

Surat Municipal Corporation

Best practices to combat COVID-19 Epidemic

Surat Municipal Corporation has undertaken various measures to combat the situation of the epidemic with a broad aim to contain outbreak of COVID 19.

Objectives

1. Reduce human to human transmission by breaking the chain of transmission concentrating on epidemiological triad (Agent-Host - Environment Factors).
2. Early Detection of suspected cases
3. Provide optimum care to the confirmed cases of COVID-19

Demographics & Health Infrastructure

- Area: 326 Sq.Km.
- Population: 44,64,326 (as per Census-2011) (Expected 53-64 Lakhs as on date)
- Number of zones: 08
- Number of sanitary wards: 91
- Number of Urban Health Centres/Community Health Centres: 52
- Number of Hospitals-Public : GMC Surat (750 beds), SMIMER (750 beds)
- Number of Private Hospitals: More than 177 (Physician, Paediatrician, General hospital, major private hospitals have been included)
- Number of Hospitals in the outskirts of Surat city will be identified.

The strategies adopted by SMC:

SMC has adopted Three T Strategy – Track, Test and Treat to fight against COVID-19.

1. To identify and test all the suspects including identifying all SARI cases with travel history as per MOHFW guidelines.
2. Contact tracing of all confirmed case
3. Measures to prevent transmission of further infection
4. Dead Body Management
5. Provide interim care of all confirmed cases
6. IEC Activities

7. Capacity Building- all government/private hospitals, paramedical and medical staff.

The detailed action plan is as follows:

To identify and test all the suspects

It is utmost important to test, tract and treat all the suspects. SMC is working mainly by IT based system, active surveillance of ARI Cases by health care workers, passive surveillance of data from all Govt. & private hospitals house to house survey and interim follow up.

IT Enabled System

Surat Municipal Corporation has taken various IT initiatives to fight Novel Coronavirus (COVID-19). SMC has developed SMC COVID-19 Tracker System which includes a web portal and Mobile application named “**SMC COVID-19 Tracker**” to track people who have abroad or inter-state travel history and persons who have come in direct contact with positive COVID-19 individual. Details of travellers and other individuals are collected through various sources like Self Declaration form on SMC website, calls received on helpline number, international traveller information received GoI & screening team at airport, etc. The brief about the functioning of application is given below:

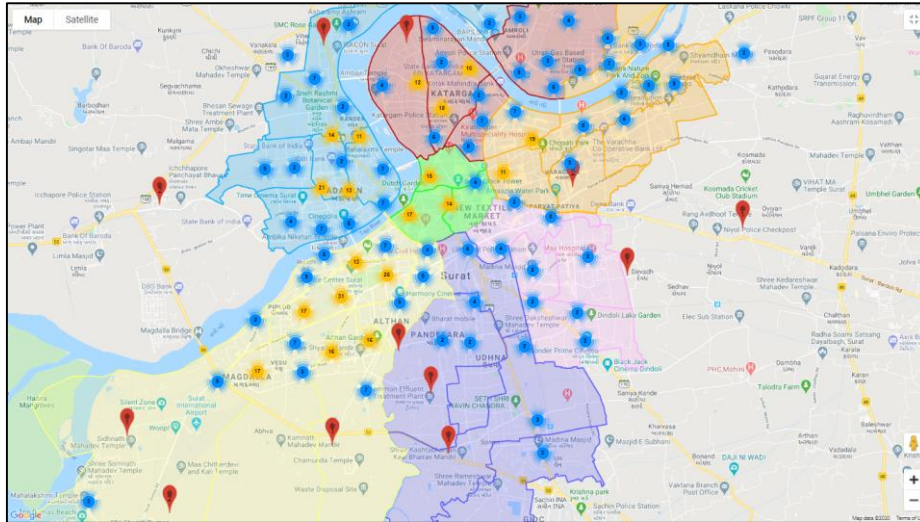
1. SMC has published Self-Declaration Form on website www.suratmunicipal.gov.in where individuals can submit their details including their abroad or interstate travel history and if they have come in contact with any positive COVID-19 individual. Upon submission of details, an SMC is sent to individuals with unique Tracker ID and are asked to download SMC COVID-19 Tracker Mobile App.
2. SMC has also started a helpline number 1800-123-800 where citizen can share details about travellers or suspects. The details are verified by SMC team including health officials. A field team visits the location and if the detail provided on helpline is verified, the individual is asked to stay in home quarantine and explain them the details regarding Do's and Don'ts. They are also assigned unique Tracker ID and are asked to download SMC COVID-19 Tracker Mobile.
3. **Health Monitoring of Individuals under Quarantine:** Individuals have to fill Feedback questionnaire twice a day (Morning 10 AM and Evening 9 AM) through SMC COVID-19 Tracker App regarding their health. Three questions are given in the questionnaire asking individuals if they have fever, cough or difficulty in breathing and remarks, with this questionnaire, individual has to also send their selfie (Photo). If any

