Summer training

Report on Public Health Intervention during COVID-19 in India, USA and Singapore.

By

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MBA (Health and Hospital management)
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CONTENTS

RESEARCH OBJECTIVES

- To know about the Public health interventional strategies for mitigation of COVID 19 in INDIA, USA and Singapore.
- This includes surveillance techniques during COVID 19 in India, USA and Singapore.
    1. Outreach programs at community level during COVID 19.
    2. Screening, case management at Individual level and community level.
    3. Risk communication strategies for mitigation of COVID.

Research Methodology

1. Study type Descriptive study

2. Study area Three countries (USA, INDIA and Singapore)

3.Data collection techniques Secondary data collection through various sites

PARAMETERS TAKEN FOR STUDY

- Public health interventions done by various governments.
- Surveillance
- Outreach
- Community strategy
- Response plan

Introduction

Coronavirus disease also known as COVID 19 is the new pandemic in 2020. It started in 2019 in Wuhan, China.

OBJECTIVE

The rationale behind this study to know about several strategies made by governments of the USA, India, and Singapore. As COVID 19 is current pandemic and its cases are increasing exponentially all over the world. But, some countries have been successful in bringing the number down through different interventions done at the community level or at an individual level. So, an effort was made to study the guidelines for operations at the country level and coordination through states to work at ground level. The inability to plan and execute the strategies leads to failures in responsiveness towards an outbreak. On the contrary, a country like India, where the health care system is not based on solid foundations in terms of accessibility, affordability, and availability. It manages to handle atrocious conditions currently in this outbreak. There have been continuous interventions to increase surveillance and screening with prompt actions with allocation of resources proved to be a supportive measure against COVID 19.

So, this study includes the details of public health intervention strategies and innovations done during the planning on a community level.

A descriptive study on Public Health Interventions during COVID-19 in India, USA and

Singapore.

Disease symptoms

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. The initial cases of novel coronavirus (2019-nCoV)–infected pneumonia (NCIP) occurred in Wuhan, Hubei Province, China, in December 2019 and January 2020.

Symptoms

Most common symptoms

Fever.

Dry cough.

Tiredness

Less common symptoms:

Aches and pains.

Sore throat.

Diarrhea.

Conjunctivitis.

Serious symptoms:

Difficulty breathing or shortness of breath.

Chest pain or pressure.

Loss of speech or movement.

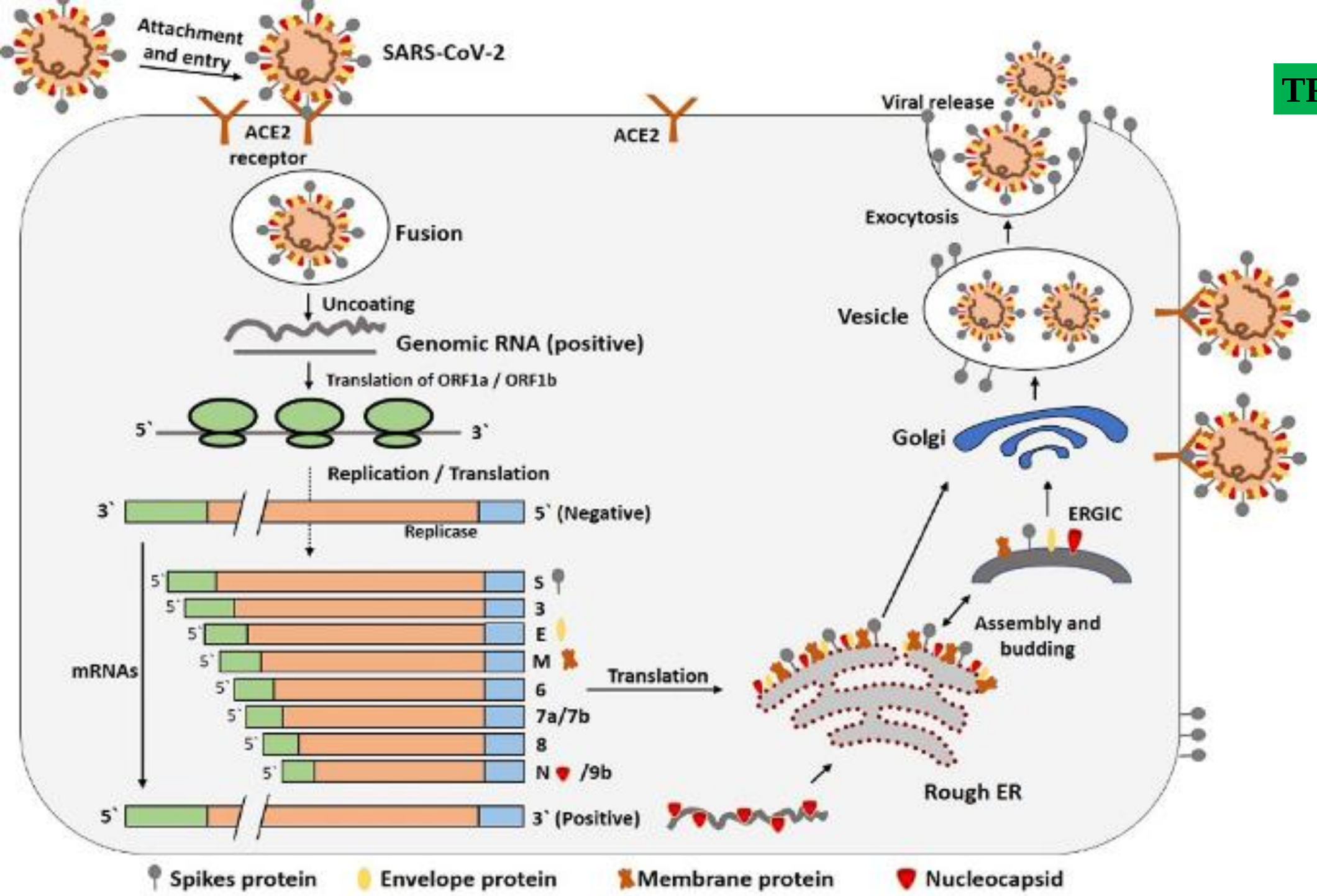
Types of CORONA VIRUS

Table 1
Comparative analysis of biological features of SARS-CoV and SARS-CoV-2.

Features	SARS-CoV	SARS-CoV-2
Emergence date	November 2002	December 2019
Area of emergence	Guangdong, China	Wuhan, China
Date of fully controlled	July 2003	Not controlled yet
Key hosts	Bat, palm civets and Raccon dogs	Bat
Number of countries infected	26	109
Entry receptor in humans	ACE2 receptor	ACE2 receptor
Sign and symptoms	fever, malaise, myalgia, headache, diarrhoea, shivering, cough and shortness of breath	Cough, fever and shortness of breath
Disease caused	SARS, ARDS	SARS, COVID-19
Total infected patients	8098	123882
Total recovered patients	7322	67051
Total died patients	776 (9.6% mortality rate)	4473 (3.61% mortality rate)

Source: M.A. Shereen et al./Journal of Advanced Research 24 (2020).

