



**COVID-19 (nCorona) Virus Outbreak Control and Prevention State Cell**  
**Health & Family Welfare Department**  
**Government of Kerala**

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**ADDENDUM TO THE ADVISORY ON SENTINEL SURVEILLANCE**

**(Ref: Advisory: 31/F2/2020/ H&FWD-14<sup>th</sup> May 2020)**

**No 31/F2/2020/Health- 27<sup>th</sup> August 2020**

**1. BACKGROUND**

The epidemiological, clinical and virologic characteristics of COVID-19 are still emerging and many aspects need to be explored for the effective preventive and control measures. The State of Kerala has taken meticulous steps to prevent and contain the disease from its very early phase. One of the major strategies implemented was the sentinel surveillance activity which aims early detection through active surveillance. The follow-up actions on detection of a case/s are isolation, treatment and support, contact tracing, quarantine of contacts and testing.

The sentinel surveillance activity has paid large dividends by early detection of clusters allowing triggering of containment strategies, emergency response systems and containment of the clusters. The sentinel surveillance activity also provides the catchment area for routine testing by identifying the cases and clusters. Sentinel surveillance has also led to policy implications including identifying high risk groups for testing and identifying high risk areas for focused actions. Even as the transmission dynamics change and the pandemic evolves the efforts for early detection and prevention should not lose focus.

As part of the policy change, Influenza Like Illness in Non-COVID settings has also been added to the routine testing strategy. Within clusters, all vulnerable

and elderly are being tested. Sentinel surveillance need to be reorganised in this context with an objective to detect clusters early and to provide evidence for further policy changes.

State had been using RTPCR for sentinel surveillance. Rapid antigen assay is widely available now which is comparatively easy to perform and able to capture active cases. RTPCR based sentinel surveillance shall be replaced with rapid antigen tests in sentinel surveillance activity for COVID-19.

## 2. OCTOPUS MODEL FOR SENTINEL SURVEILLANCE .

The model depicts the reach and implications of the sentinel surveillance applied for COVID-19 prevention and control.

