



IPHA
MAHARASHTRA
BRANCH

Newsletter

Contents

Editor's Page P.01

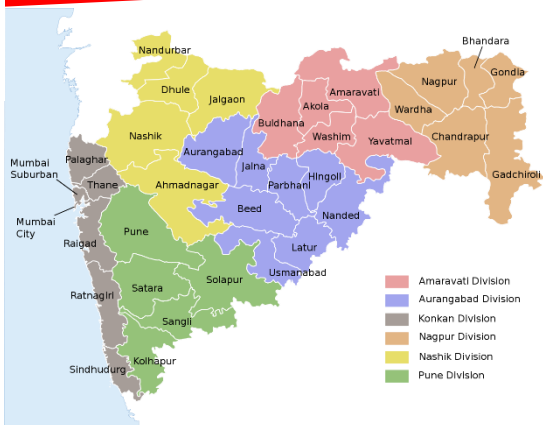
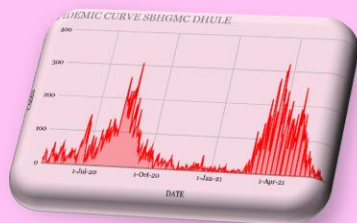
Pandemic Lessons P.02

Contact Tracing – A Tool P.04

At Jumbo Covid Centre P.06

Covid Vaccines in India P.07

First Vs Second Wave P.09



(For Private Circulation Only)

Volume 13 Issue 02
July – September 2021

Editor

Dr. Prasad Waingankar

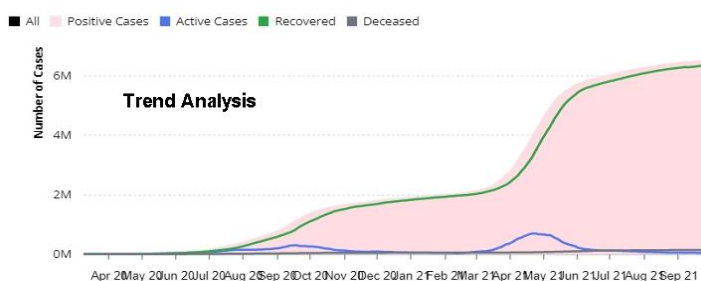
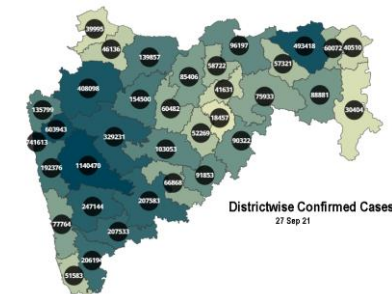
Assistant Editor

Dr. Sarika Patil

Editor's Page

Pandemic of this century of COVID-19 is one of the biggest challenge the mankind has faced ever. However we have come a long way since the beginning of it. Over the period we have seen the lack of knowledge, fear, anxiety, panic reactions, attempts of courageous response especially by medical fraternity, gaining knowledge, heroic efforts from various strata of society, the hardship and pain of losing dear ones, infodemic running side by side of pandemic, striving for survival and strong will to bring back the life to normalcy.

As of last week of September 21, the number of confirmed cases reported Globally has reached to 23.2 crores including 47.5 lakhs



deaths. In India 3.3 crores people have been infected so far with 4.4 lakhs deaths. Maharashtra, one of the major urbanized state of India, have recorded 65.4 lakh cases with 1.3 lakh deaths. Globally 592 crore vaccine doses are administered so far while in India alone 87 crore vaccine doses are administered with Maharashtra having major share of 7.9 crore vaccinations.

With the waning of number of cases and decrease in infectivity rates the administrative curbs are now being lifted. One main concern is the vaccination of children which is though on the cards, has not yet happened and need to be cautious in reaching to 'new normal' till it eventually happens. The fact remains that the 'Chatusutri' of preventive measures of 'Hand Wash', 'Use of Mask', 'Social Distancing' and 'Vaccination' remain the best practices to deal with this unprecedented situation.

(Data Source: WHO/GoI/GoM Websites)

-Dr. Prasad Waingankar

IPHA Sanshodhan Anudan P.15

Literacy in Urban India P.16

IPHA 'Shodh Prakalp' P.18

World Population Day P.19

IPHA Membership P.20

IPHA Maharashtra expresses gratitude towards UNICEF Maharashtra Field Office for providing financial assistance for printing & distribution of this Newsletter issue.

IPHA Maharashtra Secretariat

Department of Community Medicine,
Mahatma Gandhi Mission Medical College,
Kamothe, Navi Mumbai – 410209
Tel: 022-2743 79 96/97
Mobile: 9920446233, 9324714313
Email: iphamahabranch@rediffmail.com
Web: www.iphamaha.org

Pandemic Lessons – Are We Ready to Learn?

EDITORIAL

Dr. Pradip Awate

State Surveillance Officer
Integrated Disease Surveillance Programme
Maharashtra

Covid-19 pandemic is an important milestone in human history. This particular milestone is rather more important for countries like India as it has taught & yet teaches us some important lessons especially pertaining to our public health. Public health has never acquired such a central stage of public discourse as it has during this pandemic. The backbencher has moved to front benches, thanks to Covid19 pandemic, some good out of bad.

This is the historical moment for public health experts & planners to pause, introspect & revisit all pandemic lessons and most importantly try to implement it.

"The fact that India allocates only a little over 1 percent of its gross domestic product on public healthcare contrasts sharply, for example, with nearly three times as much by China. We reap as we sow, and cannot expect to get what other countries achieve by allocating much more resources -- as a proportion of their respective levels of the gross national product-- to healthcare," Nobel Laureate Amartya Sen has written in his elaborate foreword to "Healers or Predators? Healthcare Corruption in India" in 2018.

This apathy is converting our public health system into disaster itself making it incapable of dealing with any crisis like situation in an effective & efficient way. Covid warrior – this term we are using every now & then while describing health care workers dealing with Covid19 pandemic. We are using allegory of war while describing our response to ongoing pandemic but have we ever compared financial allocations we are providing to defense & public health? This is high time we need to understand this.

Long back in the first half of 19th century, well known pathologist Rudolf Virchow

challenged none other than Bismarck about excessive military budgets. We as public health personnel need to imbibe that courage of Dr. Virchow & act as a pressure group for such a vital policy change. We can not afford to ignore public health in our national development model.

Public health?

We also need to revisit the constitutional position of health. As per the Seventh Schedule the matter of 'Public health and sanitation; hospitals and dispensaries' come within the State List. During the Constituent Assembly debates, HV Kamath sought to move 'Public Health' from the State List to the Concurrent List. He argued, public health is a 'Cinderella of portfolios' – an often-neglected portfolio in the Cabinet. He believed that with the conditions of public health in India being very poor, making it a subject under the concurrent list would better enable the States and the Centre to tackle public health concerns. We as a public health community need to ponder on this.

Another lesson of the pandemic is it asked us to pay more attention to our urban areas. We do have some public health infrastructure in rural areas, thanks to the Bhore committee. Rampant urbanization is the post -1990 phenomenon. Though the National Urban Health Mission has tried to bridge the yawning gap of necessity & availability of public health infrastructure in urban areas we are still miles to go to have adequate public health infrastructure in urban areas. In Maharashtra, where more than half of its population is dwelling in urban areas we need to develop & implement a comprehensive urban health planning. Due to its' high population density & huge migration incidence & prevalence of any

communicable disease like Covid-19 or Tuberculosis is quite higher in urban localities especially in slums compared to their rural counterpart. Many important health indicators like the percentage of fully immunized children of urban slums are worse than our tribal population. We as a public health community need to mull over our urban health issues quite seriously and that too on war footing.

There is another issue of interdepartmental coordination when we consider urban health. We have nearly 27 Municipal Corporations & more than 350 Municipal councils in our state which are working under urban development & urban administration department respectively. Obviously public health of these urban local bodies is working under these departments which have no coordination with the public health department of the state on a day-to-day basis. We need to rethink the present system & introduce a more efficient system under one umbrella of public health.

“The greatest threat to New York City today is not terrorism, it is the lack of affordable housing,” Famous writer Suketu Mehta once said. This is true not only for New York city but for all our cities also. We are well aware that housing is one of the major determinants of health. Though superficially it appears to be out of ambit of public health this should be very much part of our agenda. We must not leave our urban spaces at the mercy of the private builder lobby. Our city developers & planners should come with entirely different & pleasant city maps which will accommodate everyone in the city with comfortable breathing space.

Here comes the multidisciplinary approach of public health that we missed in our pandemic handling. Our task force at state or district level is full of clinicians. Our entire approach to deal with pandemic was more or less hospital centric. We can not ignore clinicians or hospitals but we forgot the necessity of a multidisciplinary team to deal with such a complex pandemic. We require public health experts, immunologists, psychologists, sociologists, economists, bio-

statisticians, human resource managers, behavior scientists to list the few.

Apart from clinical protocol & hospital preparedness, we need to devise policy about lock down, social safety schemes during lockdowns, vaccination, future prediction of the pandemic, mental health issues, convincing masses to follow covid appropriate behavior. We cannot afford to forget the multidisciplinary nature of public health.