TRANSMISSION



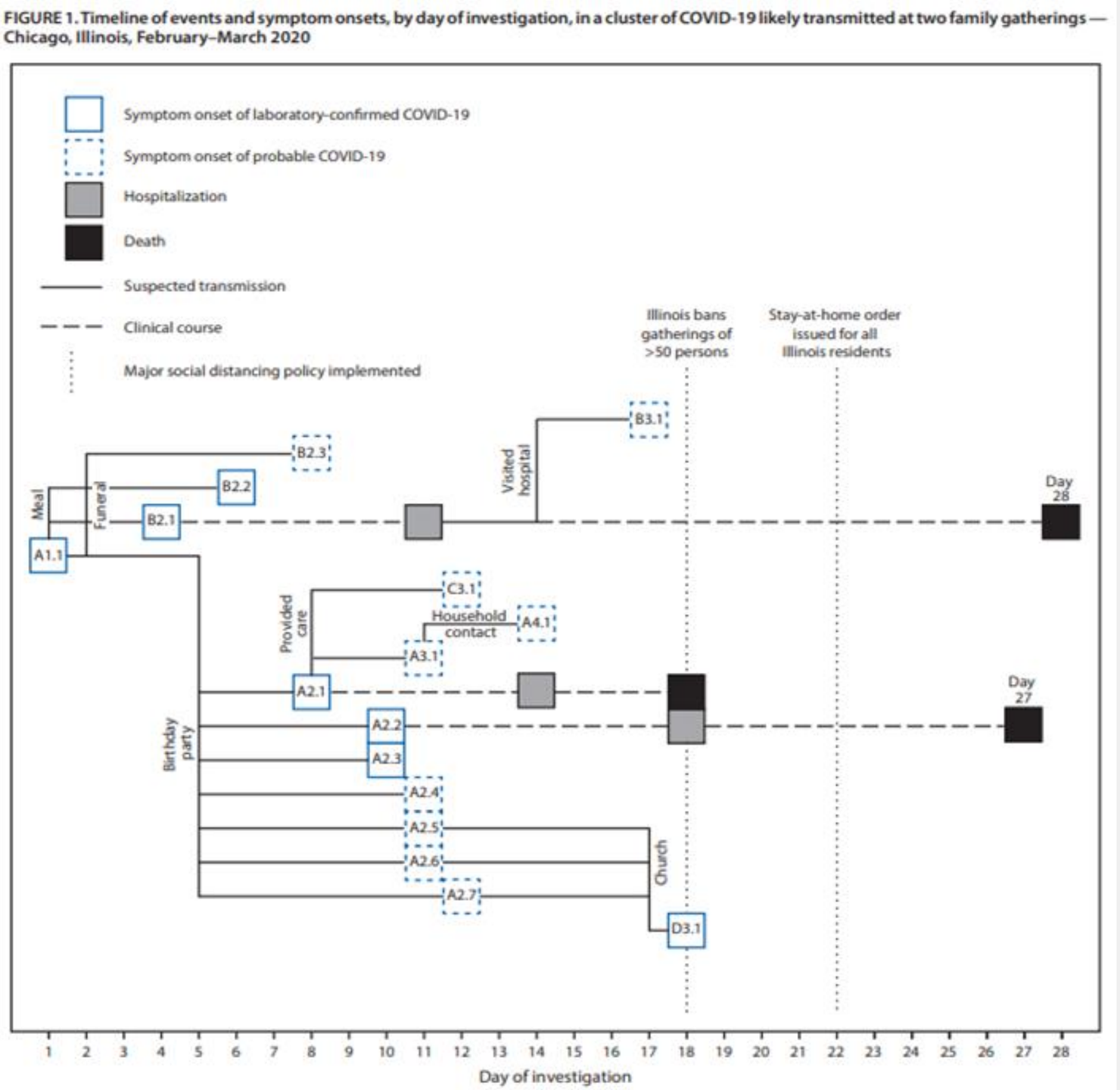
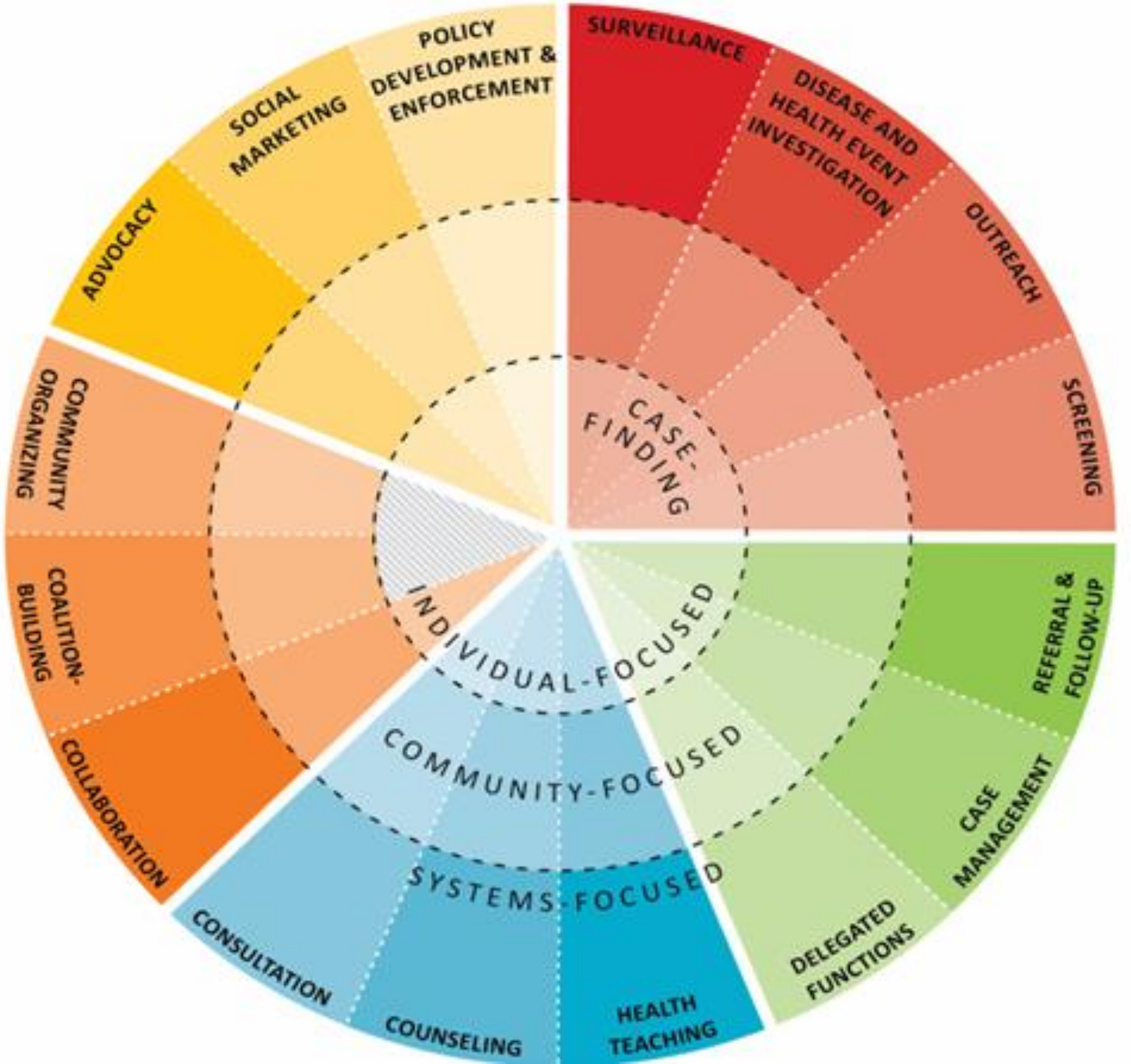


Fig 5: Community transmission demonstration strategy

Notes: Patients were designated by their family cluster letter (A or B), then by the assumed transmission generation (1–4), and finally, by sequence within each generation (1–7). Patient A2.1 died on investigation day 18; patient A2.2 died on investigation day 27; and patient B2.1 died on investigation day 28.

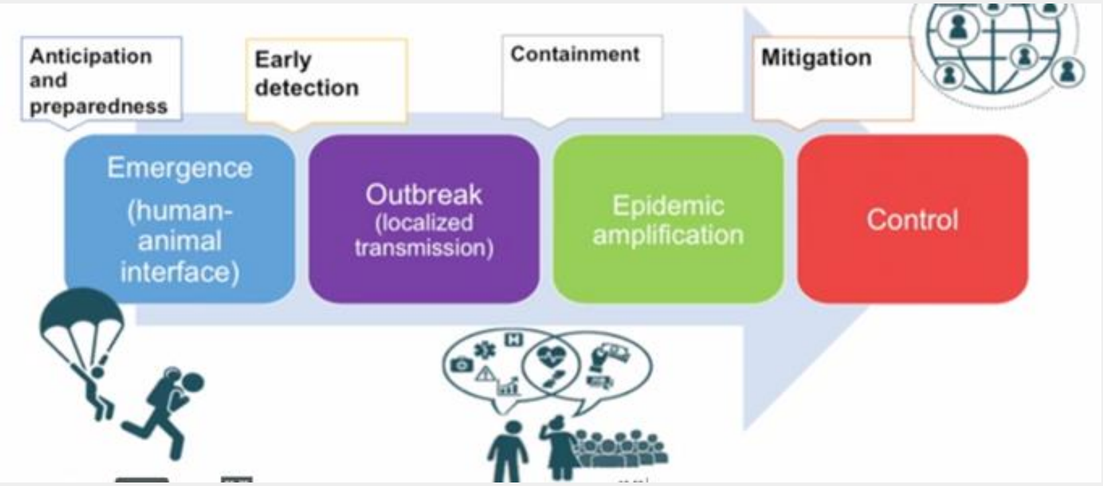
Public Health Intervention

Source : Minnesota Department of Health. (2019). Public health interventions:



Role of Interventions

Intervention is defined as a set of actions with a coherent objective to bring about change or produce identifiable outcomes. These actions may include policy, regulatory initiatives, single strategy projects or multicomponent programs.

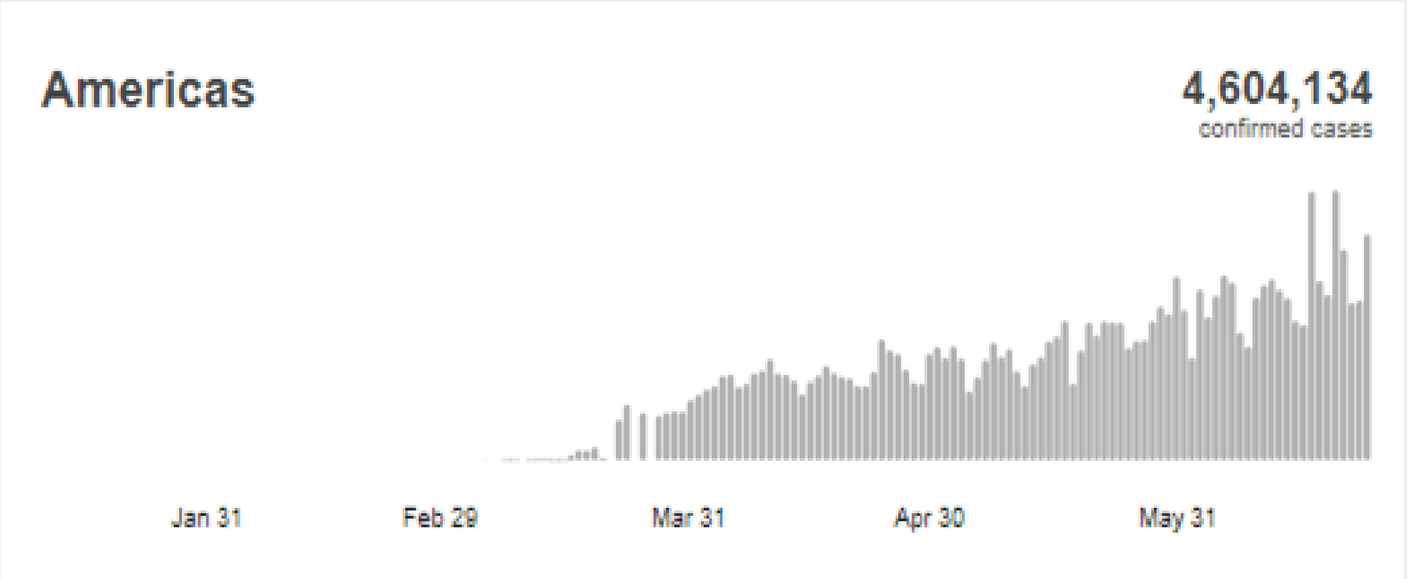


Source : WHO

Levels of Intervention

- **System focused -** Interventions focused on healthcare systems.
- **Community focused** – Interventions works on community norms, attitudes, awareness, practices and behavior. Practice levels are directed at entire population.
- **Individual focused** – Interventions focused at attitude, beliefs, practices. This is focused on families, class or group of people.

