

The Analysis of survey and awareness on COVID-19

Surekha T P¹, Shilpa R² & Geetha M N³

¹Professor, Department of Electronics and Communication Engineering,
Vidyavardhaka College of Engineering, Mysuru, India

²Associate Professor, Department of Electronics and Communication
Engineering, Vidyavardhaka College of Engineering, Mysuru, India

³Assistant Professor, Department of Electronics and Communication Engineering,
Vidyavardhaka College of Engineering, Mysuru, India.

surekha.tp@vvce.ac.in

shilpa.r@vvce.ac.in

geetha.mn@vvce.ac.in

Abstract—Contact tracing is complex information that requires attention of common people to solve problem. The common areas to troubleshoot contact tracing are issues related to process, people, and context. SARS-Coronavirus-2 is the virus, where many people get an illness, and we call COVID-19 (short for “coronavirus disease that emerged in 2019”). For COVID-19, the people who get infected with SARS - virus -2 get sick and importantly, we need to know how long they can infect people and spread the virus. This is defined as close contact. To control the spread of virus, we need to break the chains of human transmission. Where any individual who was within 6 feet of an infected person for minimum of 15 minutes starting from 2 days before sick or, for asymptomatic patients, 2 days prior to positive verification until the time the patient is isolated. The public health evaluation of close contacts to patients with laboratory-confirmed may vary depending on the exposure setting. Contact tracing for covid-19 requires, identification of signs and symptoms, Incubation period, Testing & care to reduce the transmission and control the SARS-2.

KEYWORDS: Covid-19, SARS-2, Symptoms, Treatment, Quarantine

1.INTRODUCTION

Coronaviruses(CoVs) are a large group of viruses. You need powerful microscopes to see them. They infect a wide range of mammals and birds. Some regularly cause mild respiratory illness in people. SARS-CoV-2 originated in bats, Special coronaviruses have jumped species and can be transmitted between people. This is the third coronavirus to have done so since 2002. *Severe Acute Respiratory Syndrome (SARS)* CoV emerged in Guangdong, China, in 2002, *Middle Eastern Respiratory Syndrome (MERS)* CoV emerged in the Middle East in 2012, *and SARS-CoV-2* emerged in Wuhan, China, in 2019. Contact tracing may focus on high Risk factors which include hospitals, care homes, and other closed settings. Karnataka has also widened the definition of 'Contact' to include both the high risk and low risk categories as defined by the Health Ministry

2.Risk Factors for Severe Disease

Some groups of people are more likely to have severe disease if they get infected

- a) Older adults >65 years of age (increasing risk with age)
- b) People who are obese
- c) Some young, healthy people become severely sick.
- d) Small proportion of infections

Other existing medical conditions

- a) Diabetes
- b) Hypertension (high blood pressure)
- c) Any kind of Respiratory disease (asthma, emphysema, chronic obstructive pulmonary Disorder [COPD])
- d) Heart disease
- e) Liver disease
- f) Kidney disease
- g) weakened immune system caused by taking steroids or other medications that affect the immune system (note that a

person who has HIV that is controlled with medication is not at substantially increased risk)

3. Issues related complexity can be addressed as mentioned below

- a) Contact tracing always requires skill and attention to detail.
- b) Problem solving and creativity are essential components
- c) Contact tracers are detectives, investigators, social workers and therapists
- d) Any new situation arises, bring it to the notice of higher authorities.
- e) Common areas to trouble shoot the complexity are Process, Person and context.

Process issues can be solved with contact tracing protocol, Person issues can be solved with proper communication and Context are the issues that cannot be solved by individuals themselves but needs experts' advice. If a person gets infected with SARS-COV-2, then arises the question of signs and Symptoms? How long does the sickness last? And how long the infected people spread the virus? Signs are the measurements of illness like Temperature and Breathing variations. Symptoms are what patients feel about: Fatigue, Nausea, Loss of taste or smell & Muscle ache. Fever is both a sign and symptom.

