rate (deaths per 1,00,000 live births) to 70 by 2030 under SDG	**68** (deaths per 1,00,000 live births) as of 2023
	Universal access to reproductive health-care services by 2030.	100% institutional deliveries out of the total deliveries reported	**99.96%** institutional deliveries as of 2020-21
	Reproductive Health	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.	33,633 **Sexually Transmitted Infections reported** as of 2020-21 99.91% **family planning interventions were targeted towards females** as of 2020-21
Nutrition	Micronutrient Deficiencies	Reduce percentage of pregnant women aged 15 to 49 years who are anaemic (11g/dl) to 23.57% by 2030 under SDG	**5,354** pregnant women **reported anaemic (less than 11g/dl)** as of 2020-21

3. Recommendations

1. Data Management

- Data on all the diseases and cases prevalent in the city should be maintained and analysed on a real-time basis. This will enable better methods to track the occurrence of diseases and ensure corrective measures are implemented to tackle them. Similarly, cause of death data can also help to identify the diseases that contribute to the deaths registered in the city and can allow for government to create targeted interventions.
- In all, there is a need for data-centric policy planning and programmes for all diseases like communicable and non-communicable diseases, mental health as well as programmes specific to mother and children.

2. Meeting SDG Target Should be Prioritised

- The SDGs provide specific targets that should be achieved to ensure good health and wellbeing of the citizens.
- Thus, all health policies and programmes must aim towards achieving the SDGs so that they can create specific milestones to ensure all epidemic like TB, malaria, HIV, etc. are eradicated by 2030.
- Additionally, with the help of data, the local government can track the status of health according to these targets and ensure corrective interventions are carried out.

3. Medical Testing Should Be Amplified

- The pandemic brought about several restrictions that led to a decrease in the access to healthcare services for diseases other than COVID 19.
- Thus, innovative measures must be undertaken to increase medical tests for all age groups for various diseases that are prevalent in the city, especially during the pandemic**.**

V. Annexures

1. List of Government dispensaries/hospitals

Sr. No.	Government Hospitals	Sr. No.	Government Hospitals
1	Central Railway Hospital	5	E.S.I.S. Hospital, Worli
2	Western Railway Hospital	6	E.S.I.S. Hospital, Mulund
3	Mumbai Port Trust Hospital, Wadala	7	E.S.I.S. Hospital, Kandivali
4	Nagpada and Naigaon Police Hospital	8	ESIC Model Hospital, Marol
Sr. No.	**Police Dispensaries**	**Sr. No.**	**Police Dispensaries**
1	Police Headquarters Awar Dispensary	7	Santacruz Police Dispensary
2	Police Dispensary, Tardeo	8	Andheri Police Dispensary
3	Dr. D.B. Marg Police Dispensary	9	Marol Police Dispensary
4	Dadar Police Dispensary	10	Kandivali Police Dispensary
5	LA-II HQ Police Dispensary, Worli	11	Police Dispensary, Neharu Nagar
6	Mahim Police Dispensary	12	Pant Nagar Dispensary
Sr. No.	**Municipal Hospitals**	**Sr. No.**	**Municipal Hospitals**
1	Acworth Municipal Hospital	14	M.W. Desai Hospital
2	B.Y. L. Nair Charitable Hospital	15	Maa Hospital, Diwalabai Mohanlal Mehta Hospital
3	Centenary Hospital, Govandi	16	Mahatma Jyotiba Phule Hospital
4	Dr. Babasaheb Ambedkar Hospital Kandivali (W) (Centenary Hospital)	17	Municipal Group of T.B. Hospital
5	Dr. R.N. Cooper Hospital	18	S. V. D. Sawarkar Hospital
6	E.N.T Hospital	19	S.K Patil Hospital
7	Eye Hospital	20	Sant Muktabai Hospital
8	K. B. Bhabha Hospital, Bandra	21	Seth V.C. Gandhi and M. A. Vora Rajawadi Hospital
9	K.B. Bhabha Hospital	22	Shri Harilal Bhagwati Hospital
10	Kasturba Hospital	23	Siddarth Hospital
11	Kasturba X (Cross) Road Hospital (Borivali)	24	Smt. Mansadevi T. Agarwal Hospital
12	King Edward Memorial Hospital	25	Trauma Care Hospital Jogeshwari East
13	Lokmanya Tilak Hospital	26	V. N. Desai Hospital
Sr. No.	**State Hospitals**	**Sr. No.**	**State Hospitals**
1	Gokuldas Tejpal Hospital	4	St. George's Hospital
2	Cama and Albless Hospital	5	General Hospital (Malwani)
3	Sir J.J. Group of Hospitals		

