The State of Health in Mumbai

September 2020

Table of Contents

I. Foreword

The COVID-19 pandemic has brought the spotlight on public health across the globe. For India, it is important that our response is not limited only to the disease but we endeavour for a paradigm shift in the way we make and implement policies for improving our public health system.

One of the major problems that have been highlighted during the pandemic is pressure on the public health infrastructure. Data, over the years for the city of Mumbai, as collated in Praja's past health reports has shown that inadequate health infrastructure, lack of health personnel and poor budget utilisations spell disaster for tacking any disease that affects the people of the city.

MCGM budget utilisation on capital expenditures and programme expenses for health has been very low since the past few years. In 2016-17, 73% of the budgeted capital expenditure was not spent, whereas in 2018-19, 54% of the budgeted amount went unutilised. 84% of the programme expenses of the health department and 67% of the programme expenses of public hospitals went unused in 2018-19.

Further, municipal hospitals had a 62% vacancy of medical personnel in 2019 while for primary health care in Mumbai it was 30%. This shows that while government health institutions have been the forerunners in battling COVID-19 pandemic, the current situation has led to overburdening on public health institutions which for so long have not been strengthened with the capacity to tackle such crises.

This has also led to a graver situation of inability in providing crucial healthcare to non-COVID patients who are especially dependent on public health institutions and cannot afford private care. This is clearly reflected in the deaths that have taken place since the outbreak of the pandemic. Mumbai reported an increased total of 13,833 deaths in May 2020, compared to 6,832 deaths in May 2019. The total COVID-19 related deaths reported in May 2020 was 957 in Mumbai calculating to an excess of 6,044 deaths compared to the previous year. This shows that many more people died in the lockdown of causes other than COVID-19 which has a direct relation to the lack of public health facilities available for non-COVID patients during this period.

Therefore, without sufficient resources- physical, human and financial allotted to the health sector it would not be possible to create a strong public health system that is able to provide healthcare in both crises and normal times.

A second issue that the pandemic highlighted is a complete lack of timely monitoring. Cause of death data was centralised to the Central Registration System (CRS) of the central government in 2016 and access of the same was not given to the state and local governments nor was it available in the public domain. Inspite of Praja's constant efforts on this issue, it appears that neither of the governments are interested in tracking this data which is crucial for better disease surveillance and monitoring of health.

There are a plethora of policies and schemes in the health sector but a lack of monitoring poses serious questions on the ability of the government to undertake timely interventions to prevent health crises. In an attempt to understand this further, we have in the current report, attempted to conduct a policy wise analysis of the targets set out by various policies and what the corresponding data shows.

We found that a regular monitoring of data in a holistic manner would not only enable better tracking of policy and achieving targets such as those adopted by India under the Sustainable Development Goals(SDG), but also be effective in better policy making.

For instance, cause of death data for 2018 shows that Mumbai has a very high Non-Communicable Diseases (NCDs) burden- 4 out of top 5 causes of death in 2018 were due to NCDs such as diabetes, cancer, heart and respiratory diseases. However, Mumbai implements only two major NCD policies- one related to blindness and the other which only covers hypertension and diabetes.

Similarly, inspite of multiple schemes related to maternal health, Mumbai is still way behind achieving its SDG targets. Maternal Mortality Rate in the city stood at 143 in 2018, fallen from 2014 by 17% - even if the fall continues at the same rate the target of 70 by 2030 would not be achieved by Mumbai. Similarly out of total pregnant women registered for ante-natal care, 54% reported anaemic in 2019-20. While the national average is also 50%, it seems unlikely to achieve the SDG target of 24% by 2030.

Therefore, what is required is targeted policy to deal with specific diseases, preventing duplication and focussing on public health issues that most affect a particular region or city. Most importantly, instead of creating parallel health frameworks for tacking different diseases, what is needed is integration of services into the public health system specifically by strengthening preventive and primary health care for improved access, early detection and localised provision of healthcare.

NITAI MEHTA
Founder Trustee, Praja Foundation

II. Acknowledgement

Praja has obtained the data used in compiling this white paper 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 with this information diligently.

We would like to appreciate our stakeholders; particularly, our Elected Representatives and 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.

Praja Foundation appreciates the support given by our supporters and donors, namely Friedrich Naumann Foundation, A.T.E Chandra Foundation, Narotam Sekhsaria Foundation, Madhu Mehta Foundation and numerous other individual supporters. Their support has made it possible for us to conduct our study and publish this white paper.

We would also like to thank our group of Advisors and Trustees and lastly but not the least, we would like to acknowledge the contributions of all members of Praja's team including our research interns, who worked to make this white paper a reality.

III. Sources of Data

A. RTI data

We have collected the following information through the Right to Information Act (RTI), 2005.

i. Causes of death

Data on cause of death is crucial to understand the extent to which various diseases pose a threat to public health. It can help set the policy agenda for the government in terms of identifying the diseases which need urgent attention and fix gaps in the public health delivery mechanism. Data for cause of death under the Registration of Births and Deaths Act, 1969 is to be available with the sub-registrar which in MCGM is the Medical Officer of Health (MOH) in every ward. Data from January 2014 to December 2015 is received through RTI from MCGM. However, from January 2016, the registration of deaths was centralised to central government software as the central registration system for birth and deaths. In spite of RTIs to local, state and central agencies data for causes of death in Mumbai was not provided to Praja. (Refer to section on Cause of Death and Annexure 5 for details). Data for 2016 and 2017 cause of death was finally received in July 2019 after an appeal at the State Government level; data from January 2016 to December 2017 is thus received from State (HIVS, Pune). The causes of death data upto December 2015 was received ward wise from the MCGM while the 2016, 2017 and 2018 data was received from the state as consolidated for the entire city.

ii. Deliberations by councillors

This section comprises of deliberations by elected representatives in Mumbai. Data in this section has been collected through the Right to Information (RTI), Act 2005. The information includes issues raised by councillors are from Public Health Committee meetings held between April 2017 and March 2020. Issues raised by councillors in Statutory and Special Committees meetings have also been taken. We have incorporated attendance of councillors from public health committee meetings from April 2017 to March 2020.

B. Online Government Sources

i. Population

Population used to compare number of dispensaries per population is taken from Census 2011.

ii. Health Management Information System

The Health Management Information System (HMIS) of the Ministry of Health and Family Welfare, Government of India has district wise information of all key central government schemes and major health indicators in the country. The data regarding status implementation and incidence of diseases has been taken from the HMIS.

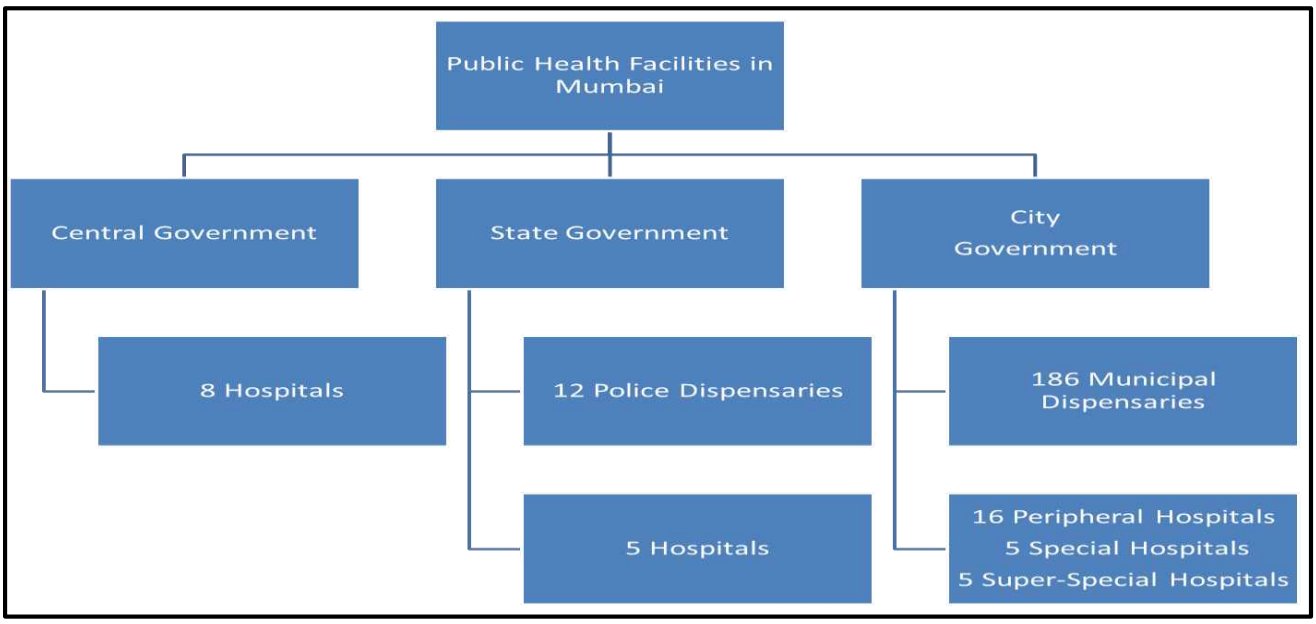
Note: Due to the COVID-19 pandemic and the subsequent difficulty in receiving complete data from the related MCGM and state departments the paper suffers from the limitation of not including certain data points and/or different data points reported of varying time periods. An attempt is however made to portray the holistic situation of Mumbai using published data from online sources and to suggest changes in strengthening health services in the city.

IV. Physical, Human and Financial Resources for Health Systems in Mumbai

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

1. Health Infrastructure

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



With regards to the upgradation and strengthening of healthcare infrastructure, the Central Government has two major policies namely Ayushman Bharat and The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY).

The infrastructure component of **Ayushman Bharat** aims to create 1,50,000 Health and Wellness Centres (HWCs) by transforming PHCs/SCs to provide Comprehensive Primary Health Care (CPHC). HWCs will enable a focus on wellness and health promotion, and provide an expanded range of primary healthcare services, including access to medicines and diagnostics, and be delivered close to the community. So far, approvals for more than 60,000 HWCs have been accorded to the States/UTs (except Delhi) and as reported by the States/UTs on the AB-HWC Portal, 24,709 HWCs have been operationalised across India.[2] However there is no data of HWCs set up in Mumbai.

The **Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)** that also aims at correcting the imbalances in the availability of affordable healthcare facilities in different parts of the country has two components- setting up of AIIMS Institutions; and Up-gradation of existing Government Medical Colleges/Institutions and is being taken up in a phased manner[3]. The scheme is currently being implemented in Mumbai for civic construction works of the Grant Medical College[4], which is a state government institution.

[1] Refer Annexure 1 for complete list of dispensaries and hospitals
[2] https://main.mohfw.gov.in/sites/default/files/major%20achivement_Part1_0.pdf
[3] https://main.mohfw.gov.in/sites/default/files/Annual%20Report%202019-2020%20English.pdf
[4] https://pmssy.nhp.gov.in/pms/

Table 1: Availability of Government Health Facilities in Mumbai in 2019

Ward	Population Census 2011	Slum Population (in %)[5]	No. of Government Hospitals	Available Government Dispensaries	Density of government dispensaries to population	Dispensary (1 for 50,000)[6]	Dispensary (1 For 15,000)[7]
A	1,85,014	34%	4	6	30,836	4	12
B	1,27,290	11%	0	5	25,458	3	8
C	1,66,161	-	0	5	33,232	3	11
D	3,46,866	10%	0	8	43,358	7	23
E	3,93,286	20%	6	13	30,253	8	26
F/N	5,29,034	58%	2	8	66,129	11	35
F/S	3,60,972	26%	4	9	40,108	7	24
G/N	5,99,039	32%	0	10	59,904	12	40
G/S	3,77,749	21%	1	14	26,982	8	25
H/E	5,57,239	42%	1	8	69,655	11	37
H/W	3,07,581	39%	1	5	61,516	6	21
K/E	8,23,885	49%	2	13	63,376	16	55
K/W	7,48,688	15%	1	7	1,06,955	15	50
L	9,02,225	54%	1	16	56,389	18	60
M/E	8,07,720	30%	1	11	73,429	16	54
M/W	4,11,893	53%	1	6	68,649	8	27
N	6,22,853	62%	2	9	69,206	12	42
P/N	9,41,366	54%	3	11	85,579	19	63
P/S	4,63,507	57%	1	3	1,54,502	9	31
R/C	5,62,162	19%	2	8	70,270	11	37
R/N	4,31,368	51%	0	5	86,274	9	29
R/S	6,91,229	58%	2	7	98,747	14	46
S	7,43,783	72%	1	8	92,973	15	50
T	3,41,463	33%	3	3	1,13,821	7	23
Total	**1,24,42,373**	**42%**	**39**	**198**	**62,840**	**249**	**829**

Inference:

- Based on the National Health Mission norm (one dispensary for 15,000 population) for primary health care, Mumbai requires 829 dispensaries, while it currently has only 198 public dispensaries. The number of dispensaries is also much lower than that recommended by the Rindani committee in 1977 (one dispensary for 50,000 population) which calculates to 249 dispensaries for the city.
- Not a single ward in Mumbai meets the criteria of 1 dispensary for 15,000 population (NUHM) criteria. Whereas only wards in the city region such as A, B, C, D, E, F/S, G/S meet the criteria of 1 dispensary for 50,000 population (Rindani Committee).

[5] Source: Greater Mumbai Report on Draft Development Plan 2034 (May 2016), MCGM

[6] The Rindani committee report of 1977 suggested that there has to be one dispensary for a population of 50,000 or 1.5 km radius.

[7] The National Urban Health Mission (NUHM) and National Building Code (NBC) suggest that one dispensary is required for a population of 15,000.

- The best performing ward in this aspect is B Ward, with one dispensary for every 25,458 people and the worst performing is P/S Ward, with one dispensary catering to 1,54,502 people.
- Considering the main aim of the National Health Policy, 2017 was to provide primary preventive and promotive care, the dearth of primary healthcare infrastructure in Mumbai places great burden on the overall health infrastructure in the city.

2. Human Resources

Table 2: Sanctioned and Available Personnel in Municipal Dispensaries and Hospitals in Mumbai in 2019[8]

Post	Sanctioned	Available	Gap %
MCGM Health Department			
Medical	779	548	30%
Para- Medical	884	543	39%
Nursing Staff	1,895	1,403	26%
Administration	2,436	1,743	28%
Labour	5,842	4,013	31%
Lecturer	1	0	100%
Total	**11,837**	**8,250**	**30%**
Municipal Hospitals			
Medical	881	337	62%
Para-Medical	2,696	1,502	44%
Nursing Staff	5,411	4,707	13%
Administration	1,679	1,041	38%
Labour	8,967	6,124	32%
Lecturer in Medical College	1,404	934	33%
Total	**21,038**	**14,645**	**30%**

Inference:

- Available personnel in the MCGM dispensaries shows a 30% shortage in medical staff and 39% and 26% shortage in para-medical and nursing staff respectively in 2019. Available personnel in the municipal hospitals shows a 62% shortage in medical staff and 44% and 13% shortage in para-medical and nursing staff respectively in 2019.
- SDG target for 2030 is to have 550 medical, paramedical and nursing personnel per one lakh population while the current number for Mumbai is 73 medical, paramedical and nursing personnel per one lakh population.

[8] Refer Annexure 2 for 2017 and 2018 data

3. Health Budgets

Table 3: Total Budget Estimates and Actuals[9] of MCGM Health Budget from 2016-17 to 2019-20 (in crores)

Heads	2016-17			2017-18			2018-19			2019-20
	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates
MCGM Health Department[10]										
Revenue Expenditure	728	566	78%	678	597	88%	717	598	83%	837
Municipal Hospitals										
Revenue Expenditure	2,055	1,570	76%	2,069	1,696	82%	2,180	1,889	87%	2,499
Other[11]										
Revenue Expenditure	9	6	60%	9	6	69%	8	5	63%	9
Total Revenue Expenditure	**2,793**	**2,141**	**77%**	**2,756**	**2,299**	**83%**	**2,905**	**2,492**	**86%**	**3,345**
Total Capital Expenditure	**901**	**242**	**27%**	**556**	**294**	**53%**	**732**	**339**	**46%**	**806**
Total Health	**3,694**	**2,383**	**65%**	**3,312**	**2,593**	**78%**	**3,637**	**2,832**	**78%**	**4,151**

Inference:

- Budget trend shows that the revenue expenditure on primary healthcare (dispensaries and programmes that fall under MCGM Health department) are considerably lesser than the expenditure on hospitals, whereas the focus of the local government should be to improve the primary health care services to provide affordable healthcare closest to the citizen.
- Capital expenditure on healthcare has been very low compared to the revenue expenditure. In 2018-19 only 46% of the capital expenditure was utilised.

[9] Actuals are from Budget Estimate Books of the MCGM of subsequent years.
[10] Includes preventive and primary public healthcare, dispensaries, burials and cremation.
[11] Includes other departments to which health budget allocated for certain related services, for example, environment dept.

Table 4: Revenue Budget Estimates and Actuals[12] of MCGM Health Department from 2016-17 to 2019-20 (in crores)

Heads	2016-17			2017-18			2018-19			2019-20
	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates
MCGM Health Department										
Establishment expenses	500	380	76%	434	402	93%	454	437	96%	577
Administrative expenses	57	25	45%	54	32	60%	56	36	65%	65
Operation and maintenance	90	70	78%	100	72	72%	106	75	71%	127
Interest and Finance charges	1	1	100%	1	1	100%	1	1	79%	1
Programme expenses	7	2	31%	5	2	43%	7	1	16%	8
Revenue grants contribution and subsidies	74	80	109%	84	78	94%	92	36	39%	57
Transfer to reserve funds	1	1	100%	1	1	100%	1	1	79%	1
Total Revenue Expenditure	**728**	**566**	**78%**	**678**	**597**	**88%**	**717**	**598**	**83%**	**837**

Inference:

- Utilisation of programme expenses of the health department has been dismal falling from 31% in 2016-17 to a mere 16% in 2018-19.
- Utilisation of establishment expenses in 2018-19 has been 96%, which is mainly spent on the salaries of the employed staff. Gap in utilisation shows non-filling of all sanctioned posts.

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

Table 5: Revenue Budget Estimates and Actuals[13] of MCGM Hospitals from 2016-17 to 2019-20 (in crores)

Heads	2016-17			2017-18			2018-19			2019-20
	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates	Actuals	Utilisation (%)	Estimates
MCGM Hospitals										
Establishment expenses	1,506	1,136	75%	1,422	1,222	86%	1,527	1,353	89%	1,771
Administrative expenses	129	63	49%	170	79	46%	146	78	53%	166
Operation and maintenance	416	300	72%	468	306	65%	495	362	73%	551
Interest and Finance charges	0	0	0%	0	0	0%	0	0	0%	0
Programme expenses	3	1	33%	9	2	22%	11	4	33%	11
Revenue grants contribution and subsidies	1	0	0%	1	0	0%	1	0	36%	1
Transfer to reserve funds	0	0	0%	0	0	0%	0	0	0%	0
Total Revenue Expenditure	**2,055**	**1,570**	**76%**	**2,069**	**1,696**	**82%**	**2,180**	**1,889**	**87%**	**2,499**

Inference:

- Overall Utilisation of revenue expenses of the hospitals (87%) in 2018-19 is more than health department (83%).
- Programme expenses are better utilised in hospitals although they are still very low at 33% in 2018-19.
- Utilisation of establishment expenses in 2018-19 has been 89%, which is mainly spent on the salaries of the employed staff. Gap in utilisation shows non-filling of all sanctioned posts.

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

4. Recommendations

Increase number of dispensaries and improve dispensary facilities for preventive and primary care:

- The number of dispensaries needs to be increased based on the norm of the National Health Mission. This will ensure that for all basic health needs-preventive and primary the point of access becomes the dispensary, available at the level of the citizens' locality.
- For making dispensaries more accessible to the working population all dispensaries should be open in early morning and evenings as well, from 8am to 10pm.

More doctors and staff to be allocated:

- For both hospitals and dispensaries medical, paramedical and other staff vacancies need to be filled.
- For dispensaries there is a need to allocate more than one general doctor per dispensary and also having visiting specialist doctors.

Upgrading Equipment:

- There is a need to ensure that the dispensary is well–equipped by strengthening schemes such as Aapli Chikitsa which would provide diagnostic services at dispensary level. This will also reduce the pressure on hospitals.