All major changes in public health policies will come through socio political churning. We as a doctors or public health community are not residing on an island devoid of sociopolitical canvas. Whenever & wherever necessary we as a public health community must be bold enough to intervene in sociopolitical activities to achieve our goals.

We must not forget what Rudolf Virchow has said, “Medicine is a social science, and politics is nothing else but medicine on a large scale. Medicine, as a social science, as the science of human beings, has the obligation to point out problems and to attempt their theoretical solution: the politician, the practical anthropologist, must find the means for their actual solution... Science for its own sake usually means nothing more than science for the sake of the people who happen to be pursuing it. Knowledge which is unable to support action is not genuine – and how unsure is activity without understanding... If medicine is to fulfill her great task, then she must enter the political and social life... The physicians are the natural attorneys of the poor, and the social problems should largely be solved by them.”

Are we ready to fulfill our life role as a disciple of Medicine, this is the question this pandemic is asking you & me !



65th Annual National Conference of Indian Public Health Association

IPHACON2021

September 24-26, 2021

IPHA Pondicherry State Branch

Jawaharlal Institute of Postgraduate Medical Education and Research
An Institution of National Importance, Ministry of Health & Family Welfare, Govt. of India



*Institutional Contact tracing as an effective tool to control
transmission in the health-care sector*

Experience from a Medical College in Mumbai.

Anuradha Kunal Shah¹, Gajanan D Velhal²

¹ Assistant Professor, Dept. of Community Medicine, Seth GSMC and KEM Hospital

² Professor and Head, Dept. of Community Medicine, Seth GSMC and KEM Hospital

Background

Contact tracing (CT) is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission. Contact tracing for COVID-19 requires identifying persons who may have been exposed to COVID-19 and following them up daily for a period of 7-14 days from the last point of exposure.[1]

A healthcare worker (HCW) could acquire SARS-COV-2 at work, through direct or indirect contact with an infected patient or another healthcare worker, or as a result of ongoing community transmission. The risk of exposure and infection among healthcare workers is substantially greater than others.[2] Potential exposure is inherent to their work, thus making healthcare workers a highly vulnerable group. If exposed, they can transmit the infection to other HCWs, family or patients they come in contact with. They have to be carefully quarantined as maintaining an adequate number of HCWs is crucial to maintaining patient care during the ongoing COVID-19 pandemic. If done effectively, CT can break the chain of transmission.[3,4]

Set up and conduct of Contact tracing

Contact Tracing Team (CTT) was set up on 9th April 2020 after the first HCW became positive in the institute. Compared to CT in the community this task was quite different. The objective was to alert contacts to the possibility of infection and offer preventive counselling or prophylactic care, to offer counselling, treatment, and facilitate isolation to already infected HCWs, and study the epidemiology of Covid 19 among HCWs. CT was done when an HCW tested Covid positive and when a patient to whom HCW was exposed tested positive. The positive persons were then contacted by a member of CTT telephonically and details regarding, the probable source of infection, symptoms, medical history, vaccination status, probable contacts were collected for the past 7-14 days. These probable contacts were also contacted to confirm exposure. If exposure was found significant, they were classified as high and low risk (Table 1) contacts. Apart from exposure to a positive HCW or patient, social gathering especially during leisure time e.g., taking lunch/dinner in groups, small tea time breaks, group discussions as a part of collective study plans in hostels, birthday celebrations, and other small events, group picnics, etc were major reasons for exposure.

CCT also made sure that the positive HCW is sent to an appropriate isolation facility. Contacts were also placed at separate facilities for quarantine or at home. All contacts were quarantined for a minimum of 7 days, from the date of the positive result of the index case for them. Swab examination was done after 7 days of exposure. Quarantined HCWs were monitored for Covid specific symptoms and signs and if any one of them became symptomatic, swab examination was done immediately. The CTT also facilitated the disinfection of rooms of HCWs staying in the hostel or quarters on the campus and other areas with potential contamination. All records are maintained in the Department of Community Medicine and shared daily with the public health department on daily basis. This is an ongoing activity.

Compulsory institutional isolation and quarantine in the initial stages of the epidemic/pandemic served the purpose of creating major awareness among the other staff regarding the importance of quarantine and isolation. The subsequent practice of home isolation and home quarantine became possible because of this level of awareness amongst the staff. By end of 31st December 2020, a total of 744 HCWs were isolated and 1486 contacts were quarantined. The trend of isolation and quarantine decreased significantly after the initial months. The ratio of isolation and quarantined HCWs was 1:15 in the initial month which decreased significantly over the following months.

The overall ratio between Isolated HCWs and Quarantined HCWs is 1:2. The test positivity rate among high-risk contacts was 9.01% and among low-risk contacts were 2.72%. Overall test positivity rate among contacts was 6%. This shows that CT was effective in breaking the chains of transmission.

Table 1: Criteria for risk stratification into high and low-risk contacts

High-Risk Contact	Low-Risk Contact
<ul style="list-style-type: none"> • Lives in the Same household/ hostel room. • Exposed to a covid positive patient or touched the patient without proper PPE. • Physical examination of a covid patient without appropriate PPE. • Direct care to a patient by HCW without appropriate PPE. • Mortuary staff without proper PPE. • Anyone in close proximity (within 1 meter) of the confirmed case without precautions (mask) for > 15 minutes • A passenger in close proximity (1m) of a case for more than 6 hours in the past 7 days. • Had direct physical contact with the body of the patient including physical examination without PPE. (Handshake, hugging, kissing, etc.) • Exposed to patients' secretions without appropriate PPE • Was present in the same room during an aerosol-generating procedure without PPE 	<ul style="list-style-type: none"> • Shared same environment (same class, same ward, same working place) and not having high-risk contact. • Traveled in the same environment (any mode of transport) but not having high risk. • Staying on the same floor or building but not fulfilling the criteria of high-risk exposure. • All other contacts, not meeting the criteria for High-Risk Contact.

Issues and Challenges

The conduct of CT was not free of challenges and some of them were overcome in due process. The exact duration of quarantine based on risk status-high or low, was debatable considering the manpower requirement of HCWs during this pandemic. A mandatory quarantine of 14 days which is advocated for community CT may not be feasible in a healthcare institution where manpower in times of pandemic is an important concern. So, the quarantine period was reduced to seven days with mandatory testing at the end of it. Isolation protocol in recovered persistent RTPCR positives was a dilemma before guidelines stating that repeat testing at end of isolation is not mandatory. No probable source of infection could be found in about one-third of the cases. The incomplete and unreliable history given by cases and contacts to either avoid quarantine or go into quarantine can become a major limitation. Some resistance in getting quarantined was observed among HCWs who were previously positive/developed antibodies and were fully vaccinated. Case reports around have shown evidence of recurrences and also breakthrough infection, hence, quarantine was enforced in such cases too.

However, many questions were left unanswered too. There were no clear guidelines regarding the sealing of health care points/buildings. It should be different from sealing buildings by Public Health Departments during large number of cases in a building. The endpoint of CT is declaration of Community Transmission, about which there were contradictory views from experts and the Government. The role of chemoprophylaxis during quarantine was not certain. Apart from the positivity rate, other indicators to assess the effectiveness of CT were not assessed.

Conclusion

Any epidemic/pandemic will always display clustering of cases distribution in the initial stages and strong and efficient CT measures along with either isolation or quarantine protocol in place will be able to keep a check on the transmission of the disease in a delimited area. The number of individuals quarantined against each positive HCW over time has decreased.

Wider publicity of quarantine protocol and covid appropriate behavior at the workplace may be a reason for this. The positivity rate among quarantined HCWs is 6%, which is greater (9.01%) among the HR contacts. CT activity if systematically done, will be successful in breaking the chain of transmission and can be replicated in other Medical Colleges or health care institutions too.

References:

1. Interim Guidance on Developing a COVID-19 Case Investigation & Contact Tracing Plan: Overview | CDC. CDC 2021. <https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/overview.html> (accessed June 3, 2021).
2. Nguyen LH, Drew DA, Graham MS, Joshi AD, Guo CG, Ma W, et al. Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *Lancet Public Heal* 2020;5:e475–83. doi:10.1016/S2468-2667(20)30164-X.
3. Kaur R, Kant S, Bairwa M, Kumar A, Dhakad S, Dwarakanathan V, et al. Risk Stratification as a Tool to Rationalize Quarantine of Health Care Workers Exposed to COVID-19 Cases: Evidence From a Tertiary Health Care Center in India. *Asia-Pacific J Public Heal* 2021;33:134–7. doi:10.1177/1010539520977310.
4. Prasad Sahoo D, Kumar Singh A, Prasad Sahu D, Pradhan S, Kumar Patro B, Batmanabane G, et al. Hospital based contact tracing of COVID-19 patients and health care workers and risk stratification of exposed health care workers during the COVID-19 Pandemic in Eastern India. *MedRxiv* 2020:2020.11.01.20220475. doi:10.1101/2020.11.01.20220475.

