

Journal of

MEDICO LEGAL

INDIAN and ETHICS **ASSOCIATION**

> Quarterly Medical Journal (Indexed with IP Indexing)

Vol.08 | Issue : 02 | Apr.-June 2020

www.imlea-india.org

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Journal of **Indian Medico Legal And Ethics Association**

Vol.08 | Issue: 02 | Apr.-June 2020

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Editorial:

Healthcare Institutions in the time of COVID-19

* Anupama Sanjeev, **Sarah Shabbir, ***Devina Neogi, ****Arkalgud Ramaprasad, *****Dr K Harish

Received for publication: 22 April 2020 Peer review: 31 May 2020 Accepted for publication: 16 June 2020

Keywords:

Pandemic, Ethical issues, Quarantine, Corona Virius

Extraordinary circumstances call for extraordinary measures – said John Woodburn, Member, Council of the Governor-General of India in January 1897 while presenting the Epidemic Diseases Bill in British India [1]. The extraordinary circumstance was the 1896 bubonic plague epidemic of Bombay (now Mumbai). India and most parts of the world are presently in the throes of a potentially more extraordinary situation – the COVID-19 pandemic.

In March 2020, the pandemic was in Stage 2 with local transmission of COVID-19. A threeweek lockdown starting March 24, extended to the end of April, with cautious relaxation modes in May and June have been part of the strategy to flatten the curve. Mathematical models predicted in late March 2020, just before the lockdown, that hospitals would run out of beds. The 21-day lockdown and its extension may impede it. Should the pandemic move to Stage 3 or Stage 4 – of widespread outbreak, the healthcare institutions will be inundated by patients, as has happened in Bergamo, Italy and New York, USA. Private hospitals stepping in to manage COVID-19 – as in states like Rajasthan where they form 50% of the state's capacity - may not be adequate. Like the healthcare providers at these foreign institutions, Indian providers, both public and private, too will be confronted with medico-legal-moral-ethicalreligious challenges in addressing the needs of the recipients. How can the healthcare institutions help their providers deliver care while being respectful of the recipients needs in a time of crisis?

Legal protection to the providers of healthcare in the institutions is provided by the National Disaster Management Act of 2005 (NDMA) and the Epidemic Diseases Act of 1897 (EDA) that have been invoked in the country. But what of the non-legal vulnerabilities? Even in noncrisis times the central, state, and professional guidelines for healthcare institutions to address the medico-legal-moral-ethical-religious challenges are inadequate. This inadequacy is compounded many times in a crisis such as the COVID-19 pandemic. The NDMA and EDA increase the demand on the institutions but provide little (a) guidance on addressing the challenges, and (b) protection from the risks of meeting the challenges. The absence of systematic consultation processes among the government, professional, and institutional stakeholders to address these challenges in normal times compounds the challenge in a crisis.

In this context the healthcare institutions must formulate their own guidelines that are within the mandated laws, protect the providers of healthcare, and respect the requirements of the recipients of healthcare [2-4]. The guidelines must broadly align the purposes and processes of the institution's staff and administration [6 - 10]. There isn't enough time for these institutions to seek several alternative opinions. Preparations must be made in earnest and be ready to decide on short notice. Overarching all of this is the vulnerability of the worked-to-the-limit medical and other professionals directed to work towards containment and mitigation of COVID-19.

Today, the provider-recipient relationship in healthcare institutions goes far beyond the traditional physician-patient relationship [11-13].

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That relationship is at the core of healthcare and a bedrock of ethics must direct all action[14-17]. However, ethics is not just about the behaviour of the frontline healthcare professionals. It emanates from the policies and guidelines framed by the institution. This is important because (a) state level policy decisions could make it difficult to act ethically on the ground, (b) there could be uncertainty in applying the standard ethical frameworks to COVID-19, and (c) practitioners from different disciplines are guided by different (and at times competing) ethical frameworks [18].