Budget Allocation and Spending:

- It is important that the budget focus on allocating sufficient amounts to improve primary health care by strengthening dispensaries.
- Focus needs to be given on increasing utilisation of budgeted amounts.

V. Cause of Death Data in Mumbai

Cause of death is an essential and basic data which is important for making and monitoring of any public health policy and is the mandate of the Municipal Corporation under Registration of Births and Death Act, 1969. (Refer Annexure 3)

- Praja has been collecting cause of death data since 2011. We received the data on cause of death up to 31st December, 2015 from the MCGM through their SAP system.
- However, from 1st January, 2016 the recording of birth and death registration was transferred to the newly launched Civil Registration System (CRS) of the central government, whereby **registration of births and deaths was centralised.**
- After this, the MCGM claimed that they **did not have access to the CRS software** for cause of death. Similarly, the state government (HIVS, Pune) also said that they did not have access to this data and continually forwarded the RTIs to MCGM which gave us the same reply.
- Even the RTI to the Vital Statistics Division in the central government was forwarded to the state and MCGM.
- Since the central government which managed the software also did not give us the data, we filed an **appeal at the Central Information Commission** (CIC), which directed the CRS department to prepare guidelines that clarify on whether states should maintain records and also work on revamping the software to provide city/district/ward wise data. It reiterated that **the cause of death data has to be provided by the point source, that is the local body and the state has the power to manage its own systems for maintaining the data.**
- However, in spite of repeated follow-ups of the CIC order, the data was not made available.
- Finally, **after three years** in July 2019, in an appeal of the state government causes of death data for 2016 and 2017, which was compiled by MCGM separately for reporting to the state was provided to Praja.
- In mid-2020, the state government was given access to the CRS software but only for 5 corporations in Maharashtra and only ward wise quarterly reports were allowed for generation acting as a hindrant for analysis of the data. Further the data when computed for Mumbai was found to be incomplete. (Refer Annexure 4)

In all of this, what comes to light is the utter confusion and duplication of work that the local and state governments had to undergo due to lack of accessibility of CRS software, and difficulty faced by MCGM and state government in monitoring the cause of death for the last four years. (For detailed timeline, please refer to Annexure 5)

Although a centralised system of recording births and deaths, has its merits, **it is imperative that the local government which acts as the primary provider of basic services, such as health has access to the cause of death data and is able to analyse the same in order to ensure effective delivery of this crucial service.**

Since the MCGM is the responsible body for deaths registration, it is imperative that it maintain this data in its software for regularly monitoring the state of health in the city. At the same time the **central government needs to follow the CIC order to provide access of district and ward wise data of cause of death to the state and local governments and to the public. The recent sharing of access to state governments is only a half-hearted attempt that does not allow any scope for it to be effectively tracked.**

Table 6: Major Causes of Death in Mumbai from 2016 to 2018

Disease	2016		2017		2018	
	No. of Deaths	In %	No. of Deaths	In %	No. of Deaths	In %
Tuberculosis (A15-A19)	6,660	7.3%	5,449	6.1%	4,940	5.5%
Other Bacterial Diseases (A20-A49)	1,801	2%	1,832	2.1%	1,798	2%
Dengue fever (A90)	7	0%	348	0.4%	239	0.3%
HIV (B20-B24)	852	0.9%	881	1%	822	0.9%
Malaria (B50-B54)	125	0.1%	100	0.1%	69	0.1%
Neoplasms (C00-D48)	9,525	10.4%	8,872	10%	10,073	11.2%
Diabetes (E10-E14)	9,088	9.9%	9,525	10.7%	10,458	11.6%
Diseases of the nervous system (G00-G98)	2,327	2.5%	2,426	2.7%	2,537	2.8%
Diseases of the circulatory system (I00-I99)	26,067	28.5%	25,067	28.2%	25,962	28.8%
Respiratory diseases (J00-J98)	8,438	9.2%	7,735	8.7%	7,954	8.8%
Diseases of the Digestive System (K00-K92)	4,232	4.6%	4,089	4.6%	4,142	4.6%
Diseases of the Genitourinary System (N00-N99)	2,173	2.4%	1,967	2.2%	1,946	2.2%
Certain Conditions Originating in the Perinatal Period(P00-P96)	1,827	2%	1,993	2.2%	1,826	2%
Symptoms Signs and Abnormal Clinical and Laboratory finding not elsewhere classified (R00-R99)	2,456	2.7%	1,789	2%	1,585	1.8%
Injury, poisoning and certain other consequences of external causes (S00-T98)	4,853	5.3%	4,945	5.6%	5,068	5.6%
Other Cause of deaths	11,064	12.1%	11,819	13.3%	10,749	11.9%
Total	**91,495**	**100%**	**88,837**	**100%**	**90,168**	**100%**

Inference:

Neoplasms (cancers), diabetes, diseases of the circulatory system, respiratory diseases and TB account for the highest disease related deaths in Mumbai over the years.

VI. Analysis of Government Health Policies 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 in 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, policy making 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."[14] 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 so as to provide universal access to equitable, affordable and quality health care services. In the Twelfth five-year plan, the Government of India decided to expand the National Rural Health Mission (2005) to the entire country, and renamed it as the NHM. 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 Urban Health Mission (NUHM)[15] was approved in 2013 as a sub-mission of the NHM. Working in 779 cities and towns, the NUHM focused on expanding and providing primary health care services to the urban poor. The aim of the NUHM was 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.

[14] https://www.nhp.gov.in/nhpfiles/national_health_policy_2017.pdf
[15] https://www.nhp.gov.in/national-urban-health-mission_pg

AYUSH

Apart from the host of programmes offering allopathic remedies, we also have the Ministry of AYUSH which 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[16].

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, there are two important policies that 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 a 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, deemed essential for the treatment of common conditions, automatically 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 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 in accordance with the powers delegated to it. The NPPA also monitors the availability of drugs, identifies shortages, if any, and takes necessary remedial measures. 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[17].

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

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

Analysing Health Policies

Apart from these overarching policy directives the Central and State Governments have created various detailed policies and programmes in an effort to tackle the varied health problems faced. In order to ensure that these policies are on the path to meeting their intended outcomes, it is important to empirically analyse them and ensure that every gap is filled, that every individual is included, and that no one is left behind. This section aims to analyse the major Central, State, and Local Government policies being implemented in Mumbai, and to gauge whether our public healthcare system is accessible to everyone who requires it, whether every individual is covered by it, and to suggest 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 pertaining to the outcomes of the scheme). The year 2020 will be the fifth anniversary of the adoption of SDGs by 193 countries at the UN General Assembly which set out targets to be achieved by 2030. Each component will thus also be analysed based on the relevant SDG targets.

Note: The section includes analysis of only major schemes that are being implemented in Mumbai.

Table 7: Summary Table of Major Health Schemes implemented in Mumbai

Name of the Scheme	Implementing Body	Targets	Implementation Status
Communicable Diseases			
Revised National Tuberculosis Control Programme	Mumbai District TB societies under MCGM	Prevalence of less than 1 case per 1 lakh population.	418 cases per 1 lakh population in 2019
National Aids Control Programme	Mumbai District Aids Control Society (MDACS) under MCGM	To reduce new infections by 50%	Reduction of 14% in the total number of HIV/AIDS cases detected from 2017-18 to 2019-20
Urban Malaria Scheme	MCGM Public Health Department	Reduction in transmission and morbidity due to malaria	Reduction of 10% in number of malaria cases from 2017-18 to 2019-20
The National Vector Borne Disease Control Programme	MCGM Public Health Department	Elimination of malaria by 2030 and Reduction in cases of dengue	Reduction of 10% in number of malaria cases and increase of 31% in dengue cases from 2017-18 to 2019-20
National Leprosy Eradication Programme	MCGM Public Health Department	Prevalence of less than 1 case per 10,000 population Elimination by 2018.	Prevalence rate of 0.25/10,000 of population as of March 2017

Non-Communicable Diseases			
Non Communicable Disease Programme	MCGM Public Health Department	To reduce morbidity due to NCDs.	10% increase in cases of diabetes 28% increase in cases of hypertension which are targeted under the scheme reported from 2017-18 to 2019-20
National Programme for Control of Blindness	Mumbai District Blindness Society	To reduce the prevalence of blindness to 0.3% of 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	Increase in number of deaths caused by mental and behavioral disorders by 27% from 2016 to 2018.
RMNCH A+			
Pulse Polio Programme	MCGM Public Health Department	100% Vaccine Coverage	Average number of children with OPV and IPV dosage increased from 1,62,803 in 2017-18 to 1,69,465 in 2019-20 although number of deaths increased from 4 in 2016 to 8 in 2018.
Mission Indradhanush and Intensified Mission Indradhanush	MCGM Public Health Department	To achieve over 90% immunisation coverage	In the 11 vaccines covered less than 10 deaths were reported except for diarrhoea and tuberculosis (67 and 75 deaths respectively in 2018)
Janani Suraksha Yojana	Maharashtra State Government	To reduce the Maternal and Neonatal Mortality	Neo Natal Mortality fell from 17 deaths/1000 live births in 2014 to 15 deaths/1000 live births in 2018 Maternal Mortality fell from 172/1 lakh live births in 2014 to 143 in 2018
Janani Shishu Suraksha Karyakram	Maharashtra State Government	Timely access to health care for new born and pregnant women	Number of Pregnant Women who registered for antenatal care decreased by 32.5% from 2,83,307 in 2017-18 to 1,91,247 in 2019-20.
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	Of the major causes of death among children in the age of 0 to 19, congenital diseases, malnutrition, anemias and rheumatic diseases (988 deaths in total) are included in RBSK. However substantial deaths caused due to other diseases such as tuberculosis, pneumonia, septicemia and nervous disorders (1,194 deaths) apart from Hypoxia, Asphyxia and other Conditions Originating in the Perinatal Period that mainly affect infants (1,621 deaths) have not been included.

School Health Scheme	MCGM Medical Officer of School Department	Medical Inspection (Primary Screening) of students in government institutions	The number of students screened has reduced from 2,32,706 in 2017-18 to 1,74,464 in 2019-20..
Urban Reproductive and Child Health Programme	MCGM Public Health Department	To improve reproductive health and bring gender parity in family planning measures	67% of the total Sexually Transmitted Infections on an average (from 2017-18 to 2019-20) were reported in females. 99.44% of all family planning interventions from 2017-18 to 2019-20 were targeted towards females.
Nutrition			
National Iron Plus Initiative for Anemia Control	Maharashtra State Government	To reduce anemia in females by 50 per cent	· Out of the total pregnant women registered for ANC the number of anemic cases was very high – 54% in 2019-20 from 28% in 2017-18
Integrated Child Development Services	ICDS Commissionerate, Maharashtra	To improve the nutritional and health status of children in the age-group 0-6 years	The number of severely underweight children increased from 2,519 in 2017-18 to 4,233 in 2019-20 and so has proportion to total children weighed (from 0.94% to 1.48%).
Mid-Day Meal Scheme	MCGM Public Health Department	Improve the effectiveness of primary education by improving the nutritional status of all primary school children	Data not available, School Health Scheme data shows 7,512 students reported underweight, 191 were reported overweight in 2019-20.
Insurance			
Ayushman Bharat Pradhan Matri Jan Aarogya Yojana	Maharashtra State Government	To provide medical care to 10.74 crore households.	A survey conducted by Praja commissioned to Hansa Research in 2019 showed that of the 27% who were aware of any government health insurance scheme, 78% knew of the scheme 35% had enrolled of which 22% had availed the scheme
Mahatma Jyotiba Phule Jan Aarogya Yojana	Maharashtra State Government	To provide insurance policy coverage to beneficiaries in Maharashtra	A survey conducted by Praja commissioned to Hansa Research in 2019 showed that of the 27% who were aware of any government health insurance scheme,46% knew of the scheme of which 47% had enrolled and 53% had availed of insurance

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 policy making and implementation agencies of major polices implemented 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		

POLICY MAKING POLICY IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *0 TB cases/1 lakh population by 2030*[1]
Current status: *418 cases/1 lakh population in 2019*[2]

KEY FINDINGS[3]

- *While the number of total malaria cases decreased from 2017-18 to 2019-20 by 10%, the total dengue cases increased by 31% from 2017-18 to 2019-20.*
- *On an average 55% of the tests for HIV on females were done for pregnant women out of which 0.15% tested positive while for non-pregnant females, 2% tested positive on an average from 2017-18 to 2019-20. Males constituted on an average 61% of total HIV positive cases, but there was more testing for females (59%) than males (41%).*
- *Of the total TB cases registered under RNTCP, drug resistant TB cases (MDR and XDR) increased by a whooping 63% from 2014 to 2018 while total registered cases fell by 17%.*

RECOMENDATIONS

- *For tackling communicable diseases, social determinants of health need to be focused on. For example, sanitation and fumigation need to be given greater focus in policy for combating malaria and dengue.*
- *Similarly for TB there is a need to focus on social determinants/factors such as housing, lifestyle, social stigma etc. Specific focus needs to be given on drug resistant TB and ensuring proper treatment at the initial stages.*
- *For HIV, more focus needs to be laid on testing of HIV among non-pregnant females and males for early detection.*
- *While increased efforts to tackle diseases are necessary, duplicity of schemes such as the case with malaria in Mumbai (Urban Malaria Scheme and National Vector Borne Disease Control Programme) may not be the useful to achieve the intended targets.*

[1] SDG India Index, Niti Aayog [2] RTI data from Mumbai TB Cell [3] Key findings data is from HMIS and MCGM website.

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, kidney etc. TB spreads through air. When a person suffering from pulmonary TB coughs or sneezes, infectious pathogens are spread in air through droplets. The National TB Control Programme (NTCP)[18] was started in 1962 to address the problem of high morbidity in TB, but had limited success with only 30-40% treatment completion rate amongst patients put on treatment. In view of this, the Government of India started the Revised National TB Control Programme (RNTCP) with Directly Observed Treatment short course (DOTS) strategy at few selected sites in 1993[19].

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 incidence of new cases, to reach elimination status by 2025.

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

Objectives:

1. To achieve 90% notification rate for all TB cases.
2. To achieve 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

Beneficiaries:

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

Implementation Status in Mumbai:

Table 8: Notified TB cases in Mumbai from 2017 to 2019 as per Nikshay portal

2017			2018			% change from 2017 to 2018	2019			% change from 2017 to 2018
Public	Private	Total	Public	Private	Total		Public	Private	Total	
25,540	8,449	33,989	34,505	22,487	56,992	68%	33,937	27,334	61,271	8%

Inference:

- Notifications under Nikshay almost doubled from 33,989 in 2017 to 61,271 in 2019. Although the portal is a positive and proactive initiative to report and track TB, it is important to streamline the patient wise tracking to ensure that there is no duplication of data. Since there is a daily updating of numbers, there is a possibility that patient count is replicated.
- Even though Nikshay claims to have a database of MDR and XDR TB patients, there is no publically accessible published data on MDR-TB and XDR-TB on Nikshay.

Table 9: Age wise deaths due to TB in Mumbai for the years 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Tuberculosis (A15-A16 , A17, A18-A19)	2016	56	428	2,051	2,251	1,874	6,660
	2017	57	380	1,673	1,881	1,458	5,449
	2018	39	346	1,404	1,753	1,398	4,940

Inference:

Data shows that although the tuberculosis deaths have been falling over the years, the number of deaths in the productive population 20-59 years is the highest. 385 deaths due to TB in children and youth (0 to 19 years) were also reported in 2018, highlighting the need for tackling the determinants of the disease such as poor housing.

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 individual patient and to monitor overall programme performance.

Table 10: Implementation Status of RNTCP programme in Mumbai from 2014 to 2019

Years (year in which case registered)	2014	2015	2016	2017	2018	2019
No. of notified cases under Nikshay (Public and Private) diagnose[20] *(from Nikshay Portal)*	NA			34,023	57,429	61,271
No. of notified cases under Nikshay (Public and Private) resident [21] (*from TB cell through RTI)*	NA				46,513	52,013
Total Cases registered and provided DOTS treatment (a) (New and Retreatment Cases) *(from TB cell through RTI)*	30,832	27,200	22,462	21,706	25,576	NA
MDR Cases registered under RNTCP *(from MCGM website)[22]*	3,013	3,564	4,770	4,891	4,969	NA
XDR Cases registered under RNTCP *(from MCGM website)*	360	583	605	670	526	NA
% of TB Drug Resistance (MDR and XDR) cases	11%	15%	24%	26%	21%	NA
Defaulters from DOTS Programme *(from TB cell through RTI)* ***(b)***	2,823	2,927	2,258	2,323	3,040	NA
Defaulter cases in % (b*100/a)	9%	11%	10%	11%	12%	NA
Number of deaths under MCGM's TB Control Unit(RNTCP) *(from TB cell through RTI)*	1,459	1,240	963	803	NA	NA
Number of deaths under MCGM's Registration of Births and Deaths. *(from MCGM and state government through RTI)*	6,589	5,680	6,660	5,449	4,940	NA

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

[20] 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.
[21] 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.
[22]MDR and XDR data from MCGM website:
https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Tuberculosis%20Department/Updated%20RNTCP%20Website%20Data.pdf

Inference:

- The total cases registered and provided DOTS reduced from 2014 to 2017 and rose again in 2018, which can be considered as a result of increased notification due to Nikshay portal. However still, in 2018 only 55% (25,576) of total notified cases (46,513) registered under RNTCP for DOTS treatment.
- Of the total cases registered % of drug resistant TB cases (MDR and XDR) have been increasing from 11% in 2014 to 26% in 2017 inspite of total cases falling. This is a serious concern that needs to be addressed- from 2014 to 2018 the drug resistant cases increased by a whooping 63% while total registered cases fell by 17%.
- The percentage of defaulter cases from 2014 to 2018 also increased from 9% to 12%.
- There continues to be a discrepancy between the TB deaths recorded by RNTCP TB cell and those by the MCGM health department.
- The number of cases notified as per TB cell in 2019 was 52,013, based on which the cases per one lakh population calculates to 418 cases per 1 lakh population while the SDG target is to achieve zero cases/ 1 lakh population by 2030.

1.2 National Aids Control Programme

Year:
1992

Background:
The National AIDS Control Programme (NACP)[23] is being implemented as a comprehensive programme for prevention and control of HIV/AIDS in India. Over time, the focus has shifted from raising awareness to behavior change, from a national response to a more decentralised response and to increasing involvement of NGOs and networks of People living with HIV (PLHIV).

- The NACP I started in 1992 was implemented with an objective of slowing down the spread of HIV infections so as 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 with the goal of halting and reversing 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 target of 90:90:90[24] 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[25].

In Mumbai, the NACP is implemented by 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.

[23] http://naco.gov.in/nacp
[24] https://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf
[25] https://main.mohfw.gov.in/sites/default/files/24%20Chapter%20496AN2018-19.pdf

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)[26]

Beneficiaries:

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

Implementation Status in Mumbai:

Table 11: HIV cases tested and positive in Mumbai from 2017-18 to 2019-20

HIV/AIDS Cases		2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Total Male	Tested	2,02,607	2,60,102	28%	2,38,330	-8%
	Positive	4,348	3,965	-9%	3,813	-4%
	%	2.1%	1.5%	-0.6%	1.6%	0.08%
Total Female	Tested	2,63,929	3,58,726	36%	3,75,714	5%
	Positive	2,801	2,575	-8%	2,271	-12%
	%	1.1%	0.7%	-0.3%	0.6%	-0.1%
Pregnant Women (Out of the Total Female)	Tested	1,35,413	2,02,820	50%	2,15,867	6%
	Positive	278	245	-12%	248	1%

Table 12: Age wise deaths due to HIV in Mumbai for the years 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Human Immunodeficiency Virus (HIV) (B20-B24)	2016	3	36	273	463	77	852
	2017	6	26	269	513	67	881
	2018	2	32	231	486	71	822

Inference:

- The number of positive HIV cases decreased from 2017-18 to 2019-20 for males and females by 12% and 19% respectively. The proportion of those recorded positive to those tested was 2% for males and 1% for females in all the three years.
- On an average 55% of the tests for females were done for pregnant women out of which 0.15% tested positive. However, for non-pregnant females, of those tested, 2% were positive on an average from 2017-18 to 2019-20. This shows that more focus needs to be laid on testing of HIV among non-pregnant females as well for early detection.
- Males constitute on an average (for 3 years) 61% of total HIV positive cases, whereas females constitute 39%, while 41% of testing was for males and 59% for females. Thus more focus needs to be laid on male testing as well.
- Though the number of positive cases has been decreasing, interventions need to be made to analyse high risk areas for HIV and provide medical support and treatment.