individual mentions issue in questionnaire regarding their health, first follow up is done over the phone by health staff and if required, individuals are asked to visit nearby health facility for necessary check-up and treatment.

4. After successful installation of app, individuals have to send their location every hour to confirm that they are following home quarantine on regular basis. SMC team monitors the location history of individuals if any individual is found not following the home quarantine guidelines, strict actions are taken against such individuals.
5. For every individual asked to stay in home quarantine, daily house to house follow-up is also done by SMC Team (Health care Providers, Technical Staff, Teachers and others). Follow up done by SMC team is also captured through the system.
6. If any individual has developed symptoms during home quarantine and has been shifted to hospital, individuals who have come in contact of suspects are entered in system under contact history so that they can be linked to understand the contact tracing. If the person admitted to hospital is found positive, the contacts are asked to follow quarantine at Govt. quarantine facility. 1000 bed quarantine facility with all services has been created for keep all close contact of positive cases and 150 beds Hotel is also identified to keep passengers/contacts on payment basis.
7. Necessary MIS reports are prepared in the system and new reports are being developed as per requirements of health department.
8. Necessary App Installation manuals for Android and iOS are also prepared along with videos tutorials and user manual to help citizen install the application easily.

The SMC COVID-19 Tracking System along with Android and iOS App are developed in very short time of 5 days. As of now around 3800 individual/passengers details are entered in the system and more than 2955 persons are using Mobile App to send their locations every hour and are submitting their health check-up questionnaire twice a day.

The system developed by SMC was reviewed by Government of Gujarat and Government of Gujarat has adopted the same for implementation for the entire state. Some of the screenshots of the system are given below:



Map view of home quarantined individuals in Surat

Tracking ID	Zone	Suspect Name / Gender / Age	Address	Contact No.	Passport No.	Return Date	Days Left	Abroad History	Suspect's Status	Position Count / Last Updated	Data Source	Actions
1	West Zone					07/03/2020	23	Italy	Under Quarantine	Count : 57 27/03/2020 12:42 AM		Action
2	South West Zone					09/03/2020	25	THAILAND	Under Quarantine	Count : 52 26/03/2020 11:12 AM		Action
3	South West Zone					08/03/2020	24	ITALY	Under Quarantine	Count : 98 27/03/2020 12:09 AM		Action
4	West Zone					08/03/2020	24	ITALY	Under Quarantine	App. not installed		Action
6	North Zone					07/03/2020	23	CANADA	Under Quarantine	Count : 67 26/03/2020 10:26 PM		Action
7	East Zone - B					08/03/2020	24	UNITED KINGDOM	Under Quarantine	App. not installed		Action
8	South West Zone					NA	27	France	Under Quarantine	Count : 5 27/03/2020 12:19 AM		Action