**Octopus Model of Sentinel Surveillance**

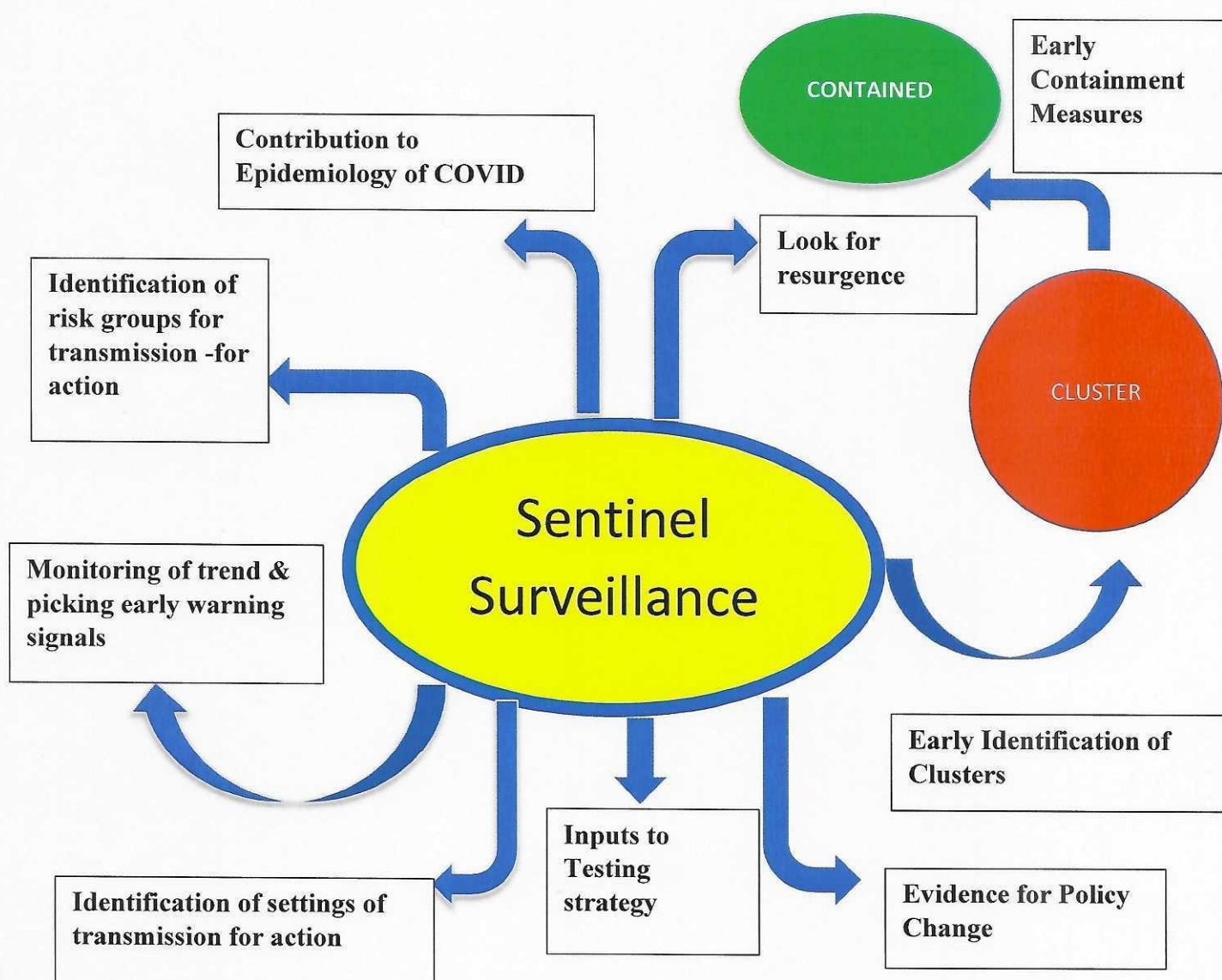
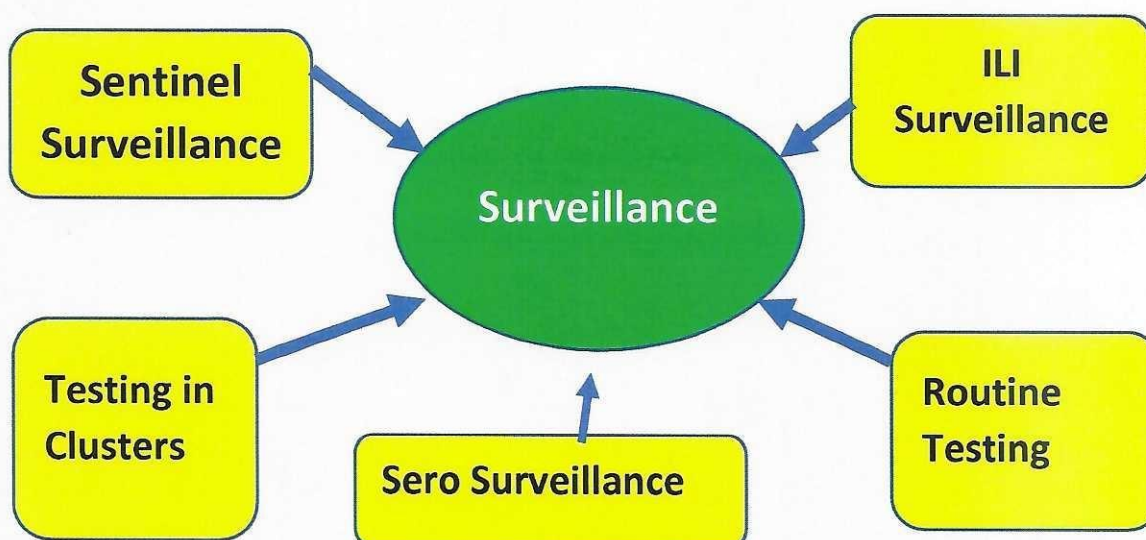




Diagram illustrating various type of testing and Surveillance which aids in control and prevention of COVID-19



### 3. METHOD & THE PROCESS

The method adopted is sentinel surveillance.

**Active clusters** are to be excluded from the sentinel surveillance activity.

**Sentinel surveillance activity should be conducted in all panchayaths/municipalities and corporations every week.**

**The population** identified for sentinel surveillance is divided into groups based on potential risk exposure and setting. High risk, vulnerable and special groups have also been identified.

**Group-1: Workers in Organised Sector-** like Large Shops/ Banks/ Government Offices / Companies or factory/ Shopping Malls, Hyper Markets, Supermarkets, Textile shops and other service sector institutions with potential continuous exposure

**Group-2: Health Care Workers (HCW)-** Doctors, Nurses and paramedical staff who are involved in patient care in **Non-COVID settings**. (Government or Private- IN / OUT Patient Departments or Casualty services).