USA



Source : By WHO dashboard

Health agencies

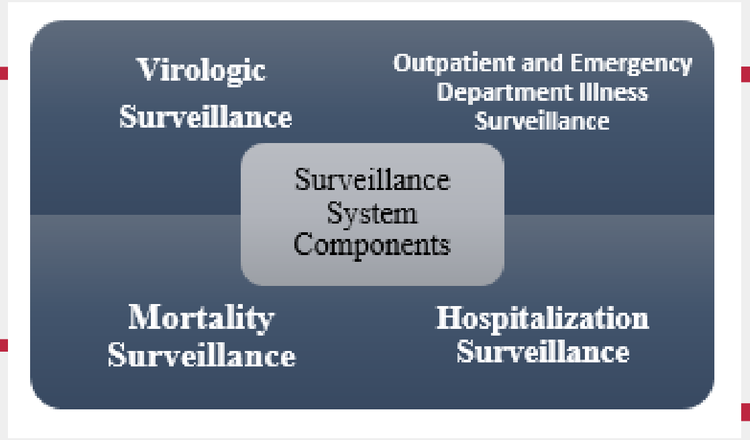
- Centers for Disease Control and Prevention (CDC)
- National Institutes of Health (NIH)
- Department of Health and Human Services (HHS),

Steps of Interventions used

Surveillance → Case management → Outreach → Risk Management

CDC stands for Centre of Disease control and using multiple surveillance systems run in collaboration with state, local and territorial health departments, public health, commercial and clinical laboratories, vital statistics offices, health care providers, emergency departments and academic partners to monitor COVID-19 disease in the United States.

All laboratories are performing primary diagnostic functions; therefore, the percentage of specimens testing positive across laboratory types can be used to monitor overall trends in COVID-19 activity.



Two syndromic surveillance systems are being used to monitor trends in outpatientand emergency department visits that may be associated with COVID-19 illness. Each system monitors a slightly different syndrome, and together these systems provide a more comprehensive picture of mild to moderate COVID-19 illness than either would individually.
Nationally, levels of ILI remain below baseline for the ninth week and in all 10 surveillance regions for the past seven to ten weeks. However, a few regions reported slight increases in percentage of visits for
ILI and CL

This data is collected by NCHS. Weekly mortality surveillance data include a combination of machine coded and manually coded causes of death collected from death certificates. Percentages of deaths due to PIC are higher among manually coded records than more rapidly available machine coded records. Due to the additional time needed for manual coding, the initially reported PIC percentages may be lower than percentages calculated from final data. NCHS surveillance data are aggregated by the week of death occurrence.

Laboratory-confirmed COVID-19-associated hospitalization rates are monitored through the COVID-19-Associated Hospitalization Surveillance Network (COVID-NET). COVID-NET conducts
all-age, population-based surveillance for laboratory-confirmed
COVID-19-associated hospitalizations.

Surveillance

Testing for COVID-19

Two kinds of tests are available for COVID-19: viral tests and antibody tests.

- A viral test tells you if you have a current infection.
- An antibody test tells you if you had a previous infection.

Case Management

Mild to Moderate Disease

Patients with a mild clinical symptoms (absence of viral pneumonia and hypoxia) may not at first require hospitalization, and they are prompted for home isolate

Severe Disease

A few patients will require hospitalization for the executives. As inpatient the executives requires the steady administration of the most common complication of COVID-19 which incorporates pneumonia, hypoxemic respiratory disappointment/ARDS, sepsis and septic stun, cardiomyopathy and arrhythmia, intense kidney injury, and difficulties from delayed hospitalization

Hypercoagulability and COVID-19

A few patients with COVID-19 may create indications of a hypercoagulable state and be at expanded hazard for venous and blood vessel apoplexy of enormous and little vessels.

SCREENING

Stages of public screening :

(1) **Primary screening-** It incorporates watching explorers for clear indications of sickness, estimating temperature, and gathering data on movement and introduction history.

(2) **Secondary screening-** It fuses having a medicinal services or general human services supplier (at whatever point conceivable) direct a further general wellbeing evaluation of sick or possibly uncovered explorers distinguished through the main screening process.

Outreach & Risk communication

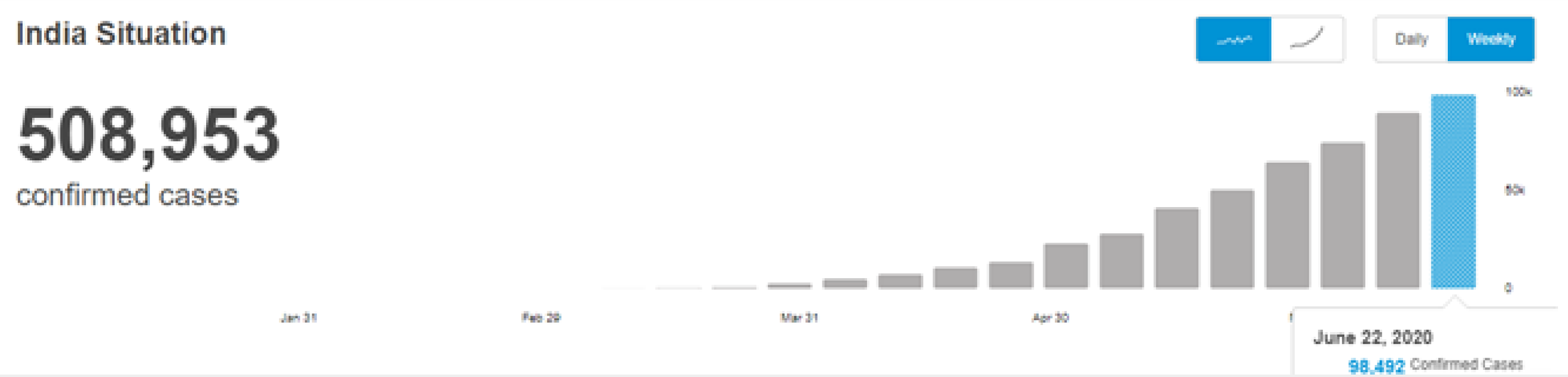
There are various resources that have been used by governmental agencies to spread the awareness in the community. They include:

- Video messages with the help several cartoon figures as well.
- Audio announcements at radio stations and in the Airport.
- Flyers and posters- a digital repository has also been managed by the government which can be downloaded and printed.
- A social media tool kit is also available for the public for free of cost.

TIMELINE OF EVENTS

JAN 2, 2020 - JAN 28, 2020	Dr. Robert warns the US government about the early cases of COVID-19 and their first case confirmed on 20, JAN 2020. Several top health officials informed the Trump government about this potential virus and the importance of early interventions.
FEB 6, 2020 - FEB 28, 2020	President TRUMP holds several meetings and rallys with the grand opening of 'Grand Marshal'. CDC director also passed various instructions to prepare for the pandemic. But, Trump decided to open up America again and declared CORONAVIRUS graph will going to drop down. With the reassessment of social distancing and Lockdown.
APRIL 16, 2020- APRIL 26, 2020	False claims of testing were made which were cancelled later on.

INDIA



Source : By WHO dashboard

Health authorities of India

- Integrated disease surveillance program (IDSP).
- National center for disease control.
- Ministry of health and family welfare
- HIV senital surveillance system
- Indian Railways

Main body involved here is ICMR stands for Indian Council Of Medical Research. Country is using a participatory approach towards it. This innovative technique is known as Participatory disease surveillance (PDS). India is using surveillance network than mass testing.

Existing strategies for COVID-19 testing:

1. Real Time RT-PCR
2. The TrueNat and CBNAAT s
3. RapidPoint-of-Care (PoC) Antigen Detection Test (for diagnosis along with RT-PCR):
4. Standard Q COVID-19 Ag kit i
5. IgG antibody for surveillance only.

Particpatory surveillance Government is using participatory approach by using Arogya setu app. Government is motivating people to download the app and use the app as it is following cases through contact tracing.

Indian railways Installed AI enabled COVID surveillance. Cameras that detect body temperatures and whether a person is wearing a mask. However, a crucial specification has been excluded by Indian Railways, called “black body” temperature in the COVID surveillance cameras in many cases.
Most important is tele thermographic systems, as one of the specifications for temperature accuracy from a COVID point of view in such systems. He said, scanners with the black body are preferable, where mass transit is present and
scanners without black body are acceptable for normal/controlled movement, the spokesman said.

Screening when patients enter and the screening of staff.

SCREENING

POE- Point of entry

• Indian Nationals – Irrespective of the location of the health care facility where the suspect/confirmed case is admitted.
• In case of any conflict, the States may discuss the matter amongst themselves and take a decision.

Border measures

•Refrain from leaving their homes and moving around from the containment zone for at least 14 days
• Refrain participating in events held in indoor venues when fever or respiratory symptoms are detected.
• Employers to cooperate for leaves or absence without a written diagnosis
•Enhanced entry screening for travellers from containment zone

Outreach

- Telemedicine is better reach
- YASH program by National council of science and technology
- DST launches health awareness program

Case management

The residential areas will be divided into sectors for the ASHAs/Anganwadi Workers/ANMs each covering 50 households (30 households in difficult areas).

Supervisory officers (PHC/CHC doctors) in the ratio of 1:4.

The field workers (FW) will be performing active house to house surveillance daily in the containment zone from 8:00 AM to 2:00 PM and also encourage self reporting.

Line list the family members, contact listing, identification of close contacts and all those having symptoms.

The field worker will provide a mask to the suspect case and to the care giver identified by the family.

The suspect will be isolated till such time he/she is examined by the supervisory officer.

The supervisory officer will collect data from the health workers under him/ her, collate and provide the daily and cumulative data to the control room by 4.00 P.M. daily.

As per case definition the supervisory officer, visit house, make arrangements to shift the suspect case to the designated treatment facility.

Follow up contacts identified by the RRTs within the sector allocated to the FWs.

RISK COMMUNICATION

PLANNING → RESPONSE → RECOVERY

TIMELINE OF EVENTS

India reported the first confirmed case of the coronavirus infection on 30 January 2020 in the state of Kerala. The affected had a travel history from Wuhan, China.