4. Common signs and symptoms of COVID-19 are

- a) Fever(temp >100.4 °F)
- b) Tiredness Chills Muscle pain
- c) Cough
- d) Loss of taste or smell
- e) Difficulty breathing
- f) Headache
- g) Sore throat

5. Severe Signs and symptoms are

- a) Blue lips, which indicates, they are not getting enough oxygen
- b) Increased rate of breathing
- c) Chest pain when breathing
- d) Waking up during sleep
- e) New confusion

6. Incubation Period

The incubation period is the time from when someone is infected until symptoms develop. It ranges from 2-14 days. 50% of people are sick by 5 days after they are infected. The infectious period is the time during someone infected with SARS-COV-2 can transmit the virus to other people.

Close Contact Evaluation and Monitoring Hierarchy

If the lungs cannot recover, patients cannot breathe on their own. Lack of oxygen can damage the organs in the body, causing increased risk for heart attacks, kidney failure, strokes, and clotting disorders.

7. Treatment of Covid-19

There is no *specific* treatment to cure COVID-19

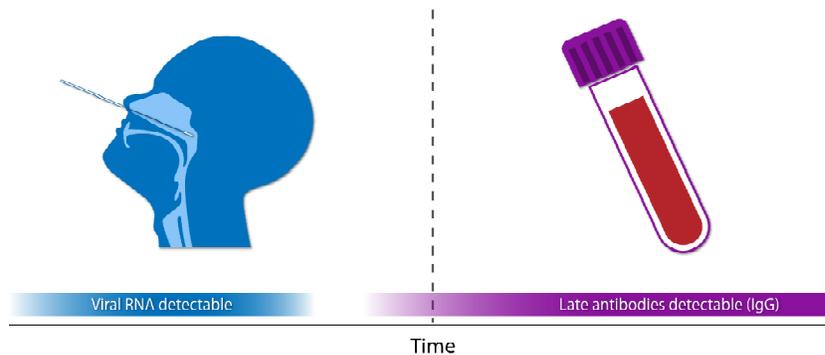
- a) Treatment is to support the body's functions until the body's immune system can fight the infection
- b) Many patients with lung disease require mechanical ventilation (breathing machine, ventilator) to help them breathe.

There are two kinds of Test

- a) These are **polymerase chain reaction (PCR)** tests (also called molecular tests). These tests give a sign that the virus is reproducing in your cells
- b) **Antibody tests** identify antibodies to the virus, usually in blood. Antibodies are made by your immune system to fight

off viruses or bacteria. Some antibodies (IgG) begin to develop when you are sick and can be identified after you recover. Remember that no tests are perfect. A positive PCR test shows that there are virus particles in the sample, means there is active infection. There are sometimes false negative results. Not all people with infection will have RNA in their sample

Diagnostic tests identify virus in the body
 —viral RNA detectable in respiratory tract, Past infection antibodies to virus detectable in blood.



8. COVID-19 Contact Tracing Workflow[3]

Step 1: Rapid Notification of Exposure

A confirmed COVID-19 patient's close contact should be cautioned of their vulnerability as early as possible. Notification of the contacts may be through various channels like email, text or in-person. The primary and secondary aids of notification of contact should follow the protocol and it should be in place to cater the services for deaf people.[3]

Step 2: Contact Interview

The contact person must be interviewed for providing guidance on prevention of infection and control practices at house/outside in individual's primary language.

Step 2a: Quarantine/Isolation Instructions and Testing Quarantine/Isolation instructions

The COVID-19 positive contacts who were diagnosed within 90 days by a positive RT-PCR test for SARS-CoV-2 RNA or by health worker depending on their symptoms, and since their symptoms began before 90 days or less[3]

- a) Quarantine is not essential and resting is not advised for contacts with no current symptoms of COVID-19[3]
- b) Self-quarantine for fourteen days is mandatory for those who exhibit symptoms and should be consulted with a healthcare provider to resolve if in case they have been infected again with SARS-COV-2 or by any other etiology if the symptoms are caused.[3]
- c) Telemedicine provision shall be made to contacts who has no primary healthcare worker. The duration of the quarantine remains same i.e., 14 days for contacts with negative test results.