**Group-3: Persons with high social exposure-** They include police personnel involved in field level enforcement of lock down, community volunteers for COVID, food /door delivery persons, filed staff of Health Department (JPHN, JHI, PHN, HI, etc), Media Personnel, Provisions shop vendors, Ration Shop, Vegetable or fruit vendors (not in market places), Auto/ taxi drivers, barber shop/ beauty salons etc

**Group-4: Markets places- ( Vegetable, Fruits, Fish, Grocery etc)** Head load workers, Lorry drivers, shop owners in the market, provision shop vendors, food vendors in the market, warehouse workers, FSW & MSM, workers employed in clearing and sanitation of market places.

**Group-5: Guest workers-** Guest workers residing in Kerala are eligible in this category.

**Group-6: Epidemiological Samples** - These include samples from specific group of people as per recommendations from the epidemiological investigation team.

**Group- 7: Closed Community** like Old age homes, Orphanages, Paramilitary camps, Prisons etc

**Group -8: Elderly individuals** in general population. (age more than 60yrs)

**Group 9: Workers in unorganised sector-** Farmers, manual labourers, skilled/semiskilled workers (carpenters, Mason, painters etc), coir workers, fishermen, milk man, etc.

**Group 10: Costal, Tribal population and Urban Slums-** Elderly and the Vulnerable persons in these settings are eligible in this group.

**Table. 1. Groups Identified for Sentinel Surveillance and weekly allocation.**

Group	Description:	Setting	Symptom status	Samples/ Week
1	<b>Workers in Organised Sector</b>	Establishments	Symptomatic* Or Asymptomatic	5 per Panchayat/ 20 per Municipality/ 30 per Corporation per week
2	<b>Health Care Workers in Non-COVID settings</b>	Non- COVID Hospital	Symptomatic* Or Asymptomatic	5 per Panchayat/ 20 per Municipality/ 30 per Corporation per week

3	<b>Persons with high social exposure; Food delivery persons / Community Volunteers for COVID /Police personnel/ Provisions shop vendors / Ration Shop/ wholesale fruits or vegetable vendors</b>	Community	Symptomatic* or Asymptomatic	10 per Panchayat/ 30 per Municipality/ 50 per Corporation per week
4	<b>Markets: These could be head load workers, shop owners, street vendors in the market, warehouse workers.</b>	Community	Symptomatic* or Asymptomatic	5 per Panchayat/20 per Municipality/ 30 per Corporation per week
5	<b>Guest workers</b>	Community	Symptomatic* or Asymptomatic	25 per Districts from 5 camps per week
6	<b>Epidemiological Samples</b>	Community/Hospitals/Establishments	Symptomatic* Asymptomatic	To be decided by DSO
7	<b>Closed Community</b>	Elderly homes/ Shelters/orphanages Paramilitary camps/prison	Symptomatic* or Asymptomatic	10 per camp per week*  20 from district

8	<b>Elderly in Community (age more than 60yrs)</b>	Community	Symptomatic* Or Asymptomatic	10 from every panchayath/  20 from Municipality/ 50 from Corporation per week
9	<b>Workers in unorganised sector</b>	Community	Symptomatic* Or Asymptomatic	5 per Panchayat/  20 per Municipality, 30 per Corporation per week
10	<b>Costal / Tribal and Urban slums</b>	Community	Symptomatic* Or Asymptomatic	25 per costal panchayath  10 per tribal panchayath  50 per corporation from urban slums

**\*Symptomatic refers to Acute Respiratory Infection (ARI)**

#### **Selection of samples**

- Samples are to be collected from every LSGs every week as indicated in the table.
- The samples are to be collected to ensure randomness to the maximum extent possible. The **Groups 1, 2 and 7** are to be chosen using simple random methods from the list of all such institutions in the LSG by the sample collection team. The list of individuals available in the setting at the time of sample collection is to be prepared by the sample collection team. From the list the Doctor in the team shall use simple random methods (calculator, random generator application) for selecting the individuals according to the number allocated. Once a site has been



chosen by the sample collection team; the same site should not be repeated in the next 2 weeks.