JAN 1, 2020 - MAR 30, 2020	This was the period of before Lockdown.
MAR 22, 2020- APR 4, 2020	68 Days of lockdown and 19007 cases reported AND 5398 deaths
APR 5, 2020- MAY 11, 2020	Nation has been divided into three zones and relief packages were announced

RISK MANAGEMENT

Hot zone – RED ZONE

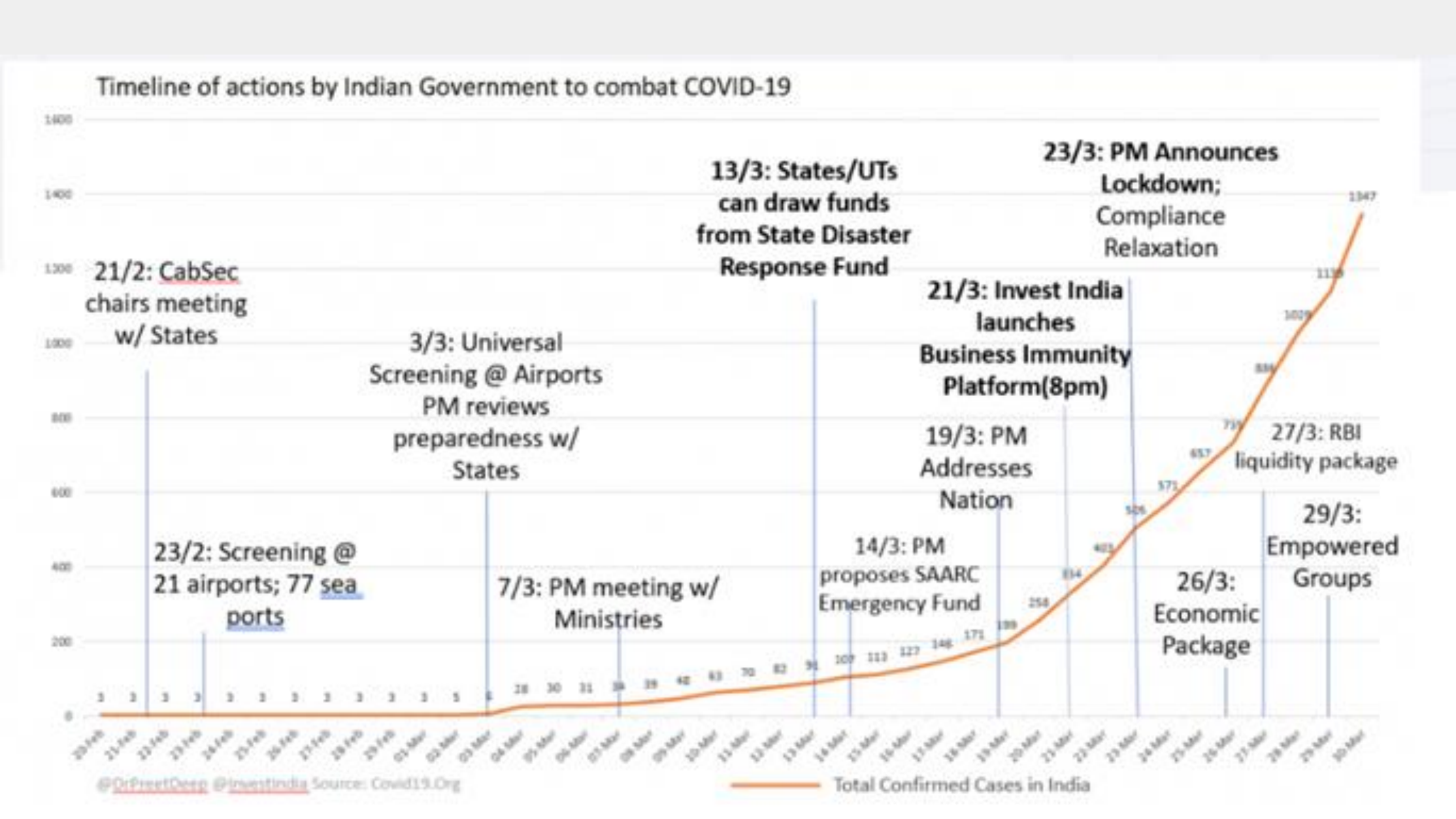
- These are highly prevalent areas of infection.
- Everyone should be considered as likely COVID positive, and generalized and effective quarantine measures must be the focus.
- Low-level syndromic sentinel surveillance in health center/hospital will be required and people suffering from upper respiratory symptoms must be considered as COVID19 and subject to isolation and quarantine accordingly.
- Laboratory testing in these cases is likely to go wrong as sensitivity and specificity of available tests are still less (60-80%) than optimum.

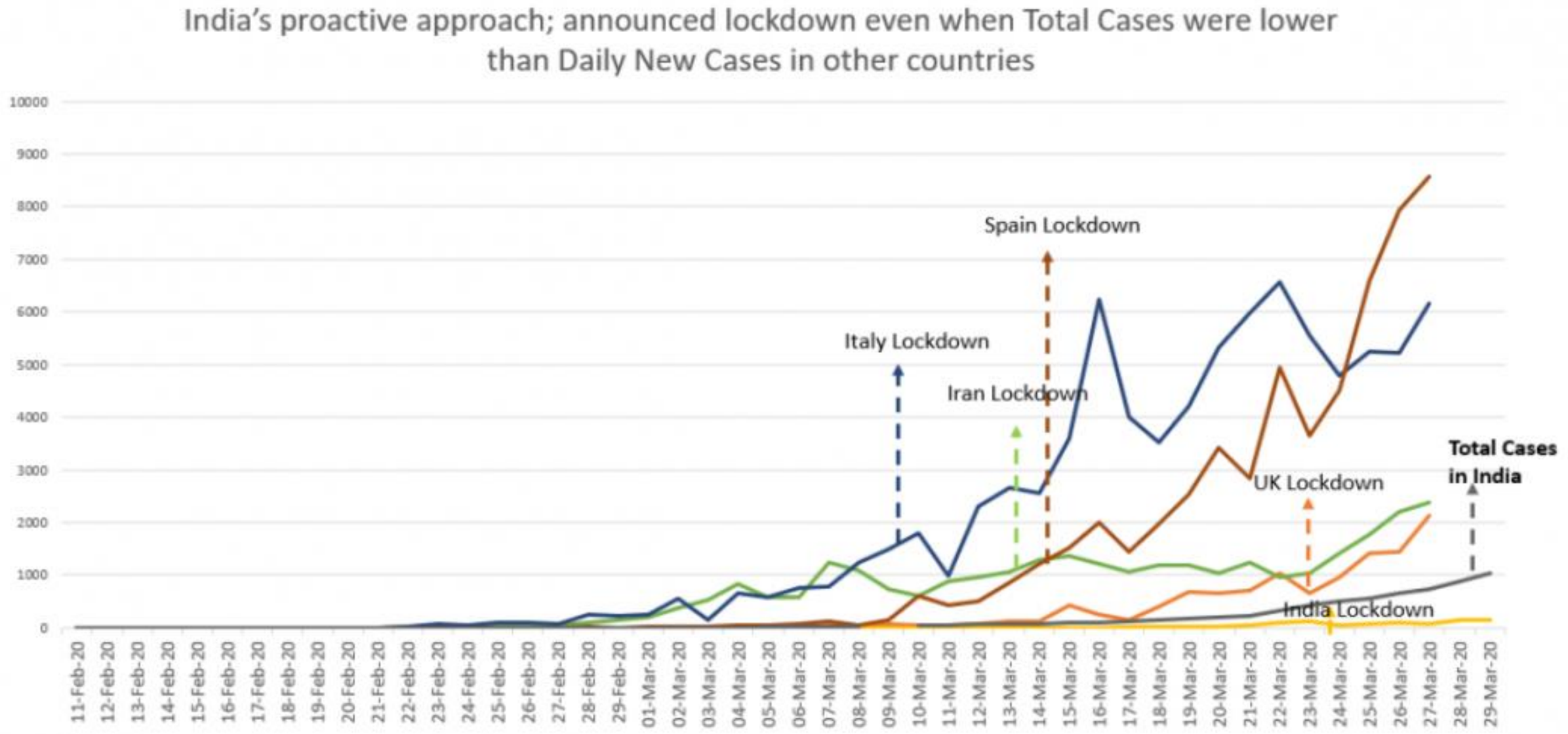
Moderate Zone – YELLOW ZONE

- High-risk areas that can quickly turn into hot spots in the country
- Adequate and timely interventions are not instituted without delay.
- The intensity of surveillance must be maximum in these areas.
- Extensive laboratory testing of all symptomatic and even routine normal people using 'Testing Booths' will need to be instituted in these areas.
- Active surveillance using existing health infrastructure of health workers will be needed to monitor fever and pneumonia as a priority in these geographical areas

Low intensity GREEN ZONE

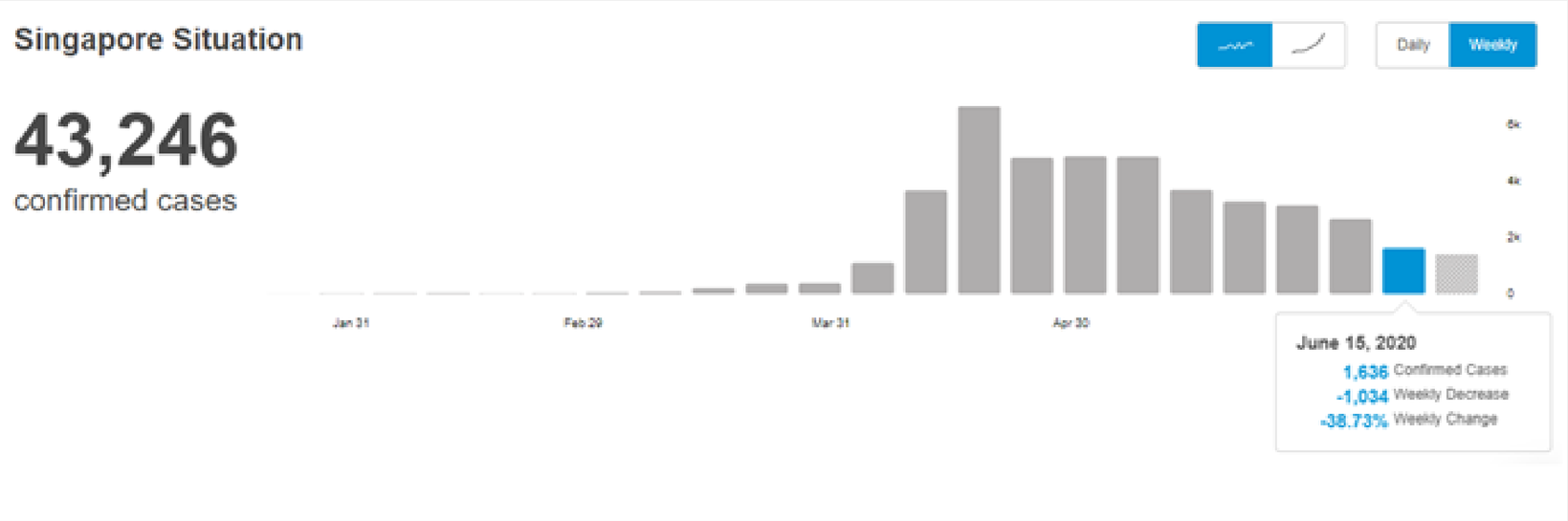
- Care must be taken to monitor these areas for emerging infections.
- At this point, low-intensity zones constitute the largest sections of the country involving many villages of India with poor health infrastructure for intensive surveillance.
- Technology-based surveillance of 'Fever' may need to be given higher priority than surveillance involving laboratory-based COVID testing methods on symptomatic people.
- Self-reporting thermometers and hand-held devices by health care workers in the villages.