For list of BMC Municipal dispensaries refer to the link below:

https://portal.mcgm.gov.in/irj/go/km/docs/documents/HomePage%20Data/Whats%20New/NON-%20COVID%20FACILITIES/MUNICIPAL%20DISPENSARIES.pdf

2. Aapli Chikitsa

MUNICIPAL CORPORATION OF GREATER MUMBAI
CENTRAL PURCHASE DEPARTMENT
566, N.M. JOSHI MARG, BYCULLA (WEST), MUMBAI: - 400 011
No.DY.CH. ENG /CPD / 7321 /A.E.-5 DATE: - 08.02.2019

RATE CIRCULAR

Direct Debit

vide Sanction of Standing Committee u/no. SCR No.1540, dated :-16.01.2019 to enter into contract with the following company/vendor for **outsourcing of laboratory investigative services "Aapli chikitsa" for the MCGM hospital, Mumbai** (Bid no. **7100126847**).

The details of Company Name & address of the recommended tenderer and terms and conditions applicable for the supply are as follows:-

CONTRACT PERIOD: 4 years from date of issue of Acceptance Letter (i.e. 08.02.2019)

The Name & Address of the recommended tenderer are as under:-

M/s. Thyrocare Technologies Limited (Vendor Code:28297)
D 37 / 1, TTC, MIDC, Turbhe,
Navi Mumbai-400703
Email: chandrasekarm@thyrocare.com
Tel: +91 – 022 – 30900000 / 41252525

1) Zone- (Western Suburban):-

Sr.No.	Description		Approximate total nos. of Test	Rate quoted by M/s. Thyrocare for 60% Guarantted samples test in Rs.	Total nos. of Guaranteed samples test (60% of total teast)	Total Rates for Guaranteed samples test (60% of total test) in Rs. (1)	Total nos. of Balance samples test (40% of total test)	Total Rates for Balance samples test (40% of total test) in Rs (2)
A)	For 1 year-							
	Western Suburban	Basic Test	2,55,000	223	1,53,000	3,41,19,000.00	1,02,000	1,81,96,800.00
		Advance Test	25,028	892	15,017	1,33,95,164.00	10,011	71,43,849.60
		Total	2,80,028		1,68,017	4,75,14,164.00	1,12,011	2,53,40,649.60
	Total 'A' (1 + 2)							7,28,54,813.60
B)	Total contract for 4 years							29,14,19,254.40
	• As per tender condition, for every increase in total samples per year than guaranteed samples per year the cost/reported sample shall decrease by 20%. Hence rate for basic test is Rs.178.40 and Advance test is Rs.713.60.							
	• As per tender condition, Guarantee of 60% of total samples test i.e. **1,68,017** nos. per year has given to bidder. If the samples test mentioned for per year is not done, the payment of remaining samples test will be paid as per approved rates to **M/s. Thyrocare Technologies Limited**.							