A MONTH AT BKC JUMBO DEDICATED COVID HOSPITAL, MUMBAI

- Dr Sujata R Lavangare

Associate Professor (Addl), Department of Community Medicine Seth GSMC & KEMH

On 17th May 2021, Foundation Day of BKC Covid Hospital was observed, and I went in a flashback of memories of my deputation there in June 2020 from Department of Community Medicine, Seth G. S. Medical College.

Since cyclone was expected to hit on 3rd June, as a precautionary measure, the mammoth task of shifting the patients to other hospitals was in process. I was fortunate to observe the whole process of transfer which was done under the leadership of respected Dean, BKC, Dr Rajesh Dere and consultants from the control room. The team of doctors, nursing staff, ward boys placed in wards and ambulance drivers had swung up in action and were acting as per the instructions received from the control room.

After all patients were shifted, post cyclone inspection was done by Dr Dere and team, and it was a relief to know that the hospital was in a good state. On 4th June onwards, all geared up for new admissions at the hospital. It was essential to prepare a new task force of doctors, nurses and ward boys at BKC hospital. I was in the managerial team and was assigned the major responsibility of recruitment of doctors mainly MBBS, BAMS, BHMS, BUMS, BDS, PT with ICU experience as well as the consultants. The other important task of training the newly recruited doctors and nursing staff, once they joined the hospital was assigned to me. The in-depth training on Covid-19 for them was done in collaboration with Department of Community Medicine, L. T. M. G. Medical College and I had to prepare their schedules as per their shift duties. There were also a team of Doctors from Sion hospital of different disciplines who were posted every fortnightly. Interns roped in from different hospitals, also added to the team. Coordination with all the doctors especially from different pathies, nursing staff and the interns, maintaining their attendance till issuing their completion certificates as well as constant interaction with the administrative team, enhanced my skills by putting them in practice.

The daily morning meetings with Dean and the team, everyday update of doctors on the google sheet, quarterly reporting everyday on the groups, was a huge learning experience in itself.

At the end of the month, the number of newly recruited doctors, reached a century. And the appreciation received from Dean, Dr Rajesh Dere, for the same, gave me immense satisfaction and fulfillment. Working at BKC Covid Hospital for a month, was indeed an opportunity of a lifetime.

A Brief History of COVID Vaccines in India

Dr. Shrey Kumar Dubey¹, Dr. Prashant Solanke²

¹ Intern, Department of Community Medicine, ACPM Medical College & Hospital, Dhule

² HoD & Professor, Department of Community Medicine, ACPM Medical College & Hospital, Dhule

It's been over 20 months since the world saw its first case of arguably the biggest and most widespread pandemic of the century, COVID-19. Although, the pandemic is now in the decline phase, it has taught us that the age old remedy of "Prevention is the best cure" is still indeed true. Among the various prevention methods such as social distancing, masks, handwashing, etc. the most effective method, and the one with the most impact on flattening the curve has been vaccination.

India has been one of the worst hit countries, but despite being underhanded in terms of manpower and infrastructure, we have created records in terms of vaccination. Currently our country has 3 vaccines with fourth about to debut in the country, which has been administered as staggering 41.8 crore doses, fully vaccinating 8.76 crore people that's approximately 6.5% of the population. So let me take you on a short journey down the memory lane about this vaccination programme that is one of the largest in the world.

Our country confirmed its first case of COVID-19 on 27th January 2020, and almost after a year on 16th January 2021, we started our vaccination drive at 3000+ centres and vaccinating 1,65,714 people on the very first day. It was the largest drive in the world which was aimed vaccinating 300 million (30 crore) people who were at risk, that included the first line workers and the people above the age of 45 years.

Amongst Indian vaccines the first and foremost is India's indigenous COVAXIN, which works on whole-virion inactivated Vero Cell technology. The interim efficacy is placed at around 81%. It confers immunity against double mutant strain of covid-19, Bharat biotech stipulated it to be effective against the triple mutant strain although there is no scientific evidence for the same as of now. As it contains killed virus it cannot cause infection and is completely safe. It is expected to provide immunity for 9 to 12 months. The vaccine needs no reconstitution and is available in multi dose vials. The vaccine is said to be effective in reducing the morbidity and mortality in fully vaccinated individuals affected by the delta strain. The vaccine is under trial for its safety and efficacy in children as well.

Next is Covisheild which is the Indian brand name for Oxford AstraZeneca recombinant vaccine. It is based on replication deficient chimpanzee adenovirus vector encoding for SARS-CoV-2 spike glycoprotein. The interim efficacy is placed around 70 to 75%. It confers substantial immunity against the double mutant strain although there is no information about its effectiveness against the triple mutant strain. This vaccine is said to provide several years of immunity which will be better the naturally acquired immunity. The vaccine is indigenously produced at Serum Institute of India, and comes in multi dose vial. Just like the Indian COVAXIN, CoviSheild is equally effective in reducing the severity and mortality in those infected even with the delta variant. It should be noted that both of the above-mentioned vaccines are available for free in government run vaccination centres. They both require 2 doses of 0.5 ml and should be stored at 2-8 degree Celsius.

Third comes Russia's Sputnik V vaccine which got approval on 14th April 2021 in India. It's based on 2 viral vectors which are deficient in E1 replication gene. The 2 doses of this are to be administered 21 days apart. The two formulations are said to increase the immune response of human body. The interim efficacy is around 92%. It is technically the first-ever vaccine approved for coronavirus after clearing all trials does making it the safest vaccine. The vaccine is said to provide immunity for at least two years and maybe more. The first batch with 150,000 vials has reached India on May 1st 2021 and was thoroughly checked by CDRI for quality, and first dose was administered on 14th May 2021. The vaccine is made available by Hyderabad based Dr. Reddy's Laboratories and is currently available in 50+ cities across the nation.

Our country is on the verge of getting a fourth and the world's first single dose vaccine by Johnson & Johnson. The vaccine is set to be mass produced in the country itself and is expected to roll out for public in the last quarter of the year.

There are certain precautions that should be practiced while getting vaccinated .The vaccine is only available for people above the age of 18. No other vaccine should be administered 14 days before or after taking a covid-19 vaccine. The vaccine should not be taken in people who have any allergic response to any constituent of the vaccine, a person who has an ongoing covid-19 infection should also not get vaccination at least till 90 days since the infection. The vaccines do not contain any bovine or porcine proteins so, people of all faiths and believes can take these vaccines. As per the recent CDC guidelines and ACOG both pregnant women and lactating mothers are now allowed to take the covid-19 vaccines, in India as per the guidelines by the Ministry of Health and Family Welfare dated 19th May 2021, the vaccine can be safely administered in lactating mothers but should not be administered in pregnant women. Although many experts are of the view that the benefits of vaccination during the gestation heavily outweigh the probable side effects and the new guidelines are awaited. People with history of bleeding or clotting disorders should take absolute caution while getting vaccinated. Vaccine can be safely administered in people who are immunocompromised or on anticoagulant therapy. The minor side effects are usually experienced but, neurological disorders can rarely occur as a side effect of vaccination but, all of these are readily treatable and respond very well to the treatment.

We as doctors and responsible citizen of the country should understand that we are just about on the threshold of seeing off a devastating second wave of COVID-19, and with the emergence of delta and delta plus variants it is a possibility that we even have to face a third wave in the near future. For the same we must also understand that we are no longer just healers, we are leaders, guides and activists who should make it a point at every opportunity that the vaccines are just a safety net and not a cure against the covid-19 infection. Vaccines do not make one invulnerable to covid-19 virus, it just reduces the lethality and severity of the infection if you get the infection at all. The best way to prevent covid-19, still, is by maintaining social distancing, wearing masks, maintaining proper hygiene and sanitation, regular washing of hands and avoiding public gatherings. The virus does not differentiate between the one who is being careless and the one who is not, thus we are not only responsible for our own safety but, for the safety of the society as a whole. Thus it should be well understood that prevention is the only cure that's definite!

COVID 19 - FIRST WAVE VS SECOND WAVE A TERTIARY CARE HOSPITAL PERSPECTIVE

Dr. Sarika P. Patil¹ Dr. Pallavi Sapale² Dr Sushant Chavan³

¹ Associate Professor Department of Community Medicine, SBHGMC Dhule.