[26] http://naco.gov.in/sites/default/files/Annual%20Report%20NACO-2018-19%20%281%29.pdf

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 was created to abate the malaria transmission in urban areas, the central government approved a scheme for malaria prevention in 1971 and named as Urban Malaria Scheme[27] which is complementary to the National Vector Borne Disease Control Programme. In Mumbai, it is implemented by the MCGM Surveillance Department[28].

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 human population can be protected from malaria transmission with the available means.

Beneficiaries:
Those afflicted with Malaria and at high risk of contracting Malaria

[27] https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=529&lid=3822
28https://portal.mcgm.gov.in/irj/go/km/docs/documents/MCGM%20Department%20List/Public%20Health%20Department/Docs/Surveillance/AIM.pdf

Implementation Status in Mumbai:

Table 13: Testing and cases for Malaria in Mumbai from 2017-18 to 2019-20[29]

Criteria	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Total Blood Smears Examined for Malaria	14,50,310	14,04,777	-3%	14,26,624	2%
Malaria (Microscopy Tests) - Positive	11,707	9,363	-20%	7,599	-19%
% of Positive Cases	0.8%	0.7%	-0.1%	0.5%	-0.1%
RDT conducted for Malaria	1,67,519	1,99,457	19%	2,40,422	21%
Malaria (RDT) - Positive	5,811	6,669	15%	8,178	23%
% of Positive Cases	3.5%	3.3%	-0.1%	3.4%	0.1%
Total Malaria Cases	**17,518**	**16,032**	**-8%**	**15,777**	**-2%**
Hospitalised Cases	9,389	7,940	-15%	7,067	-11%

Inference:

From 2017-18 to 2019-20, the number of malaria cases decreased by 10%. Cases requiring hospitalisation have reduced from 53.6% of total in 2017-18 to 44.8% in 2019-20.

Table 14: Age wise deaths due to Malaria in Mumbai for the years 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Malaria (B50-B54)	**2016**	3	11	33	42	36	125
	2017	1	9	23	25	42	100
	2018	5	3	16	16	29	69

Inference:

While malaria deaths have fallen from 2016 to 2018 showing that the Urban Malaria Scheme has made progress, more holistic approach needs to be adopted to look at social determinants such as sanitation and fogging to tackle the disease more effectively.

[29] 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.

1.4 The National Vector Borne Disease Control Programme

1.4.1. Malaria

Year:
2003

Background:
The National Vector Borne Disease Control Programme is implemented by the MCGM Surveillance Department which works for prevention and control of malaria in Mumbai[30]. The control of malaria in the urban areas is a complementary programme in line with National Vector Borne Disease Control Programme (NVBDCP)[31] in rural areas.

Objectives:
1. To actively search for malaria patients and ensure provision of complete radical treatment to control the spread of malaria.
2. Reduction of the disease to a tolerable level in which 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 pertaining to the spread of diseases in communities).

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

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 due to the fact that areas where rainwater collects or is stored present themselves as high risk breeding grounds for dengue.[32] It is implemented by the MCGM 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 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 15: Testing and cases of Dengue in Mumbai from 2017-18 to 2019-20

Testing and Cases	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
RDT Test Positive	23,732	29,378	24%	28,031	-5%
Enzyme- Linked Immuno Sorbent Assay (ELISA) Test Positive	3,362	5,157	53%	7,349	43%
Total Dengue Cases	27,094	34,535	27%	35,380	2%
Cases with Hospitalisation	12,681	17,698	40%	16,702	-6%

Inference:
Out of the total dengue cases almost half required hospitalisation- this has increased marginally from 46.8% in 2017-18 to 47.2% in 2019-20.

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

Table 16: Age wise deaths due to Dengue in Mumbai for the years 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Dengue Fever (A90)	2016	0	1	2	4	0	7
	2017	48	61	86	73	80	348
	2018	13	50	74	43	59	239

Inference:

Total deaths related to dengue in 2018 were 239, highest in age group of 20-39 years (74 deaths).

Table 17: Month-wise Comparison of Malaria and Dengue[33] Cases in Mumbai from 2017-18 to 2019-20

Month	Malaria			Dengue		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
April	581	641	669	378	381	370
May	766	858	925	468	676	498
June	1,114	1,045	1,063	1,313	785	754
July	2,391	2,336	1,574	1,518	2,270	1,927
August	3,042	3,048	2,166	2,977	5,346	3,628
September	2,598	2,410	2,620	4,871	8,829	7,033
October	1,861	2,543	1,810	5,177	10,242	9,267
November	1,903	1,193	997	4,176	3,859	5,590
December	873	742	586	2,922	944	2,808
January	933	359	2,345	1,441	499	2,052
February	456	341	651	1003	316	1,216
March	1,000	516	371	850	388	237
Total	**17,518**	**16,032**	**15,777**	**27,094**	**34,535**	**35,380**

Inference:

- While the number of total malaria cases decreased from 2017-18 to 2019-20 by 10%, the total dengue cases increased by 31% from 2017-18 to 2019-20.
- The month wise analysis of both diseases showed August and September months had the highest malaria cases while September and October months had highest dengue cases.
- In this scheme specifically, attention must be given to the social determinants that cause these diseases i.e. sanitation and stagnating water.

[33] While the malaria mosquito (Anopheles) breeds in accumulating water in open areas, the dengue mosquito (Aedes aegypti) breeds in freshwater in domestic areas in and around the household. A combination of conditions such as bouts of heavy rainfall, succeeded by dry spells of no rain, leading to the accumulation of water creates an atmosphere for mosquitoes to breed and for their eggs to grow from a larval stage to an adult stage. When there is continuous rainfall, water is constantly washed away thereby making it impossible for mosquito larvae to grow to full adulthood (which takes 7 days). It is the period of no rain following this that allows them to reach maturity and consequently start infecting humans.

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 national level by December 2005, as set out by The NHP 2002. The NHP 2017 sets out the goal to achieve and maintain 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.[34]

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 MCGM website as of March 2017 was 0.25/10,000 of population[35]. Though we have already surpassed our target of less than 1/10000 of population, concerted efforts will need to continue to eliminate the disease- data shows 53 reported cases in government health services in 2018-19.

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

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 policy making and implementation agencies of major polices implemented in Mumbai.

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

POLICY MAKING POLICY IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *To reduce by one third premature mortality from NCDs by 2030.*
Current: *Not adopted under India's targets* [1]

KEY FINDINGS [2]

- *Majority of the NCD schemes have not been implemented in Mumbai inspite of a heavy NCD disease burden- Neoplasms (cancer), diabetes, respiratory and circulatory system diseases, were among the Top 5 causes of death in the city in 2018, while TB was the only communicable disease in Top 5.*
- *While the NCD Programme covers diabetes which is a major cause of death in Mumbai (10,458 deaths in 2018) other NCDs such as neoplasms (cancers) (10,073 deaths in 2018) and respiratory diseases (7,954 deaths in 2018) that are not covered under the scheme also account for major causes of NCD related deaths.*
- *Similarly while hypertension is covered under the NCD programme, it accounts for only 3,731 of the total 25,962 deaths due to heart and circulatory system related diseases in 2018, highlighting the need to focus on other diseases related to the heart and circulatory system.*

RECOMENDATIONS

- *Focus on promoting healthier lifestyle changes, nutrition counselling, and early detection that are geared towards improving overall health need to be adopted in policy and implementation. A targeted approach towards tackling each NCD specifically with its underlying causes and determinants needs to be adopted.*
- *Schemes related to NCDs such as The National Programme for Prevention and Control of Cancer Diabetes Cardiovascular Diseases and Strokes should be implemented in Mumbai.*
- *National Programme for Palliative Care and the National Programme for Healthcare of Elderly needs to be implemented in Mumbai to better tackle diseases among the elderly and reduce morbidity.*

[1] SDG India Index, Niti Aayog [2] Cause of Death data for Mumbai from RTI

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), MCGM 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.[36]

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 MCGM 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 general population
5. To conduct camps at the community level to create awareness and promote early screening of NCDs[37]

Objectives:

1. To prevent and control NCDs in the city of Mumbai.
2. Presently primarily for diabetes and hypertension goal 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).

[36] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=bDfNKKgG7mQ=
[37] 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 18: Cases of Diabetes and Hypertension from 2017-18 to 2019-20

Cases	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Diseases covered under the NCD programme					
Diabetes	2,25,793	2,46,073	9%	2,49,034	1%
Hypertension	1,49,644	1,79,353	20%	1,91,529	7%

Inference:

The NCD scheme focuses on interventions for diabetes and hypertension. The cases registered for these two diseases has however increased from 2017-18 to 2019-20, although there is a fall in the percentage rise year on year.

Table 19: Age wise Deaths due to Major NCD diseases in Mumbai from 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Diabetes Mellitus (E10-E14)	**2016**	3	6	96	1,772	7,211	9,088
	2017	5	11	112	1,884	7,513	9,525
	2018	8	7	122	2,109	8,212	10,458
Hypertension (I10-I15)	**2016**	2	9	124	540	2,882	3,557
	2017	4	6	97	585	3,001	3,693
	2018	1	4	106	554	3,066	3,731
Disease Of The Circulatory System (I00-I99)	**2016**	145	129	1,364	5,715	18,714	26,067
	2017	110	116	1,008	5,251	18,582	25,067
	2018	92	118	1,071	5,346	19,335	25,962
Diseases Of The Respiratory System (J00-J98)	**2016**	915	261	607	1,204	5,451	8,438
	2017	478	198	489	1,228	5,342	7,735
	2018	488	177	466	1,191	5,632	7,954
Diseases of the Nervous system (G00-G98)	**2016**	148	167	255	375	1,382	2,327
	2017	165	155	250	432	1,424	2,426
	2018	147	165	249	440	1,536	2,537
Neoplasms (Cancer) (C00-D48)	**2016**	112	246	695	2,950	5,522	9,525
	2017	65	112	579	2,885	5,231	8,872
	2018	116	292	704	3,165	5,796	10,073

Inference:

- While the NCD Programme covers diabetes which is a major cause of death in Mumbai (10,458 deaths in 2018) other NCDs such as neoplasms (cancers) (10,073 deaths in 2018) and respiratory diseases (7,954 deaths in 2018) that are not covered under the scheme also account for major causes of NCD related deaths.
- Similarly, while hypertension is covered under the NCD programme, it accounts for only 3,731 of the total 25,962 deaths due to heart and circulatory system related diseases in 2018, highlighting the need to focus on other diseases related to the heart and circulatory system.

2.2 National Programme for Control of Blindness

Year:
1976

Background:
The Government of India started the National Programme for Control of Blindness (NPCB) in order to strengthen the systems to reduce preventable blindness, promote awareness, and increase institutional capacity[38]. The implementation of the programme was decentralised in 1994-95 with formation of District Blindness Society in every district expected to enhance the coverage and improve quality of eye care services[39].

Objectives:
1. To reduce the backlog of avoidable blindness through identification and treatment of curable blindness at primary, secondary and tertiary levels, based on 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 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 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 an infrastructure and efficiency levels in the programme to be able to cater 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, number of ophthalmologists, or facilities for the same.

[38] 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.

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

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 policy making and implementation agencies of major polices implemented in Mumbai.

Government	Central	State	City
Central			
State	National Mental Health Programme		
City			

POLICY MAKING POLICY IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *Promote mental health and well-being*
Current: *Not adopted under India's targets*[1]

KEY FINDINGS[2]

- *Over the last three years, since the inception of the Mental Healthcare programme, people seeking medical interventions for mental health have increased from 88,672 in 2017-18 to 90,515 in 2019-20.*
- *The number of deaths for mental and behavioral disorders has increased from 381 deaths in 2016 to 484 deaths in 2018.*
- *The policy requires mental health services to be incorporated into general health facilities, however in the School Health Scheme in Mumbai for example screening is done for physical diseases but there are no mental illnesses/conditions screened.*

RECOMENDATIONS

- *Mental healthcare services need to be more accessible and affordable. For this implementation of the Mental Health Programme needs to be tracked more effectively especially ensuring integration into the general health services, such as availability of health personnel.*
- *Efforts need to be made to reduce the stigma around mental illnesses and normalise seeking treatment for them. For this educational institutions and workplaces especially need to include mental health in their agenda.*

[1] SDG India Index, Niti Aayog [2] Data from HMIS and Cause of Death RTI

3.1 National Mental Health Programme

Year:
1982

Background:
The National Mental Health Programme (NMHP)[40] 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; and 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 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[41].

In Maharashtra[42] 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 service, 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 the society.

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

Target:

1. Prevention and treatment of mental and neurological disorders and their associated disabilities.
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.

Beneficiaries:

Individuals afflicted by neuro-psychiatric 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, specially characterised by sub normality of intelligence.

Implementation Status in Mumbai:

Table 20: Mental Health cases in Public Institutions from 2017-18 to 2019-20

Cases	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Total Number mental health cases	88,672	1,10,257	24%	90,515	-18%

Inference:

Over the last three years, since the inception of the Mental Healthcare programme, people seeking medical interventions for mental health have increased from 88,672 in 2017-18 to 90,515 in 2019-20, although there was a fall from 2018-19 to 2019-20.

Table 21: Age wise Deaths due to mental disorders in Mumbai from 2016 to 2018

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)	**2016**	12	17	42	135	175	381
	2017	8	21	62	146	210	447
	2018	10	18	63	134	259	484
Suicide (X60-X84)	**2016**	0	0	1	0	0	1
	2017	0	0	1	1	0	2
	2018	0	3	8	1	1	13

Inference:

The number of deaths for mental and behavioral disorders has increased from 381 deaths in 2016 to 484 deaths in 2018.

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 policy making and implementation agencies of major polices implemented 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

POLICY MAKING POLICY IMPLEMENTATION

SUSTAINABLE DEVELOPMENT GOALS

Target: *Reduce Maternal Mortality Rate to 70 by 2030 and Under 5 Mortality Rate to 11 by 2030.*[1]
Current Status: *Maternal Mortality was 143 and Under 5 Mortality Rate was 30 in 2018.*[2]

KEY FINDINGS[3]

Child Health

- *While average number of children with polio vaccination dosage increased from 1,62,803 in 2017-18 to 1,69,465 in 2019-20, 8 deaths due to polio were reported in Mumbai in 2018.*
- *In all the 11 vaccines covered under Mission Indradhanush the cause of death data shows less than 10 deaths except for diarrhoea and tuberculosis (67 and 75 deaths respectively in 2018).*
- *Of the major causes of death among children in the age of 0 to 19, congenital diseases, malnutrition, anemias and rheumatic diseases (988 deaths in 2018) are included in Rashtriya Bal Swasthya Karyakram. However substantial deaths caused due to other diseases such as tuberculosis, pneumonia, septicaemia and nervous disorders (1,194 deaths in 2018) apart from Hypoxia, Asphyxia and other Conditions Originating in the Perinatal Period that mainly affect infants (1,621 deaths in 2018) have not been included.*

Adolescent Health

- *With regards to adolescent health, there has been a decline in the number of adolescents provided with IFA (iron) tablets by 14% from 2017-18 to 2019-20 and albendazole (for preventing worms) fell from 2,02,824 students in 2017-18 to zero in 2019-20. The number of free sanitary pads being distributed was 0 in 2019-20.*

[1] SDG India Index, Niti Aayog [2] MCGM HMIS data [3] Key findings data is from HMIS and cause of death is from RTIs

- *The number of students screened under the School Health Scheme reduced by 23% from 2018-19 to 2019-20.*
- *While 7,512 students were reported underweight under the School Health Scheme, 191 were reported overweight in 2019-20, reflecting the double burden of nutrition.*

Maternal Health

- *With regards to antenatal care, the number of Pregnant Women (PW) who registered for antenatal care decreased by 32.5% from 2,83,307 in 2017-18 to 1,91,247 in 2019-20. Inspite of various schemes targeting mother's health, maternal mortality is still very high (217 deaths in 2018).*

Reproductive Health

- *67% of the total Sexually Transmitted Infections on an average (from 2017-18 to 2019-20) were reported in females and has direct relation to the kind of contraceptives used- 99.44% of all family planning interventions from 2017-18 to 2019-20 were targeted towards women.*
- *While family planning programmes such as the Urban Reproductive and Child Health Programme, speak of gender parity and sensitivity, the contraceptive distribution is heavily skewed- there was a 236% increase in emergency contraceptive pills distributed from 2017-18 to 2019-20 while distribution of condoms fell by 34% in the same period.*

RECOMENDATIONS

- *Efforts must be made to improve our immunisation rates and coverage every year to reduce preventable diseases, there is also a need to specifically focus on certain diseases like tuberculosis and diarrhoea. In targeted intervention such as those under RBSK, diseases based on deaths in that age group such as pneumonia, septicaemia and nervous disorders also need to be targeted.*
- *Focus needs to be laid on the adolescent health component under RMNCHA+ which has not been covered by most schemes.*
- *Promotion of gender equality and greater male participation in the Urban Reproductive and Child Health programme needs to be implemented in actuality, by promotion of male contraceptive methods that are much more safer and easier to use.*
- *School Health Scheme should add gender and sexuality counselling as well as mental health component for school children.*
- *Various policies have been implemented to focus on maternal health and institutional deliveries, however the maternal mortality continues to be high- there needs to be a comprehensive and unified policy that looks at all aspects of maternal health and prevention of maternal mortality.*

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)[43]. The WHO removed India from the list of countries with active endemic wild poliovirus transmission after India reported its last case in 2011[44].

Objectives:
The Pulse Polio Initiative was started with an objective of achieving hundred per cent 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.

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

Implementation Status in Mumbai:

Table 22: Number of Polio Immunisations in Mumbai from 2017-18 to 2019-2020[45]

Polio Immunisations	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of Children Administered Oral Polio vaccines (OPV 0)	1,70,898	1,59,737	-7%	1,62,510	2%
Number of Children Administered Oral Polio vaccines (OPV 1)	1,80,581	1,67,847	-7%	1,74,522	4%
Number of Children Administered Oral Polio Vaccine (OPV 2)	1,80,850	1,62,840	-10%	1,72,820	6%
Number of Children Administered Oral Polio Vaccine (OPV 3)	1,87,812	1,67,836	-11%	1,77,978	6%
Number of Children Administered Oral Polio Vaccine (OPV Booster)	1 99,651	1,64,264	-18%	1,77,450	8%
Number of Children Administered Inactivated Polio Vaccine 1 (IPV 1)	1,21,264	1,36,688	13%	1,58,858	16%
Number of Children Administered Inactivated Polio Vaccine 2 (IPV 2)	98,567	1,29,496	31%	1,62,119	25%

Table 23: Deaths due to Polio in Mumbai from 2016 to 2018

Cause of Death	Year	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 Years and Above	Total
Acute Poliomyelites (A80)	**2016**	0	0	1	3	0	4
	2017	0	0	1	1	1	3
	2018	0	1	5	1	1	8

Inference:

- For full immunisation, atleast 3 OPV and 2 IPV doses are required. Average number of children with OPV and IPV dosage increased from 1,62,803 in 2017-18 to 1,69,465 in 2019-20.
- While there were 6 cases and 3 cases of polio deformity reported in 2015-16 and 2016-17 respectively under the Medical Officer of School Health (MO) data, from 2017-18, there have been no such cases reported amongst Primary and Secondary level children in MCGM Schools.[46]
- While The WHO removed India from the list of countries with active endemic wild poliovirus transmission in 2011, 8 deaths due to polio were reported in Mumbai in 2018, and therefore efforts must be made to improve our immunisation rates and coverage every year.

[45] 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

[46] https://praja.org/praja_docs/praja_downloads/State%20of%20Health%20of%20Children%20in%20Anganwadis%20and%20Municipal%20Schools%20in%20Mumbai.pdf

4.2 Mission Indradhanush and Intensified Mission Indradhanush

Year:
2014

Background:
Mission Indradhanush[47] an intensification strategy for immunisation (Refer to Annexure 8 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 drop outs in select districts and urban cities with low routine immunisation coverage in a specific time-frame[48]. 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 MCGM, offers protection against 11 Vaccine Preventable Diseases, Polio, Hepatitis B, TB, Diphtheria, Pertussis, Tetanus, H- Influenza B, Measles, Rubella, Mumps, and Rotavirus induced diarrhoea[49].