List view of home quarantined individuals in Surat

SMC COVID-19 Tracking System





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Corona Suspect Detail Entry

Tracking ID	
City	Surat
Zone	South West Zone
Patient Name	
Patient Address	
ContactNo	
Entry Date	18-03-2020 00:00:00
Abroad History	Yes
Last Location Update	26/03/2020 10:42 PM
Employee Number	NA
Employee Name	NA
Employee Mobile No	NA

[Add/Update Employee Assignment](#)

Tracking of individual in home quarantine in Surat

Corona Patient Summary							
Fever	Having Cough	Difficulty In Breathing	Other Detail	Seq. No.	Date time	Created By	Selfie Image
No	No	No	Safe at home Thank you Smc	Evening	21-03-2020 21:44:54		
No	No	No	Starting using the app right now	Morning	21-03-2020 21:45:11		
No	No	No	Just got up	Morning	22-03-2020 11:14:55		
No	No	No	Safe at home	Evening	22-03-2020 21:16:58		

Health Check Questionnaire details received through Mobile App

Other Initiatives:

- Private Hospitals having >50 beds have been identified as COVID-19 Hospitals.
Segregated Cough OPDs have been made functional at following private hospitals:
 - Mission Hospital, Athwalines (10.00 am to 1.00 pm & 5.00 pm to 6.00 pm)
 - Lockhat Hospital, Rampura (10.00 am to 1.00 pm & 5.00 pm to 6.00 pm)
 - Venus Hospital, Nr. Lal-Darwaja (10.00 am to 1.00 pm)
 - Kiran Hospital, Alkapuri, Katargam (10.00 am to 1.00 pm)
- The Details regarding no. of ambulances (With or without health units), no. of ventilators, and total beds of all the hospitals have been obtained.
- No. of private vehicle providers including details of their Vehicle number, Driver name & contact number have been obtained and reported on daily basic.
- All private hospitals provides indoor patient details admitted with ARI like symptoms through Jaimini Software module (<http://vbdc.jaiminissoftware.com/>) regularly.

Contact tracing of all the confirmed cases:

- The detailed histories of all the confirmed cases are being revealed to find out as much as possible contacts immediately by rapid response team.
- Till date, Surat Municipal Corporation has notified 10 confirmed cases of COVID 19. 5 of the cases had history of international travel, one case had contact with confirmed case, and 2 cases had history of interstate travel.

However, history of two cases was inconclusive. The interim actions were undertaken with special emphasis on containment zone for the inconclusive cases considering the possibility of community transmission.

- Affected area is plotted on map. An area is demarcated by 1 km radius around containment zone. Intensified activities are being conducted in containment area including buffer zone.
- The containment zone will be divided in to sectors with 50 houses each.

Surveillance activity:

Active surveillance

- House to house survey is conducted for the containment area and buffer zone to find out all the cases with influenza like illness and suspects with history of any symptoms suggestive of COVID 19. The cases identified in house to house survey are referred to nearby urban health centre or SMIMER/New Civil hospital which would be decided by medical Officer.
- The suspects will be referred and their testing and hospital based facilities will be ensured by the respective team



Picture 1: Active surveillance at containment zone to find out patients with influenza like illness

Survey results for containment zone, Qureshi street, West Zone

Date	Total teams	Supervisors	Houses surveyed	Population surveyed	Number of cases with ARI	Remarks
30-03-2020	83	14	16785	54003	15	All the cases were instructed for strict home quarantine with supportive treatment
31-03-2020	10	2	3458	11838	1	
01-04-2020	10	2	3142	8997	2	

Passive surveillance

All the private hospitals and urban health centers in the SMC area are instructed to notify all the cases of influenza like illness in the OPD as well as indoor patients with SARI (Severe Acute Respiratory Symptoms). The random samples are being taken from the SARI patients admitted at private hospitals to rule of possibility of community transmission.

Measures to prevent further transmission of infection

To prevent further transmission of infection, the plan of is prepared to avoid public gatherings and specific emphasis on social distancing.