Timeline of actions by Indian Government to combat COVID-19
21/2: CabSec chairs meeting w/ States
23/2: Screening @ 21 airports; 77 sea ports
3/3: Universal Screening @ Airports PM reviews preparedness w/ States
7/3: PM meeting w/ Ministries
13/3: States/UTs can draw funds from State Disaster Response Fund
14/3: PM proposes SAARC Emergency Fund
19/3: PM Addresses Nation
21/3: Invest India launches Business Immunity Platform(8pm)
23/3: PM Announces Lockdown; Compliance Relaxation
26/3: Economic Package
27/3: RBI liquidity package
29/3: Empowered Groups
Total Confirmed Cases in India



Timeline of actions and depiction of events and number of cases in India.

SINGAPORE



Source : By WHO dashboard

Government health bodies

1. Ministry of Health
2. NCID- National Centre for Infectious Diseases
3. Minister for National Development
4. Duke-NUS Medical School

Singapore, a city-state in southeast Asia, developed case definitions, laboratory tests, and enhanced surveillance to detect affected individuals with COVID-19 early,to enable containment of the disease.

The government developed an application name as TraceTogether. It uses Bluetooth signals between cellphones to see if acarriers of the coronavirus have been in close contact with other people.

Wastewater samples were screened because the agencies believed about the proportion of viral material in wastewater. It had shown that wastewater testing at treatment plants could be useful for early detection of COVID-19 transmission in the community.

Ministry of Health (MOH) has approved more than 600 polyclinics in country and some general practioners to test for COVID 19.These clinics have been named as (PHPCs) which stands for Public Health Preparedness Clinics. These clinics are responsible for following :-

.

- Dispense medications (e.g. Tamiflu, antibiotics)
- Administer vaccinations (e.g. flu vaccines)
- Provide subsidized treatment (e.g. under the HSS)
- Staff at these clinics will be supplied with personal
- protective equipment by the ministry

Strategy made by hospitals to protect their staff from COVI-19 infection: -

(1) Use of personal protective equipment
(2) Data collected if any staff suffers from fever.
(3) Data collected from medical support given to unwell staff.
Staff health surveillance s an important strategy because hospitals are at greater risk for NOSOCOMIAL infections specially in Eds

screening

POE- Point of entry

OUTREACH

There are various resources that have been used by governmental agencies to spread the awareness in the community. They include:

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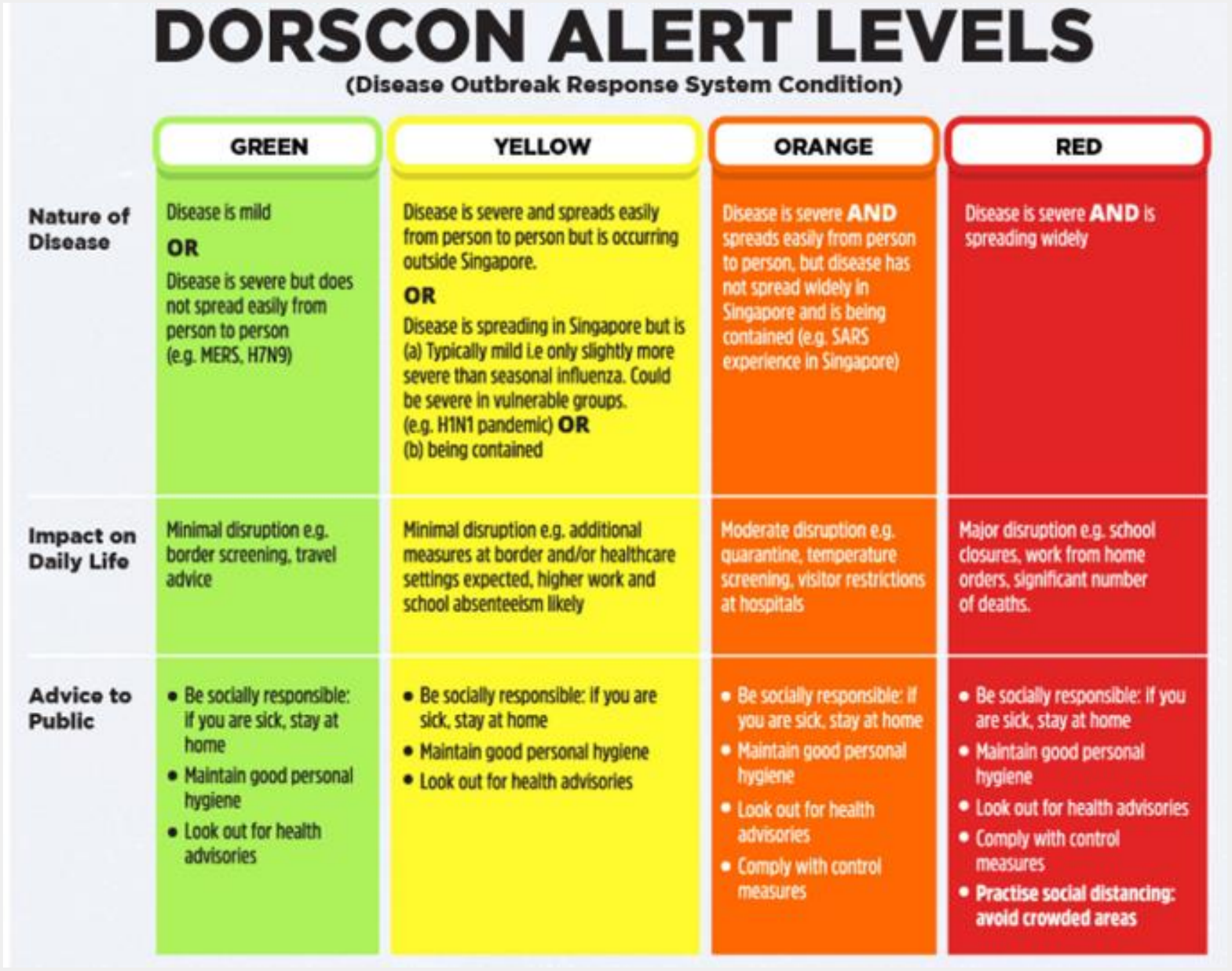
RISK MANAGEMENT IN SINGAPORE



RISK Management

- **Mandatory leave of absence (LoA) for Singaporeans**

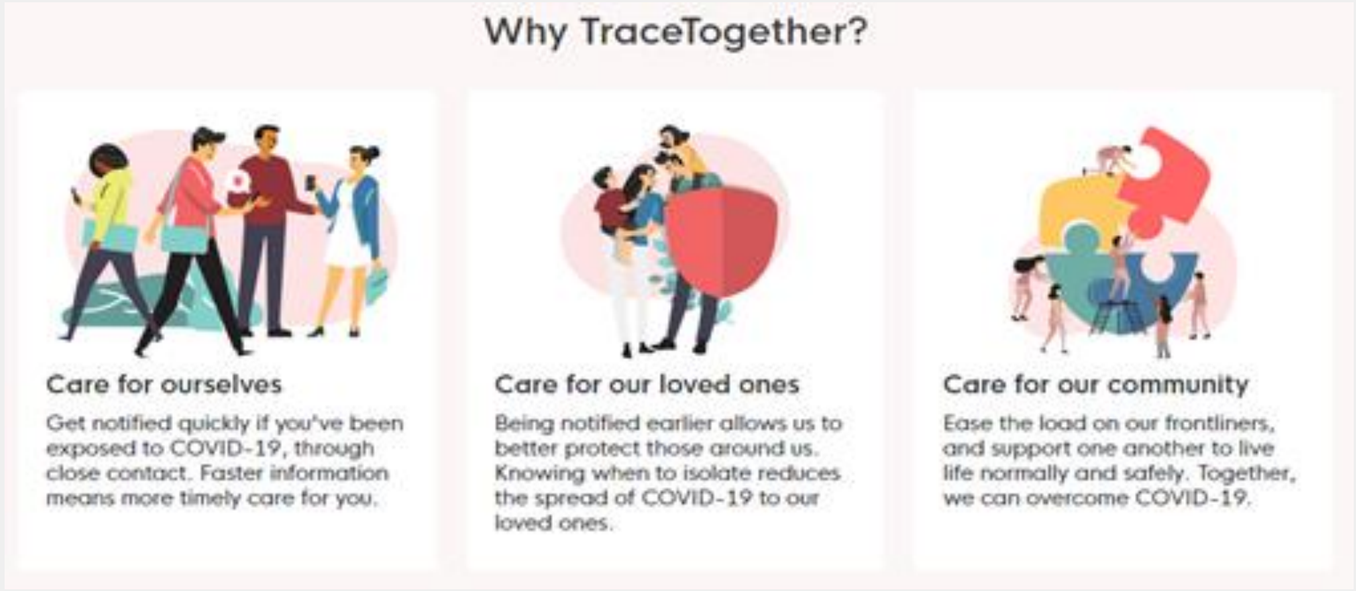
Citizens of Singapore returning to their homeland from other countries were placed in Quarantine of 1 days and government allowed LOA i.e. and an annual leave entitlement. People coming from outside or China were denied to enter the Singapore.