² Dean, SBHGMC Dhule

³ Assistant Professor, Department of Community Medicine, SBHGMC Dhule

INTRODUCTON

Till the end of June 2021 India experienced 821,625,936 confirmed Covid 19 cases and 398454 deaths. Response to pandemic was a challenging task for underdeveloped nation like us with constraints like manpower, logistics and funding. The overwhelmed medical sector both private and government needs a serious introspection at policy level to evolve and be better equipped for catastrophe like pandemic and the ever increasing population of India who largely depends upon government sector for their medical needs. The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020.^[1] Currently, India has the largest number of confirmed cases in Asia.^[2] As of 12 June 2021, India has the second-highest number of confirmed cases in the world (after the United States) with 29.3 million reported cases of COVID-19 infection and the third-highest number of COVID-19 deaths (after the United States and Brazil) at 367,081 deaths.^[3]

A second wave began in March 2021, with shortages of vaccines, hospital beds, oxygen cylinders and other medicines in parts of the country.^[4] By late April, India lead the world in new and active cases. On 30 April 2021, it became the first country to report over 400,000 new cases in a 24-hour period.^[5]

India observes a three tier system for its medical care delivery. During first wave response it felt that we didn't used this three tier system to its fullest and that had severely impacted the working of tertiary care hospitals. Because of the anxiety all the mild & moderate cases that can be treated at primary and secondary levels were referred to tertiary care hospitals. First wave and second wave response has a tremendous difference as medical fraternity was ill prepared during first wave and solely dependent on the experiences of other countries that was out of place as per the Indian scenarios due to demographic and policy differences. For second wave response we had first-hand knowledge and also experienced manpower and improved logistics that helped us to counter Covid 19. We share our experience of working at the front door of a busy tertiary care hospital at a district place of Maharashtra state, at the peak of pandemic. We have suggested some helpful guides in service development, pointing out how we tackled increased workload of a contagious disease and how we established standard operating procedures in an ever-evolving situation. To minimise the spread of the disease, we developed a triage system and a separate pathway at the front door for suspected COVID 19 patients with a dedicated area in emergency ward capable of providing level 2 care to 30 patients at one time. We have also highlighted the factors that had a negative impact on our efforts and morale while we battled with coronavirus, including sluggishness in ramping up testing capabilities and scandals surrounding procurement and supply of personal protective equipment to health care workers. We planned this study form the tertiary care point of view so as to differentiate the first wave and second wave presentation and response so that we can point out improvements and shortcomings that can be addressed.

METHODOLOGY

The study was proposed in a tertiary care teaching hospital at a district place of Maharashtra. Ethical clearance was taken from institutional ethical committee. The data of all consecutive individuals who attended Covid wards during March 2020 to June 2020 were examined retrospectively. The two periods covered the first and second waves of the COVID 19

pandemic, from approximately mid-March 2020 until the end of June December 2020, and from mid-March 2021 to June 2021, respectively. The main epidemiological and clinical features of SARS-CoV-2- positive patients and positivity rate of diagnostic testing procedures used during the periods of the first and second pandemic waves were compared, using information collected from polymerase chain reaction (PCR) confirmation.

Recording included information on main demographics and clinical manifestations. In order to simplify the recording and grading of clinical manifestations, the study population was grouped into two categories: those without symptoms or with minor symptoms lasting 3 days, and those with mild or severe symptoms. The latter group included fever, cough, headache, shortness of breath, anosmia, ageusia and/or malaise for 4 days. SARS-CoV-2-specific PCR testing was performed using a real-time commercial assay that targets S, N and ORF1ab genes on nasopharyngeal swabs.

Statistical analysis- All results have been presented as absolute numbers and percentages, and as mean values and standard deviations. Rates were compared using Fisher’s exact test or Chi-squared test. $P < 0.05$ was considered to indicate significance. All analyses were performed using SPSS Version 21 (IBM Corp., Armonk, NY, USA).

RESULTS

Our Tertiary care hospital observed 3494 cases during first wave against 2753 cases in second wave. (Table 1). The duration of first wave was from March 2020 till December 2020. First case was presented in March 2020. While second wave cases were distributed from March 2021 to June 2021. (Fig 1) Age range was from 5 years to 94 years with mean age of 44 years in first wave while second wave observed age range of 2 years to 98 years with the mean age of 51 year. (Table 1)

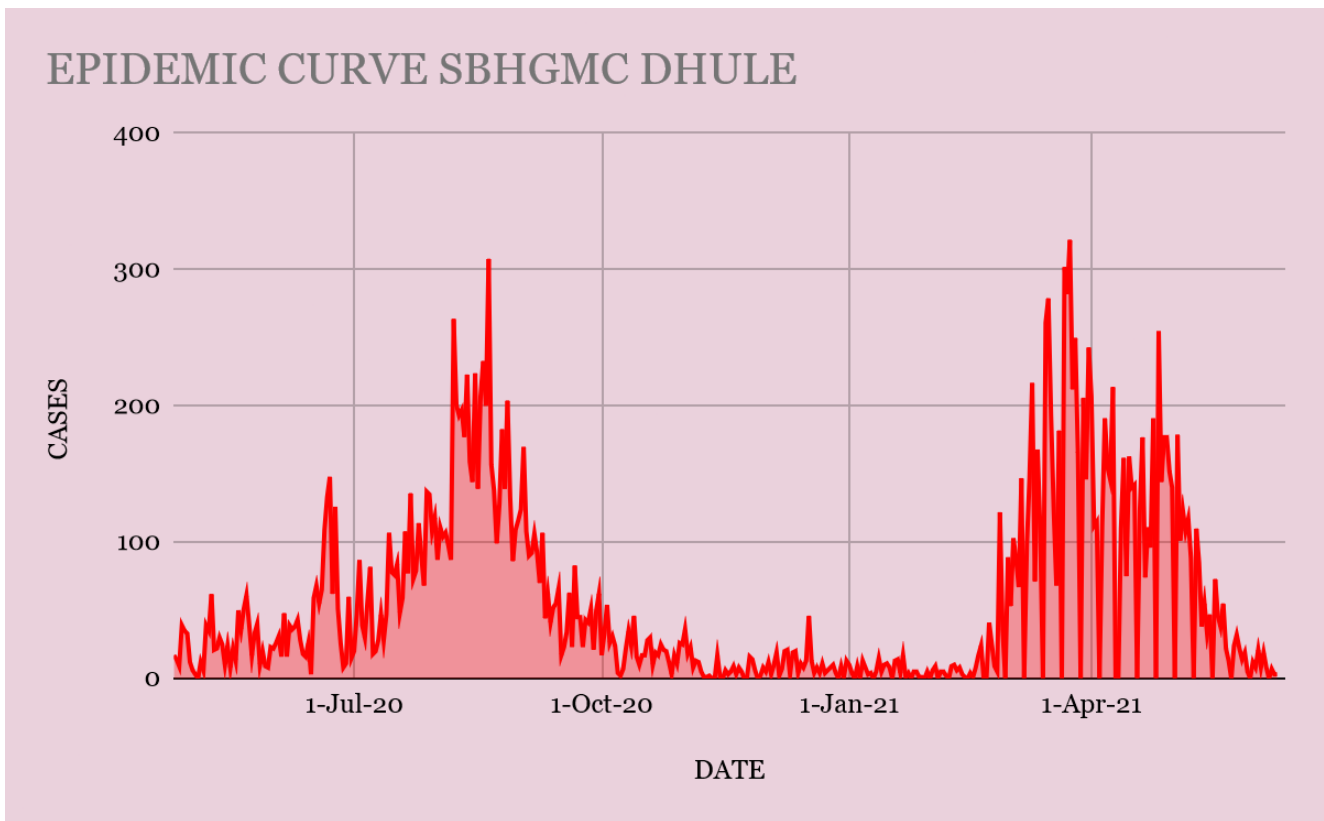


Figure 1- Epidemic Curve of Cases Observed at Tertiary Care Centre

Affected males in first wave were 1958 (56.03%) against 1630 (59.32%) showing slight increase in proportion. (Table 1)

Table -1 – Characteristics difference experienced during first and second wave of Covid 19.

	First wave (n=3494)	Second wave (n= 2753)	Significance
Age	44.64 (5 - 94)	51.32 (2 – 98)	p > 0.05
Sex	1958 (56.03%)	1630 (59.20%)	p > 0.05
DEATHS	339 (CFR= .70%)	196 (CFR = 7.115)	p > 0.05
AGE	59.56 (15 - 88)	59.15 (20 - 87)	p > 0.05
SEX (Males)	247 (72.86)	130 (66.32)	p > 0.05
COMORBIDITIES	1,151 (33%)	1894 (68.97%)	p > 0.05
POSITIVITY RATE	14.03	12	p < 0.05
SYMPTOMATIC	2998 (85.80%)	2753 (100%)	p > 0.05
OXYGEN THERAPY	1885 (53.94%)	2138 (77.66%)	p < 0.05

Hospital observed 339 deaths with case fatality rate of almost 10% in first wave, while in second wave it experienced 196 deaths with case fatality rate of 7.11%. Proportion of males among deaths was high in both first and second wave 72.86% and 66.32% respectively with slight increase in female deaths in second wave. The mean age among deaths was found to be 59.56 and 59.15 for first and second wave respectively. (Table 1)



Figure 2 - Covid 19 Related Deaths Observed at Tertiary Care Hospital

A total of 1151 (33%) of patients were presented with at least one comorbidity in first wave while 1894 (68.97%) of affected patients had comorbidities along with Covid 19 infection in second wave. Significant increase in Covid 19 infection in comorbid patients was seen in second wave (p<0.05) (Table 1)

Positivity rate for RT-PCR test in first wave was 14.03 while it decreased to 12 in second wave. A total of 2998 symptomatic patients were treated in first wave against 2753 symptomatic patients in second wave. Out of which 1885 cases required oxygen

supplementation in first wave against 2138 patients in second wave. There was a significant increase in requirement of oxygen supplementation in second wave. (P value <0.05). (Table 1)

Necessity of oxygen supplementation was tremendously high during second wave (77.66% against 54% in first wave. (Table 1)

DISCUSSION

We worked in a 540 bedded tertiary care hospital in a district place of Maharashtra. The hospital employees over 1200 staff and provides acute hospital services to approximately 500 000 people living in district Dhule. We had our first confirmed case of coronavirus in the first week of March 2020. The first wave the hospital observed 3494 Covid positive cases against 2753 cases in second wave. Figure 1 suggest that the cases were scattered over longer duration from March 2020 to December 2020 while second wave started in mid-March 2021 to June 2021. First wave duration was more as compared to second can be attributed to RT PCR testing facility availability and mutant strain in second wave. In the earlier months of pandemic, swab taken for Covid 19 RT-PCR had to be sent to Virology Lab Pune for testing as testing facility was not available in the institution. RT PCR lab was developed in May 2020 with 400 sampling capacity per day which was responsible for late reporting and large chunk of pending swabs for testing. The capacity for testing was ramped up to 2000 samples per day till January 2021.