3. List of Basic and Advanced Tests under Aapli Chikitsa scheme

Sr no	Type	Test	TAT	Sr no	Type	Test	TAT
1	Basic	HB. CBC, Platelet count & ESR	6 Hrs	36	Basic	S. Triglycerides	6 Hrs
2	Basic	PS for MP	6 Hrs	37	Basic	S.HDL	6 Hrs
3	Basic	Blood Grouping	6 Hrs	38	Basic	S.LDL	6 Hrs
4	Basic	Urine Routine & Microscopy	6 hrs	39	Basic	S. VLDL	6 Hrs
5	Basic	Stool routine & Microscopy	6 hrs	40	Basic	S. Amylase	6 Hrs
6	Basic	Stool Hanging drop	6 hrs	41	Basic	U. Micro albumin	6 Hrs
7	Basic	G6PD	36-48 hrs	42	Basic	S. Acid Phosphatase	6 Hrs
8	Basic	Blood Glucose	6 Hrs	43	Basic	T3	6 Hrs
9	Basic	S. Total Bilirubin	6 Hrs	44	Basic	T4	6 Hrs
10	Basic	S. Direct Bilirubin	6 his	45	Basic	TSH	6 Hrs
11	Basic	SGPT/ALT	6 hrs	46	Basic	FT3	6 Hrs
12	Basic	SGOT/AST	6 hrs	47	Basic	FT4	6 Hrs
13	Basic	VDRL	6 hrs	48	Basic	ELISA for IgM to HEV	8 Hrs
14	Basic	WIDAL tube test	24 hrs	49	Basic	ELISA for HBsAg	8 Hrs
15	Basic	Rapid test for Leptospirosis IgM Antibody	6 hrs	50	Basic	TORCH Panel	24 hrs
16	Basic	Rapid test for Dengue NS1 Antigen	6 hrs	51	Basic	ASLO	6 Hrs.
17	Basic	Rapid test for Malaria Antigen	6 hrs	52	Basic	HbA1C	8 hrs
18	Basic	Sputum for AFB	6 hrs	53	Basic	RA qualitative	6 hrs
19	Basic	S. BUN	6 hrs	54	Basic	HCV Rapid	8 hrs
20	Basic	S. Creatinine	6 hrs	55	Basic	HBsAg Rapid	8 hrs
21	Basic	BT.CT	6 Hrs	56	Basic	PT/INR	6 hrs
22	Basic	Cross Matching	6 Hrs	57	Basic	Reticulocyte Count	6 hrs
23	Basic	PAP smear Cytology	24-48 Hrs	58	Basic	Sickling Test	6 hrs
24	Basic	FNAC	24-48 Hrs	59	Basic	Body fluid Routine & Microscopy	6 Hrs
25	Basic	ALP	6 Hrs	60	Basic	Rapid test for Dengue IgM Antibody	6 Hrs
26	Basic	GGT	6 Hrs	61	Basic	ELISA for Dengue IgM Antibody	6 Hrs
27	Basic	S. Total Proteins	6 Hrs	62	Basic	CSF Routine & Microscopy	6 hrs
28	Basic	S. Albumin	6 Hrs	63	Basic	Semen examination	24-48 Hrs
29	Basic	S. Globulins	6 Hrs	64	Basic	APTT	6 hrs

Sr no	Type	Test	TAT	Sr no	Type	Test	TAT
30	Basic	S. A:G Ratio	6 Hrs	65	Basic	Biopsy	24-48 Hrs
31	Basic	S. Urea	6 Hrs	66	Basic	HPE small specimens	24-48 Hrs
32	Basic	S. Total Calcium	6 Hrs	67	Basic	HPE big specimens	3-5 days
33	Basic	S. Phosphorus	6 Hrs	68	Basic	S. Ionic Calcium	6 Hrs
34	Basic	S. Uric acid	6 Hrs	69	Basic	S. Electrolytes	6 Hrs
35	Basic	S. Cholesterol	6Hrs	70	Basic	U. Electrolytes	6 Hrs
71	Basic	Urea Clearance	6 Hrs	5	Advanced	Anti ds DNA	36-48 hrs
72	Basic	Creatinine Clearance	6 Hrs	6	Advanced	Blood Culture & AST	By 6 days
73	Basic	S. Lipase	6 Hrs	7	Advanced	AFB Culture & sensitivity	10-12 weeks
74	Basic	S. Troponin 1	6 Hrs	8	Advanced	Bacterial culture & sensitivity	2-4 days
75	Basic	S. Adenosine Deaminase	6 Hrs	9	Advanced	Liquid (MGIT) & DST for TB	6 days
76	Basic	FSH	6 Hrs	10	Advanced	ELISA for Amoebic liver abscess	8 hrs
77	Basic	LH	6 Hrs	11	Advanced	ELISA for Hydatid Cyst	8 hrs
78	Basic	Prolactin	6 Hrs	12	Advanced	S. C Peptide	4 days
79	Basic	Testosterone	6 Hrs	13	Advanced	Anti phospholipid antibody	4 days
80	Basic	Estragon E2	2 days	14	Advanced	Anti thyroid antibodies	4 days
81	Basic	Beta HCG	2 davs	15	Advanced	D Dimer	6 hrs
82	Basic	Total PSA	2 davs	16	Advanced	S. Insulin	4 days
83	Basic	Total CPK	6 Hrs	17	Advanced	S. Digoxin	2 days
84	Basic	CPK MB	6 Hrs	18	Advanced	S. Carbamazepine	2 days
85	Basic	S. Iron	8 Hrs	19	Advanced	S. Phenytoin Sodium	2 days
86	Basic	S. Ferritin	8 Hrs	20	Advanced	Anti Pro BNP	6 hrs
87	Basic	S. T1BC	8 Hrs	21	Advanced	PTH	4 days
88	Basic	24 Hrs urinary Proteins	6 Hrs	22	Advanced	Blood Acetylcholinesterase	6 hrs
89	Basic	CRP quantitative	6 Hrs	23	Advanced	Blood Ammonia	6 hrs