Significantly, the providers include individuals, teams, departments, clinics, and hospitals. The individuals may be physicians, surgeons, residents, students, nurses, paramedicals, social workers, and others. The teams may include the above individuals as units, multidisciplinary teams, surgery teams, and others. The recipients include patients, their families, communities, caretakers, and others. The guidelines must encompass the complex web of relationships between the providers and the recipients. The guidelines must define the responsibility [19,20], transparency[21], accountability[22], and autonomy [23] of the providers to the recipients.

Further the Charter of Patient Rights [24] released by the Ministry of Health and Family Welfare in 2018 must be seen in the light of COVID-19. For instance confidentiality though imperative, must be contextualised to the pandemic [25]increasing telemedicine and remote working. Institutional guidelines must spell out the extent and scope of sharing recipient health information without consent.

Using the analogy of flight safety rules, the emphasis of guidelines for providers in the COVID-19 situation must be safety of self before delivering healthcare. This includes the right to refuse healthcare to an uncooperative recipient, especially with safety pre-requisites. Taking all possible and reasonable steps to treat the patient (the obligation of means) is essential to the

providers of healthcare. However, guidelines must emphasize non-responsibility of healthcare professions for an incorrect diagnosis / procedure, contingent to widely accepted medical practices being followed. However, the converse – abandoning a recipient under active treatment without adequate notice, must be emphasized as an example of non-compliance in the institutional guidelines.

Institutional guidelines must further specify processes for triage situations where there is a catastrophic shortage of medical resources to prevent its ethical ramifications on individual providers. Vicarious and malpractice liability during COVID-19 [26] must also be specified in the guidelines. A survey of the experience in other countries and India highlights some of the issues that will likely be exacerbated in the coming days. Some of them are:

- With a limited number of tests, who should be tested?
- What should be the cost of the test to the recipient?
- In the event of a positive test, who should be quarantined? An individual, the family, the community, the locality, or the region?
- With a limited number of ventilators, who should be put on the ventilator?
- How should the wellbeing of the providers be protected? What should be the policy on use/reuse of personal protective equipment (PPE)?
- How should the religious sentiments of the recipients be respected? During care? After care? In case of deceased?
- Should untested drugs and treatments be permitted? Under what conditions?
- Under what conditions should extreme lifesaving measures be adopted for COVID-19 patients? Or, not adopted?

The pandemic forces a focus on public safety and civil order. Hence solidarity must be seen in terms of benefits to the community. The common

good takes priority in medical goals. Minimizing morbidity and mortality remain the primary goals with standards of care aiming for maintenance of community resilience during and after the crisis. Further the institutions must strive for fairness and protect the populace against unfairness by basing the guidelines on evidence and scientific soundness. This will bring in social, cultural, religious, and political support for, and efficacy of decisions based on the guidelines. Preservation of community characteristics and co-opting stakeholders to minimise disruption in daily lives will keep the response proportional to the threat and preserve the integrity of guidelines.

With a daily increase of 10,000 in number of infections in June 2020, the COVID-19 curve shows no signs of abatement. The resources and administrative capacity of institutions in many states are being stretched thin with unlikely respite. The institutions must collaborate now with their peers and extend a safety net of guidelines that acts as a buffer between the providers and the medicolegal-moral-ethical-religious challenges, or allow systems and processes to implode into COVID-19.

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Perspective:

Legal & Regulatory aspects of novel corona virus pandemic in India

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Received for publication: 5 June 2020 Peer review: 11 June 2020 Accepted for publication: 17 June 2020

Keywords

COVID Pandemic, Epidemic disease Act, Disaster management PPE Kits, Social media

Abstract

During this unprecedented epidemic we have been expected to follow the laws, regulations, rules, orders and guidelines issued by different authorities. Unfortunately India fights this battle against Covid 19 with laws which are of colonial vintage. It is not easy to get consolidated information from one source and hence confusion prevails. This article attempts to discuss the legal and regulatory aspects of the Corona virus pandemic in India.

Introduction

During this unprecedented pandemic we have all learnt about where Covid 19 started, how it spread, what measures to take to prevent oneself from infection, what type of mask or Personal Protective equipment to use and also that the same doctors public depends on to treat them, are ostracized, hounded and assaulted even after their death for doing their duty [1]. News channels spew knowledge and webinars, e-publications and social media have left no stone unturned in bringing information regarding Covid 19 to us. What has not been discussed and what is important for everyone, specially doctors to know is the Legal and Regulatory aspects of the Covid 19 Pandemic as ignorance of law is no excuse under law.