The mean age of patients during first wave was 44.64 year (5 - 94) and in second wave it was observed to be 51.32 years (2 - 98). Slight increase in average age was seen during second wave. During second wave admission policy for Covid patients in the hospital was revised. Only symptomatic patients who required supplementary oxygen therapy were the first preference for admission. That may be the reason for increased average age group at tertiary care hospitals as different studies has reported that need of oxygen supplementation increased with increasing age. Comorbidities are also attributable to increase in age. Shweta Jakhmola et reported in her study that Population groups of 20-49 years of age and 50 years-above were highly vulnerable to infection. Interestingly, 20-49 years of age group was most affected in India. However, higher population of the deceased were reported in the 50 years-above in all countries.^[6] On the other hand Brigid Unim et al in his study suggest that the mean number of COVID-19-related symptoms progressively declined with age, from 2.1 in patients aged < 60 years to 1.7 in those aged 90 years or older (p < 0.001). Older adults had atypical presentation of symptoms and may be pauci symptomatic. This may lead to a diagnostic and therapeutic delay which aggravates the prognosis of COVID-19. A study done in european country by Alberto Aleta et al analyse data of incidence by age groups in 25 European countries, revealing that the highest incidence of the current second wave is observed for the group comprising young adults (aged 18-29 years old) in all but 3 of the countries analysed.^[7]

No significant association was found between sex and Covid 19 infection in both waves. A total of 1958 (56.03%) male were reported in first wave against 1630 (59.20%) males in second wave. Covid 19 infection was seen evenly distributed among both sex. Case fatality was more in the first wave 9.70% (339 deaths) against in second wave. 7.11% (196 deaths). Proportion of deaths among males was higher in both the waves. 247 (72.86%) in first wave while 130 (66.32%) in second). Joanne Michelle D. Gomez et al in his multicentre retrospective cohort study compared males versus females with COVID-19 infections from March 1, 2020, to June 21, 2020, in the Rush University System. Male sex was independently associated with death, hospitalization, ICU admissions, and need for vasopressors or endotracheal intubation, after correction for important covariates.^[8] Nabamallika Dehingi et al stated that Global data indicate higher COVID-19 case fatality rates among men than women. Most countries with available data indicate a male to female case fatality ratio higher than 1.0, ranging up to 3.5 in some cases.^[9]

Significantly higher number of Covid 19 patients with comorbidities were admitted during second wave 1894 (68.97%) than I first wave 1,151 (33%). During first wave because

of anxiety ever asymptomatic patients were seeking admissions in the hospitals. Patients were getting admitted wherever they got bed thus making hospital admissions difficult to those who really need it. Most of the valuable time was lost in search of beds for severe patients. By the time patient got bed he was already in severe stage leading to prolonged hospital stay and in some cases death. During second wave hospital protocol was in place and also with the help of Municipal corporation various wards were set up in schools, community places, hotels etc. only severe cases with need of oxygen supplementation were admitted to tertiary care and other less symptomatic cases were referred to municipal corporations ward and asymptomatic cases were home quarantined with necessary instructions and prescription.

Positivity rate was reduced from 14 in first wave to 12 in second wave. During first wave testing facility was not available at hospital so all the swabs were sent to Virology institute Pune for testing. Latter on RTPCR lab was established in the hospital with testing capacity of 500 per day. Which was ramped up to 2500 testing per day. During early days of epidemic less testing due to logistics constraints may be the reason for increased positivity rate during first wave.

Oxygen supplementation was extremely high during second wave. That may be associated with the mutant variant and also with the new policy decision to admit only symptomatic patients in tertiary care hospital. During second wave we experienced tremendous increased in oxygen demand. During peak of the wave the demand was above 15 metric ton per day. At least two oxygen tank of 20 metric ton capacity is required at tertiary care centre to fulfil oxygen demand during peak of epidemic.

It is known to all of us that in India about 5%–10% of all the COVID-19-positive patients will have a chance to become ill and actually need immediate hospitalization. Around 30% out of 5%–10% might require intensive care unit support or even ventilator or extracorporeal membrane oxygenation support. Rest of the COVID-19-positive patients may be cared by oxygen or other supportive care.^[10]

The most crucial part of administration of pandemic COVID-19 management in tertiary medical teaching hospitals is to think judiciously for both COVID and non-COVID medical conditions as medical teaching hospitals cannot ignore non-COVID in view of the pandemic situation for the interest of the society, community, and medical trainees. Hence, it is a really a huge responsibility of tertiary care hospital administration to ensure the safety of doctors, nursing, and other paramedical staff in the hospital where COVID-19 and other routine patients are likely to admit and expect equal care from the hospitals. A sincere and effective management system in coordination with experts and governments is the need of the hour to tackle the situation.

Tertiary care teaching hospitals must build proper infrastructural reforms to accommodate COVID-19 patients. A complete isolated COVID-19 area or unit should be formed which should have separate entrance via flue clinic or suspected patient zone after primary screening in an isolated area of the hospital. This will ensure that other non-COVID-19 patients including emergency patients with non-COVID-19 ailments will not mix up with possible infectious patients. One must also remember that even infectious disease unit of any tertiary teaching hospitals should be completely separated from COVID-19 care area. The area must have facilities to make negative air pressure by interventions of air-handling facilities. Hospitals must have adequate personal protection equipment or ventilators, video laryngoscopes, and ultrasonic nebulizers.

The second important thing is tertiary teaching hospitals must follow the standard operating procedures to treat COVID-19 patients. The protocols of WHO and ICMR are actually recommended as per the guidelines of the Ministry of Health and Family Welfare, Government of India.^[11]

The procedure includes the mechanisms to minimize the impact of the disease and to prevent the transmission of disease to health-care professionals or even patients or their

caregivers. There should be routine briefing by senior consultants with COVID-19 warriors. The procedures also include routine update to various government authorities regularly. In addition to that, the hospital administration must regularly motivate doctors, interns, and postgraduate medical students. Perhaps, this is the most crucial challenge for tertiary care teaching hospitals' authority. If this part is not taken care by the hospital authority, the fight against COVID-19 will be incomplete and unsuccessful.

The end point of this discussion is to generate research data and resources on COVID-19. The research on this virus requires not only laboratory support, but also supports from clinicians to understand and treat better. It is the duty of the medical institutions across India to develop a strong research team that comprises of basic scientists, biotechnologists, bioinformatics, epidemiologists, psychiatrists, and clinical experts from all the disciplines with appropriate ethical guidelines.^[12]

India has great potentiality to fight and defeat COVID-19 pandemic very effectively provided we all work together for humankind.

REFERENCES

1. Perappadan BS. India's first coronavirus infection confirmed in Kerala [Internet]. The Hindu2020 [cited 2021 Jun 30];Available from: <https://www.thehindu.com/news/national/indias-first-coronavirus-infection-confirmed-in-kerala/article30691004.ece>
2. India most infected by Covid-19 among Asian countries, leaves Turkey behind [Internet]. Hindustan Times2020 [cited 2021 Jun 30];Available from: <https://www.hindustantimes.com/india-news/india-most-infected-by-covid-19-among-asian-countries-leaves-turkey-behind/story-Jjd0AqIsuL3yjMWg29uJ3l.html>
3. India's COVID crisis 'beyond heartbreaking': WHO | Coronavirus pandemic News | Al Jazeera [Internet]. [cited 2021 Jun 30];Available from: <https://www.aljazeera.com/news/2021/4/26/india-sets-new-covid-world-record-for-5th-straight-day-live-news>
4. India's shocking surge in Covid cases follows baffling decline [Internet]. the Guardian2021 [cited 2021 Jun 30];Available from: <http://www.theguardian.com/world/2021/apr/21/india-shocking-surge-in-covid-cases-follows-baffling-decline>
5. India coronavirus: New record deaths as virus engulfs India [Internet]. BBC News2021 [cited 2021 Jun 30];Available from: <https://www.bbc.com/news/world-asia-india-56961940>
6. Jakhmola S, Baral B, Jha HC. A comparative analysis of COVID-19 outbreak on age groups and both the sexes of population from India and other countries. The Journal of Infection in Developing Countries 2021;15(03):333–41.
7. Aleta A, Moreno Y. Age differential analysis of COVID-19 second wave in Europe reveals highest incidence among young adults. medRxiv 2020;2020.11.11.20230177.
8. Gomez JMD, Du-Fay-de-Lavallaz JM, Fugar S, Sarau A, Simmons JA, Clark B, et al. Sex Differences in COVID-19 Hospitalization and Mortality. Journal of Women's Health 2021;30(5):646–53.
9. Dehingia N, Raj A. Sex differences in COVID-19 case fatality: do we know enough? The Lancet Global Health 2021;9(1):e14–5.
10. Managing a tertiary care hospital during COVID-19 pandemic [Internet]. Express Healthcare2020 [cited 2021 Jul 8];Available from: <https://www.expresshealthcare.in/blogs/managing-a-tertiary-care-hospital-during-covid-19-pandemic/420792/>
11. FinalGuidanceonMangaementofCovidcasesversion2.pdf [Internet]. [cited 2021 Jul 8];Available from: <https://www.mohfw.gov.in/pdf/FinalGuidanceonMangaementofCovidcasesversion2.pdf>
12. Banerjee D. The COVID-19 outbreak: Crucial role the psychiatrists can play. Asian J Psychiatr 2020;50:102014.