Sr no	Type	Test	TAT	Sr no	Type	Test	TAT
90	Basic	Vitamin D2	8 Hrs	24	Advanced	S Cortisol	4 days
91	Basic	Vitamin D3	8 Hrs	25	Advanced	CA 125	4 days
92	Basic	Folic acid	4 days	26	Advanced	CA 19-9	4 days
93	Basic	Vitamin BI2	8 Hrs	27	Advanced	CEA	4 days
94	Basic	LDH	6 Hrs	28	Advanced	ACTH	4 days
95	Basic	ELISA for IgM to Leptospirosis	8 Hrs	29	Advanced	AFP	4 days
96	Basic	ELISA for NS1 for Dengue	8 Hrs	30	Advanced	Growth Hormone	4 days
97	Basic	ELISA for IgM lo HCV	8 Hrs	31	Advanced	CCP antibody	36-48 hrs
98	Basic	ELISA for IgM to HAV	8 Hrs	32	Advanced	HLA B 27	2-3 days
99	Basic	Coombs Test	8 Hrs	33	Advanced	FDP	6 hrs
100	Basic	RA quantitative	6 hrs	34	Advanced	CSF latex aggulitimation for Crytococcsis	6 hrs
101	Basic	Chickengunya IgM antibody	8 Hrs	35	Advanced	CSF latex aggulitimation for bacterial pathogens	6 hrs
1	Advanced	S. Ionic Calcium	6 Hrs	36	Advanced	Fungal Culture & AST	14 days
2	Advanced	Hb Variants	24-48 Hrs	37	Advanced	Insulin antibodies	4 days
3	Advanced	HPE with IHC	3-5 days	38	Advanced	17 OHP	5 days
4	Advanced	ANA	36-48 hrs				

4. Timings of MOH Dispensaries and HBT as of 2023

Ward	Slum Population (in %)	Timing												
		MOH							HBT					Unique Availabe Dipsensary
		08:30 am to 11:30 am, 5:30 pm to 8:30 pm	09:00 am to 01:00 pm	09:00 am to 03:00 pm	09:00 am to 04:00 pm	09:00 am to 05:00 pm	10:00 am to 06:00 pm	Not Mention	07:00 am to 02:00 pm, 03:00 pm to 10:00 pm	09:00 am to 04:00 pm	10.00 am to 05.00 pm	01:00 PM to 08:00 PM	03:00 PM to 10:00 PM	
A	34%				4		2			1		1	4	11
B	11%				5					1			3	6
C	-				5					1			1	6
D	10%				6								1	8
E	20%		1		12								4	13
F/N	58%				7				1	1			8	12
F/S	26%				9			1	1	2			3	13
G/N	32%				9				4	2			15	25
G/S	21%				13					1	1		7	19
H/E	42%				7				1				4	10
H/W	39%				5					2			4	10
K/E	49%	1			10					1			15	24
K/W	15%				3	4				2			10	14
L	54%				15				1	1			13	22
M/E	30%				11				1	2			11	18
M/W	53%				6					2			5	10
N	62%				8				2	1			5	16
P/N	54%			1	11				1	2			13	18
P/S	57%				3								5	6
R/C	19%				7					3			7	13
R/N	51%				7					2			4	10
R/S	58%				7					1			12	14
S	72%				8				1	2			5	11
T	33%				3					1			2	4
Total	**42%**	**1**	**1**	**1**	**181**	**4**	**2**	**1**	**13**	**31**	**1**	**1**	**161**	**313**