Objectives:
1. Mission Indradhanush (MI) was launched to improve the 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 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

[47] https://www.nhp.gov.in/mission-indradhanush1_pg
[48] https://nhm.gov.in/New_Updates_2018/NHM_Components/Immunization/Guildelines_for_immunization/Mission_Indradhanush_Guidelines.pdf
[49] 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

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.[50] However this number is much lower than the annual vaccinations reported under the HMIS for various diseases. (Refer Annexure 9)

Table 24: Deaths from Diseases of Vaccines covered under Mission Indradhanush for Age 0 to 9 from 2016 to 2018

Causes Of Death	Years	Upto 1 year	1 -4 years	5 - 9 years
Acute Poliomyelites (A80)	2016	0	0	0
	2017	0	0	0
	2018	0	0	0
Acute Hepatitis B (B16)	2016	0	0	0
	2017	0	0	0
	2018	0	0	0
Tuberculosis (A15-A19)	2016	18	38	43
	2017	18	39	25
	2018	14	25	36
Diphtheria (A36)	2016	0	1	6
	2017	0	1	6
	2018	1	1	3
Whooping Cough (A37) Pertussis	2016	0	1	0
	2017	2	0	0
	2018	5	0	0
Tetanus (A33, A34, A35)	2016	1	7	1
	2017	0	3	4
	2018	1	3	4
Influenza (J10- J11)	2016	0	0	0
	2017	2	11	2
	2018	0	1	0
Measles (B05)	2016	2	6	5
	2017	1	4	1
	2018	2	4	2
All Other Types Of Viral Diseases (A70-A74, A81.A87-A89,A95,B00-B02,B04,B06-B09.B25-B34)*	2016	8	5	3
	2017	5	4	4
	2018	2	3	3
Diarrhoea and Gastroenteritis Of Presumed Infectious Origin (A09)	2016	65	12	6
	2017	40	14	3
	2018	45	17	5

Note (*) - Includes Rubella and Mumps

Inference:

In all the vaccines covered under MI and IMI scheme the cause of death data shows less than 10 deaths except for diarrhoea and tuberculosis (67 and 75 deaths respectively in 2018), showing that these need to be specifically focussed upon, while continuing vaccination for others to keep the mortality low as can be seen from this table.

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

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[51]. 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 Low Performing States or LPS). In addition to 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[52]. 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.[53]

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) checkups 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 for the purpose of receiving 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 Low Performing States, and BPL Pregnant women in High Performing States (HPS). Since Maharashtra is under the HPS, only pregnant women under BPL are eligible for the scheme.

[51] https://nhm.gov.in/WriteReadData/l892s/97827133331523438951.pdf
[52] https://www.ilo.org/dyn/travail/docs/683/JananiSurakshaYojanaGuidelines/MinistryofHealthandFamilyWelfare.pdf
[53] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=xO3DHbQ/Sx0=

Implementation Status in Mumbai:

Table 25: Births and Deaths Rate in Mumbai from 2014 to 2018

Indicators	2014	2015	2016	2017	2018
M.Y.E.P Population[54]	1,25,84,139	1,26,43,252	1,26,89,644	1,27,36,036	1,27,82,429
Live Births	1,74,084	1,74,902	1,52,952	1,55,386	1,51,310
Birth Rate (Births per 1000 population)	13.83	13.83	12.05	12.20	11.84
Still Births	2,421	2,225	486	158	929
Total Deaths	93,254	94,706	86,642	89,037	88,852
Death Rate (Deaths per 1000 population)	7.41	7.49	6.83	6.99	6.95

Table 26: Mother and Child Death Indicators in Mumbai from 2014 to 2018[55]

Indicators	2014	2015	2016	2017	2018
Neo-Natal Deaths (less than 28 days)	2,999	2,788	2,498	2,563	2,239
Neo-Natal Mortality Rate (deaths per 1000 live births)	17.23	15.94	16.33	16.49	14.80
Infant Deaths (Less than 1 year)	4,883	4,575	3,998	4,079	3,723
Infant Mortality Rate (deaths per 1000 live births)	28.05	26.16	26.14	26.25	24.61
Under 5 Mortality/Child Deaths (less than 5 years)	5,866	5,540	4,932	5,020	4,529
Under 5 Morality rate (deaths per 1000 live births)	33.70	31.67	32.25	32.31	29.93
Maternal Deaths	229	314	305	236	217
Maternal Mortality Rate (per 1,00,000 live births)	172	180	199	152	143

Note: Data needed to calculate the mortality rate was not available in HMIS, hence the above data is taken from MCGM MIS

Inference:

- In the year 2018, numbers of still births reported were 929 which is a 488% increase from 158 still births reported in 2017.
- As per WHO[56], India's MMR in 2015 (The year Millennium Developmental Goals(MDG) ended) was 174. The MMR for Mumbai in the same year was 180. Similarly, Sustainable Development Goal's (SDG) National MMR target for 2030 is 70. Even though there is a decreasing trend in MMR from last 2 years, but still the picture is grim at 143 in 2018.
- Similarly, Under- 5 mortality rate (U5MR) National target under SDGs is 11 as adopted and the current U5MR is 30 in Mumbai.

[54] MYEP Population – Mid Year Estimated Population

[55] 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.

[56] https://www.who.int/gho/maternal_health/countries/ind.pdf

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 newborns accessing public health institutions for healthcare till 30 days after birth.[57] 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.[58]

Objectives:
The objective of the JSSK Programme is that each and every pregnant woman and sick infant upto 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 newborns accessing the public health system every year.

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

[57] https://www.nhm.gov.in/images/pdf/nrhm-updates/presentations/11th_sep/jssk_dc_mh.pdf
[58] https://arogya.maharashtra.gov.in/Site/Form/DiseaseContent.aspx?CategoryDetailsID=E0/L/wULlww=

Implementation Status in Mumbai:

Table 27: Antenatal Care and Deliveries in Mumbai from 2017-18 to 2019-20

Indicators		2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Antenatal Care						
Total number of pregnant women (PW) registered for ANC		2,83,307	2,20,969	-22%	1,91,247	-13%
Out of the total ANC registered, number registered within 1st trimester (within 12 weeks)		99,719	97,363	-2%	1,06,164	9%
Number of PW given TT1		1,31,300	1,20,271	-8%	1,28,695	7%
Number of PW given TT2		1,25,451	1,10,566	-12%	1,03,684	-6%
Number of PW given TT Booster		64,084	58,194	-9%	62,358	7%
Number of PW given 180 Iron Folic Acid (IFA) tablets		1,88,352	1,87,817	-0.3%	1,60,879	-14%
Number of PW given 360 Calcium tablets		1,56,510	1,78,129	14%	1,57,736	-11%
Number of PW given one Albendazole tablet after 1st trimester		73,447	1,16,400	58%	1,03,263	-11%
Number of PW received 4 or more ANC check ups		1,86,532	1,59,671	-14%	1,59,686	0.01%
Deliveries						
Number of Institutional Deliveries conducted (Including C-Sections)	**Public**	73,820	68,739	-6.88%	68,936	0.29%
	Private	78,403	78,718	0.40%	78,886	0.21%
Number of Home Deliveries attended by Skill Birth Attendant (SBA) Doctor/Nurse /ANM)	**Public**	1	2	100%	4	100%
	Private	0	0	-	0	-
Number of Home Deliveries attended by Non SBA (Trained Birth Attendant (TBA) /Relatives/etc.)	**Public**	25	29	16%	37	27.59%
	Private	0	0	-	0	-
Total	**Public**	73,846	68,770	-6.87%	68,977	0.30%
	Private	78,403	78,718	0.40%	78,886	0.21%

Inference:

- The number of institutional deliveries to total deliveries in public institutions has remained almost constant from 99.98% in 2017-18 to 99.97% in 2019-20, while the absolute number of institutional deliveries conducted in government facilities has reduced by 7% from 2017-18 to 2019-20.
- With regards to antenatal care, the number of Pregnant Women (PW) who registered for antenatal care actually decreased by 22% from 2017-18 to 2018-19 and 13% from 2018-19 to 2019-20. The number of PW given their TT injections also decreased, and then showed a marginal increase in 2019-20. Also, the number of PW given IFA tablets decreased by 14% from 2018-19 to 2019-20. Antenatal care and the health of the mother during pregnancy is a vital element of ensuring the health of the newborn 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 28: Services provided to Infants under JSSK in Mumbai from 2017-18 to 2019-20

Services for Infants	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Free Medicines	11,867	62,392	426%	58,955	-6%
Free Diagnostics	4,529	21,377	372%	36,839	72%
Free Home to facility transport	0	0	0%	1	-
Inter facility transfers when needed	118	259	119%	378	46%
Free Drop Back home	0	0	0%	12	-

Table 29: Services provided to Pregnant women under JSSK in Mumbai from 2017-18 to 2019-20

Services for Pregnant women (PW)	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Free Medicines	1,43,493	1,40,863	-2%	1,82,115	29%
Free Diet	1,43,493	1,40,863	-2%	1,30,682	-7%
Free Diagnostics	1,43,493	1,40,863	-2%	1,82,115	29%
Free Home to facility transport	0	0	0%	0	0%
Inter facility transfers when needed	1,069	1,290	21%	1,426	0%
Free Drop Back home	0	0	0%	0	0%

Inference:

- 2018-19 shows a small decrease (of 2%) in the number of pregnant women provided free medicines and diagnostics under the scheme, while this number increased in 2019-20 by 29%. This increase is a good sign, and this number must be maintained and proportionally increased annually in order to ensure all pregnant women receive adequate and quality healthcare and nutrition.
- Number of infants provided free medicine and diagnostics is much lower than the services provided to pregnant women although it has increased from 2017-18 to 2019-20.

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 in accordance with the provisions of the National Food Security Act, 2013[59] with the aim 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 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 are in receipt of 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.

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

4.6 Rashtriya Bal Swasthya Karyakram

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 7) receive follow up including surgeries at tertiary level, free of cost under the NHM. The newborns 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)[60].

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.

Implementation Status in Mumbai:

Table 30: Screening of Children under RBSK from 2017-18 to 2019-20

Indicators	2017-18	2018-19	2019-20
Number of new-born screened for defects at birth (as per RBSK)	0	55,595	57,963
Number of children screened by RBSK mobile health teams at Anganwadi	4,148	2,68,755	2,53,928
Number of children screened by RBSK mobile health teams at Government and Government aided schools	42,155	2,27,778	1,71,119
Number of children with disease/deficiency/developmental delay	2006	13,408	12,152
Number of Children provided Medical Intervention	706	6,542	4,952
Number of Children provided Surgical Intervention	1	35	66

Inference:
The number of children screened under RBSK has increased from 42,155 children in 2017-18 to 1,71,119 in 2019-20, while the percent of children with identified disease or deficiency also increased from 5% to 7% in the same period. 41% of the children identified were given medical/surgical intervention in 2019-20 up from 35% in 2017-18.

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

Table 31: Total deaths from Age 0 to 19 in Mumbai from 2016 to 2018

Year	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
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

Table 32: Major Causes of deaths from Age 0 to 19 in 2018

Causes of Death	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)	923	0	0	0	0	923
All Other Conditions Originating in the Perinatal Period (P00-P04, P29-P54, P56-P57, P60-P96)	698	0	0	0	0	698
Congenital Malformations of the Circulatory System (Q20-Q28, Q31)	421	77	21	20	15	554
Cleft Lip and Cleft Palate (Q35-Q37)	1	0	0	0	0	1
Event of undetermined Intent (Y10-Y34)	0	0	1	0	0	1
Tuberculosis(A15-A19)	14	25	36	74	236	385
Pneumonia (J12-J18)	273	84	26	28	26	437
All Other Congenital Malformations, Deformations and Chromosomal Abnormalities Not Elsewhere (Q18, Q32-Q34, Q38-Q99)	248	25	7	5	3	288
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)	18	26	20	33	164	261
All other diseases of the nervous system (G10-G25, G31, G35-G37, G43-G98)	56	37	32	34	42	201
Septicaemia(A40-A41)	106	35	10	7	13	171
Dengue Fever (A90)	2	11	18	15	17	63
Diarrhoea (A09)	45	17	5	1	4	72
Other Viral Hepatitis (B15, B17-B19)	0	2	3	5	5	15
Human Immuno-deficiency Virus (HIV) (B20-B24)	2	0	2	12	18	34
Other protein-energy malnutrition (E42-E46)	11	14	3	1	2	31
Diabetes mellitus (E10-E14)	4	4	1	2	4	15
Malaria (B50-B54)	0	5	0	0	3	8
Hypertension (I10-I15)	0	1	1	0	3	5

Causes of Death	Upto 1 year	1-4 years	5 - 9 years	10 -14 years	15 -19 years	Total 0-19 years
Typhoid (A01)	0	0	1	1	1	3
Acute Myocardial infarction (I21-I22)	0	1	0	1	3	5
Nutritional marasmus (E41)	0	0	0	0	0	0
All other nutritional deficiencies (E50-E64)	0	1	0	0	0	1
Acute Poliomyelitis (A80)	0	0	0	1	0	1
Kwashiorkor (E40)	0	0	0	0	0	0
Cholera(A00)	0	0	0	0	0	0
Acute Hepatitis B (B16)	0	0	0	0	1	1
Acute rheumatic fever and chronic rheumatic heart diseases (I00-I09)	1	0	1	5	10	17
Convulsions not Elsewhere Classified (R56)	1	0	0	0	0	1
Other Anaemias (D50-D55, D57-D64)	19	15	12	11	23	80
Other Causes	721	426	321	380	956	2,804
Total Deaths	**3,564**	**806**	**521**	**636**	**1,549**	**7,076**

Inference:

Of the major causes of death among children in the age of 0 to 19, congenital diseases, malnutrition, anemias and rheumatic diseases (988 deaths in total) are included in RBSK. However substantial deaths caused due to other diseases such as tuberculosis, pneumonia, septicemia and nervous disorders (1,194 deaths) apart from Hypoxia, Asphyxia and other Conditions Originating in the Perinatal Period that mainly affect infants (1,621 deaths) have not been included.

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 MCGM 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[61].

Objectives:
1. Medical Inspection (Primary Screening) of students. Every year each Medical unit is allotted 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 clinic in hospitals
3. To ensure that follow up treatments of referred students are conducted (especially those with major problems who require treatment for 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

[61] 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 33: Number of diseases/ailments found in Health Check-ups in Municipal Schools from 2017-18 to 2019-20

Diseases/Ailments	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Dental Caries	1,10,039	96,658	-12%	68,668	-29%
Dental Others	23,444	18,710	-20%	13,334	-29%
Scabies	948	1,063	12%	797	-25%
Leprosy (New)	9	4	-56%	4	0%
Skin Other	21,240	19,612	-8%	12,851	-34%
Lymphadenopathy	7,168	4,466	-38%	2,452	-45%
Speech	1,939	1,728	-11%	1,182	-32%
Eye Conditions	5,393	5,148	-5%	4,559	-11%
Eye (Defective Vision)/ Refractory error	15,283	13,590	-11%	13,192	-3%
Otorrhoea	1,712	1,590	-7%	1,101	-31%
Ear Other defects	24,976	23,478	-6%	14,038	-40%
Nose Defects	15,212	15,279	0%	10,671	-30%
Thyroid	40	49	23%	21	-57%
Throat Other Defects	6,355	4,174	-34%	3,181	-24%
Splenomegaly	2	3	50%	1	-67%
Vitamin A Deficiency	3,166	2,212	-30%	760	-66%
Night blindness	2	7	250%	2	-71%
Vitamin B,C,D Deficiency	2,422	1,652	-32%	1,371	-17%
Rheumatic Heart Disease (RHD) (New)	9	3	-67%	2	-33%
Heart and Circulation	253	284	12%	239	-16%
TB (New)	187	179	-4%	102	-43%
Lung Other Defects	4,134	2,219	-46%	872	-61%
Orthopaedic Defects	1,283	1,317	3%	979	-26%
Nervous Defects	NA	NA	NA	345	NA
Polio Deformity	0	0	NA	NA	NA
Mental Defects	1,338	1,646	23%	1,023	-38%
Pallor	8,140	3,106	-62%	5,566	79%
Anemia	NA				
Underweight	11,720	7,383	-37%	7,512	2%
Overweight	NA	1,421	NA	191	-87%
Worms	2,191	894	-59%	1375	54%
Other Defects	18,857	18,198	-3%	31,498	73%
Total Defects	2,87,462	2,46,073	-14%	1,97,889	-20%
Total No. of students Examined	2,32,706	2,26,066	-3%	1,74,464	-23%

Inference:

- The number of students screened has reduced by 23% from 2018-19 to 2019-20.
- 68,668 students out of the 1,74,464 students examined (39%) had dental caries in 2019-20.
- 760 students had a Vitamin A deficiency, and 1,371 had Vitamin B, C, D deficiency in 2019-20, all of which are primarily caused due to nutritional deficiencies in diet.
- 5,566 cases of anemia were detected in 2019-20, a 79% increase from 2018-19.
- While 7,512 students were reported underweight, 191 were reported overweight in 2019-20, reflecting the double burden of nutrition.
- The School Health Checkup in 2018-19 also reported 179 new tuberculosis cases and 284 cases related to heart and circulation in 2018-19.

4.8 Urban Reproductive and Child Health Programme

Year:
1997

Background:
The Reproductive Health and Child Health Programme seeks 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, counseling, 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 34: Reproductive Tract /Sexually Transmitted Infections (RTI/STI) Cases in Mumbai from 2017-18 to 2019-20

RTI/STI Cases		2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Male	Identified	12,972	15,703	21%	11,406	-27%
	Treatment Initiated	11,441	13,257	16%	11,327	-15%
Female	Identified	24,669	29,280	19%	27,566	-6%
	Treatment Initiated	20,558	25,318	23%	27,502	9%
Total	Identified	37,641	44,983	20%	38,972	-13%
	Treatment Initiated	31,999	38,575	21%	38,829	1%

Inference:

- 67% of the total RTI/STI cases on an average (from 2017-18 to 2019-20) were reported in females showing that the burden of sexually transmitted infections is highly skewed, and has direct relation to the kind of contraceptives used.
- The number of STI cases has also increased in females from 24,669 in 2017-18 to 27,556 in 2019-20 while it has decreased for males from 12,972 to 11,406 in the same period.
- On an average treatment was initiated for males in 91% of the cases and for females in 90% of the cases from 2017-18 to 2019-20.

Table 35: Family planning methods (Female) from 2017-18 to 2019-20[62]

Family Planning Female	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of Interval IUCD Insertions (excluding PPIUCD and PAIUCD)	38,064	35,411	-7%	29,699	-16%
Number of Postpartum (within 48 hours of delivery) IUCD insertions	8,444	8,438	-0.1%	8,510	1%
Number of Post Abortion (within 12 days of spontaneous or surgical abortion) IUCD insertions	1,078	1,195	11%	1,395	17%
Number of IUCD Removals	3,105	4,021	30%	4,399	9%
Number of complications following IUCD Insertion	148	125	-16%	196	57%
Injectable Contraceptive-Antara Program- First Dose	4,084	2,993	-27%	1,552	-48%
Injectable Contraceptive-Antara Program- Second Dose	1,013	1,192	18%	600	-50%
Injectable Contraceptive-Antara Program- Third Dose	338	783	132%	315	-60%
Injectable Contraceptive-Antara Program- Fourth or more than four	0	765	-	496	-35%
Number of Combined Oral Pill cycles distributed	3,20,610	3,68,930	15%	3,74,090	1%
Number of Emergency Contraceptive Pills (ECP) given	574	522	-9%	1,928	269%
Number of Centchroman (weekly) pill strips distributed	532	1,423	167%	5,746	304%
Number of Tubectomies	20,750	19,263	-7%	17,659	-8%
Failures following female sterilization	11	11	0%	4	-64%
Deaths following female sterilization	2	0	-100%	0	0%

Table 36: Family planning methods (Male) from 2017-18 to 2019-20

Family planning: Male	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of Condom pieces distributed	59,78,295	53,72,124	-10%	39,19,138	-27%
Number of Non Scalpel Vasectomy (NSV) / Conventional Vasectomy conducted	914	185	-80%	116	-37%
Failures following male sterilization	0	0	0%	0	0%
Deaths following male sterilization	0	0	0%	0	0%

[62] Refer Annexure 10 for details of each of the contraceptive methods

Inference:

- With regards to family planning interventions for women, IUCD insertions (excluding PPIUCD and PAIUCD) show a decrease of 16% from 2018-19 to 2019-20 and Antara dosages showed an average decrease of 48%, whereas there was a 269% increase in the number of emergency contraceptive pills (ECP) distributed.
- Male contraceptive interventions also showed a decrease of 37% from 2018-19 to 2019-20. The number of condom pieces distributed in 2019-20 also dropped by 27%.
- The increase in ECP with a simultaneous fall in condoms distributed shows that the former is being promoted although condoms are a much safer option.