PADVYUTTAR SANSHODHAN PRAKALP ANUDAN – 2021

The post graduate students of Community Medicine/ Public Health have to learn the research methodology and conduct the research activity and submit dissertation/ thesis to obtain postgraduate degree. Many students develop interest in research during the process and wish to conduct more research studies during their post graduate period. One of the obstacles in conducting good quality research, especially for a student, is lack of funding.

As a response to this need, Indian Public Health Association, Maharashtra Branch is starting a new scheme this year, '**Padvyuttar Sanshodhan Prakalp Anudan**', offering financial support to deserving research proposals from post-graduate students of Public Health / Community Medicine from Medical Colleges located in Maharashtra State. This will help in the long run, in development of good Public Health researchers.

Eligibility

1. Applicant should be a post graduate student of Community Medicine OR Masters in Public Health OR Community Nursing OR Community Dentistry
2. Either the applicant or Guide of the applicant should be member of Indian Public Health Association.
3. Research study proposed should be community based original research and should be distinctly different from student's dissertation topic.

Guidelines for submission of research proposal

- Topic of research project should contribute to Public Health knowledge base.
- Student should be the Principal Investigator and Guide should be Co-Investigator.
- The project proposal should be submitted to IPHA Maharashtra Branch office by email only, to iphamahabbranch@rediffmail.com on or before 30th November 2021. The proposal will be scrutinized by panel of experts and the acceptance of proposal will be communicated by end of December 2021 to the concerned student by email.
- The projects from only Colleges of Maharashtra will be assessed and FIVE best projects (3 From Community Medicine & 2 From MPH / Community Nursing/ Community Dentistry) will be awarded funding of Rs. 15,000/- each. The funds will be released in 2 instalments i.e., Rs. 10,000/- once the project is approved and Rs. 5000/- immediately after approval of project report submitted within a period of 18 months.
- Student should prepare & complete project under the guidance of Community Medicine / Community Nursing/ Community Dentistry faculty.
- Final submission of Project Report should be before 30th June 2023.

Format of Application

1. Title page - Name & details of student and guide bearing signatures
2. Research Proposal
 - a) Title
 - b) Introduction
 - c) Aim & Objectives
 - d) Material and Methods
 - e) Plan of Data Analysis
 - f) Study Implications
 - g) Study Limitations
 - h) References
 - i) Annexures including Budget with Justification
3. Enclose Institution Ethics Committee approval letter
4. Enclose Covering letter from Head of Department mentioning distinct difference in dissertation topic and topic of study under consideration and validating that the study will be student's original research work.

All documents to be submitted in single e-mail as typed or good quality scanned documents.

Literacy status in Urban Population of India

Dr. Prasad Waingankar¹, Dr. Sneha Kotian²

¹ Professor & Head, Department of Community Medicine, MGM Medical College, Navi Mumbai

² Former Resident, Department of Community Medicine, MGM Medical College, Navi Mumbai

Background:

Literacy and education are key indicators in society and play a significant role in human development that affects the social and economic development of the society at large. Census 2021 activity is getting delayed due to COVID 19 pandemic, which would be an important source of providing the latest literacy status of India. It would be interesting to compare the findings of Census 2011 and to note the increase in literacy over the decade.

Increased levels of literacy and education lead to better health and nutritional status attainment, economic development, disease control, advancement of the vulnerable groups, and the whole society. The Indian Census is the most credible and largest single source of variety of the statistical information on several variables related to Demography, Economic Activity, Literacy and Education, Housing & Household Amenities, Urbanisation, and many other socio-cultural factors related to health. A person aged seven years or older who can read and write in any language is considered as 'literate' in census.

Urbanization has significantly increased in many states of India in the last few decades. This in turn, serves as a backbone by providing the power to transform the resources, building a sustainable and prosperous nation. Education is an important investment in human capital building which drives technological advancement and growth in the economy. The multi-faceted growth of its people can only be achieved by raising the educational status of a community.

According to Census 2011, the literacy rate of India in 2011 is 74.0 per cent. Higher levels of education and literacy lead to a greater awareness and also contributes in improvement of economic and social conditions. It acts as a catalyst for social upliftment enhancing the returns on investment made in almost every aspect of development effort. [1]

The low female literacy rate has had a dramatically negative impact on family planning and population stabilization efforts

in India. Studies have indicated that female literacy is a strong predictor of the use of contraception among married Indian couples, even when women do not otherwise have economic independence. [2]

Literacy being a fundamental human right forms the basis for the learning ability of any individual. Communicating, reading and writing is a priority, and the greatest investment that we can make for our future. UNESCO aims to encourage literacy so that every child will be able to read and be able to use those skills to empower and transform their lives. It would serve as a prerequisite, leading to an improved standard of health and ability to earn a higher income. Census is the basis for reviewing the country's progress in the past decade, monitoring the ongoing Schemes of the Government and most importantly, plan for the future. It is a known fact that several developmental indicators including literacy level are poor in rural population in comparison with urban areas. Hence it is necessary to review the situation about the literacy in urban population as it matters in alleviation of poverty as well having impact on health, will help in planning for behavior change communication activities in the implementation of health programs in urban India.

Aim & Objectives

Aim: To study the literacy status in urban population across India based on census data.

Objectives:

1. To identify the variation in education level in urban population across the states of India.
2. To identify gender wise variation in literacy status.

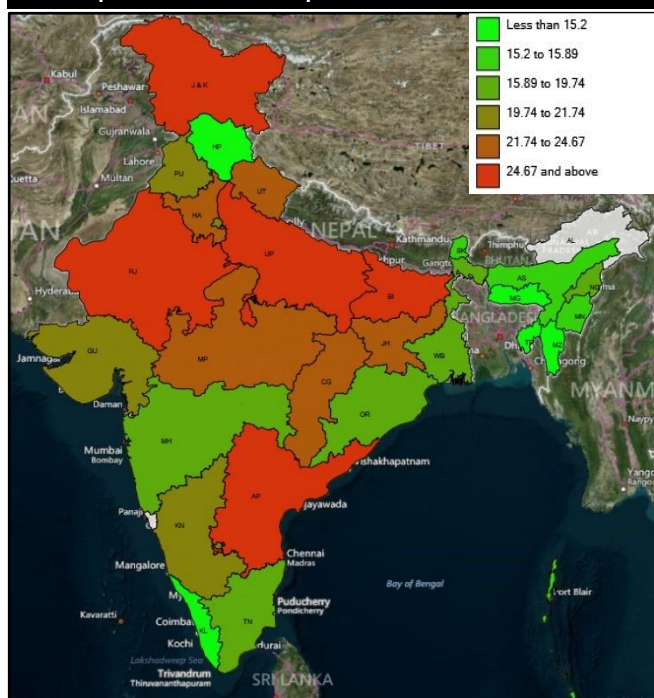
Methodology

This study is based on the analysis of secondary data. The official census data spreadsheets were obtained and data of 505 Urban Areas (City, Town etc. as defined by Census) across 30 States and Union Territories of India was analyzed using, Microsoft Excel, EpiInfo and GIS software.

Results & Discussion

As per the provisional figures of Census 2011, in India 77,84,54,120 persons have been counted as literates. Among all literates, 33,42,50,358 are females, whereas 44,42,03,762 are males. The literacy rate of India in 2011 is 74.0 per cent.

Choropleth of % Urban Population never attended School



The study findings show that on an average countrywide 26.5% of total urban population is attending one or the other educational institute, relevant to the age group and 52% have completed their education while around 20% urban population has never attended the school. Excluding the population below 6 years 14.5% urban population was found illiterate, lowest in Mizoram (1.6%) and Kerala (4.3%) while highest in Uttar Pradesh (21.9%) and Jammu & Kashmir (24.4%). On further analysis significant state wide variation and gender gap was found in various age groups.