Discussion

With no Public health Law in place India is fighting Covid 19 Pandemic using a 123 year old Epidemic Diseases Act (EDA), an older still Indian

Penal Code of 1860 vintage and a recent Disaster Management Act of 2005. The 123 year old EDA was brought in by the British to tackle Bubonic plague in State of Bombay but was also misused to arrest freedom fighters like Bal Gangadhar Tilak for 18 months for anti establishment coverage of plague by his newspaper "Kesari" [2]. This is a short Act with only four sections 1st of which gives various definitions, 2nd Section delineates powers which can be given to "Any person" to take special measures and prescribe regulations related to containment of the disease, 3rd section relates to penalties under the Act and 4th section relates to protection given to authorities for action taken in good faith. Till March 13th, 7 States and Central Government had invoked powers and provisions under EDA [3]. The 123-year-old colonial law, however, does not even define what a disease is, let alone an epidemic or a pandemic. Indeed, a Public Health (Prevention, Control and Management of Epidemics, Bio-Terrorism and Disasters) Bill had been drafted in 2017, intended to replace the Epidemic Diseases Act of 1897. The Bill has yet to be tabled in Parliament [4].

The Disaster Management Act which was formulated in 2005 was intended to tackle natural or manmade disasters. The Ministry of Home affairs has issued a notification invoking this act with retrospective effect from Jan 17 2020 [5]. The power of the Chairman National executive Committee was delegated to the Union Secretary Health under this Act. Sections 51-60 of DMA relate to penalties and punishments which can be awarded for various offences under this Act. Spitting in Public which was so far a national sport

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has been made an offence under it. Imprisonment upto 2 years can be awarded for obstruction of any officer or refusal to comply with any direction of the Government under this Act.

Under Section 65 of DMA Government can requisition resources, manpower, services, premises, vehicles from private institutions for use to tackle the disaster for a period as is deemed necessary. This has already been done in Andhra Pradesh where 58 private hospitals have been taken over by the Government [6]. A reasonable compensation may be provided as prescribed in Section 66 of the Act. States where Clinical Establishment Act is notified already possess a great leverage over private healthcare facilities and realizing this Punjab Government recently during the Covid epidemic has notified the Clinical Establishment Act which was stalled for long via an ordinance [7].

The Indian Medical Council Regulations of 2002 vide Section 5.2 demands that a doctor assigned to a duty during an epidemic shall not abandon his duty. Also according to Section 56 of Disaster Management Act Any officer on whom any duty has been imposed under this Act and who ceases or refuses to perform or withdraws himself from the duty without express written permission of his superior; imprisonment upto one year is prescribed. Government doctors who take unsanctioned sick leave or private doctors requisitioned who refuse to join duty need to be aware of the consequences. If authorities force health workers to perform their duties without proper protective gear, written / email protest needs to be sent to them with proof of receipt and legal action taken against them in case of harm. However during this pandemic while DMA is operative the authorities do have draconian powers which they can use and it will be upto courts to decide later whether right to healthy life of the health worker as enshrined under Article 21 of Indian Constitution could be thus violated under the garb of acting under DMA.

Besides EDA and DMA which have been invoked India is also using the 1860 vintage Indian Penal Code to tackle this pandemic. Section 188 of IPC which prescribes penalty for disobedience to order duly promulgated by public servant with imprisonment upto six months and a fine is most frequently used. Other sections used are Section 269 to 271 which deal with actions which spread infection and breaking quarantine and prescribe imprisonment upto 2 years. Actor Kanika Kapoor was one of the first persons to be booked under these sections during this pandemic [8].