Step 3: Medical Monitoring

- a) Self quarantine contacts are monitored daily via different communication modes such as video conferencing, telephonic conversation, to test their temperature and COVID symptoms.
- b) For contacts who report testing, follow up is advised to confirm results.[3]
 - o Positive cases will be referred to a case investigator.
- c)

- c) Symptomatic contacts should be self-quarantined if negative, and are advised to follow all guidelines given by public health authorities.
- d) If there is no improvement, then additional medical consultation and second test is required.
- e) If there is no provision for second testing ,then they should be intimated to self-isolate and should be advised to be accomplished as a credible case. The people with confirmed COVID-19 and having a mild infection are advised for *Self-isolation* [3].

Step 4: Contact Close Out

After 14 days of quarantine ,the asymptomatic people were released by giving general health instructions. Contacts who test negative but still have symptoms during monitoring period should follow the advice of the health care and self-quarantine.

If there is no improvement in the symptoms, an additional test and medical consultation may be required. Contacts who develop symptoms but test negative during their monitoring period should continue to self-quarantine and follow all recommendations of public health authorities.

A second test and additional medical consultation may be needed if symptoms do not improve. The conclusion to release a contact from self-quarantine must be decided at the local level and advised to the contact [3]

9. Results and Analysis:

The Analysis of the Covid-19 can be addressed through two steps.

- a) The first step indicates the general survey of covid-19, with eight questions as shown in figure 1 to figure 8 with the percentage of solutions from 10-100% with the maximum of 453 responses.
- b) The second step indicates the awareness of covid-19 with 10 questions from figure 09 to figure 18, with the percentage of solutions from 10-100% with the maximum of 25 responses.

453 responses

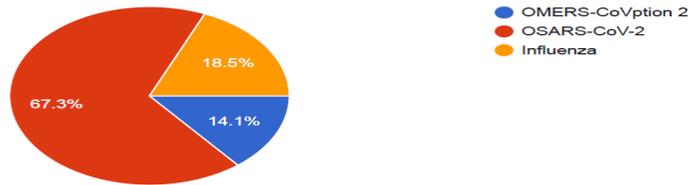


Fig 1: shows the responses for Covid-19, caused by which virus

453 responses

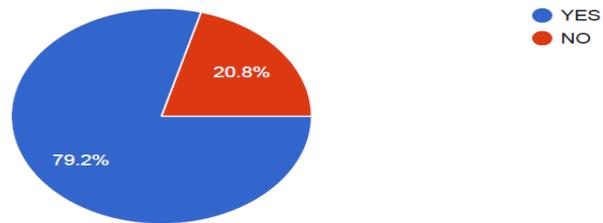


Fig 2: Shows the responses regarding Lifestyle and eating habits has changed during Covid-19

453 responses

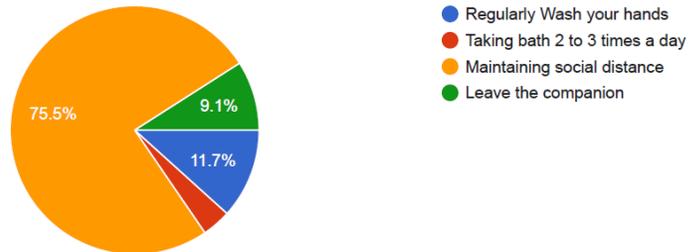


Fig 3: Shows the responses for the precautionary measures taken when companion have close contactwith Covid-19