- **Joint Working Group with Malaysia**

A joint working committee was made to deal with the spread and take the curve down of CORONA VIRUS. This committee will share the technical details about surveillance, exchange the information on COVID and what improvements can be done for both the countries. They both will follow border screening protocols with sharing the national advisories

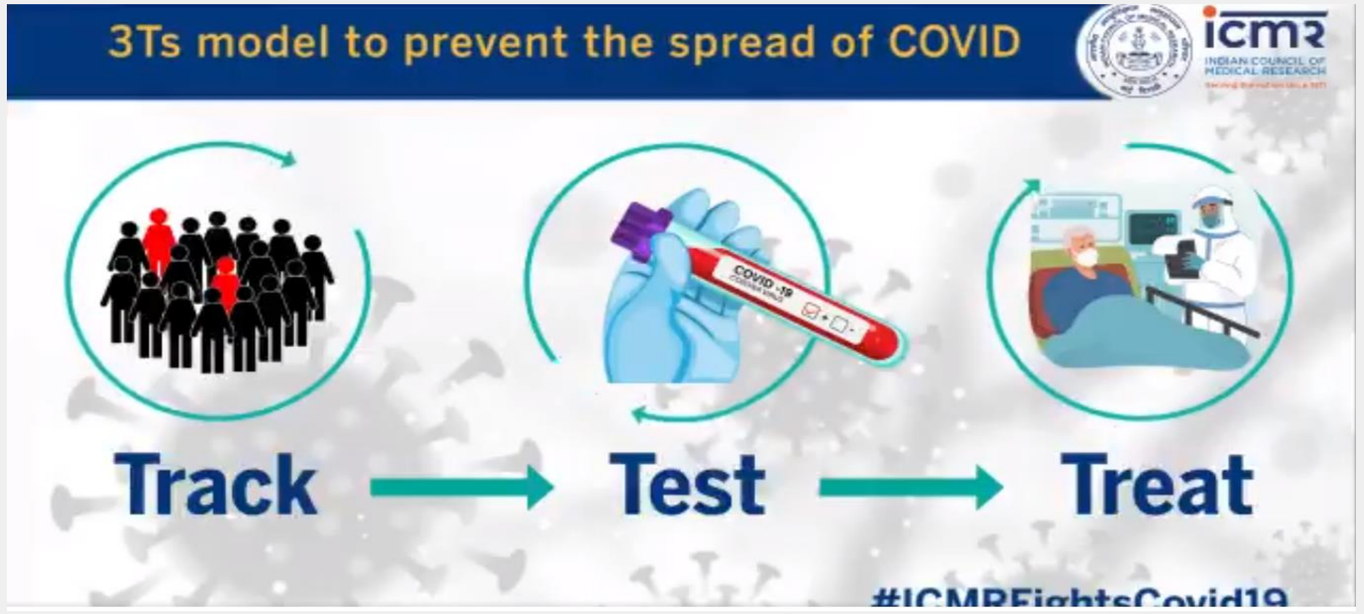
TIME LINE OF EVENTS

JAN 22, 2020	First case of COVID 19 is detected
JAN 23, 2020 - JAN 27, 2020	Regulations from Health ministry were passed and protection from COVID 19 were started through screening.
FEB 4,2020- FEB 26, 2020	First cluster transmission was confirmed and DORSCON level was raised to 'orange. Serological tests were conducted, connections was established .
MAR 5, 2020 - APR 21, 2020	Nasal swab test were done for the travellers who found to be fevrish. Circuit break measures - Home based measures like work from, study fom home, etc.
MAY 9, 2020- MAY 31, 2020	• Migrant workers tested • Screening done by serological test • Cancellation of all flights



SINGAPORE APPLICATION

NDIAN APPLICATION



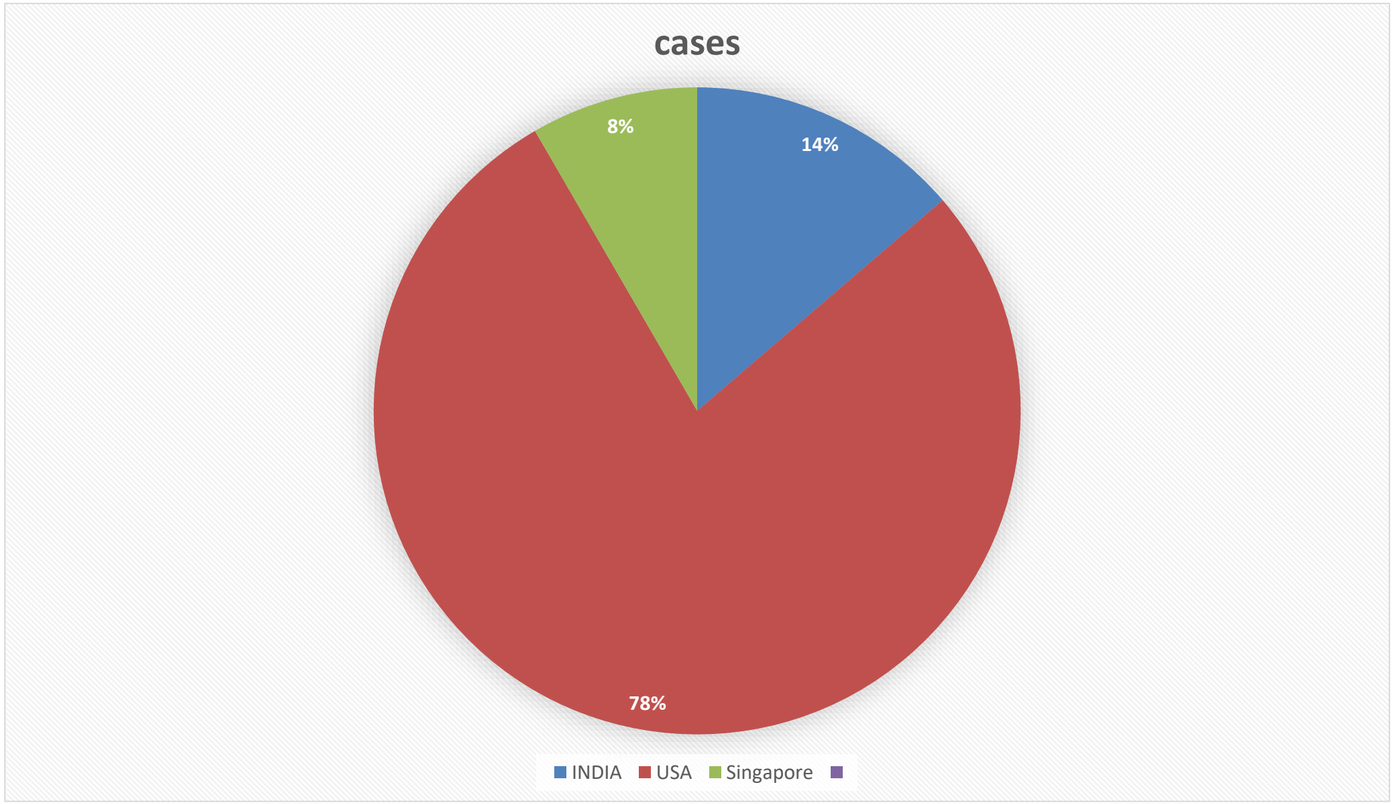


Fig: Percentage of Corona virus Cases per million population of India, USA, Singapore during 1 Jan, 2020- 1 May, 2020.

CONCLUSION

India and Singapore are working on a similar mitigation strategy where they have divided the areas into zones according to the cases present in a particular demographic area. This has figured out at which rate contamination can be spread in the country and how rapidly the response plan is needed in those areas to deal with conditions. Approaching the outreach, India has planned different strategies to work upon accordingly in various states. A good example is Rajasthan's Bhilwara model. In this model the several administrative steps were taken by the Rajasthan government in Bhilwara district of Rajasthan. In the earlier weeks of COVID 19 infection Bhilwara district was the most affected district. The government imposed a curfew with the essential services and a house to house survey was done. This includes detailed screening and contact tracing with the help of a team containing 850 members. .

Moving towards the operational guidelines in response to the COVID increasing cases were made and applied. Guidelines including the risk communication helps in moving towards the planned steps like lockdown done in 5 phases and participatory surveillance. Likewise, Singapore also maintained the containment zone named DORSCON plan where the demographic areas were divided into GREEN, YELLOW ORANGE, and RED. Depending on the level of disease beginning from the green where disease level is mild moving towards red where disease level is rising rapidly. Imposing lockdowns and the availability of essential services were also restricted accordingly. Whereas the USA being the most developed country and having a strong health care system faced many challenges during COVID as government as not able

to cases in comparison with India and Singapore. The country planned a lot for surveillance techniques to detect and identify the cases in various cities. They made a good surveillance system which is considered to be the first step in mitigating the cases. There were some similarities present if we consider surveillance and point of entry screening and case management. But, due to the lack of an effective risk communication timely. The country is facing ramifications as cases are increasing rapidly.

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THANK YOU

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PART-2

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ONLINE COURSE

ESSENTIALS OF GLOBAL HEALTH

By

Himani Kulshreshtha

IIHMR UNIVERSITY

Yale

COURSE CERTIFICATE

06/18/2020

Dr Himani kulshreshtha

has successfully completed

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an online non-credit course authorized by Yale University and offered through Coursera

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Richard Skolnik
Former Lecturer, Department of Health Policy and Management, Yale School of Public Health and Lecturer in the Practice of Management, Yale School of Management, 2012-2016

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TOPICS TO BE COVERED

Introduction
Objecties
Burden of disease

DETAILS

Essentials of Global Health

- Course Affiliation - Yale university,
- Mode of learning – Online at COURSERA
- Course Facilitator - **Richard Skolnik**, (Former Lecturer, Department of Health Policy and Management, Yale School of Public Health and Lecturer in the Practice of Management, Yale School of Management,
- Duration of Course – **56 Hours**

INTRODUCTION

Global health is considered as the health of people across the world. The global health essentials course covers all the aspects related to global health and the issues, challenges, limitations in the same.Various underlying global issues and challenges are continuously faced by the population across the globe that are the determinants of their health. . The health care system has been divided into different levels across the world and each actor supports the system in its way resulting in the formation of a network good for collaborations and generation of funds. However, at certain points or stages, the Govt. or the non-Govt agencies also face the problem in the implementation of the schemes for the maintenance of the health of its individual that happens in the case of COVID-19. The course global health is thus very important in this context and might be the linkages between the health care system and population by highlighting these facts in the global scenario.