With regards to quarantine, SMC has adopted HCM Strategy – Home Quarantine, Centralised Quarantine and Mass Quarantine. Precautionary measures are taken for public meeting of govt. and private authorities to ensure social distancing.

- To ensure home quarantine is strictly followed, SMC is ensuring installation of COVID-19 tracking mobile app which helps to identify the home quarantine violations.
- Further, separate teams are also entrusted the responsibility for monitoring of those under quarantine.
- Strict actions against the violators are being taken including moving them to centralised quarantine facility, collection of fine of Rs. 25,000/- and registration FIR.
- To quarantine the area affected by the COVID-19 confirmed cases, mass quarantine is being implemented.
- Barricades are placed as early as containment zone has been defined to restrict the movement of general public in the areas with possibility of infection.



Picture 2: Barricades at main road (West Zone, SMC)

- After identifying all the possible contacts of the confirmed cases, the individuals are being kept under quarantine facilities developed by Surat Municipal Corporation or at home. The strict follow up to the quarantined individuals is being ensured by rapid response team and is being monitored by nodal officer deputed for the same.

Samvedna: Surat Cares

SMC has undertaken various measures to ensure the food and other essential supply in the city. Special care is being taken for the old, destitute, homeless and migrants.

- SMC has tied up with APMC for home delivery of groceries, vegetables and fruits.
- SMC has also facilitated home delivery system and tied up with big retailers and courier system for home delivery.
- Passes distributed to retailers for easy movement and support. 700+ identity cards have been issued to the individuals selling essentials through retail stores, mall, etc.
- Vegetables Larries allowed and facilitated in societies along with home delivery system with courier services.
- SMC has tied up with various NGOs and have made special arrange in collaboration with Akshaypatra Foundation. Special relief centers are opened to accommodate homeless people.
- Relief centres are opened providing accommodation and food.
- Ration kits are also being distributed.

SMC has tied up with various institutes which includes APMC for supply of vegetables, grocery stores for supply of food grains, etc. Further to ensure food, Food packets are being distributed to the needy people. Further the food kits are also being distributed. Tie-up with local grocery and medical stores and IT professional is also done to ensure online order and delivery.

Waste Collection & Treatment

SMC has started collecting Solid Waste separately from all home quarantine persons. Special arrangements are made in this regards. Separate D2D vehicles are used and such solid waste is being processed as per guidelines of Biomedical Waste Management. So far 22.48 MT solid waste is collected in this regard. Special attention is also paid for ensuring that the routine solid waste collection, transportation and disposal activity along cleaning and scrapping is carried out efficiently to keep the city clean.

Further all STP plants are efficiently in operation. We have taken all precautions to avoid spreading of COVID19 as Sewage may contains corona virus due to its life of 20 to 27 days in faecal of corona patients. Use of STP water for watering road dividers, etc. is also stopped. Special provisions are made to clean Sewer jetting machine hose pipe, sewer cleaning rod, etc.

Disinfection

Surat Municipal Corporation has taken **unique three fold strategy** to check the spread of COVID-19 by ensuring that that the all areas of city are sanitized and disinfected. SMC through their team of **VBDC and Fire Fighter** has divided their activities in **3 areas** as below:

1. **Daily Disinfection and sanitization of Public Places:** With the help of VBDC team and Fire Fighters at each zone, the major public places are disinfected through spraying disinfectant **sodium hypochlorite** using spraying vehicles based on guidelines. For metallic surface **Alkyl-Dimethyl-Benzyl-Ammonium-Chloride** (Benzyl Chromium Chloride-BKC) is used as disinfectant. All public places like Quarantine Centres, Hospitals, Vegetable Markets, Slaughter Houses, Fish/meat Markets, Government Offices, Departmental Stores, Roads, Ambulance, and Cremation Grounds etc. and Quarantine Houses are being disinfected on regular basis.
2. **Disinfection of area with positive cases:** Prompt action is being taken against the residential area of the confirmed cases which is disinfected as soon as the case is identified. Considering as an epicentre, mapping of area as **Contaminant Zone** (upto 3 km radius or as decided by authority) and **buffer zone** is carried out. On same day SMC machineries disinfect the Contaminant Zone and on next day, the disinfection process of Buffer zone is being ensured.
3. **Installation of Sanitization Cabins at major Government Hospitals:** SMC has also taken the steps to disinfect the people visiting the hospitals. A special cabin of dimension 5 ft. x 8 ft. x 9 ft. is setup at major government hospitals. The cabin is transparent with non-skid flooring. It has 2 water mist fans for fogging. These fans have 12 litres water capacity that uses Alkyl-Dimethyl-Benzyl-Ammonium-Chloride for Sanitization in 1:800 ratio. It works by spreading the disinfectant through the mist fans and hence fogging the human body including their hair and clothes within few seconds.

Machinery Deployed for Disinfection

To carry out above activities, SMC has deployed the following machineries on field which work 24x7

- 150 Fumigation Pumps (Hand Compression)
- 12 Fire Fighter Vehicles
- 3-4 Tractors with Spraying Pump
- 1 Spray Pump which can cover 40 Ft road
- 200 manpower for fumigations

Snapshot of Disinfections Activities





The sterilization operation is carried out at zonal level under the supervision and monitoring by appointed nodal officer from head quarter. This activity is

carried out under the guidance and direction of MoH, Deputy Commissioner (H&H) and Municipal Commissioner, SMC.

Dead Body Management

Dead Body Management is being carried out as per Govt. of India, Ministry of Health and Family welfare guideline.

IEC Activities

Surat Municipal Corporation is committed to minimize risk of transmission of infection to the community by the means of extensive IEC activities. SMC is using both conventional modern IEC media for creating awareness among the citizens. SMC is extensively using the popular social media channels (Facebook, Twitter, Instagram, WhatsApp) to educate and engage citizens. Some of the IEC activities are as under:

- Pamphlet distribution with due emphasis on Do's & Don'ts in the situation of Epidemic.
- IEC by health care provider during house-to-house activity
- **Bulk SMS:** As soon as confirmed case of COVID 19 is detected, bulk SMS is sent to the property owners residing in the surrounding area appealing them not to move out of home and take special precautions of elders. This done without revealing the identity of the confirmed case
- SMC has started declaring the names of confirmed cases of COVID 19 with main objective to ensure the strict home quarantine and self-declaration by all the possible contacts, which ultimately helps in breaking the chain of transmission. Further those who have come in direct contact with the confirmed cases are also appealed to fill up self-declaration form on SMC website or call on toll-free number.
- **Daily audio briefing** is released by Municipal Commissioner at 5:30 pm, highlighting the current situation and important message to the citizens.
- Communication by the means of Audio/Video Clippings are done on regular basis.
- Social Media: Maximum utilization of social media is being done for providing correct information to all the citizens with due emphasis on hand washing, social distancing and other infection prevention measures.
- SMC has developed a plan for limiting rumour spread as much as possible
- The door-to-door garbage collection facilities equipped with public address system is also being used to spread awareness during its routine collection trips to ensure that message reaches to the maximum people.
- Media briefing /Press notes is released on Twice a day basis.

- Nutritional Counselling with concept of balanced diet and immunity boost-up is provided by health care providers.



સુરત મહાનગરપાલિકા હેલ્પલાઇન નં.-104

હોમ કોરોન્ટાઇન વ્યક્તિએ કોઈપણ સંજોગોમાં ઘરની બહાર ન નીકળવું

હોમ કોરોન્ટાઇન માટેનો પ્રોટોકોલ

- પૂરતા હવા-વિજાસવાળા તથા શીયાલય સાથેના સિંગલ રૂમમાં રહેવું.
- વૃદ્ધ લોકો, સગર્ભા સ્ત્રીઓ, બાળકો અને કુટુંબની કોઈ ડિમાર્સવાળા વ્યક્તિઓથી દૂર રહેવું.
- કોઈપણ પ્રકારના સામાજિક, ધાર્મિક કાર્યક્રમો અને સમૂહ મેળાવવામાં જવાનું ટાળી.