Table 37: Percentage of female contraceptive interventions to male contraceptive interventions from 2017-18 to 2019-20

Total Contraceptives by Gender	2017-18	2018-19	2019-20
Total contraceptives	74,685	70,225	60,342
Female contraceptives total	73,771	70,040	60,226
Percentage of female contraceptive interventions	98.78%	99.74%	99.81%
Male contraceptives total	914	185	116
Percentage of male contraceptive interventions	1.22%	0.26%	0.19%

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

Inference:

Even with the decrease in female contraceptive interventions, they made up to an average of 99.44% of all family planning interventions from 2017-18 to 2019-20, whereas male contraceptive interventions only made up 0.56% of the total.

Table 38: Adolescent health interventions in Mumbai from 2017-18 to 2019-20

Adolescent Health	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Girls (6th -12th class) provided 4 IFA tablets in schools	1,84,153	2,72,390	48%	1,57,298	-42%
Boys (6th -12th class) provided 4 IFA tablets in schools	1,82,474	2,77,118	52%	1,56,537	-44%
Girls (6th -12th class) provided albendazole in schools	1,01,733	80,499	-21%	0	-100%
Boys (6th -12th class) provided albendazole in schools	1,01,091	80,068	-21%	0	-100%
Number of out of school adolescent girls (10-19 years) provided 4 IFA tablets at Anganwadi Centres	3,65,968	2,60,180	-29%	2,10,853	-19%
Number of out of school adolescent girls (10-19 years) provided albendazole at Anganwadi Centres	49,000	2,99,542	511%	0	-100%
Number of adolescent girls provided sanitary napkin packs	0	0	0%	0	0%
Number of sanitary napkin packs sold to adolescent girls	0	0	0%	0	0%
Number of sanitary napkin packs distributed free to ASHA	0	0	0%	0	0%
Number of adolescent girls attended monthly meeting	5,961	0	-100%	0	0%

Inference:

- With regards to adolescent health, there has been a decline in the number of adolescents provided with IFA (iron) tablets in schools, by 14% from 2017-18 to 2019-20 and albendazole (for preventing worms) fell from 2,02,824 students in 2017-18 to zero in 2019-20.
- The number of free sanitary pads being distributed is also 0. Moreover, in 2018-19, the number of adolescent girls who attended monthly medical meetings also dropped to a complete 0.
- Focus needs to be given to improve adolescent health and provide counselling and interventions during that formative stage. Moreover, free sanitary pads must be provided to adolescent girls and to ASHA's who provide them to adolescent girls as sanitary pads are a necessary commodity, and not an optional one.

Table 39: Medical Termination of Pregnancy (MTP) in Mumbai from 2017-18 to 2019-20

MTP	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
MTP up to 12 weeks of pregnancy	24,874	22,585	-9%	18,623	-18%
MTP more than 12 weeks of pregnancy	3,383	1,356	-60%	1,643	21%
Post Abortion/ MTP Complications Identified	21	20	-5%	7	-65%
Post Abortion/ MTP Complications Treated	21	6	-71%	3	-50%
Number of women provided with post abortion/ MTP contraception	2,828	2,564	-9%	2,742	7%

Inference:

- With respect to 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.

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 policy making and implementation agencies of major polices implemented in Mumbai.

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

POLICY MAKING POLICY 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]

Current status: ***HMIS reports show that out of total pregnant women registered for ante-natal care, 54% reported anemic (less than 11g/dl) in 2019-20.***

KEY FINDINGS[2]

- *The number of pregnant women tested positive for moderate anemia showed an increase of 32% from 2017-18 to 2019-20. While the number of women tested positive for severe anemia decreased by 6% in the same period. However, when compared to the total pregnant women registered for ANC the number of anemic cases was very high – 54% in 2019-20.*
- *The number of Anganwadi Workers (AWW) in position dropped from 5,041 in 2017-18 to 4,977 in 2018-19 to 4,925 in 2019-20.*
- *The number of severely underweight children increased from 2,519 in 2017-18 to 4,233 in 2019-20 and so has proportion to total children weighed (from 0.94% to 1.48%).*

RECOMENDATIONS

- *As has been mentioned by the NHP 2017, supplementation although necessary as an immediate intervention is not a replacement for nutritious and macronutrient rich food. Nutritional schemes therefore need to include a nutritional counselling component.*
- *Food supplements need to be focussed upon such as iron rich food for tackling anemia which needs to be incorporated as components in the overall food security policies.*

[1] SDG India Index, Niti Aayog [2] Key findings are from ICDS Monthly Progress Reports and HMIS

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)[63] data suggests that anemia is widely prevalent among all age groups, and is particularly high among the most vulnerable – nearly 58 per cent among pregnant women, 50 percent among non-lactating women, 56 per cent among adolescent girls (15–19 years), 30 per cent among adolescent boys and around 80 per cent among children under 3 years of age and 70% below 5 years of age[64]. 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[65]. 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 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 per cent.
(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[66]

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

Beneficiaries:

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

Implementation Status in Mumbai:

Table 40: IFA tablets provided under Weekly Iron and Folic Acid Supplementation Programme from 2017-18 to 2019-20

WIFS	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of children covered under WIFS JUNIOR (6 - 10 years) provided 4-5 IFA tablets in schools	3,46,834	5,87,416	69%	10,76,810	83%
Number of out of school children (6-10 years) given 4-5 IFA tablets at Anganwadi Centres	1,67,716	4,32,002	158%	10,93,056	153%

Table 41: Anemia prevalence rate and interventions from 2017-18 to 2019-20

Anemia	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of Hb tests conducted	14,13,094	17,33,436	23%	16,79,665	-3%
Out of the total number of Hb tests done, Number having Hb < 7 mg	61,117	81,890	34%	1,05,422	29%
Number of children (6-59 months) provided 8-10 doses (1ml) of IFA syrup (Bi weekly)	12,299	40,118	226%	1,80,362	350%
Number of mothers provided full course of 180 IFA tablets after delivery	85,058	1,02,812	21%	1,03,464	1%
Number of PW given 180 Iron Folic Acid (IFA) tablets	1,88,352	1,87,817	-0.3%	1,60,879	-14%
Girls (6th -12th class) provided 4 IFA tablets in schools	1,84,153	2,72,390	48%	1,57,298	-42%
Boys (6th -12th class) provided 4 IFA tablets in schools	1,82,474	2,77,118	52%	1,56,537	-44%
Number of out of school adolescent girls (10-19 years) provided 4 IFA tablets at Anganwadi Centres	3,65,968	2,60,180	-29%	2,10,853	-19%

Inference:

- While the number of tests conducted for anemia has increased by 23% from 2017-18 to 2018-19 this number has decreased by 3% from 2018-19 to 2019-20.
- Individuals tested positive for severe anemia has increased by 34% and 29% respectively from 2017-18 to 2018-19 and 2018-19 to 2019-20.

Table 42: Incidence of anemia in pregnant women from 2017-18 to 2019-20

Anemia in Pregnant Women	2017-18	2018-19	% change from 2017-18 to 2018-19	2019-20	% change from 2018-19 to 2019-20
Number of PW registered for ANC	2,83,307	2,20,969	-22%	1,91,247	-13%
Number of PW having moderate Anemia	73,752	1,06,378	44%	97,385	-8%
Number of PW having severe Anemia	5,381	5,967	11%	5,082	-15%
% of PW with anemia to total PW registered	28%	51%	23%	54%	3%
Number of PW treated having severe anemia	2,941	4,741	61%	4,778	1%
Number of PW with hypertension	5,605	6,994	25%	7,095	1%

Note: 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[67].

Table 43: Age wise number of deaths caused due to anemia in Mumbai from 2016 to 2018

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)	**2016**	56	51	83	125	611	926
	2017	44	55	79	115	486	779
	2018	34	55	69	95	511	764

Inference:

- The number of pregnant women tested positive for moderate anemia showed an increase of 32% from 2017-18 to 2019-20. While the number of women tested positive for severe anemia decreased by 6% in the same period.
- However, when compared to the total pregnant women registered for ANC the number of anemic cases was very high 54% in 2019-20.
- Total deaths related to anemia have reduced although the number is quite high at 764 in 2018. Anemia related deaths in the child and adolescent age (5 to 19 years) have marginally increased from 51 in 2016 to 55 in 2018.

[67] 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

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[68]. 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.

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

Implementation Status in Mumbai:

Table 44: ICDS Coverage from 2017-18 to 2019-20

Indicators		2017-18	2018-19	2019-20
SNP Coverage	6-35 Months	89,781	93,000	1,19,536
	36-71 Months	162,753	1,66,909	1,66,821
	Pregnant women	10,249	9,856	13,570
	Lactating mother	12,203	11,939	15,556
PSE Coverage (36-71 month attended for 16 or more days)	Girls	63,886	67,915	70,522
	Boys	64,182	69,455	71,461
Nutritional Status (0-5 Years Children)	Total Children Weighed	2,65,554	2,86,992	2,86,041
	Normal Grade	2,18,569	2,38,143	2,37,594
	Moderately underweight	44,466	46,136	44,214
	Severely underweight	2,519	2,713	4,233

Table 45: ICDS personnel in Mumbai from 2017-18 to 2019-20

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
2017-18	5,130	5,130	33	21	206	140	5,130	5,041	5,130	4,376
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

Inference:

- The number of Anganwadi Workers (AWW) in position dropped from 5,041 in 2017-18 to 4,977 in 2018-19 to 4,925 in 2019-20.
- The number of severely underweight children increased from 2,519 in 2017-18 to 4,233 in 2019-20 and so has proportion to total children weighed (from 0.94% to 1.48%).

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 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 has an adverse impact on learning levels[69]. 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 with the objective to boost Universalisation of Primary Education' by increasing enrolment, retention and attendance and simultaneously impacting on 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 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.

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

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 policy making and implementation agencies of major polices implemented in Mumbai. Please note that the insurance policies that have been subsumed due to Ayushman Bharat and those that are made and implemented by other state governments.

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

POLICY MAKING POLICY IMPLEMENTATION

KEY FINDINGS[1]

- *A survey conducted by Praja commissioned to Hansa research in 2019 showed that of the 27% who were aware of any government health insurance scheme, 78% knew of Ayushman Bharat Scheme while 46% were aware of Mahatma Jyotiba Phule Jan Aarogya Yojana.*
- *Of the respondents who were aware of Ayushman Bharat Scheme scheme, 35% had enrolled of which 22% had availed the scheme. While for Mahatma Jyotiba Phule Jan Aarogya Yojana 47% had enrolled of which 53% had availed of the insurance.*

RECOMENDATIONS

- *Insurance schemes are mainly focused on hospitalisation and tertiary care ignoring the regular out of pocket expenditure incurred by families that do not require hospitalisation. Although Ayushman Bharat envisioned primary healthcare through Health and Wellness Centres, instead of creating new health units it is important to upgrade and improve services of the existing dispensaries and primary health care system. It is therefore important to create mechanisms for stronger preventive and primary health care systems that act as the first line of defense to prevent catastrophic heath events.*

[1] Data is from a household survey of conducted by Praja commissioned to Hansa Research in 2019.

6.1 Ayushman Bharat- Pradhan Mantri Jan Aarogya Yojana

Year:
2018

Background:
Ayushman Bharat, a flagship scheme of 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)[70] Pradhan Mantri Jan Arogya Yojana (PM-JAY)[71]

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, the 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 Maharashtra 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 own health insurance schemes with a set of beneficiaries already identified. Thus, States have been provided the flexibility to use their own database

[70] https://ab-hwc.nhp.gov.in/
[71] https://pmjay.gov.in/

for PM-JAY. However, they will need to ensure that all the families eligible based on the SECC database are also covered. (Refer Annexure 11 for other Exclusions and Inclusions)

Implementation Status in Mumbai:

Table 46: Awareness, enrollment and availing of PMAY SEC wise in 2019

Ayushman Bharat	SEC A	SEC B	SEC C	SEC D	SEC E	Overall
Not aware of any Government Health Insurance Scheme	71%	74%	73%	72%	74%	73%
Aware of any Government Health Insurance Scheme	29%	26%	27%	28%	26%	27%
Out of those aware of any scheme, % of respondents' Ayushman Bharat Scheme Awareness	80%	78%	83%	75%	75%	78%
Of those aware of the scheme, % of respondents enrolled in the scheme	43%	33%	30%	36%	36%	35%
Of those who enrolled in the scheme, % of respondents who availed the scheme	26%	21%	18%	29%	14%	22%

Inference:

- Of the 27% who were aware of any government health insurance scheme, 78% knew of Ayushman Bharat Scheme.
- Of the newly launched Ayushman Bharat Scheme, out of the respondents who were aware of the scheme, 35% had enrolled of which 22% had availed the scheme.
- While the inclusions mentioned in Ayushman Bharat are nearly all encompassing and seek to cover a wide section of the population, it does not address the problem of the lack of Primary Health Care. While creating HWC's is an admirable target, the lack of PHCs has been ignored, and goes against the NHP 2017 goal of providing "Primary Preventive" care to all.

6.2 Mahatma Jyotiba Phule Jan Aarogya Yojana

Year:

2012

Background:

The State Government of Maharashtra launched its flagship health insurance scheme, Mahatma Jyotiba Phule Jan Aarogya Yojana (MJPJAY)[72] (previously known as the Rajiv Gandhi Jeevandayee Arogya Yojana) in 2012 in 8 districts of Maharashtra and later on introduced it to the remaining 28 districts of Maharashtra. The Scheme provides coverage for meeting all expenses relating to hospitalisation of beneficiary up to Rs. 1,50,000 per family per year in any of the Empaneled Hospital subject to Package Rates on cashless basis.

Objectives:

To improve access of Below Poverty Line (BPL) and Above Poverty Line (APL) families (excluding White Card Holders as defined by Civil Supplies Department) to quality medical care for identified specialty services requiring hospitalisation for surgeries and therapies or consultations through an identified Network of health care providers.

Target:

No specific target is mentioned

Beneficiaries:

The insurance policy/coverage under the MJPJAY can be availed by eligible beneficiary families residing in all the 36 districts of Maharashtra and holding Yellow Ration Card, Antyodaya Anna Yojana Card (AAY), Annapurna Card and Orange Ration Card along with Farmers from 14 agriculturally distressed districts of Maharashtra.

Implementation Status in Mumbai:

Table 47: Awareness, enrollment and availing of MJPJAY SEC wise in 2019

Name of Government Insurance Scheme	SEC A	SEC B	SEC C	SEC D	SEC E	Overall
Not aware of any Government Health Insurance Scheme	71%	74%	73%	72%	74%	73%
Aware of any Government Health Insurance Scheme	29%	26%	27%	28%	26%	27%
Out of those aware of any scheme, % of respondents' Awareness for MJPJAY	51%	43%	44%	48%	46%	46%
Of those aware of the scheme, % of respondents enrolled in the scheme	56%	53%	45%	39%	49%	47%
Of those who enrolled in the scheme, % of respondents who availed the scheme	54%	53%	51%	50%	55%	53%

Inference:

Of the 27% who were aware of any government health insurance scheme, 46% were aware of Mahatma Jyotiba Phule Jan Aarogya Yojana. Of the respondents who were aware of the scheme, 47% have enrolled in Mahatma Jyotiba Phule Jan Aarogya Yojana of which 53% have availed of the insurance.

[72] https://www.jeevandayee.gov.in/MJPJAY/FrontServlet?requestType=CommonRH&actionVal=RightFrame&page=undefined%3E%3E%3Cb%3EMJPJAY%3C/b%3E&pageName=MJPJAY&mainMenu=About&subMenu=MJPJAY

VII. Deliberations by Municipal Councillors on Health in Mumbai

Table 48: Total of Meetings, Attendance and Questions from 2017-18 to 2019-20 of Councillors in MCGM Public Health Committee

Year	Total Meetings	Attendance (%)	Total Questions Asked
2017-18	13	70%	154
2018-19	16	68%	159
2019-20	23	69%	105

Inference:
Although the number of meetings increased from 16 in 2018-19 to 23 in 2019-20, the number of questions asked by the Councillors in Public Health Committee decreased from 159 in 2018-19 to 105 in 2019-20.

Table 49: Health issues raised by Public Health Committee Councillors from 2017-18 to 2019-20

Issues	2017-18	2018-19	2019-20
Total Questions asked	**154**	**159**	**105**
Budget	1	1	1
Bio medical Waste	0	1	1
Cemeteries /Crematorium related	4	8	2
Epidemic/Sensitive Diseases	3	10	2
Malaria/Dengue	1	1	0
Diabetic/Hypertension	0	0	0
Diarrhoea/Typhoid/Cholera	0	1	0
Tuberculosis	2	7	0
Dispensary/Municipal Hospital/State Hospital	4	0	16
Equipment	6	4	4
Eradication programme	0	0	0
Fogging	0	0	0
Health Education/institute	2	0	0
Health related	4	5	3
Health Service Related	4	22	16
Human Resource	28	25	15
Infrastructure	41	31	10
License Related	4	3	0
Maternity homes / Primary Health Centre(PHC)	13	14	6
MCGM Related	2	1	1
Mortality rate	0	0	0
Medical Examination of Students	0	0	0
Naming/ Renaming Hospital/Health Centre/Cemeteries	12	17	17
Nuisance due to Pest Rodents, stray dogs, monkeys etc.	2	0	0
Pest Control Related	2	0	0
Private Health Services	1	1	0
Quacks	0	0	0
Reforms in health policies	0	0	0
Schemes / Policies in Health Related	7	10	4
Treatment/Medicines	14	10	7

(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:

Most issues in Public Health Committee from April 2019 to March 2020 were raised on renaming of hospitals and health centres (17), whereas not even a single issue/question was raised on diseases like diabetes, tuberculosis, etc. which have led to the highest deaths in the city.

Table 50: Ward-Wise Number of Questions asked on Health by Municipal Councillors in All Committees from 2017-18 to 2019-20

Ward	No. of Councillors	2017-18	2018-19	2019-20
A	3	0	2	5
B	2	0	0	0
C	3	3	2	2
D	6	6	2	10
E	7	22	16	7
F/N	10	14	28	24
F/S	7	13	14	8
G/N	11	10	23	18
G/S	7	21	40	23
H/E	10	10	14	17
H/W	6	3	3	4
K/E	15	12	14	21
K/W	13	28	28	26
L	16	93	75	48
M/E	15	23	19	21
M/W	7	17	12	15
N	11	8	16	10
P/N	18	35	26	25
P/S	9	13	8	12
R/C	10	18	13	12
R/N	8	24	25	13
R/S	13	36	25	9
S	14	10	15	11
T	6	16	15	6
Total	**227**	**435**	**435**	**347**

Inference:

- Questions asked by the Councillors on health related issues decreased drastically from 435 in 2018-19 to 347 in 2019-20. Councillors from L ward asked the highest number of health related questions (48) while those from B ward asked none, in 2019-20.
- 30% of total health questions (105 out of 347) were raised in the Public Health Committee.