OBJECTIVES

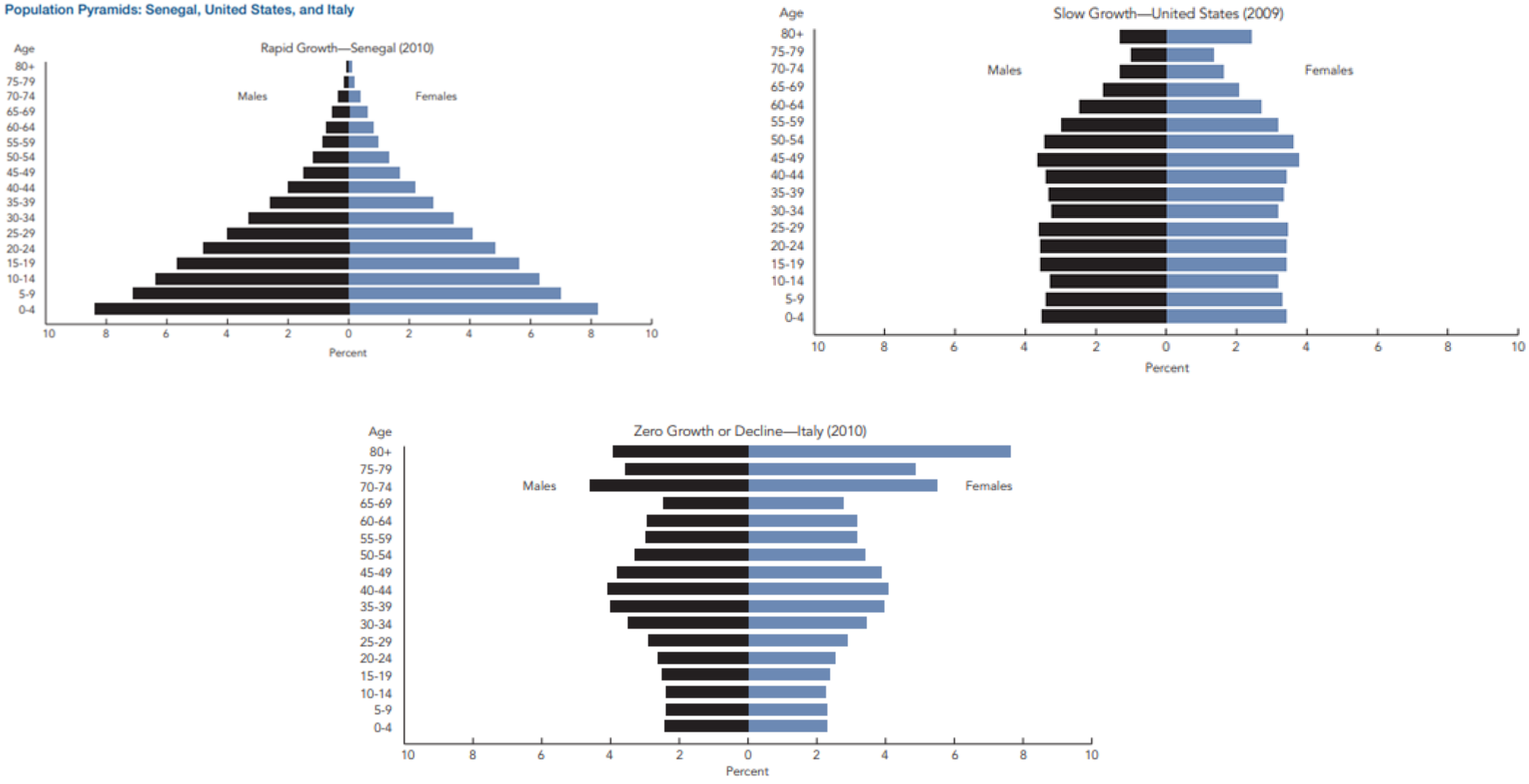
- Dependency on demographic dividends and demographic indicators and look for the dependency on these variables for different diseases.

• Assess key wellbeing differences, particularly as they identify with the soundness of low-salary and underestimated individuals in low-and center pay nations;

• Outline the key entertainers and associations in worldwide wellbeing and the way wherein they collaborate to address basic worldwide wellbeing concerns;

• The substance of the Operational arranging rules to help nation readiness and reaction, and gives direction on a lot of focused quick activities that nations ought to consider at national.


1 Introducing Global Health
2 The State of the World's Health
3 Health Systems and Value for Money in Health
4 Cross-cutting Themes
5 Critical Causes of Illness and Death
6 Looking Forward



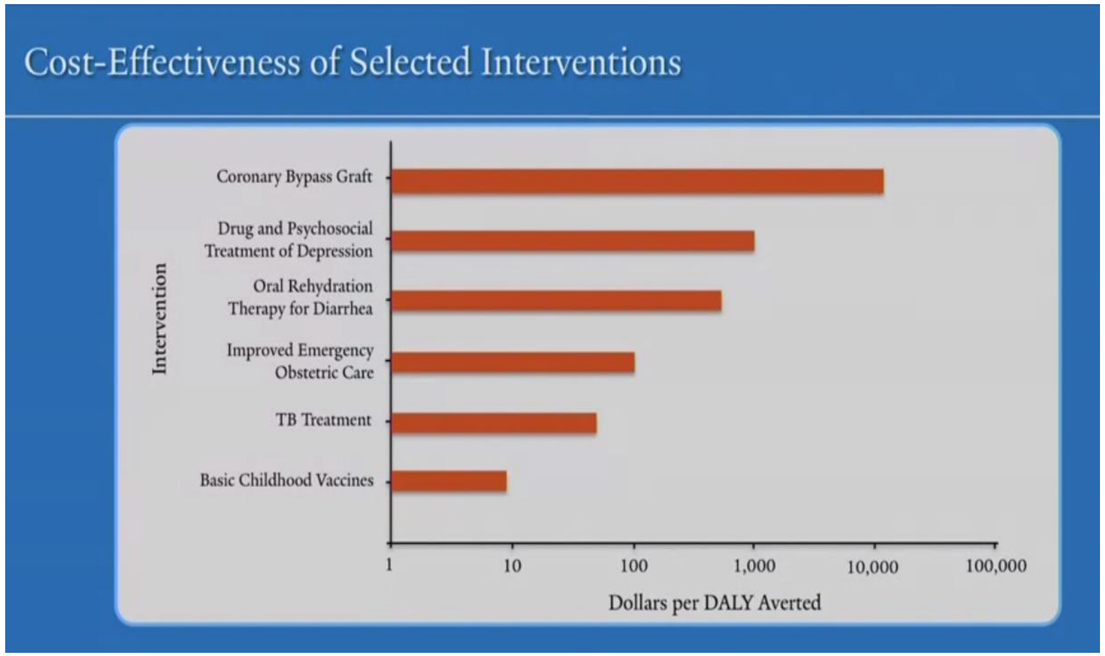
Population pyramids representation

Value for Money

Value for money" in considering investments in health. All legislatures need to set needs, and one device that they may use to set those needs is called cost adequacy investigation.

Definition

This can be defined in simple terms as a method for comparing the cost of an investment with the amount of health that can be purchased with that investment. The cost is the price of the investment.



Application of techniques of cost effectiveness analysis. So, we can look on the following:

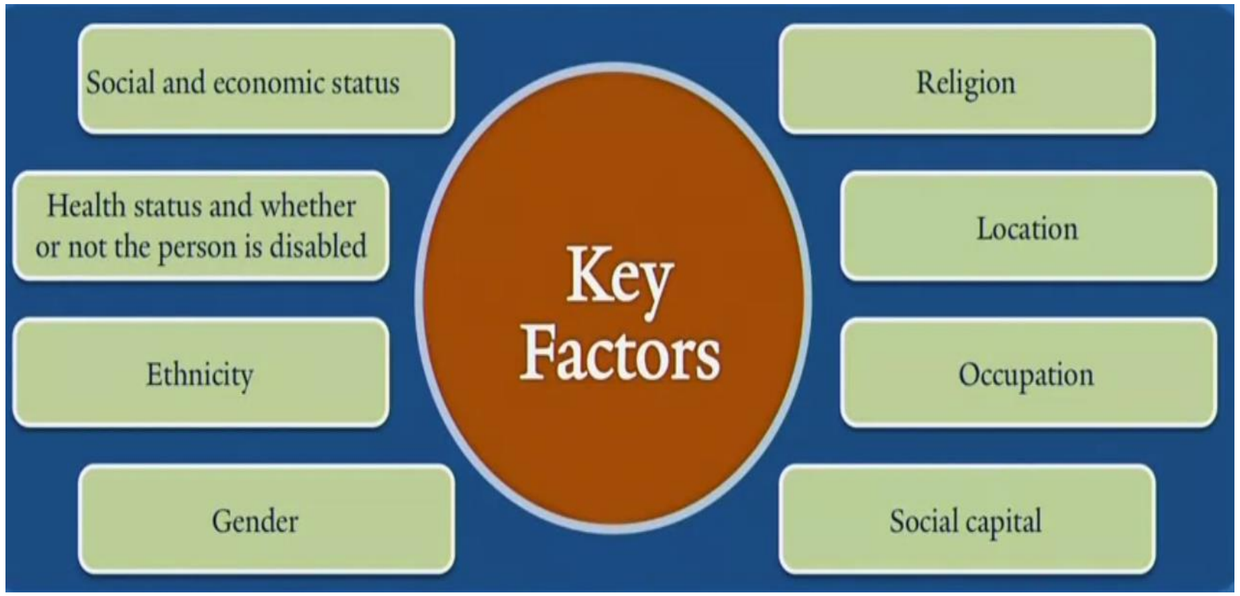
·Equity consideration
·Burden of disease
·Extent to which investment serves as a society.
·Impact it laid on the provisions of Insurance .

Burden of disease-

(1) Comparative hazard evaluation techniques utilizing point by point introduction and presentation
chance data for all populaces; these strategies are commonly founded on the most elevated levels of proof and most thorough information.

(2) Calculations dependent on increasingly restricted epidemiological information, which require more suspicions for certain populace gatherings or geological locales.

(3) Certain ailments were completely ascribed to the earth as indicated by the data about their transmission pathways.

