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Editorial

The Lessons Learned from Current ongoing Pandemic Public Health Crisis of COVID 19 and its Management in India from Various Different Angles, Perspectives and way forward

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One can wonder as to why COVID 19 spread more in some countries so rapidly as compared to other countries. There are various epidemiological factors associated with it and one among them is ***sthanamial*** rituals and religious practices, as the total number of infected people up to 16th March 2020 hints for the possibility of such association. This article is devoted to explain important various factors and inform the public for remedial action as very often people are not prepared to question such practices particularly of their religion to which they are emotionally and sentimentally attached. Some people believe that they can drive away corona by religious ***havan*** or by herbal products.

Why Italy and some of other countries have more cases compared to rest of the world?

When an infective organism enters into one person it causes an index case and when the index case comes in contact to others through personal contact or through some infection carrying medium, it results into a secondary case/ cases and cluster around it. It is also possible when the harmful organism reaches at the same time to many people through infected object or animal food it causes multiple index cases at one or more places resulting into many clusters at the same time. This is what may have happened in Hubei provinces of China and many multiple index cases may have quickly caused multiple secondary cases, tertiary cases and so on. Accordingly, through travelers, the virus spread to other countries but so far it has not been possible to explain the epidemiological factors as to why some countries are seeing more cases and other countries less cases, at initial stage. In the course of period, all countries are likely to face more cases.

The spread of disease happens with different magnitude depending on epidemiological and operational factors of the health service response in the countries. Early detection and reporting also reflect more cases including intensity of population covered by laboratory testing of

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infected suspected persons. One of the possible factors that may have played role at initial stage of its spread in new countries as seen from the data till 16th March 2020 could be due to religious rituals and practices involved at the common platform of worshiping that can be temple, church, mosque, gurudwara or any identified place, which in Sanskrit is called ***sthanam*** and all infections that can spread from such a place could be named as ***Sthanamial* infections** just like nosocomial infections in the hospitals/ health care facilities.

The European Centre for Disease prevention and Control (ECDC) website data as of 16.03.2020 shows that high number of cases of Covid 19 are seen mostly in countries that have more dense population, frequent people-to-people contact, more out-eating habits, use of pre-cooked food/ quick food and partly it could also be linked to countries where Roman Catholic population is more, most of who go to church for Sunday Mass. Under such circumstances it may have caused multiple secondary/ tertiary cases in that country due to initial infected person administering sacraments of holy communion or by contaminated concentrated bread and wine itself served on Sunday mass or also due to person to person contact in the Church.

Interestingly, in Italy (with 96.55% catholic Christian population), Vatican City (100%), France (75.54%), Germany (31.2%), Austria (72.10%), Spain (87.79%), Switzerland (46.08%), Netherland (31.28%) and in USA (22.63%) where there is more catholic population, the initial number of cases are high. Other countries with high catholic Christian population are Brazil 78.91%, Mexico 86.67%, Philippines 81.03% which are also affected. The protestant Christians don't observe Sunday mass and adjoining countries in Europe with more protestant Christian appear to have lesser number initially. It however does not mean that every other country with less Catholic Christian population have less initial infection. Subsequently high number of people are likely to develop COVID 19 infection in most of other countries as well but their occurrence can be more spread with flat curve over the period of time or delayed peak of less intensity.

Why Iran has high number of initial COVID 19 in comparison to other Muslim countries?

More number of Iranians may have travelled to China or more Chinese may have visited Iran and due to the dense population affected area in Iran the disease may have spread through contact with infected persons or through infection germ carrying object or food. But it may also likely have spread through the water pond/***Haudh***/ water tap made in the Masjid /Mosque used to perform a purification ritual called ***Wudu*** by washing face, hands, arms and feet before ***Namaz*** prayer. Many Muslims offer 5 Namaz every day so even one infected person or carrier of the COVID 19 virus is sufficient to contaminate Haudh water tap. The question also arises as to why it has not happened in other countries where there are more Muslims. This is because it can be incidental and does not happen all the time but it is a lesson to learn for these countries data that there is high level of risk in all other religious places as well. Such risk factors in other religion also need to be identified. Close contacts & practice of touching for greeting in big a religious gathering of any religion may also become a precipitating factor.

In China more case fatality rate may also be linked to one child norm and most of elderly may have inadequate home care when they fall sick and particularly those elderly persons who are already having co morbidity. Eating, serving and food distribution habits of the people can play role for rapid spread of such infectious disease.

Most of the big religious places in India have been closed as a precaution but large number of such worshiping places are still open where special precautions is required. Even a big crowd itself can infect a person from another subclinical or healthy carrier or infected sick person. ***Prashadam*** offered in the Hindu temple needs to be prepared and stored with proper precaution and priests who perform puja ceremony and offer *prashadam* and charnamrita (holy water offered to devotees in temple) should be free from such viral infection. All religion priests therefore need to be taught the principles and significance of personal hygiene and safe performance of rituals of religious ceremonies learning from the experience of above countries.

Other socio-cultural practices, demography and environmental and geographic locations also have bearing on the magnitude of such viral infection in a country or a place. While some of the sociocultural and religious practices in India are helpful certain other practices can have harmful posing risk of spread of infection.