Table 51: Health issues raised by Municipal Councillors in All Committees from 2017-18 to 2019-20

Issues	2017-18	2018-19	2019-20
Total Questions asked	**435**	**435**	**347**
Budget	1	1	1
Bio medical Waste	5	2	1
Cemeteries / Crematorium related	15	21	10
Compensation/Rehabilitation	0	0	1
Epidemic/Sensitive Diseases	57	75	61
Malaria/Dengue	18	*19*	*20*
Tuberculosis	8	*26*	*21*
Diarrhoea/Typhoid/Cholera	0	*1*	*4*
Diabetes/Hypertension	5	*2*	*3*
Dispensary/Municipal Hospital/State Hospital	12	9	27
Equipment	9	7	4
Eradication programme	2	0	0
Fogging	23	15	26
Health related	66	35	52
Human Resource	42	52	28
Health Service Related	13	49	35
Health Education/Institute Related	2	1	1
Infrastructure	57	59	19
Issue of Birth/Death certificates	1	3	4
License Related	15	12	10
Maternity homes / Primary Health Centre(PHC)	34	29	12
MCGM related	2	1	3
Mortality rate	3	0	0
Naming/ Renaming Hospital/Health Centre/Cemeteries	13	27	20
Nuisance due to Pest Rodents, stray dogs, monkeys etc.	8	4	0
Private health services	1	1	1
Reforms in health policies	3	1	0
Schemes / Policies in Health	25	27	20
Vaccination	0	0	1
Treatment/Medicines	26	26	10

(**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:

More issues were raised on diseases like dengue/malaria (20), tuberculosis (21) and diabetes/hypertension (3) in other committees than public health committee in 2019-20.

VIII. 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		

Sr. No.	Ward	Municipal Dispensaries	Sr. No.	Ward	Municipal Dispensaries
1	A	Colaba Municipal Dispensary	96	K/W	Banana Leaf Dispensary*
2	A	Head Office (H.O.) Dispensary	97	K/W	Juhu Dispensary
3	A	Maruti Lane Dispensary	98	K/W	Millat Nagar Dispensary*
4	A	Saboo Siddhique Road Dispensary, Paltan Road (S.S. Road)	99	K/W	N.J. Wadiya Dispensary
5	A	Shahid Bhagat Singh Road Dispensary	100	K/W	Oshivara Dispensary
6	B	Jail Road Municipal Dispensary	101	K/W	Vileparle Market Dispensary
7	B	Jail Road Unani Dispensary	102	K/W	Varsova Dispensary
8	B	Kolsa Mohalla Unani Dispensary	103	L	Asalpha Village Dispensary
9	B	S.V.P. Road Municipal Dispensary	104	L	Bail Bazar Mun. Dispensary
10	B	Walpakhadi Muncipal Dispensary	105	L	Bibi Fatima Municipal Dispensary
11	C	Chandanwadi Dispensary	106	L	Budda Colony Dispensary
12	C	Duncan Road Dispensary	107	L	Chandivali M.N.P. Dispensary
13	C	Ghogari Mohalla Dispensary	108	L	Christain Municipal Dispensary*
14	C	Panjarapol Mun. Dispensary	109	L	Chunnabhatti Dispensary
15	C	Thakurdwar Dispensary	110	L	Himalaya Society Municipal Dispensary*
16	D	Banganga Municipal Dispensary	111	L	Kajupada Muncipal Dispensary
17	D	Nana Chowk Dispensary	112	L	Mohill Village Dispensary
18	D	R.S. Nimkar Marg Dispensary	113	L	Nahar Amrut Shakti Dispensary
19	D	Raja Rammohan Roy Marg Dispensary (R.R.R Marg)	114	L	Nehru Nagar Dispensary
20	D	Tardeo Flat Municipal Dispensary	115	L	Qureshi Nagar Dispensary
21	D	Tulsiwadi Dispensary (Bane Compound)	116	L	Safad Pool Dispensary
22	E	D.P.Wadi Municipal Dispensary	117	L	Tilak Nagar Dispensary
23	E	ES Pathanwala Municipal Dispensary	118	M/E	Anik Nagar Dispensary*
24	E	Gaurabhai Dispensary	119	M/E	Ayodhya Nagar Dispensary
25	E	Huzaria Street Dispensary	120	M/E	Deonar Colony Dispensary
26	E	Motishah Dispensary	121	M/E	Gavanpada Dispensary
27	E	N.M. Joshi Marg Dispensary	122	M/E	Kamala Raman Nagar Municipal Dispensary/Baiganwadi Dispensary
28	E	R.J. Compound Dispensary*	123	M/E	Lallubhai Compound Municipal Dispensary*
29	E	Siddarth Nagar Dispensary	124	M/E	Maharashtra Nagar Municipal Dispensary
30	E	Souter Street Dispensary*	125	M/E	R.B.K. International Municipal Dispensary*
31	E	Tadwadi Municipal Dispensary	126	M/E	L.U Gadkar Vashi Naka Dispensary

Sr. No.	Ward	Municipal Dispensaries	Sr. No.	Ward	Municipal Dispensaries
32	E	Tank Square Garden Municipal Dispensary	127	M/E	New Bainganwadi Dispensary
33	E	Nawab Tank Dispensary	128	M/E	Trombay Municipal Dispensary
34	E	Hakim Ajmal Khan Unani/Souter Street Municipal Dispensary	129	M/W	Chembur Colony Dispensary
35	F/N	Antop Hill Municipal Dispensary	130	M/W	Chembur Naka Municipal Dispensary*
36	F/N	Korba Mithagar Dispensary	131	M/W	Labour Camp Dispensary
37	F/N	L. B. Shastri Dispensary	132	M/W	Lal Dongar Dispensary
38	F/N	Raoli Camp Dispensary	133	M/W	Mahul Dispensary
39	F/N	Transit Camp Dispensary*	134	M/W	Mahul SRA Dispensary
40	F/N	Wadala Dispensary	135	N	Kirol Dispensary
41	F/N	New Transit Camp Municipal Dispensary	136	N	Pant Nagar Dispensary
42	F/S	A.D. Marg Dispensary	137	N	Parksite Dispensary
43	F/S	Abhuyday Nagar Dispensary	138	N	Parshiwadi Dispensary
44	F/S	Ambewadi Dispensary	139	N	Ramabai Colony Dispensary
45	F/S	Gautam Nagar Dispensary	140	N	Sainath Nagar Dispensary
46	F/S	Kidwai Nagar Dispensary*	141	N	Sarvodaya Pantnagar Dispensary*
47	F/S	Naigaon Dispensary	142	N	B. Nath Pai Nagar, Garodia Nagar Dispensary (Started from June 2017)*
48	F/S	Parel Dispensary	143	P/N	Choksey Municipal Dispensary
49	F/S	Sewree Cross Road Dispensary	144	P/N	Goshala Municipal Dispensary
50	F/S	Triveni Sadan Dispensary	145	P/N	Kurar Village Municipal Dispensary
51	G/N	Dharavi Main Road Dispensary*	146	P/N	Malvani Municipal Dispensary
52	G/N	Dharavi Transit Camp Dispensary	147	P/N	Manori Dispensary
53	G/N	Gulbai Dispensary	148	P/N	Nimani Municipal Dispensary
54	G/N	Kumbharwada Dispensary	149	P/N	Pathanwadi Dispensary
55	G/N	Matunga Labour camp Dispensary	150	P/N	Rathodi Village Dispensary
56	G/N	Pilla Bunglow Dispensary	151	P/N	Riddhi Garden Mun Dispensary*
57	G/N	Shahu Nagar Dispensary	152	P/N	School Road Municipal Dispensary
58	G/N	Welfare Camp (Shri Cinema) Dispensary	153	P/N	Valnai Municipal Dispensary
59	G/N	Welkarwadi Dispensary	154	P/S	Chincholi Square Garden Dispensary*
60	G/S	B.D.D. Chawl Dispensary	155	P/S	Topiwala Lane Dispensary
61	G/S	Beggar Home Dispensary	156	P/S	Sundar Nagar Municipal Dispensary
62	G/S	Curry Road Dispensary	157	R/C	Charkop Sector 5 Dispensary
63	G/S	Fergusson Road Dispensary	158	R/C	Eksar Road Dispensary*
64	G/S	Jijamata Nagar K. Moses Dispensary	159	R/C	Gorai MHADA Dispensary

Sr. No.	Ward	Municipal Dispensaries	Sr. No.	Ward	Municipal Dispensaries
65	G/S	Maharashtra High school Compound Dispensary	160	R/C	Gorai Village Dispensary
66	G/S	Prabhadevi Dispensary	161	R/C	K.K. Municipal Dispensary
67	G/S	Prbhadevi Ayurvedic Municipal Dispensary	162	R/C	Kajupada Dispensary
68	G/S	Sasmira Dispensary	163	R/C	M.H.B. Dispensary
69	G/S	Senapati Bapat Marg, Hilly Cross, 633 Dispensary	164	R/C	Magathane Dispensary
70	G/S	Welfare Center Dispensary	165	R/N	Anand Nagar Municipal Dispensary*
71	G/S	Worli Koliwada Dispensary*	166	R/N	L.T. Road Dispensary
72	G/S	Zandu Ayurvedic Mun. Dispensary	167	R/N	Shastri Nagar Municipal Dispensary*
73	H/E	Bharat Nagar Dispensary	168	R/N	Y.R. Tawade Nagar Dispensary*
74	H/E	Jawahar Nagar Dispensary	169	R/N	Pramila Nagar UPHCD
75	H/E	Kalina Dispensary*	170	R/S	Akurli Road Municipal Dispensary
76	H/E	Kherwadi Dispensary	171	R/S	Babrekar Nagar Municipal Dispensary
77	H/E	Kolekalyan Dispensary*	172	R/S	Charcop Sector- I Muncipal Dispensary
78	H/E	Prabhat Colony Municipal Dispensary	173	R/S	Dahanuwadi Municipal Dispensary
79	H/E	S.V. Nagar Dispensary	174	R/S	Hanuman Nagar Dispensary*
80	H/W	G.N. Station Road Dispensary	175	R/S	New Centenary Dispensary
81	H/W	Guru Nanak (Dr. Ambedkar Road) Dispensary	176	S	Kanjur Village Dispensary
82	H/W	Khar-Danda Dispensary	177	S	M.V. R Shinde Dispensary
83	H/W	Old Khar Dispensary*	178	S	Shivaji Talav Mumbai Dispensary*
84	H/W	Shastri Nagar Linking Road Dispensary	179	S	Tagor Nagar Dispensary
85	K/E	Caves Road Dispensary	180	S	Tembhipada Shivaji Nagar Dispensary
86	K/E	Gundawali Dispensary	181	S	Tirandaz Village Dispensary
87	K/E	Hari Nagar Dispensary	182	S	Tulshetpada Dispensary
88	K/E	Koldongari Dispensary	183	S	Nahur East Dispensary*
89	K/E	Marol Dispensary	184	T	Dindayal Upadhyay (DDU) Dispensary
90	K/E	Natwar Nagar Dispensary	185	T	Mulund Colony Dispensary*
91	K/E	Paranjape Dispensary	186	T	P.J.K. Dispensary
92	K/E	Sambhaji Nagar Dispensary			
93	K/E	Sambhji Nagar Ayurvedic Dispensary			
94	K/E	Sunder Nagar Dispensary*			
95	K/E	Mangala Municipal Dispensary Nursing Home			

Note: *(*) Upgraded dispensaries with laboratories. The total number of upgraded dispensaries is 30.*

2. MCGM Dispensaries and Hospitals Personnel Data of 2017 and 2018

Table 52: Percentage gap in the Personnel of Municipal Dispensaries in Mumbai in 2017 and 2018

Personnel in Municipal Dispensaries						
Post	2017			2018		
	Sanctioned	Available	Gap %	Sanctioned	Available	Gap %
Medical	213	190	11%	224	209	7%
Para-Medical	269	195	28%	273	213	22%
Nursing Staff	0	0	0%	7	6	14%
Administration	2	2	0%	3	2	33%
Labour	425	328	23%	434	332	24%
Overall	**909**	**715**	**21%**	**941**	**762**	**19%**

Table 53: Percentage gap in the Personnel of Municipal Hospitals in Mumbai in 2017 and 2018

Personnel in Municipal Hospitals						
Post	2017			2018		
	Sanctioned	Available	Gap %	Sanctioned	Available	Gap %
Medical	1,739	1,057	39%	2,194	1,259	43%
Para-Medical	2,044	1,440	30%	2,121	1,421	33%
Nursing Staff	6,288	5,108	19%	6,296	5,483	13%
Administration	1,405	1,015	28%	1,407	1,002	29%
Labour	9,928	7,471	25%	10,077	7,253	28%
Lecturer in Medical College	1,433	871	39%	1,431	893	38%
Overall	**22,837**	**16,962**	**26%**	**23,526**	**17,311**	**26%**

Table 54: Percentage gap in the Personnel of State Hospitals in Mumbai in 2017 and 2018

Personnel in State Hospitals						
Post	2017			2018		
	Sanctioned	Available	Gap %	Sanctioned	Available	Gap %
Medical	152	63	59%	150	67	55%
Para-Medical	440	330	25%	436	320	27%
Nursing Staff	2,295	1,936	16%	2,654	2,189	18%
Administration	283	205	28%	341	239	30%
Labour	2,326	1,839	21%	2307	1,832	21%
Lecturer in Medical College	239	99	59%	236	80	66%
Overall	**5,735**	**4,472**	**22%**	**6,124**	**4,727**	**23%**

3. Registration of Births and Deaths Act 1969

- Provides for registration of births and deaths and for matters connected.
- 'Source of demographic data for socio-economic planning, development of health systems and population control' *(as per 2012 Training Manual for Civil Registration Functionaries in India, Office of Register General of India, Ministry of Home Affairs, Government of India).*

Medical Certification of Causes of Death (MCCD)

In Maharashtra, on every 10th of the month, monthly reports are received at state office of Deputy Chief Registrar of Birth and Death at Pune.

The strategy they follow:

- It is the duty of Registrar (in the case of Mumbai it is Executive Health Officer of MCGM), to ask about form No.4 and 4A according to occurrence of death, while entering the death event.
- Deputy Director is responsible for compilation, coding and analysis of data received through MCCD according to ICD (International Cause of Death) – 10 (http://www.who.int/whosis/icd10/).

Source: http://www.maha-arogya.gov.in/programs/other/sbhivs/strategy.htm

FORM NO. 4

(See Rule 7)

MEDICAL CERTIFICATE OF CAUSE OF DEATH

(Hospital In-patients. Not to be used for still births)

To be sent to Registrar along with Form No. 2 (Death Report)

Name of the Hospital .....

I hereby certify that the person whose particulars are given below died in the hospital in Ward No .....

on ..... at ..... AM/PM

NAME OF DECEASED					
Sex	Age at Death				For use of Statistical Office
	If 1 year or more, age in years	If less than 1 year, age in month	If less than one month, age in days	If less than one day, age in hours	
1. Male 2. Female					

CAUSE OF DEATH		Interval between onset and death approx.
I. Immediate cause State the disease, injury or complication which caused death, not the mode of dying such as heart failure, asthenia, etc.	(a) ..... due to (or as a consequences of)	
Antecedent cause Morbid conditions, if any, giving rise to the above cause, stating underlying conditions last	(b) ..... due to (or as a consequences of)	
II. Other significant conditions contributing to the death but not related to the disease or condition causing it	(c)	

Manner of Death

How did the injury occur?

1. Natural 2. Accident 3. Suicide 4. Homicide
5. Pending investigation

If deceased was a female, was pregnancy the death associated with? 1. Yes 2. No

If yes, was there a delivery? 1. Yes 2. No

Name and signature of the Medical Attendant certifying the cause of death

Date of verification .....

SEE REVERSE FOR INSTRUCTIONS

(To be detached and handed over to the relative of the deceased)

Certified that Shri/Smt/Kum ..... S/W/D of Shri .....

R/O ..... was admitted to this hospital on .....

and expired on .....

Doctor .....
(Medical Supdt
Name of Hospital)

MEDICAL CERTIFICATE OF CAUSE OF DEATH

Directions for completing the form

Name of deceased: To be given in full. Do not use initials. If deceased is an infant, not yet named at time of death, write 'Son of (S/o)' or 'Daughter of (D/o)', followed by names of mother and father.

Age: If the deceased was over 1 year of age, give age in completed years. If the deceased was below 1 year of age, give age in months and if below 1 month give age in completed number of days, and if below one day, in hours.

Cause of Death: This part of the form should always be completed by the attending physician personally.

The certificate of cause of death is divided into two parts, I and II. Part I is again divided into three parts, lines (a) (b) (c). If a single morbid condition completely explains the deaths, then this will be written on line (a) of Part I, and nothing more need be written in the rest of Part I or in Part II, for example, smallpox, lobar pneumonia, cardiac beriberi are sufficient cause of death and usually nothing more is needed.

Often, however, a number of morbid conditions will have been present at death, and the doctor must then complete the certificate in the proper manner so that the correct underlying cause will be tabulated. First, enter in Part I(a) the immediate cause of death. This does not mean the mode of dying, e.g., heart failure, respiratory failure, etc. These terms should not be appear on the certificate at all since they are modes of dying and not causes of death. Next consider whether the immediate cause is a complication or delayed result of some other cause. If so, enter the antecedent cause in Part I, line (b). Sometimes there will be three stages in the course of events leading to death. If so, line (c) will be completed. The underlying cause to be tabulated is always written in last in Part I.

Morbid conditions or injuries may be present which were not directly related to the train of events causing death but which contributed in some way to the fatal outcome. Sometimes the doctor finds it difficult to decide, especially for infant deaths, which of several independent conditions was the primary cause of death, but only one cause can be tabulated, so the doctor must decide. If the other diseases are not effects of the underlying cause, they are entered in Part II.

Do not write two or more conditions on a single line. Please write the names of the diseases (in full) in the certificates as legibly as possible to avoid the risk of their being misread.

Onset: Complete the column for interval between onset and death whenever possible, even if very approximately, e.g., "from birth" "several years".

Accidental or violent deaths: Both the external cause and the nature of the injury are needed and should be stated. The doctor or hospital should always be able to describe the injury, stating the part of the body injured, and should give the external cause in full when this is shown. Example : (a) Hypostatic pneumonia; (b) Fracture of neck of femur; (c) Fall from ladder at home.

Maternal deaths: Be sure to answer the question on pregnancy and delivery. This information is needed for all women of child-bearing age, even though the pregnancy may have had nothing to do with the death.

Old age or senility: Old age (or senility) should not be given as a cause of death if a more specific cause is known. If old age was a contributory factor, it should be entered in Part II. Example : (a) Chronic bronchitis, II old age.

Completeness of information: A complete case history is not wanted, but, if the information is available, enough details should be given to enable the underlying cause to be properly classified.

Example: *Anaemia* – Give type of anaemia, if known. Neoplasm – Indicate whether benign or malignant, and site, with site of primary neoplasm, whenever possible. Heart disease – Describe the condition specifically. If congestive heart failure, chronic or pulmonale, etc., are mentioned, give the antecedent conditions. Tetanus – Describe the antecedent injury, if known. Operation – State the condition for which the operation was performed. Dysentery – Specify whether bacillary, amoebic, etc., if known. Complications of pregnancy or delivery – Describe the complication specifically. Tuberculosis – Give organs affected.

Symptomatic statement: Convulsions, diarrhea, fever, ascites, jaundice, debility, etc., are symptoms which may be due to any one of a number of different conditions. Sometimes nothing more is known, but whenever possible, give the disease which caused the symptom.

Manner of Death: Deaths not due to external cause should be identified as 'Natural'. If the cause of death is known, but it is not known whether it was the result of an accident, suicide or homicide and is subject to further investigation, the cause of death should invariably be filled in and the manner of death should be shown as 'Pending investigation'.