453 responses

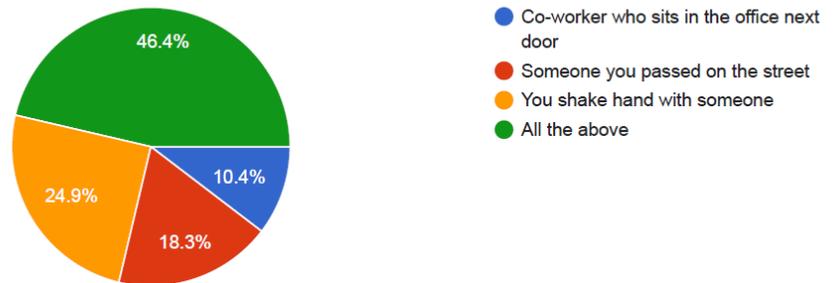


Fig 4: Shows responses for Positive Covid-19,would most likely to infect

453 responses

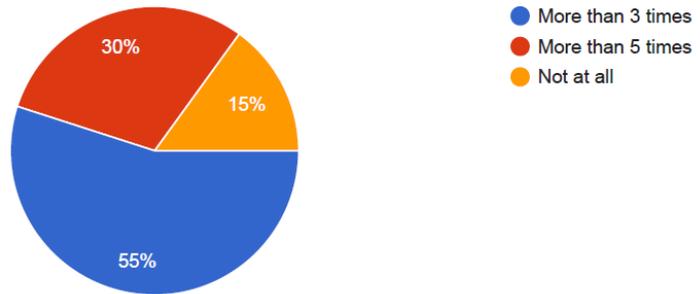


Fig 5:Indicates the usage of Santizier in a day

453 responses

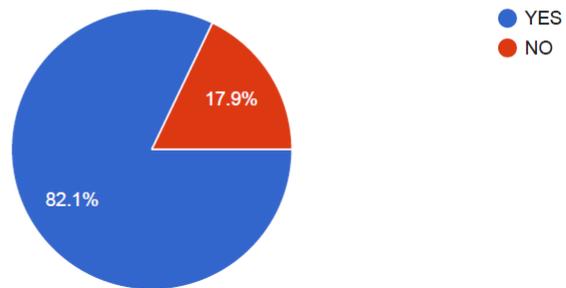


Fig 6: shows the indications of Covid-19 has effected regular routine

453 responses

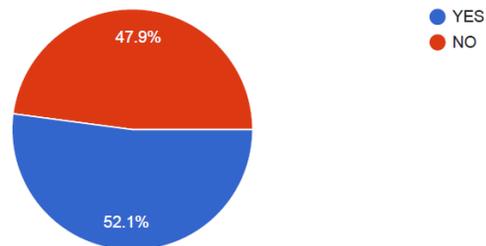


Fig 7: Shows how many were stressed during Covid -19

453 responses

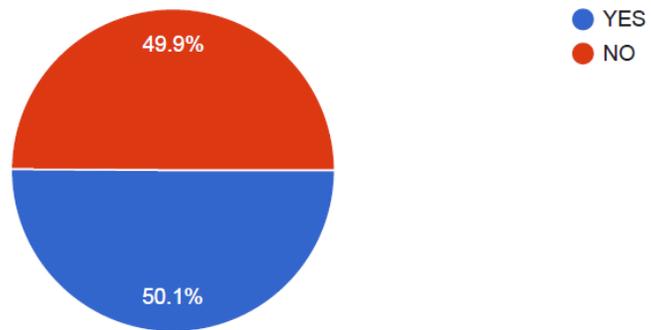


Fig 8: Shows how many are taking Immunity Boosters

Analysis part two indicates Awareness of Covid-19 as shown in figure below.