Good things in favour of India are its joint family system and other members take care of sick person in the family, less outside eating habit, serving, Non-preference for ready cooked, packaged and fast food, greeting habit of namaste, and taking bath in the morning, less use of hand sanitiser and tissue and toilet papers for which disposal system is poor, etc .

Bad circumstances and practices in India are like very big religious gatherings & processions, melas, jutthas, offering of prashadam in temples mostly not prepared with standard norms, sharing of Hukka, unfinished bidi and Cigarette with friends, overcrowded market places, crowded tourist places and temple compounds, inadequate housing and poor sanitation and inadequate drinking water facilities although sanitary toilet facilities have improved remarkably in last few years, sharing of shelter places with domestic

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animals in the villages, selling uncovered cooked foods on the roadside trolleys, open drainage in many urban cities/ towns etc. Problems are more intense in the slums and in the unauthorised colonies, some other bad practices also seen in offices like habit of ministerial/departmental higher executives using towels in their office rooms for wiping hand and face, which are very often not ironed after washing, use of handkerchiefs used by school children that is not washed and ironed on day-to-day basis.

The strategy for prevention and control of such pandemic should vary from country to country depending on their capacity, socio-economic condition, demographic structure, geographical location, healthcare infrastructure, public health organisation and infrastructure, preparedness for such public health emergencies, prior existence of regular ad hoc response for similar other pandemics of respiratory origin. Such COVID 19 pandemic alerts us that for all such infectious disease success depends on the extent of response addressing determinants of pandemic and its precipitating causes and escaping from such disease looks difficult for any country. Rich country like USA and most of European countries, which have already on-going regular programme implementation for other corona virus infection and Influenza/H1N1 like illness have most of things required for Covid19 in place except vaccines and anti-viral drugs. Therefore, beside enforcement of other measures, their topmost priority appeared to be development of drug and vaccine as rapidly as possible and some developed countries including China are selling testing kits to other countries. China took measures though little late but took more rigorous forceful measure and has ultimately appeared to have controlled it. But much depends on that there is no reoccurrence of infection in epidemic form within one to two years.

The Indian Government response till now appears appropriate and the approach adopted will help to delay the load of infection and let it happen gradually so that country can cope with it. Since there is no anti-viral and vaccine available and 75 to 80 % of infection is mild and asymptomatic/ subclinical in nature spending more on confirmation taste beyond optimal limit will be waste of resources for India which may create more fear and chaos in the society. There is however scope to further develop national HQ capacity to lead and coordinate with one programme approach and there should be general health partnership with various other ministries/ sectors involving coordination, communication, coherence and cooperation. India should declare a full fledged National Programme for prevention and control of epidemic/ pandemic prone respiratory illnesses of severe consequence in human being " which should subsume the initiatives already being taken for seasonal Influenza H1N1 and Avian Influenza. One voice and one message system needs to be adopted so that the State/UT level messages do not differ with the national messages. All the states/ UTs should take greater responsibility and the state, district and block level rapid response teams already in place should be fully geared up.

The Govt. staff of closed institutions like colleges /schools particularly science and communication faculty should be utilized in manning control room for public information after their orientation and public health specialists should be used to give practical preventive/ protective measures for the public on radio and TV. The Hospital clinical, para clinical specialists be used to address how to maintain a safe hospital and other health care facility & to teach general practitioners how to take effective measures for the same.

The PM's call for SARC country cooperation and G20 meeting on the subject is most appropriate and should be globally appreciable as it will help in data sharing, communication, IHR capacity strengthening and assist in capacity building of low income countries. In such pandemic situation it will be in the interest of rich developed countries and rich pharmaceutical companies to provide free testing kit to meet optimal requirement of very poor countries. It must be realised that COVID 19 being a totally new virus, 30 to 40% of population is going to get infected over period of time till an effective vaccine is made available and used. If there are more sub-clinical cases of COVID 19, it would appear initially more challenging at present but may prove useful ultimately by building herd immunity provided such immunity lasts after infection for at least 1 to 2 years. So instead of spending huge amount on lab testing at present, the country should do it optimally and rather spend more on building public awareness, informing people on harmful practices through cadre of Public health workers and field epidemic surveillance specialists, improving sanitation and drinking water supply, improving peripheral health system particularly primary health care with community involvement, developing robust isolation centres, isolation based ambulance system, survey of samples from general population with lab testing in different geographic area of the country, R & D for development drugs, vaccine development In the long run following other measures will add to the value of our preparedness for the achieving national health security and mitigating Public Health Emergency by equipping standard fully protected isolation ambulance for every district, a few special small aircraft to rescue even Infected Indians trapped in a situation of similar or more lethal pandemic disease from other countries and completion of VSL III lab already sanctioned at India's National Centre for Disease prevention and Control (NCDC) about 10 years ago but still construction not started. NIV Pune under ICMR is basically a research institute, but is very often overburdened to help in preparation of laboratory tests, and for testing for such diseases to meet the urgent requirement. The problem of COVID 19 should

not be left to M/O H&FW alone. All other Ministries, Pvt agencies/ bodies, Municipalities, CBOs, RWAs, Govt and PVT institutions, religious organisations, media have to play their role and the community at large have to play important role for developing health habits for adoption and ultimate success.

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