4. Cause of Death Data

Table 55: Age Wise Causes of Death from 2016 to 2018 in Mumbai

Cause of Death	Years	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 and Above Years	TOTAL
Tuberculosis (A15-A19)	2016	56	428	2,051	2,251	1,874	6,660
	2017	57	380	1,673	1,881	1,458	5,449
	2018	39	346	1,404	1,753	1,398	4,940
Other Bacterial Diseases (A20-A49)	2016	174	63	217	364	983	1,801
	2017	172	71	179	416	994	1,832
	2018	152	54	163	340	1,089	1,798
Dengue fever (A90)	2016	0	1	2	4	0	7
	2017	48	61	86	73	80	348
	2018	13	50	74	43	59	239
HIV (B20-B24)	2016	3	36	273	463	77	852
	2017	6	26	269	513	67	881
	2018	2	32	231	486	71	822
Malaria (B50-B54)	2016	3	11	33	42	36	125
	2017	1	9	23	25	42	100
	2018	5	3	16	16	29	69
Neoplasms (C00-D48)	2016	112	246	695	2,950	5,522	9,525
	2017	65	112	579	2,885	5,231	8,872
	2018	116	292	704	3,165	5,796	10,073
Diabetes (E10-E14)	2016	3	6	96	1,772	7,211	9,088
	2017	5	11	112	1,884	7,513	9,525
	2018	8	7	122	2,109	8,212	10,458
Diseases of the nervous system (G00-G98)	2016	148	167	255	375	1,382	2,327
	2017	165	155	250	432	1,424	2,426
	2018	147	165	249	440	1,536	2,537
Diseases of the circulatory system (I00-I99)	2016	145	129	1,364	5,715	18,714	26,067
	2017	110	116	1,008	5,251	18,582	25,067
	2018	92	118	1,071	5,346	19,335	25,962
Respiratory diseases (J00-J98)	2016	915	261	607	1,204	5,451	8,438
	2017	478	198	489	1,228	5,342	7,735
	2018	488	177	466	1,191	5,632	7,954
Diseases of the Digestive System (K00-K92)	2016	73	63	828	1,887	1,381	4,232
	2017	58	68	758	1,824	1,381	4,089
	2018	67	73	770	1,839	1,393	4,142
Diseases of the Genitourinary System (N00-N99)	2016	53	61	281	507	1,271	2,173
	2017	30	59	177	423	1,278	1,967
	2018	26	41	162	442	1,275	1,946

Cause of Death	Years	0-4 Years	5-19 Years	20-39 Years	40-59 Years	60 and Above Years	TOTAL
Certain Conditions Originating in the Perinatal Period(P00-P96)	2016	1,827	0	0	0	0	1,827
	2017	1,993	0	0	0	0	1,993
	2018	1,826	0	0	0	0	1,826
Symptoms Signs and Abnormal Clinical and Laboratory finding not elsewhere classified (R00-R99)	2016	44	22	245	326	1,819	2,456
	2017	44	37	94	147	1,467	1,789
	2018	51	19	85	94	1,336	1,585
Injury, poisoning and certain other consequences of external causes (S00-T98)	2016	105	450	2,035	1,175	1,088	4,853
	2017	122	493	2,063	1,114	1,153	4,945
	2018	98	509	2,038	1,220	1,203	5,068
Other Cause of deaths	2016	1,293	864	3,122	2,271	3,514	11,064
	2017	1,453	986	3,081	2,465	3,834	11,819
	2018	1,240	820	2,774	2,272	3,643	10,749
Total	**2016**	**4,954**	**2,808**	**12,104**	**21,306**	**50,323**	**91,495**
	2017	**4,807**	**2,782**	**10,841**	**20,561**	**49,846**	**88,837**
	2018	**4,370**	**2,706**	**10,329**	**20,756**	**52,007**	**90,168**

Table 56: Incomplete Data of Cause of Death 2019 provided by State Government in RTI Reply

Ward	No. of Deaths	Ward	No. of Deaths
A	269	K/W	3,814
B	560	L	1,096
C	233	M/E	1,124
D	357	M/W	1,462
E	1,440	N	2,012
F/N	1,720	P/N	2,605
F/S	1,864	P/S	570
G/N	690	R/C	2,385
G/S	1,357	R/N	438
H/E	1,005	R/S	2,651
H/W	396	S	1,277
K/E	1,806	T	250
Total			**31,381**

5. Timeline of Cause of Death Data at MCGM, State and Central Government Level

In 2016, the Civil Registration System of the central government for registration of Births and Deaths in India was centralised. The software was to enable uniformity in registration and to improve the percentage of registered births and deaths data in compliance with WHO recommendations and to enable better monitoring of Sustainable Development Goals (SDGs).

Maharashtra state began implementation of registration of the online CRS system from 1st January, 2016.
In Mumbai, a software adopted by MCGM from 2007 called SAP software was used to record all the information online including the cause of death data by the Department of Public Health. However, from 1st January, 2016 the recording of birth and death registration was transferred to the CRS software of the central government.

Praja has been collecting cause of death data since 2011. We received the data on cause of death up to 31st December, 2015 from the MCGM through their SAP system. However, in 2016 when Praja filed an RTI for the information on cause of death in the city, we received a response stating that – "The causes of death gender wise, age wise, cause wise and month wise is generated under CRS system. However, ICD-10 code wise and ward wise is not available at Registrar Level of MCGM. When reports were seen in CRS system, it is observed all the fields are showing zero figures. This typical problem has already been communicated to Officer of Registrar General and Census Commissioner of India via email. The matter was discussed during the monthly review meeting at Deputy Director of Health Services and Deputy Registrar of Birth and Death, Maharashtra State on 19th August, 2016 as the CRS Software is not developed by MCGM" (Refer to Annexure 3).

The MCGM claimed not to have access to cause of death data due to a technical issue. Further the online published data of the Department of Public health also stated that – 'Disclaimer: From 1st January 2016 Registration of Births and Deaths is doing in Central Government portal crsorgi.gov.in and Reports of Births and Deaths are retrieved from CRS Portal.' The said reports retrieved however only have information of the number of births and deaths and not the causes of the same.

The first appeal to the Deputy Executive Health Officer and the second appeal to the State Information Commission were lost on the basis that MCGM does not have access to the said data and therefore cannot provide it under RTI. Following this Praja filed an RTI at the state government level to the Health Intelligence and Vital Statistics (HIVS), Pune who forwarded the same to MCGM, providing the same reply. In the first appeal the HIVS stated that they do not have access to the CRS software. They also allowed us to access the data available with them but that did not include the cause of death data.

An RTI was filed to the Vital Statistics Division (VSD), New Delhi, requesting data directly from the CRS of the central government. The Vital Statistics Division forwarded the data to the state government at Director General of Health Services, Mumbai which further forwarded the same to the MCGM. Since both the state and local governments claimed that they did not have access to the cause of death data in the CRS software although at the local level, the MCGM had login access to enter the said data in the software, the software only provided output with reference to number of deaths. An RTI was thus filed at the Vital Statistics Division for providing cause of death data for 2016, in reply to which a 2014 report on cause of death was provided. Further, our efforts to acquire cause of death data led the VSD department to assure that the said data will be

provided by the IT department if a request for the same is provided by the MCGM. Accordingly, we requested the RTIs filed at ward level to be forwarded to Delhi. However, no information was provided. In the first appeal promise to provide the data was reiterated but without success.

Finally, Praja filed an appeal at the Central Information Commission (CIC), where the CRS claimed that nowhere was it mandated to maintain the data only in the central government software and that health being a state subject, the respective states and local bodies could maintain their own management systems. The CIC seconded this view and also directed the CRS department to prepare guidelines that clarify the same and also work on revamping the software to provide city/district wise data. It reiterated that the cause of death data has to be provided by the point source, that is the local body and the state has the power to manage its own systems for maintaining the data.

A letter was also sent to the Prime Minister's Office (PMO), which through the home ministry was forwarded to the VSD which was directed to update their Management Information System, to solve the discrepancy. It was claimed that the said issue is being worked upon; however, it has not yet been implemented.

Cause of death is an essential and basic data which is important for making and monitoring of any public health policy. Furthermore, Municipal Corporation has failed to abide by the rules and regulations under Registration of Births and Death Act, 1969 (Refer Annexure 2).

The evasion of providing this data in the public domain appears to be purposeful, in the face of the revealing status of health in the country that the cause of death data brings forth. The CRS Report, 2016 mentions, "For the country, the requirement of a complete CRS system is a must as it has important administrative and statistical uses. The data generated through a complete and up to date CRS is essential for socio-economic planning and to evaluate the effectiveness of various social sector programs." The government seems to go back upon its own objectives of providing integrated software for the processing and analysis of data which would help in policy. The argument that the data is sensitive and thus centralised and available only at the central level for analysis and policy making does not hold good on the eve of 25 years of constitutional decentralisation adopted in the country. Although a centralised system of recording births and deaths, has its merits, it is imperative that the local government which acts as the primary provider of basic services, such as health has access to the cause of death data and is able to analyse the same in order to ensure effective delivery of this crucial service.

When the MCGM's SAP system recorded the cause of death data, its analysis would enable the health department officers to study trends in the data and to map locality and area wise incidences to enable identifying problematic areas and better monitoring of the same. It is important for the government that implements a particular policy to have access to the information regarding the areas under its jurisdiction. By repeatedly transferring the RTI back to the local government in spite of being well aware that the latter does not have access to it, the central government is absolving itself of its responsibility. In spite of an order from the Ministry to the VSD, if it is unable to provide simple access of data to the agency that is responsible for implementation of many centrally-sponsored health policies, this reflects sheer insensitivity of the central government towards preventable deaths in its population.

It is interesting, on how the government that on one hand advocates for a 'Digital Bharat' is unable to solve an internal technical discrepancy and hides behind the same, to deny the local authority its rightful access to data.

On 31st August 2018, at appeal hearing of CIC where central information commissioner ordered that clear guidelines need to be given to states/local bodies on whether they have to continue maintaining the data and stated that the CRS should make the data available district wise and also provide access to the state and local bodies for the said data. It also stated that information be provided to us in 4 weeks.

However, neither MCGM nor SBHVIS shared any information with us. To pursue this Praja sent a letter to different authorities i.e. HIVS, CRS, DGHS Maharashtra, CPIO-MCCD to understand whether they received CIC's appeal order and whether any action has been taken after it. We also complained about non-followance of its order to the CIC. On sending the new RTIs to MCGM we have received the similar replies as before.

Following the CIC appeal it comes to light that the state and the local body also cannot absolve themselves of the duty to maintain and provide the cause of death data using the pretext of lack of access to CRS. Its high time CRS should take actions in providing data to local bodies. Nevertheless, the local body should take responsibility of maintaining and providing the cause of death data as well.

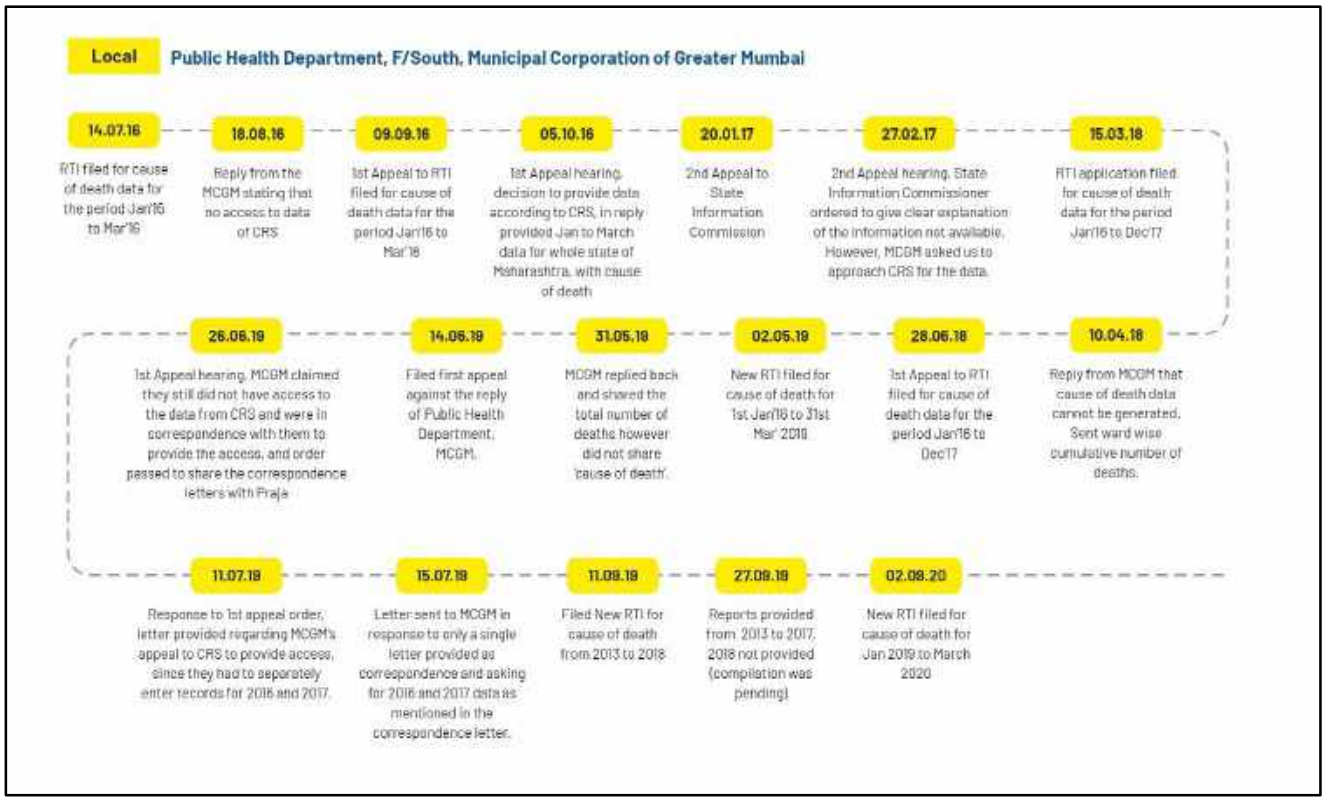
In the first appeal in MCGM on 26th June, 2019 the MCGM claimed they still did not have access to the data from CRS and were in correspondence with the central government in respect to the same and agreed to share the correspondence letters with Praja.

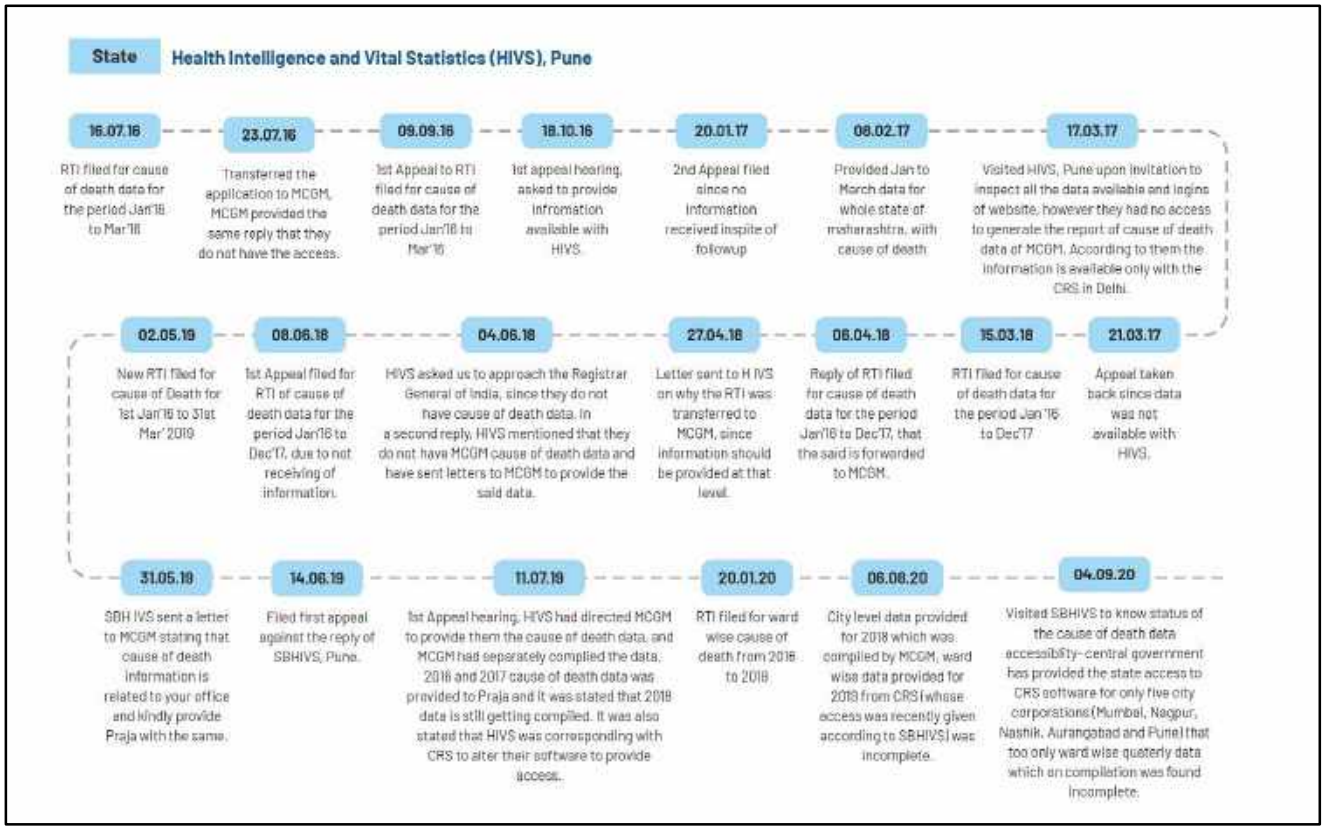
Through the correspondence, and in the first appeal in HIVS, Pune on 11th July, 2019, it came to our knowledge that on the directive of the state, the MCGM had separately compiled all the cause of death data for the years 2016 and 2017 and provided it to the state only recently, and that 2018 data was still getting compiled. In all of this, what comes to light is the utter confusion and duplication of work that the local and state governments had to undergo due to lack of accessibility of CRS software, and the difficulty that the MCGM for the last three years has faced in monitoring the causes of death in the city and made a compiled report on their end only in 2019 after being directed by the state.

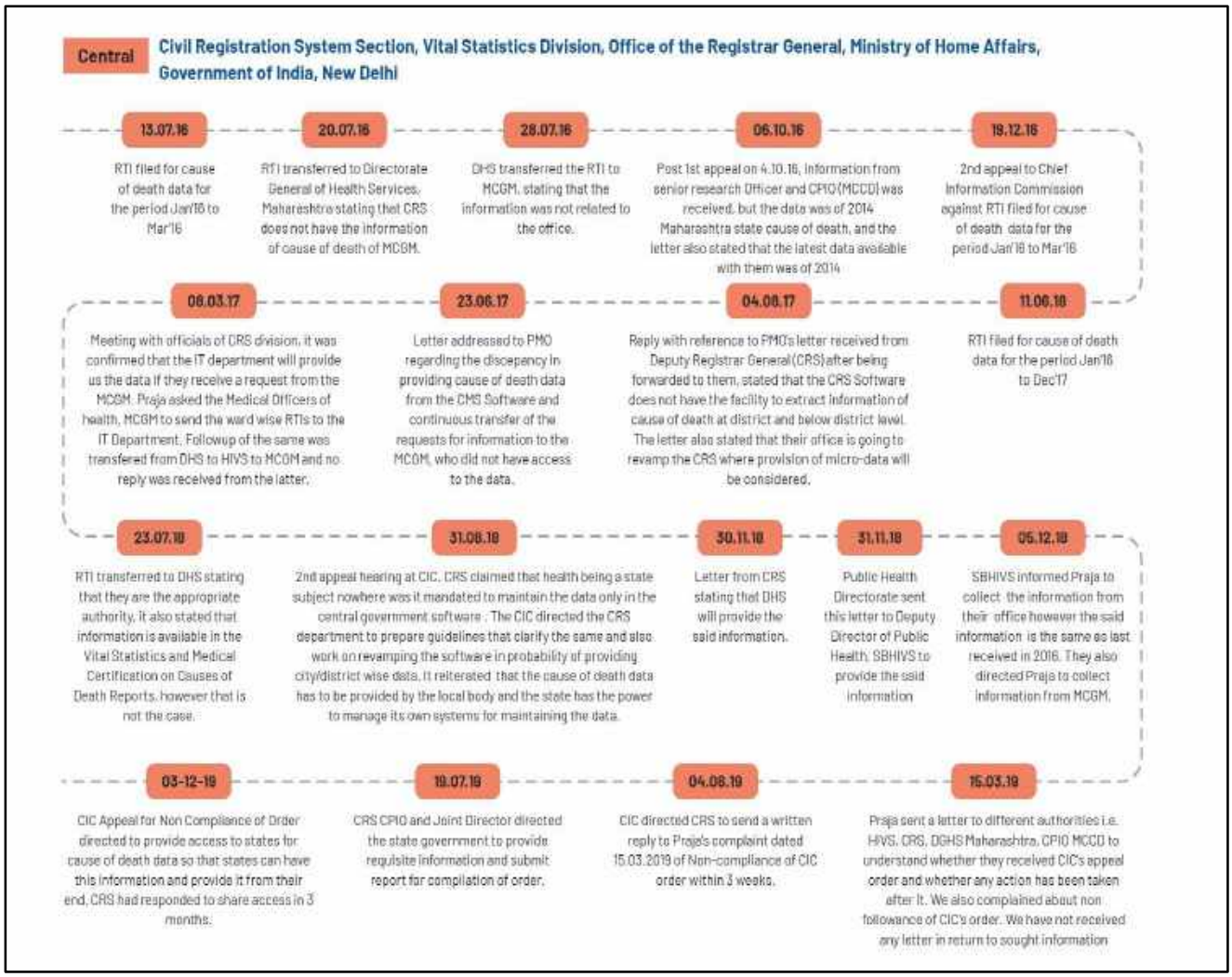
In mid-2020, the state government was given access to the CRS software but only for 5 corporations in Maharashtra and only ward wise quarterly reports were allowed for generation acting as a hindrant for analysis of the data. Further the data when computed for Mumbai was found to be incomplete.