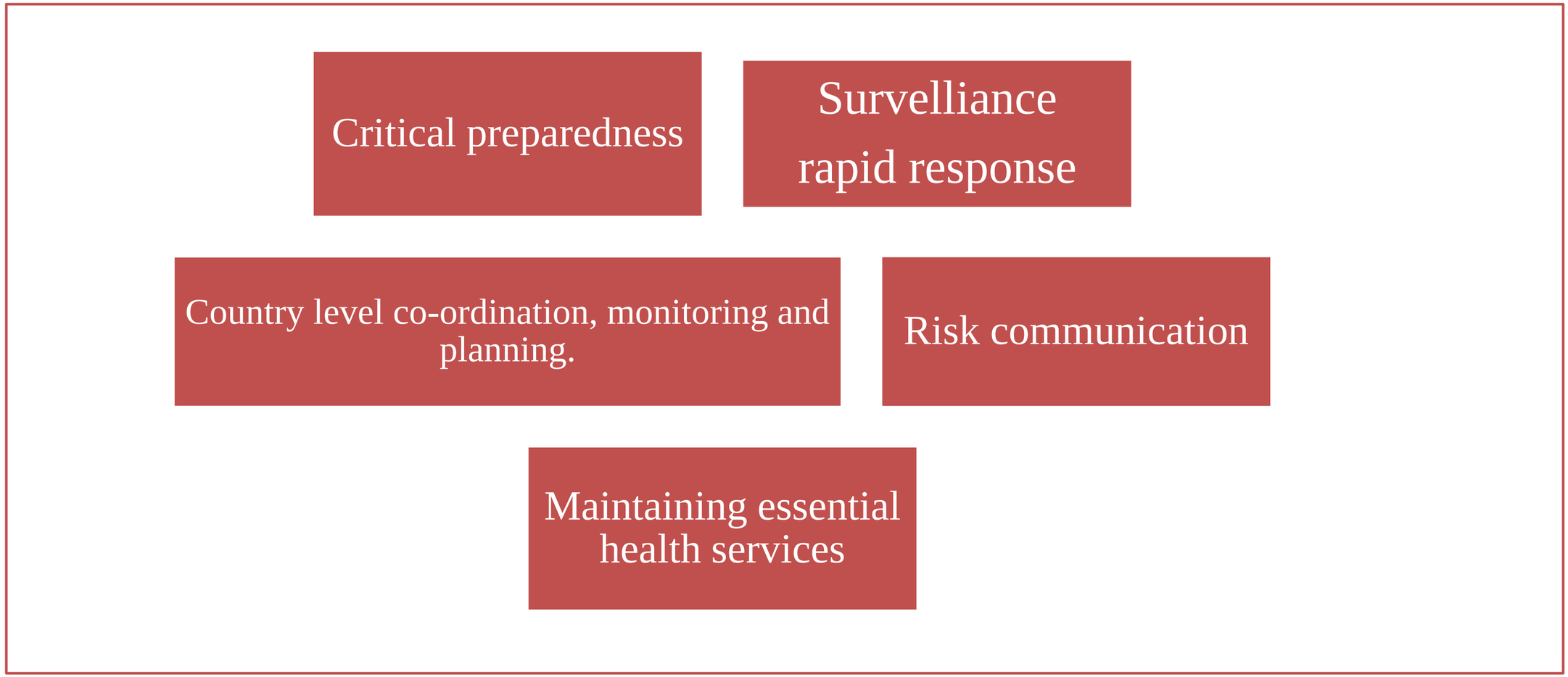


Critical key factors for various health disparities

Neonatal and nutritional conditions	
Neonatal conditions	Household air pollution, mothers' exposure to second-hand tobacco smoke, poor water and sanitation in birth settings.
Protein-energy malnutrition	Water, sanitation and hygiene, climate change acting on food insecurity.
Noncommunicable diseases	
Cancers	Household and ambient air pollution, second-hand tobacco smoke, ionizing radiation, UV radiation, chemicals, worker protection.
Mental, behavioural and neurological disorders	Occupational stress; disasters such as floods, earthquakes and fires (linked to housing, flood management, climate change); forced resettlements in the context of development projects; occupations in the entertainment or alcohol industry; head trauma (for epilepsy); chemicals (for certain neurological diseases); noise (for insomnia); bright lights, poor air quality and odours (for headaches). Physical activity fostered by supportive environments can reduce certain disorders.
Cataracts	UV radiation, household air pollution.
Hearing loss	Occupational exposure to high noise levels.
Cardiovascular diseases	Household and ambient air pollution, second-hand tobacco smoke, exposure to lead, stressful working conditions, shift work.
Chronic obstructive pulmonary disease	Household air pollution, ambient air pollution, exposure to dusts in the workplace.
Asthma	Air pollution, second-hand tobacco smoke, indoor exposure to mould and dampness, occupational exposure to allergens.
Musculoskeletal diseases	Occupational stressors, prolonged sitting at work and poor work postures; need to carry large quantities of water over significant distances for domestic use.
Congenital anomalies	Mothers' exposure to second-hand tobacco smoke, chemicals.
Risk factors for noncommunicable diseases in other areas but related to the environment	
Physical inactivity	Workplace activity, prolonged sitting at the workplace, travel modes, transport infrastructure and land-use patterns, availability of suitable parks and open spaces.
Obesity	Environmental factors favouring physical activity.

Looking Forward

This plan includes working on various health issues or pandemic situations like we have currently i.e. COVID 19.



Country level co-ordination, monitoring and planning

To be effective, any public health measure must be implementable and designed in a way that will promote willingness to comply. Urban authorities should:

- Adopt a coordinated multisectoral, whole-of-government and whole-of society approach;
- Promote coordination and coherence in measures across governance levels.
- Identify existing hazards and vulnerabilities.
- Identify and equitably protect vulnerable subpopulations.
- Consider diverse social and cultural interactions with health issues, norms and perceptions;
- Consider the extent of reliance on the informal sector or economy.
- Consider the most appropriate means of communication of information.
- Ensure continued provision of essential services.
- Ensure that health facilities are prepared for COVID-19 and identify and mobilize additional resources.

Risk communication

- Ensure that the highest levels of government include RCCE in preparedness and response activities and are ready to release information to protect the public's health in a rapid, transparent, and accessible manner.
- Review existing RCCE plans and consider whether adjustments are needed for an outbreak of COVID-19.
- Agree on procedures to ensure the timely release of information, such as clearance procedures for messages and information products.
- Keep clearance chains short. Prepare a budget for communication (including scale up).
- Set up an RCCE team and define members' roles and responsibilities.

Learning Methodology

Digital learning resources Mix of media - combine multimedia elements including text, image, video and audio to present information.

Discussion Boards –
Where learners can post the questions or doubts after watching the sessions and reading the articles.

Evaluation Quizzes per module ensured that learners have actually understood the topic.

Readings A set of module is present to cover each and every topic.

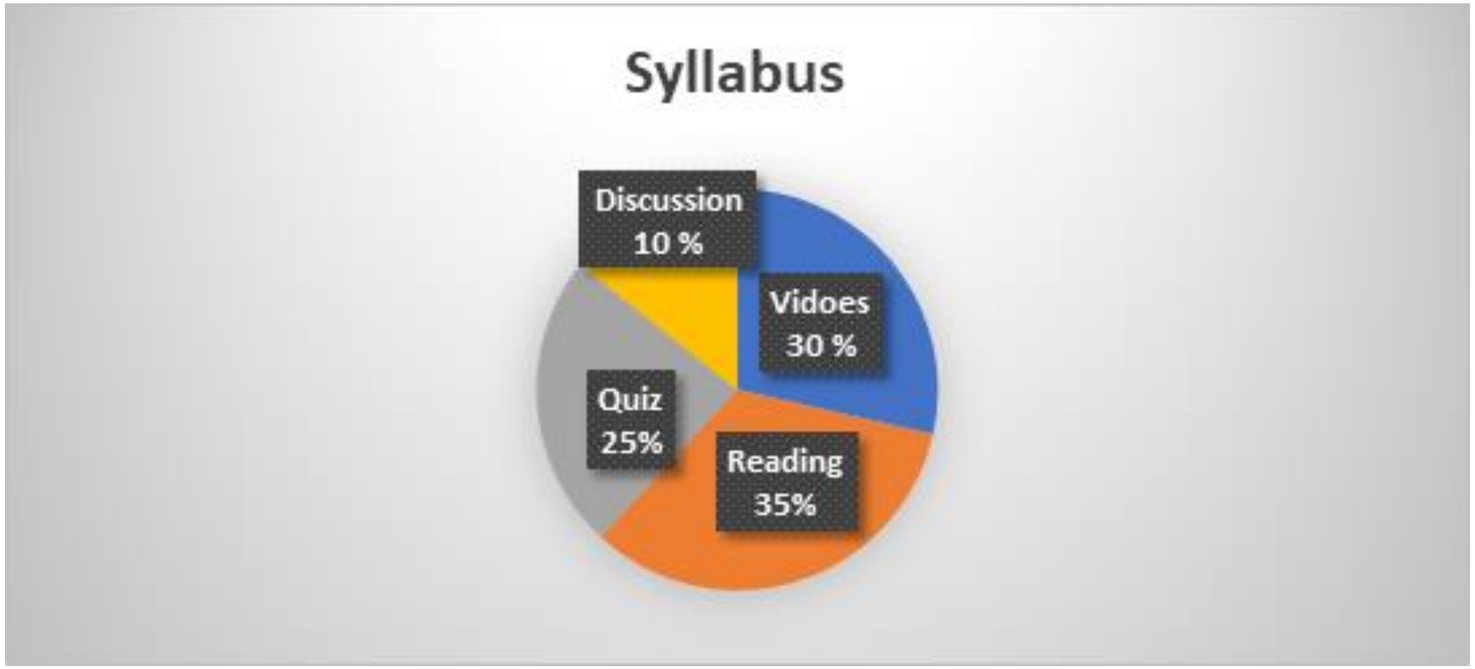


Figure 1 : Illustration of the contents of syllabus

Recommendations

Recommendations to the learners can be given because of following reasons: -

1.It gives an insight about how to access the global disease conditions.

2.The responsible factors and the rationale of taking them into consideration
.

3. Measurement and analyses of provided data in terms of DALY etc.

4. Learners will also come to know about the basics of strategies which should be made to deal with global health issues.

CONCLUSION

1. For global health solutions we require to understand the Countries having cases clusters in time, geographic location and/or common exposure (Clusters of cases).
2. The local transmission and the type of preparedness we need to have during local transmissions and epidemiological conditions.
3. Detection needs to be very precise in terms of following:
    - Emergency response mechanisms.
    - Risk communication, contact tracing and management.
    - Case Finding and tracing.
    - Public health measures.
    - Case management strategies
    - Societal responses

4. The interventions we need to have to prevent the situations.
5. There should be good assessment of public health and the calculation of DALY to know about the disease effectiveness.
6. Workplaces should develop action plans for prevention and mitigation of COVID-19 as part of the business continuity plan and according to the results of the risks assessment and the epidemiological situation.
7. Universal health coverage ensures everyone has access to the health services they need without suffering financial hardship as a result.
8. The health sector regulates the quality and safety of food and pharmaceutical products. But there should be regulation of the marketing, by satellite TV, of unhealthy lifestyles, including diets.

THANK YOU