જાહેર આરોગ્યના નીચેના મુદ્દાઓનું ધ્યાન રાખવું

- સમયાંતરે સાવું અથવા હેન્ડ સેનીટાઇઝર થી હાથ ધોવા.
- ગોજવસ્તુઓ જેવી કે ચાળી, વાટકી, ઝાસ, ટુવાલ, પથારી અને અન્ય વસ્તુઓને કુટુંબના અન્ય વ્યક્તિઓએ ઉપયોગ નહીં કરવા.
- ડિસ્પોઝેબલ માસ્કને એક વાર ઉપયોગ લીધા બાદ ફરી ઉપયોગમાં લેવા નહીં.
- શરદી, ખાંસી, તાવ અથવા ફ્લુ લેવામાં તકલીફ જણાય તો તરત જ નજીકના આરોગ્ય કેન્દ્રનો સંપર્ક કરવો.

પરિવારજનોને સૂચન

- કુટુંબના કોઈ પણ એક જ વ્યક્તિએ સંભાળ લેવી જોઈએ.
- સફાઈ કરતી વખતે ગ્લોવ્સનો ઉપયોગ કરવો.
- ગ્લોવ્સના ઉપયોગ કર્યા બાદ હાથ ધોવા.
- ઘરમાં કોઈપણ મહેમાનોને આવવા ન દેવા.

ઘરની સફાઈ

- કોરોન્ટાઇન વ્યક્તિના સંપર્કમાં આવેલ તમામ વસ્તુઓ (ટેબલ, ખુરશી વિગેરે) તથા જુગ્યાઓને ૧% સોડીયમ હાઇપોક્લોરાઇટ સોલ્યુશનથી દૈનિક સાફ કરવા.
- શીયાલયને દૈનિક ફોનાઇલ અથવા ટ્વલીચથી સાફ કરવા.
- દર્દીના કપડા અને અન્ય વપરાશમાં લીધેલ વસ્તુઓને અલગથી ધોવા.

COVID-19 થી ગણરાવાની જરૂર નથી, જરૂર છે માત્ર સાવચેતી રાખવાની

સુરત મહાનગરપાલિકા
જાહેર અપીલ (COVID-19)

સુરત મહાનગરપાલિકાના નગરજનોને માન. મેયરશ્રી તથા માન. મ્યુનિસિપલ કમિશ્નરશ્રી સંયુક્ત રીતે અપીલ કરે છે કે, ઘરની બહાર અનાજ-કરિયાણું કે શાકભાજી, દવા, વિગેરે લેવા માટે નીકળે તો એકબીજાથી બે મીટરનું અંતર રાખવું, ઘરમાં પણ કુટુંબના સભ્યોએ એક મીટરનું અંતર જાળવી રાખવું અને વૃદ્ધ(વડીલો)ને ચેપ ના લાગે તેની સંપૂર્ણ તકેદારી રાખવી અને કોઈ પણ ધાર્મિક કાર્યક્રમ અને જાહેર જમણવાર માટે મહોલ્લામાં ભેગા થવું નહીં, અન્યથા ગંભીર પરિણામ આવી શકે છે.

Capacity Building

Due emphasis is given to increase the capacity building of all staffs including healthcare providers and other staffs related to COVID-19 activities

- Taskforce team have been identified and specific tasks including training with nodal officers have been assigned for the combating epidemic situation.

- Trainings have been provided for all the healthcare providers including medical officers, specialist, ANM, PHW, Pharmacist, Sanitary Staffs, etc.
- Sensitization regarding changing guidelines and protocols to be followed will be done on regular basis.
- Grievances Redressal system is in place for quick response in the current situation of epidemic.