Since the MCGM is the responsible body for deaths registration, it is imperative that it maintain this data in its software for regularly monitoring the state of health in the city. At the same time the central government needs to follow the CIC order and revamp its software to provide access of district and ward wise data to the local government, to prevent duplication of record maintenance.

Timeline of RTIs and responses on Cause of Death in Local (City), State and Central Government






Central
Civil Registration System Section, Vital Statistics Division, Office of the Registrar General, Ministry of Home Affairs, Government of India, New Delhi
13.07.16
RTI filed for cause of death data for the period Jan'16 to Mar'16
20.07.16
RTI transferred to Directorate General of Health Services, Maharashtra stating that CRS does not have the information of cause of death of MCGM.
28.07.16
DHS transferred the RTI to MCGM, stating that the information was not related to the office.
06.10.16
Post 1st appeal on 4.10.16, information from senior research Officer and CPIO (MCCD) was received, but the data was of 2014 Maharashtra state cause of death, and the letter also stated that the latest data available with them was of 2014
19.12.16
2nd appeal to Chief Information Commission against RTI filed for cause of death data for the period Jan'16 to Mar'16
08.03.17
Meeting with officials of CRS division, it was confirmed that the IT department will provide us the data if they receive a request from the MCGM. Praja asked the Medical Officers of health, MCGM to send the ward wise RTIs to the IT Department. Followup of the same was transfered from DHS to HIVS to MCGM and no reply was received from the latter.
23.06.17
Letter addressed to PMO regarding the discrepancy in providing cause of death data from the CMS Software and continuous transfer of the requests for information to the MCGM, who did not have access to the data.
04.08.17
Reply with reference to PMO's letter received from Deputy Registrar General (CRS) after being forwarded to them, stated that the CRS Software does not have the facility to extract information of cause of death at district and below district level. The letter also stated that their office is going to revamp the CRS where provision of micro-data will be considered.
11.06.18
RTI filed for cause of death data for the period Jan'18 to Dec'17
23.07.18
RTI transferred to DHS stating that they are the appropriate authority. It also stated that information is available in the Vital Statistics and Medical Certification on Causes of Death Reports, however that is not the case.
31.08.18
2nd appeal hearing at CIC. CRS claimed that health being a state subject nowhere was it mandated to maintain the data only in the central government software . The CIC directed the CRS department to prepare guidelines that clarify the same and also work on revamping the software in probability of providing city/district wise data. It reiterated that the cause of death data has to be provided by the local body and the state has the power to manage its own systems for maintaining the data.
30.11.18
Letter from CRS stating that DHS will provide the said information.
31.11.18
Public Health Directorate sent this letter to Deputy Director of Public Health, SBHIVS to provide the said information
05.12.18
SBHIVS informed Praja to collect the information from their office however the said information is the same as last received in 2016. They also directed Praja to collect information from MCGM.
03-12-19
CIC Appeal for Non Compliance of Order directed to provide access to states for cause of death data so that states can have this information and provide it from their end. CRS had responded to share access in 3 months.
19.07.19
CRS CPIO and Joint Director directed the state government to provide requisite information and submit report for compilation of order.
04.08.19
CIC directed CRS to send a written reply to Praja's complaint dated 15.03.2019 of Non-compliance of CIC order within 3 weeks.
15.03.19
Praja sent a letter to different authorities i.e. HIVS, CRS, DGHS Maharashtra, CPIO MCCD to understand whether they received CIC's appeal order and whether any action has been taken after it. We also complained about non followance of CIC's order. We have not received any letter in return to sought information

6. Health Indicators Adopted by India under Sustainable Development Goals, SDG India Index Baseline Report, 2018

The National Context

National aspirations for economic growth cannot be achieved without a healthy and productive population. Economic and social advancements can neither be secure nor sustainable unless sufficient investments are made to protect and promote the health and well-being for all, at all ages. Thus, maintaining good health is important for individuals to lead a better life and is critical for a nation's development.

While sustained efforts have to be made for India to achieve the targets set under Goal 3, the country has made impressive gains on key indicators. The maternal mortality ratio has declined to 130 in 2014-16 from 254 in 2004-06. Under 5 mortality rate in 2015-16 was 50, down from 74 in 2005-2006 . ***Ayushman Bharat*** and ***POSHAN Abhiyan*** are two of the most comprehensive and recent programmes of the Government of India to promote good health.

India SDG Index – Goal 3

To measure India's performance on the Goal of Good Health and Well-being, five national level indicators have been identified, which capture four out of the 13 SDG targets for 2030 outlined under this Goal. These indicators have been selected based on availability of data at the national level and to ensure comparability across States and Union Territories (UTs).

3.1	3.2	3.3	3.4	3.5	3.6	3.7
3.8	3.9	3.a	3.b	3.c	3.d	

NATIONAL INDICATORS USED

SDG GLOBAL TARGET	INDICATOR SELECTED FOR SDG INDIA INDEX	NATIONAL TARGET VALUE FOR 2030
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	1. Maternal Mortality Ratio	70
3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	2. Under-five mortality rate per 1,000 live births	11
	3. Percentage of children aged 12-23 months fully immunized (BCG, Measles and three doses of Pentavalent vaccine)	100
3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	4. Annual notification of Tuberculosis cases per 1 lakh population	0
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	5. Number of governmental physicians, nurses and midwives per 1,00,000 population	550

7. Health Conditions Screened under RBSK

Health Conditions for Compulsory Screening	
Defects at Birth	**Deficiencies**
Neural tube defect	Anemia especially Severe anemia
Down's Syndrome	Vitamin A deficiency (Bitot spot)
Cleft Lip and Palate / Cleft palate alone	Vitamin D Deficiency, (Rickets)
Talipes (club foot)	Severe Acute Malnutrition
Developmental dysplasia of the hip	Goiter
Congenital cataract	
Congenital deafness	
Congenital heart diseases	
Retinopathy of Prematurity	
Diseases	**Developmental delays and Disabilities**
Skin conditions (Scabies, fungal infection and Eczema)	Vision Impairment
Otitis Media	Hearing Impairment
Rheumatic heart disease	Neuro-motor Impairment
Reactive airway disease	Motor delay
Dental conditions	Cognitive delay
Convulsive disorders	Language delay
	Behaviour disorder (Autism)
	Learning disorder
	Attention deficit hyperactivity disorder
Health Conditions for Optional Screening	
Deficiencies	
Congenital Hypothyroidism	
Sickle cell anemia	
Beta thalassemia	

8. Details of Immunisation Programmes

The Immunisation Programme in India was introduced in 1978 as the 'Expanded Programme of Immunisation' (EPI) by the Ministry of Health and Family Welfare, Government of India. In 1985, the programme was modified to the 'Universal Immunisation Programme' (UIP), which was to be implemented in phased manner to cover every district in the country by 1989-90. Despite being one of the largest healthcare programmes in the world, and being operational for many years, UIP was only able to fully immunize 65% children by the first year of their life.

To solve this problem and to achieve full immunization coverage for all children and pregnant women at a rapid pace, the Government of India launched Mission Indradhanush in December 2014. An intensification strategy, it was aimed at providing all the vaccines under the Universal Immunisation Programme and ensuring full immunization for children up to two years of age and pregnant women. Under this mission, focus was given to pockets of low immunization coverage and hard to reach areas where the proportion of unvaccinated and partially vaccinated children was highest. Mission Indradhanush provided an impetus to the UIP resulting in an annual increase of approximately 7% in full immunization coverage as compared to 1% annual increase in the past.

However, despite an increase in coverage of full immunization, the progress was not uniform in all districts and some areas (like urban slums) were not receiving adequate focus. To further intensify the immunization programme and accelerate full immunization 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 drop outs in select districts and urban cities with low routine immunization coverage in a specific time-frame (December 2018)[73].

IMI 2.0 came into place in December 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 MCGM, offers protection against 11 Vaccine Preventable Diseases, Polio, Hepatitis B,TB, Diphtheria, Pertussis, Tetanus, H- Influenza B, Measles, Rubella, Mumps, and Rotavirus induced diarrhoea[74].

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

[74] 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

9. Child Immunisation from 2017-18 to 2019-20

Table 57: Number of Children Administered Vaccines in Mumbai from 2017-18 to 2019-20

Vaccines	2017-18	2018-19	2019-20
Vitamin K1 (Birth Dose)	98,368	1,19,352	1,34,432
BCG	1,78,938	1,66,126	1,65,359
Pentavalent 1	1,80,702	168488	174405
Pentavalent 2	1,80,653	162557	172880
Pentavalent 3	1,87,880	168127	178586
OPV 0 (Birth Dose)	1,70,898	1,59,737	162510
OPV1	1,80,581	1,67,847	1,74,522
OPV2	1,80,850	1,62,840	1,72,820
OPV3	187812	1,67,836	1,77,978
Hepatitis-B0 (Birth Dose)	1,39,970	1,30,725	1,45,106
Inactivated Polio Vaccine 1 (IPV 1)	1,21,264	1,36,688	1,58,858
Inactivated Polio Vaccine 2 (IPV 2)	98,567	1,29,496	1,62,119
Rotavirus 1	0	0	99,878
Rotavirus 2	0	0	85,346
Rotavirus 3	0	0	78,756
Child immunisation (9-11months)			
Measles and Rubella (MR)- 1st Dose	13	31,385	1,81,346
Measles 1st dose	1,87,013	1,39,058	0
Children aged between 9 and 11 months fully immunized- Male	95,651	86,470	93,164
Children aged between 9 and 11 months fully immunized - Female	89,998	82,472	87,863
Child immunisation - Measles and Rubella (MR)- 1st Dose	0	3,492	2,544
Child immunisation - Measles-1st dose	4,597	2,498	0
2nd doses and booster injections			
Measles and Rubella (MR)- 2nd Dose (16-24 months)	2	466	125
Measles 2nd dose (More than 16 months)	6,373	416	0
DPT 1st Booster	1,99,757	1,64,567	1,77,604
OPV Booster	1,99,651	1,64,264	1,77,450
Measles, Mumps, Rubella (MMR) Vaccine	1,83,944	1,44,647	1,76,039
Typhoid	0	0	1,139
Children between 5-16 years			
Children more than 5 years received DPT5 (2nd Booster)	1,68,732	1,50,529	1,66,402
Children more than 10 years received TT10	2,12,545	1,76,916	1,76,313
Children more than 16 years received TT16	2,07,712	1,88,216	1,60,700
Immunisation sessions			
Immunisation sessions planned	46,036	44,592	44,649
Immunisation sessions held	45,838	44,328	44,419
Number of Immunisation sessions where ASHAs were present	20,395	35,139	36,645

10. Major Types of Contraceptive Methods

Intrauterine Contraceptive Devices (IUCDs):
A small flexible, plastic device, usually with copper, is inserted into the womb by a qualified medical practitioner, after menstruation, abortion, or 4-6 weeks after delivery. It prevents the fertilized egg from settling in the womb. Copper ions have spermicidal activity. It is 95–98% effective, does not interfere with intercourse and can be removed when pregnancy is desired. It may cause heavy bleeding in some women. Pelvic inflammation in women, especially those exposed to STDs, may occur. Sometimes the IUD loosens and detaches and hence should be checked periodically. It may increase risk of ectopic pregnancy. It is unsuitable for women with cervical or pelvic infection, uterine fibroids, heavy menstruation, or unexplained vaginal bleeding. Two popular contraceptive devices used are *CuIUCD 380A(10 Years) and CuIUCD 375(5 years).*

Injectable Contraceptive-MPA (Under Antara Programme):
It is a hormonal contraceptive method for women that prevent pregnancy for three months. It prevents monthly ovulation, thickens cervical mucus thus blocking sperms from meeting eggs and makes implantation of fertilized eggs difficult. It needs to be administered every 3 months. It can easily be administered in the arms, thighs or buttocks. The date of subsequent dose may be remembered from the MPA card provided. It is a long-term effective, reversible method of contraception, suitable for breastfeeding women (after 6 weeks of childbirth) and does not require daily attention.

Chaya (Centchroman):
Chhaya is a non-hormonal, non-steroidal, once a week contraceptive pill. Chhaya prevents implantation of fertilized egg in the uterus. For the first three months two pills are to be taken every week. From 4th month one pill has to be taken every week. The first pill can be taken on the first day of the menstrual cycle or any other day provided pregnancy has been ruled out. Chhaya is an effective reversible method of contraception. It is safe for women of all age groups and breastfeeding women, even immediately after childbirth. Return to fertility on stopping the pills is also prompt.

ECP (Emergency contraceptive pill):
This Method of Contraception that is used within 72 hours of unprotected intercourse to prevent pregnancy also called "Morning after" or post-coital contraception. The Government of India guidelines for Emergency Contraception recommend use of Levonorgestrel (progestogen only) NG 0.75 mg as a "dedicated product" for effective emergency contraception. The Drug Controller of India has approved only Levonorgestrel for use as ECP. It prevents pregnancy by inhibiting or delaying ovulation, altering the survival mucosa, altering the endometrial leading to impair endometrial receptivity to implantation of fertilizing egg. Any woman can use emergency oral contraception if she is not already pregnant. The ECPs should be taken as soon as possible after unprotected intercourse. Only one tab of 1.5 mg or two tabs of 0.75 mg stat should be taken within 72 hours after intercourse.

Male Sterilisation (Vasectomy):

A permanent surgical method in which the vasa deferentia which carry the sperms from the testes to the penis, are blocked. This prevents the sperms from being released into the semen at the time of ejaculation. It is a simple and reliable method not requiring hospitalization. Contrary to popular belief, it does not affect health; neither does it interfere with intercourse.

Female Sterilisation (Tubectomy):

Tubal ligation or tubectomy is a surgical procedure for female sterilization in which the fallopian tubes are permanently blocked or removed. This prevents the fertilization of eggs by sperm and thus the implantation of a fertilized egg. Tubal ligation is considered a permanent method of sterilization and birth control. Tubectomy is however likely to have more risks and complications as compared to vasectomy.

11. Criteria for Ayushman Bharat-Pradhan Mantri Jan Aarogya Yojana

Exclusions of Medication: Out- patient care, Individual diagnostics (for evaluation), Drug rehabilitation program, Cosmetic related procedures, Fertility related procedures, Transplants involving organs etc.

Beneficiary Inclusions: In Urban areas include occupational criteria such as Rag pickers, Beggars, Domestic workers, Street vendors, Cobbler, hawkers, Construction workers, Plumbers, Masons, Painters, Welders, Sweepers Sanitation workers, Mali, Home-based workers, Artisans, Handicrafts workers, Tailors, Transport workers, Drivers, Conductors, Helpers, Rickshaw pullers, Shop workers, Assistants, Peons, Attendants, Waiters, Electricians, Mechanics, Assemblers, Repair workers, Washer-men, Chowkidar. All eligible families are identified with valid Yellow, Orange, Antyodaya, and Annapurna ration card (irrespective of date of issue of Ration Card or the inclusion of the beneficiary's name therein) coupled with any Photo ID proof.

12. Socio Economic Classification (SEC) Note and Survey Methodology

SEC is used to measure the affluence level of the sample, and to differentiate people on this basis and study their behaviour / attitude on other variables.

While income (either monthly household or personal income) appears to be an obvious choice for such a purpose, it comes with some limitations:

- Respondents are not always comfortable revealing sensitive information such as income.
- The response to the income question can be either over-claimed (when posturing for an interview) or under-claimed (to avoid attention). Since there is no way to know which of these it is and the extent of over-claim or under-claim, income has a poor ability to discriminate people within a sample.
- Moreover, affluence may well be a function of the attitude a person has towards consumption rather than his (or his household's) absolute income level.

Attitude to consumption is empirically proven to be well defined by the education level of the Chief Wage Earner (CWE*) of the household as well as his occupation. The more educated the CWE, the higher is the likely affluence level of the household. Similarly, depending on the occupation that the CWE is engaged in, the affluence level of the household is likely to differ – so a skilled worker will be lower down on the affluence hierarchy as compared to a CWE who is businessman.

Socio Economic Classification or SEC is thus a way of classifying households into groups' basis the education and occupation of the CWE. The classification runs from A1 on the uppermost end thru E2 at the lower most end of the affluence hierarchy. The SEC grid used for classification in market research studies is given below:

EDUCATION / **OCCUPATION**		Illiterate	literate but no formal schooling / School up to 4th	School 5th – 9th	SSC/ HSC	Some College but not Grad	Grad/ Post-Grad Gen.	Grad/ Post-Grad Prof.
Unskilled Workers		E2	E2	E1	D	D	D	D
Skilled Workers		E2	E1	D	C	C	B2	B2
Petty Traders		E2	D	D	C	C	B2	B2
Shop Owners		D	D	C	B2	B1	A2	A2
Businessmen/ Industrialists with no. of employees	None	D	C	B2	B1	A2	A2	A1
	1 – 9	C	B2	B2	B1	A2	A1	A1
	10 +	B1	B1	A2	A2	A1	A1	A1
Self-employed Professional		D	D	D	B2	B1	A2	A1
Clerical / Salesman		D	D	D	C	B2	B1	B1
Supervisory level		D	D	C	C	B2	B1	A2
Officers/ Executives Junior		C	C	C	B2	B1	A2	A2
Officers/Executives Middle/ Senior		B1	B1	B1	B1	A2	A1	A1

**CWE is defined as the person who takes the main responsibility of the household expense*

Survey Methodology

Praja Foundation had commissioned the **household survey** to Hansa Research and the survey methodology followed is as below:

- In order to meet the desired objectives of the study, we represented the city by covering a sample from each of its 227 wards. The target Group for the study was:
  - ✓ Both Males and Females
  - ✓ 18 years and above
  - ✓ Belonging to that particular ward.
- Sample quotas were set for representing gender and age groups on the basis of their split available through Indian Readership Study (Large scale baseline study conducted nationally by Media Research Users Council (MRUC) for Mumbai Municipal Corporation Region.
- The required information was collected through face to face interviews with the help of structured questionnaire.
- In order to meet the respondent within a ward, following sampling process was followed:
  - ✓ 5 prominent areas in the ward were identified as the starting point
  - ✓ In each starting point about 20 individuals were selected randomly and the questionnaire was administered with them.
- Once the survey was completed, sample composition of age and gender was corrected to match the population profile using the baseline data from IRS. This helped us to make the survey findings more representative in nature and ensured complete coverage.

  The total study sample was 20,187.

13. Note on MCGMs Public Health Committee

a) The Corporation under Section 38A (1) of the M.M.C. (Mumbai Municipal Corporation) Act, appoints the Public Health Committee out of its own body consisting of 36 members in their meeting after general elections and delegate any of their power and duties to such Committee and also define the sphere of business of Committee so appointed and direct that all matters and questions included in any such sphere shall be submitted to the Corporation with such Committee's recommendation.

b) Sphere of Business

Sphere of Business of Special Committees defined by the Corporation vide Corporation Resolution No.46, dated 11th May 1999 in exercise of the powers vested in them by Sub-Section (1) of Section 38A of the Mumbai Municipal Corporation Act, 1888, as amended up to date.

b. i) All questions relating to the King Edward VII Memorial Hospital and Seth Gordhandas Sunderdas Medical College, Kasturba Hospital for infectious diseases, Medical Relief in the Municipal outdoor dispensaries, Medical and Nursing assistance to the poor in their homes, Venereal Diseases Dispensaries, Anti Tuberculosis League and any Medical Institution to which monetary assistance is given by the Corporation.

b. ii) Health Department (including Street Cleaning, Conservancy, etc.) with the exception of questions pertaining to the Mechanical Branch so far as they fall within the province of the Works Committee.

At present, there are 36 members in the Public Health Committee.