25 responses

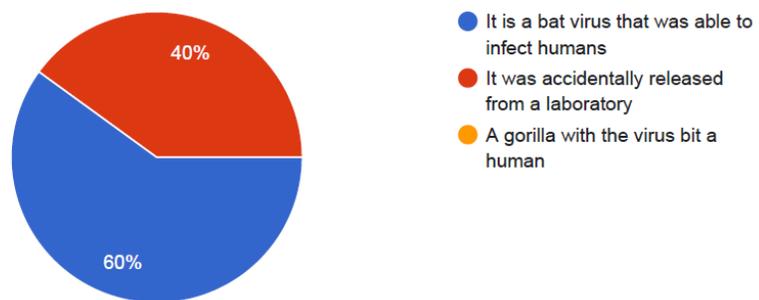


Fig 9:Shows the responses of the SARs –COV 2 virus emerge

25 responses

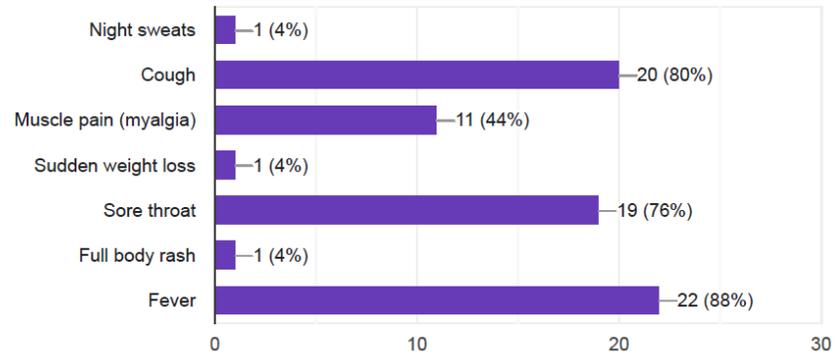


Fig 10: Indicates the responses for common signs and symptoms of Covid-19

25 responses

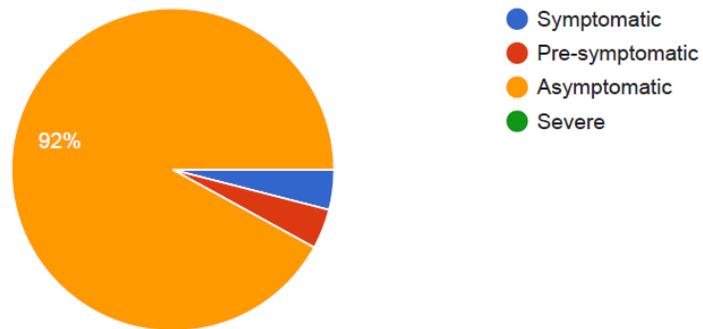


Fig 11: Shows the responses for people infected with SARs-cov2

25 responses

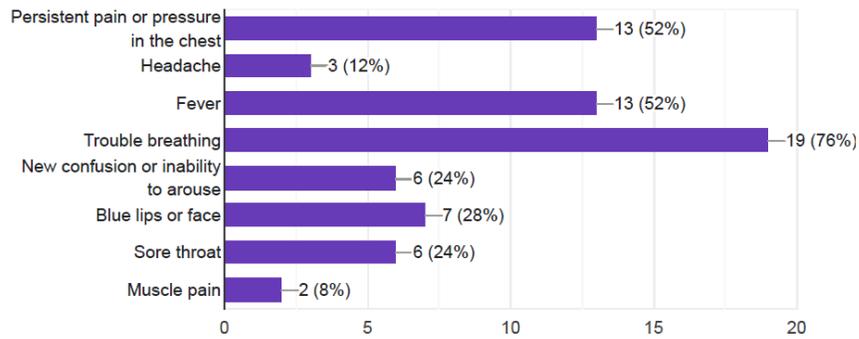


Fig 12: Shows the responses for urgent care of covid -19

25 responses

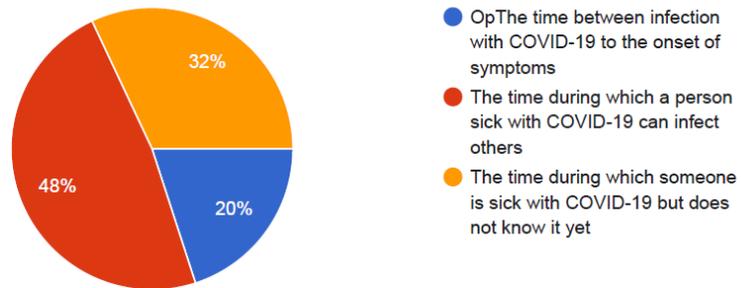


Fig 13: shows the responses for Infectious period

25 responses

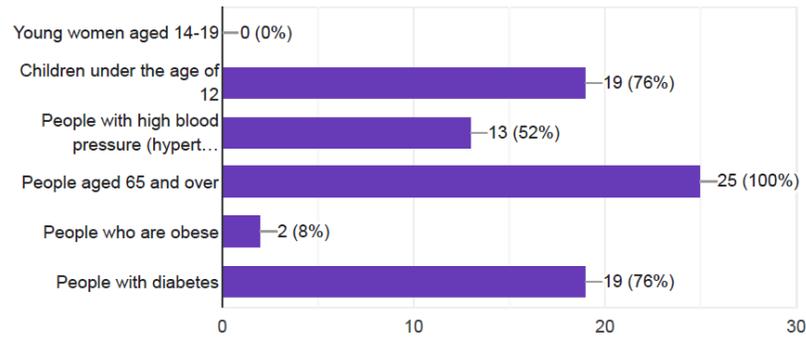


Fig 14: Shows the responses for increased risk for severe disease

25 responses

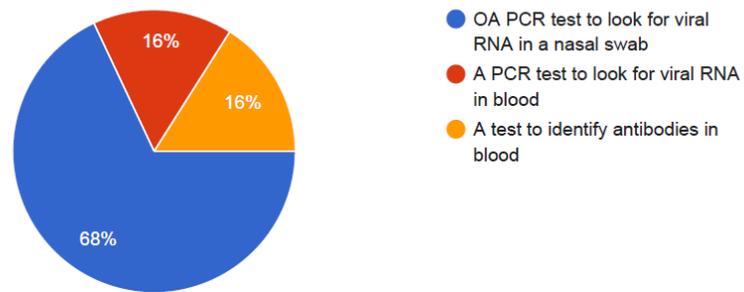


Fig 15: Shows the responses for common test to diagnose covid -19

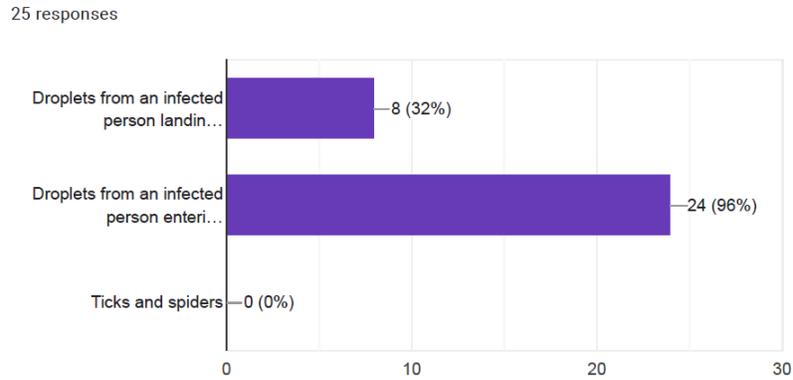


Fig 16: Shows the responses, how the virus is transmitted between people

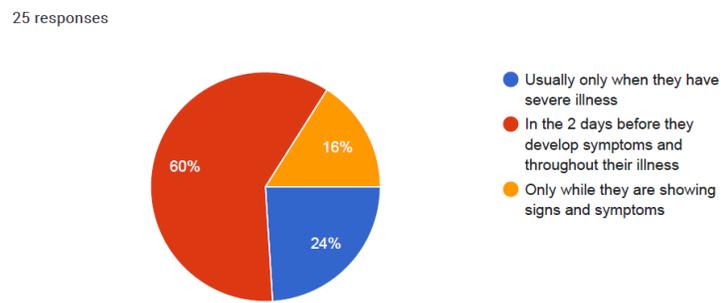


Fig 17: Shows the responses for someone with covid-19 is contagious to others

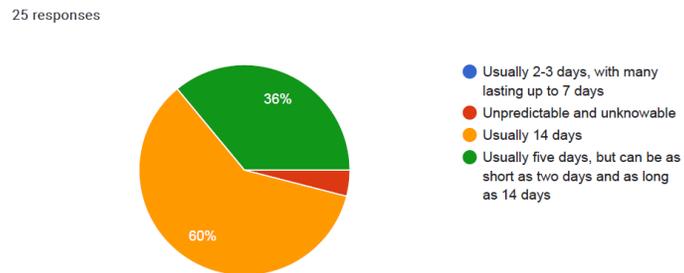


Fig 18: Shows the responses for the incubation period of covid-19

10. Result discussions

Two sets of questioner were sent to general public to get the feedback relating to the survey and awareness connected to Covid-19. This result is validated with the feedback from the Google forms Feedback is based on responses with two set of questions. First set of questions is based on general survey with 453 responses as shown in figure 1 to figure 8. Fig 1 shows the Pie chart responses for Covid-19, caused by which virus, with rating of 67.3% out of 453 responses. Fig 2 shows the Pie chart responses regarding Lifestyle and eating habits has changed during Covid-19, with high rating of 79.2% out of 453 responses.