In urban India, only 34.59% of the population was literate in 1951, rising to 80.3% in 2001 followed by 85.5% in 2011. The female literacy rate was 22.33 % in 1951, went up to 73.2% in 2001 followed by 81% in 2011. During the last two decades, there has been substantially greater growth in female literacy rates. The gender gap has been reduced in 2011 compared to what it was in 2001 and 1991

An examination of gender-disaggregated global data by UNESCO reveals that in all

regions with data, except Central Asia, female literacy rates were lower than male literacy rates. [3] India is no exception to it. However this gap is still wide even in urban population and when the percentage is translated in sheer numbers considering high population growth in India, it becomes an obstacle in the efforts of motivating masses to attain high level of Health literacy. [4] At the same time most populous states of India show similar pattern of rural illiteracy even in urban population. Illiteracy in India is more or less concerned with different forms of disparities that exist in the country. There are gender imbalances, income imbalances, state imbalances, caste imbalances, technological barriers which shape the literacy rates that exist in the country.[5]

Top 20 Cities in Country based on LOW % of Illiterate Population

Rank	State	City	% Illiterate
1	MIZORAM	Aizawl	1.64
2	KERLA	Kochi	2.69
3	KERLA	Thrissur	2.94
4	KERLA	Kozhikode	3.68
5	KERLA	Malappuram	3.73
6	KERLA	Alappuzha	4.19
7	TAMIL NADU	Nagercoil	5.01
8	KERLA	Thiruvananthapuram	5.21
9	TAMIL NADU	Alandur	5.54
10	TRIPURA	Agartala	5.55
11	WEST BENGAL	Khardaha	5.63
12	KERLA	Kollam	5.86
13	KERLA	Palakkad	6.10
14	WEST BENGAL	North Barrackpur	6.10
15	MAHARASHTRA	Panvel	6.11
16	WEST BENGAL	Darjiling	6.15
17	MAHARASHTRA	Wardha	6.23
18	TAMIL NADU	Thoothukkudi	6.31
19	KARNATAKA	Mangalore	6.33
20	HIMACHAL	Shimla	6.37

Conclusion & Recommendations

The last two decades have shown vast improvements in country's literacy scenario in the urban areas as evidenced by the average literacy figures. While India is marching towards Smart Cities, Literacy in Urban population, is worth considering an important indicator not only affecting the Health but impacting the Urban Development. The gender and state variations need attention to rebalance the growth.

References

1. Web:http://censusindia.gov.in/Census_And_You/literacy_and_level_of_education.aspx
2. A. Dharmalingam S, Philip Morgan, "Women's work, autonomy, and birth control: evidence from two south India villages", Population Studies, 1996 50: 187-201
3. Web:<http://www.uis.unesco.org/Education/Documents/l1-literacy-statistics-trends-1985-2015.pdf>
4. Web:<http://www.who.int/healthpromotion/conferences/7gchp/track2/en/>
5. Web:<http://www.indiacelebrating.com/social-issues/illiteracy/>

Research Study Abstracts of Winners of IPHA Maharashtra Branch Scheme Padvidhar Sanshodhan Prkalp Anudan for M.B.,B.S. Students from Medical Colleges of Maharashtra

2016: Saili Jadhav*, P.D.V.V.P.F's Medical College, Ahmednagar
Impact of sensitization programme on reproductive health awareness among adolescent girls residing in a shelter home (Snehalay) Ahmednagar

Background: Adolescents comprise one-fifth of India's total population. Knowledge on reproductive health at adolescent age is essential to build their foundation of healthy reproductive practices in the future and to lower the risk of sexually transmitted diseases. **Methods:** An interventional study was done on 51 adolescent girls at a shelter home (Snehalaya). Informed consent was obtained from the concerned authorities. Data was collected by interview technique with the help of a structured questionnaire prepared by literature search. Response of adolescents was recorded through their answers to the questionnaires. Intervention was done in the form of sensitization lecture with the help of audio visuals and educational posters. The same questionnaire was again interviewed and the impact of intervention was assessed. Statistical analysis of data was done using percentage, proportion and appropriate tests of significance. **Results:** In our study we found the average age of menarche of the girls to be 12-14 years, but as several of the girls came from unhealthy backgrounds, they had several menstrual problems like dysmenorrhea, irregular menses. Three of the girls had not experienced menses after 14 years of age. After the sensitization lecture, 56% of the girls were able to write the names of the reproductive organs in the female genital tract. 85% of the girls were able to name the hazards of teenage pregnancy. All adolescents need access to quality youth-friendly services provided by clinicians trained to work with this population. Sex education programs should offer accurate, comprehensive information while building skills for negotiating sexual behaviors. **Conclusions:** Hence from our project we identified the unmet need of awareness regarding reproductive health amongst adolescent girls and we tried to meet those needs by providing sensitization.

Keywords: Adolescent girls, Reproductive health, Impact of intervention, Shelter home

Complete Article: Jadhav SU, Avachat SS. Impact of sensitization programme on reproductive health awareness among adolescent girls residing in a shelter home (Snehalay) Ahmednagar. Int J Community Med Public Health 2020;7:138-43.

* **Guide:** Dr. Shubhada S. Avachat, Professor and Head, Dept of Community Medicine

WHO COVID-19: Case Definitions

Updated in Public health surveillance for COVID-19, published 16 December 2020

World Health Organization

Case Definitions

Suspected case of SARS-CoV-2 infection

A A person who meets the clinical **AND** epidemiological criteria:

Clinical Criteria:

- Acute onset of fever **AND** cough; OR
- Acute onset of **ANY THREE OR MORE** of the following signs or symptoms: Fever, cough, general weakness/fatigue¹, headache, myalgia, sore throat, coryza, dyspnoea, anorexia/nausea/vomiting¹, diarrhoea, altered mental status.

AND

Epidemiological Criteria:

- Residing or working in an area with high risk of transmission of virus: closed residential settings, humanitarian settings such as camp and camp-like settings for displaced persons; anytime within the 14 days prior to symptom onset; or
- Residing or travel to an area with community transmission anytime within the 14 days prior to symptom onset; or
- Working in any health care setting, including within health facilities or within the community; any time within the 14 days prior to symptom onset.

B A patient with severe acute respiratory illness: (SARI): acute respiratory infection with history of fever or measured fever of $\geq 38^{\circ}\text{C}$; and cough; with onset within the last 10 days; and requires hospitalization).

C Asymptomatic person not meeting epidemiologic criteria with a positive SARS-CoV-2 Antigen-RDT²

¹ Signs separated with slash (/) are to be counted as one sign.
² NAAT is required for confirmation, see [Diagnostic testing for SARS-CoV-2](#).
See [Antigen detection in the diagnosis of SARS-CoV-2 infection using rapid immunoassays](#)

Probable case of SARS-CoV-2 infection

A A patient who meets clinical criteria above **AND** is a contact of a probable or confirmed case, or linked to a COVID-19 cluster³

B A suspect case with chest imaging showing findings suggestive of COVID-19 disease⁴

C A person with recent onset of anosmia (loss of smell) or ageusia (loss of taste) in the absence of any other identified cause.

D Death, not otherwise explained, in an adult with respiratory distress preceding death **AND** was a contact of a probable or confirmed case or linked to a COVID-19 cluster³

Confirmed case of SARS-CoV-2 infection

A A person with a positive Nucleic Acid Amplification Test (NAAT)

B A person with a positive SARS-CoV-2 Antigen-RDT **AND** meeting either the probable case definition or suspect criteria A OR B

C An asymptomatic person with a positive SARS-CoV-2 Antigen-RDT who is a contact of a probable or confirmed case

³ A group of symptomatic individuals linked by time, geographic location and common exposures, containing at least one NAAT-confirmed case or at least two epidemiologically linked, symptomatic (meeting clinical criteria of Suspect case definition A or B) persons with positive Ag-RDTs (based on $\geq 97\%$ specificity of test and desired $>99.9\%$ probability of at least one positive result being a true positive)

⁴ Typical chest imaging findings suggestive of COVID-19 include the following:

- **Chest radiography:** hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
- **Chest CT:** multiple bilateral ground glass opacities, often rounded in morphology, with peripheral and lower lung distribution
- **Lung ultrasound:** thickened pleural lines, B lines (multifocal, discrete, or confluent), consolidative patterns with or without air bronchograms.

Note: Clinical and public health judgment should be used to determine the need for further investigation in patients who do not strictly meet the clinical or epidemiological criteria. Surveillance case definitions should not be used as the sole basis for guiding clinical management.