- Selection of individuals for **Groups 3, 4, 9 & 10** shall be done by identifying an area for the respective groups based on the available information (list of market places, list of major shopping areas, posting of police personnel and volunteers, food delivery shops, areas where vendors are more etc). The sample collection team shall prepare the list of individuals according to the group in the area based on the available information. The individuals should be randomly selected from this list as mentioned above.
- **Group-5-** The DSO shall identify the guest worker camps in the district and take appropriate samples as per the allocation. A Maximum of 5 samples per camp is permitted.
- The DSO shall indicate the areas/individuals for epidemiological samples, **group-6** as per the recommendation of epidemiological investigators.
- Members for **group 8** shall be collected from community as follows. The respective sample collection team is to prepare a list of all the wards in the LSG. Randomly select one ward in Panchayat, 3 divisions in Municipality or 5 per Corporation. Take the map of the ward/division randomly selected, place a pen or pencil and spin it. Select the area/street/road the tip of the pen/pencil has pointed. Identify the houses in that /area/street/road and prepare a list of the houses. Use random methods to select the 10 houses (refer table for LSG wise allocation). If elderly are not present in the house selected, move to the nearest house where elderly are present. Then complete the houses selected. Only one elderly per house is to be selected. The wards selected should not be repeated in the next 2 weeks.

**Days of Sample Collection:** Samples can be collected on any day at filed level and tests shall be performed. The number of samples required has to be met as per the weekly allocation.

**Biological Sample collection:** Follow advisory on Rapid Antigen Test Assay for sample collection and testing.

**Sample Collection Team:** Every PHC/CHC/ UPHC Medical Officer/ Superintendent THQ/DH shall manage the sentinel surveillance sample collection in a decentralised manner using the sample collection teams already constituted for COVID testing.

The team shall collect the samples and fill the SRF filled correctly.

DSO can customise the sample collection plan suited to the local settings.

On the online portal Select **Others** Category- Sentinel Surveillance- Mark the correct groups.

All results shall be informed to the subjects at the field itself after proper counselling by the Doctor/ Medical Officer in the team.

The follow up action (isolation, contact tracing, admission, treatment and discharge) shall be as per the existing guidelines of the Department of Health and Family Welfare Govt. of Kerala.

The DSO shall analyse the epidemiological situation along with the sentinel surveillance data and take appropriate action in the district.

  
Principal Secretary



## Annexure 1:

## Government of Kerala

## COVID-19 SENTINEL SURVEILLANCE ACTIVITY USING RAPID ANTIGEN ASSAY

## COVID-19 Surveillance form

SRF ID NO: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

(date/District/Health Institution code/AN/.....

[ eg: 26-08/ KSD/GHKSD/AN/001 ]

Name:			
Age:		Gender: Male/ Female/ Other	
Address			
District		Phone Number:	
Name of LSG			Ward no:

1. Is the subject Symptomatic/ Asymptomatic? \_\_\_\_\_

2. If Symptomatic; data of onset of first symptoms: \_\_\_\_/\_\_\_\_/\_\_\_\_\_

Please **encircle** the group and the subcategory as applicable in the table below:

GROUP	DESCRIPTION	SUB-CATEGORY
Gr 1	Workers in Organised Sector	a. Large shop.      b. Bank.      c. Govt. Office d. Company/factory.      e. Others
Gr 2	Health Care Workers in Non-COVID settings	a. Doctor      b. Nurse.      c. Paramedical d. Ambulance Drivers      e. Others
Gr 3	Persons with high social exposure	a. Police Personnel.      b. Community Volunteer c. Food delivery person.      d. Field staff of Health Dept e. Media personnel.      f. ASHA worker. g. Provisions shop vendors.      h. Ration Shop i.. Veg/fruit vendor.      j. Auto/taxi driver k. Barber/beauty saloon.      l. Others
Gr 4	Markets	a. Head load workers      b. lorry drivers c. Shop owners in the market      d. Ware house personnel e. FSW/MSM.      f. Cleaning and Sanitization worker

<b>Gr 5</b>	<b>Guest workers</b>	-
<b>Gr 6</b>	<b>Epidemiological Samples</b>	-
<b>Gr 7</b>	<b>Closed Community</b>	a. Old age home b. Orphanage c. Paramilitary camps d. Others.....
<b>Gr 8</b>	<b>Elderly at Community</b>	-
<b>Gr 9</b>	<b>Workers in unorganised sector</b>	a. Farmer    b. Manual Labourer.    c. Skilled or Semiskilled labourers.    d. coir workers e. Fisherman.    f. Milkman. g. Other
<b>Gr 10</b>	<b>Costal, Tribal population and Urban Slums</b>	a. Costal    b. Tribal.    c. Urban slum