Fig 3 shows the Pie chart responses for the precautionary measures taken when companion have close contact with Covid-19, with high rating of 75.5% out of 453 responses. Fig 4 shows the Pie chart responses for Positive Covid-19, would most likely to infect, with rating of 46.4% out of 453 responses. . Fig 5 shows the Pie chart responses for the usage of Santizier in a day with rating of 55% out of 453 responses. Fig 6 shows the Pie chart responses for the indications of Covid-19 has effected regular routine, with excellent rating of 82.1% out of 453 responses. Fig 7 shows the Pie chart responses how many were stressed during Covid -19 with rating of 52.1 % out of 453 responses. Fig 8 shows the Pie chart responses, for how many are taking Immunity Boosters with rating of 50.1% out of 453 responses.

Second set of questions is based on awareness on covid-19 as shown in figure 9 to figure 18 with 25 responses. Fig 9 shows the Pie chart responses, of the SARs –COV 2 virus emerge with rating of 60 % out of 25 responses. Fig 10 shows the Pie chart responses, of Common signs & symptoms of Covid-19 with high rating of 80 % out of 25 responses. Fig 11 shows the Pie chart responses, for people infected with SARs-cov2, with high rating of 92 % out of 25 responses. . Fig 12 shows the Pie chart responses for urgent care of covid -19, with high rating of 76% out of 25 responses. Fig 13 shows the Pie chart responses for Infectious period with rating of 48% out of 25 responses. Fig 14 shows the Pie chart responses for