© World Health Organization 2020. Some rights reserved. This work is available under the [CC-BY-NC-SA 3.0 IGO](#) license.
WHO reference number: WHO/2019-nCoV/Surveillance_Case_Definition/2020.2

World Population Day - 11th July

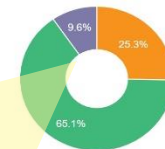
- World Population Day, which seeks to focus attention on the urgency and importance of population issues, was established by the then-Governing Council of the United Nations Development Programme in 1989, an outgrowth of the interest generated by the Day of Five Billion, which was observed on 11 July 1987. The Day was first marked on 11 July 1990 in more than 90 countries. China is currently the most populous country, with 1.4 billion people. Global life expectancy is 75 years for women and 71 years for men while Global Total Fertility Rate is 2.4

TOP 10 MOST POPULOUS COUNTRIES – JULY 2021

Sr. No	Name of the country	Population	Sr. No	Name of the country	Population
1	China	1,397,897,720	6	Nigeria	219,463,862
2	India	1,339,330,514	7	Brazil	213,445,417
3	United States	332,475,723	8	Bangladesh	164,098,818
4	Indonesia	275,122,131	9	Russia	142,320,790
5	Pakistan	238,181,034	10	Mexico	130,207,371

Population

Population, by age group, per cent



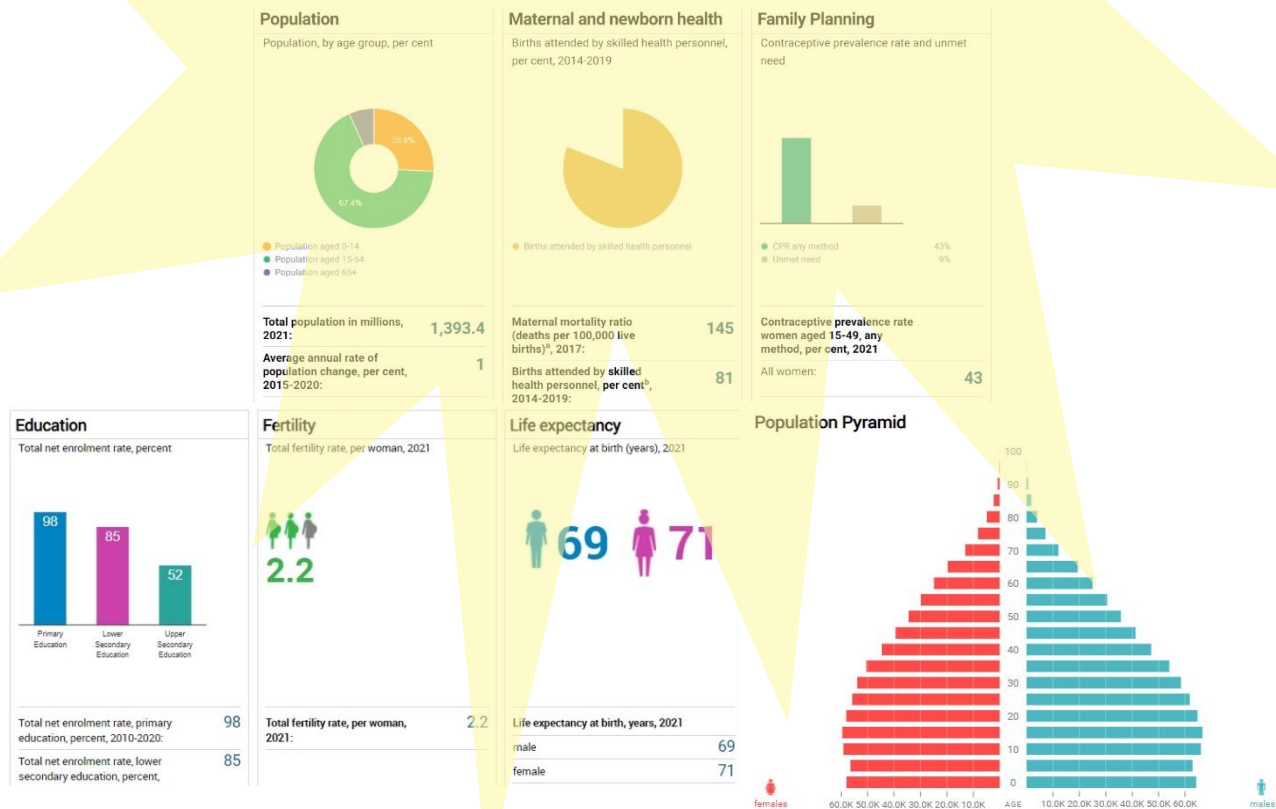
- Population aged 0-14
- Population aged 15-64
- Population aged 65+

Total population in millions, 2021: **7,875**

Globally:
 One birth every **08 Sec**
 One death every **12 Sec**
 Net gain 1 person every **24 Sec**

India

India ranks number 2 in world by population. The population of India is growing faster than China's. India is expected to surpass China as the world's most populous country around 2024. India's population is equivalent to 17.7% of the total world population. The median age in India is 28.4 years. The 35% of population of India is living in urban area.



Source: UN Websites & Dashboard

Padvidhar Sanshodhan Prakalp Anudan - 2021

In order to promote interest for research among undergraduate medical student, there is a need to encourage research aptitude among undergraduate medical students to undertake small research projects. The students aspire recognition and may need some financial support to pursue these small research projects. As a response to this need, Indian Public Health Association, Maharashtra Branch is offering last few years financial support to deserving research proposals from undergraduate students from Medical Colleges located in Maharashtra State. This will not only provide an opportunity to students to familiarize themselves with research methodology & techniques but will also serve as an incentive for them to take up research as a career in the future.

Guidelines for submission of research proposal

- Topic should be related to Public Health /Community Medicine
- The project proposal should be submitted to IPHA Maharashtra Branch office by email on iphamahabbranch@rediffmail.com.
- The proposal should reach on or before 30th November 2021
- The proposal will be scrutinized by panel of experts.
- The acceptance of proposal will be communicated by end of December 2021 to the concerned student by email.
- The projects from all Medical Colleges of Maharashtra will be assessed and five best projects will be awarded funding of Rs. 5,000/- each. The funds will be released in 2 instalments i.e. Rs. 2,500/- once the project is approved and Rs. 2,500/- at the end of final submission of one hard copy of the project report.
- Student should prepare & complete project under the guidance of Community Medicine faculty.
- Final submission of Project Report should be before 31st Dec 2022.

Format of Application

1. Title page - Name & details of student and guide bearing signatures
 2. Research Proposal
 - a) Title
 - b) Introduction
 - c) Objectives
 - d) Material and Methods
 - e) Plan of Data Analysis
 - f) References
 - g) Annexure: Study tools, details of budget requirements, etc.
 3. Enclose Institution Ethics Committee approval letter
 4. Enclose Covering letter from Head of Community Medicine Dept.
- All documents to be submitted in single e-mail as typed or good quality scanned documents.

APPEAL

The Indian Public Health Association (IPHA) existing since 1956 is a professional registered body (Society Act No. S/2809 of 1957 – 58) committed to promotion and advancement of public health and allied sciences in India, protection and promotion of health of the people of the country, and promotion of co-operation and fellowship among the members of the association. IPHA has local branches in almost all states of the country.

Any professional graduate, MBBS or any equivalent degree recognized by any Indian university in Indian System of Medicine / Dentistry (BDS) / Engineering (BE) / Nursing (B Sc Nursing) / Veterinary (BV Sc & AH) are eligible to be ordinary & life member of the association after paying the necessary subscription.

We, the executive committee members of IPHA – Maharashtra Branch sincerely appeal the eligible qualified individuals to become the life members of the organization and enhance our strength and visibility.

Kindly visit National IPHA website, www.iphaonline.org to download the application form and for further official procedures of payment of membership fee.

If you need any help in this regard please feel free to contact Secretary, IPHA – Maharashtra Branch on phone (022 - 2743 79 96 / 97) or on email - iphamahabbranch@rediffmail.com



IPHA MAHARASHTRA EXECUTIVE COMMITTEE

• President

Dr. Gajanan Velhal
Professor & Head, Dept. of Community Medicine
Seth G. S. Medical College & KEM Hospital,
Mumbai

• Immediate Past President

Dr. Murlidhar Tambe
Professor & Head, Dept. of Community Medicine
B. J. Govt. Medical College, Pune

• Vice-President

Dr. Purushottam Giri
Professor & Head, Dept. of Community Medicine
IIMSR Medical College, Badnapur Dist. Jalna

• Secretary

Dr. Prasad Waingankar
Professor & Head, Dept. of Community Medicine
Mahatma Gandhi Mission Medical College,
Navi Mumbai

• Joint Secretary

Dr. Harshal Pandve
Professor & Head, Dept. of Community Medicine
PCMC's Postgraduate Medical Institute & YCM
Hospital, Pimpri, Pune

• Treasurer

Dr. Nandkumar Salunke
Assistant Professor, Dept. of Community Medicine
B. J. Govt. Medical College, Pune

• Executive Committee Members

Dr. Prakash Gattani
Professor & Head, Dept. of Community Medicine
Dr. S. C. Govt. Medical College, Nanded

Dr. Rina Tilak

Scientist - G, Dept. of Community Medicine,
Armed Forces Medical College, Pune

Dr. Shilpa Narayanan

Director, Appa Patwardhan Safai Wa Paryawaran
Tantraniketan, Dehu Village, Dist. Pune

Dr. Sujata Lavangare

Associate Professor, Dept. of Community Medicine
Seth G. S. Medical College & KEM Hospital,
Mumbai

Dr. Sarika Patil

Associate Professor, Dept. of Community Medicine
Shri Bhausaheb Hire Govt, Medical College, Dhule

Major (Dr.) Ashlesha Tawde Kelkar

Assistant Professor, Dept. of Community Medicine
Mahatma Gandhi Mission Medical College,
Navi Mumbai

[2021 - 2024]