increased risk for severe disease, with excellent rating of 100% out of 25 responses. Fig 15 shows the Pie chart responses for common test to diagnose covid -19, with rating of 68% out of 25 responses. Fig 16 shows the Pie chart responses, how the virus is transmitted between people, with high rating of 96% out of 25 responses. Fig 17 shows the Pie chart responses for someone with covid-19 is contagious to others, with rating of 60% out of 25 responses, Fig 18 shows the Pie chart responses for the incubation period of covid-19, with rating of 60% out of 25 responses.

11. Conclusion

There is sufficient survey and awareness for close contact of covid-19 and evidence of safety from individual to justify the public health based on the above analysis. Since COVID -19 viruses is highly infectious, some of the cases are life threatening. Thus Covid-19 poses a great hazard to public health and care. As such there is no antiviral drugs developed. Hence we need to promote the importance of close contact, to control the source of contagion and cutoff the route of spread. Finally as an individual and community based we need to follow the following summary points.

Summary

- a) Introduce yourself to the case
- b) Inquire about the case's infectious period
- c) Identify contacts
- d) Issue isolation instructions to the case (includes identifying challenges to isolation and providing resources)
- e) Initiate contact tracing (includes informing contacts that they were around someone with COVID-19, checking on their symptoms, issuing quarantine instructions, and identifying challenges to and providing resources for effective quarantine)
- f) Implement regular check-ins with cases and contacts

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