Besides EDA, DMA, IPC, Essential Services Maintainance Act has also been invoked in various states to quell any protest or strike by staff involved in essential services including healthcare services. Also there have been 507 notifications which have been issued by the Union Government through its various ministries to tackle the crisis [9]. Over and above these are various orders, regulations, guidelines and rules made by various State Governments, Medical Councils and Local authorities, many of which are conflicting and are creating confusion for doctors and patients alike. Many of these orders are a result as a knee jerk reaction to news reports. Some doctors have had FIR lodged against them for allegedly not complying with orders of local authority as happened recently to a physician in Panchkula [10] as well as to a radiologist in Punjab. Multiple Hospitals across India have been shut down if a patient or staff is found to be Covid positive [11]. Though a state of Emergency has as yet not been declared, but, expanding the scope of "Internal Disturbances" suspension of Article 19 of Indian Constitution could have been the next step if the Covid 19 is not contained by measures taken so far [12]. However since the word "internal disturbance" was replaced by the word "armed rebellion" in the 44th constitutional amendment it would require deft legislative maneuvering to declare State of Emergency under Article 352 of Indian Constitution.

Protection to Doctors

An Ordinance was notified on April 22nd 2020 to amend Epidemic Diseases Act for the protection of health care workers. This relates to prevention of violence against doctors and healthcare workers during the period the epidemic Diseases Act remains invoked. It provides speedy investigation and verdict, cognizable and non bailable nature of the offence with Jail term of upto 7 years and fine of upto 5 lacs with double the amount of damage to property plus penalty upto 2 lacs . An Insurance Scheme for Health Workers Fighting COVID-19 under Pradhan Mantri Garib Kalyan Package has also been floated where a sum of 50 lacs has been assured for death of any Healthcare worker on Covid duty. Though appreciable but equating the life of a doctor on same scale as that of a ANM or Multipurpose Health care worker has disappointed doctors instead of incentivizing them.

Special circumstances justify special measures and when such extraordinary measures are undertaken there is always a chance of errors resulting in collateral and unintended damage. All officials and authorities act during such emergency and unusual circumstances with a protection accorded to them for action taken in good faith. Section 73 of Disaster Management Act, and Section 4 of Epidemic Diseases Act specifically mention that no suit or legal proceeding will lie against an officer for action taken in good faith under these Acts.

Unfortunately even in these times doctors have not been given any relief from prosecution for alleged grievance of patients or for non compliance of provisions of Consumer Protection Act, Indian Medical Council Act (National Medical Commission), Indian Penal Code, Clinical Establishment Act, PCPNDT Act, Biomedical waste Management Rules etc. even though they are working in exceptional circumstances. By following law doctors are neglecting their regular patients putting them at

risk of complications, exposing their staff and non covid patients to Covid 19, and managing the patients of covid with limited resources at their disposal. Any of these issues is likely to result in doctors getting embroiled in litigations later. Similarly telemedicine which so far was not permitted in India by various courts [13,14] as well as the Indian Medical Council Regulations 2002 has now been permitted by the medical councils but will open new dangers for doctors who venture into this arena. The professional acts of doctors during this period even if done in good faith is going to be evaluated and adjudicated by the leisurely judicial process many years later.

Doctors, especially those who own or manage Small and Medium Health Care Establishments will need to further be wary of falling foul of labor laws. They have been ordered not to do elective procedures, they may have closed the OPDs or even the hospital but by law they cannot lay off staff members or deduct their salary for days when the staff member has been absent from duty [15]. Despite wearing PPEs and maintaining social distancing norms, all the principles of informed consent will continue to apply to medical practice [16]. Also the issue of medical record keeping needs special mention. Writing notes while wearing gloves and PPEs is cumbersome and not hygienic. It is also not feasible to write all notes at the end of duty shift because law demands medical records to be written contemporaneously. Similarly use of keyboard while wearing gloves is difficult and likely to transmit infection.

Conclusion

Medical professionals are precious national resource in these exceptional circumstances of pandemic and they should have a mind free of any stress of violence against them or litigations in future at least for the duration of the pandemic. Government needs to urgently look into this aspect and protect doctors not only from violence but also from suits or legal proceedings for cause of actions

arising during the period that Disaster Management Act remains notified. There is also an urgent need to bring in a Public Health Act where powers are given to qualified and competent predefined professionals rather than to "Any Person" as mentioned in Epidemic Diseases Act, to tackle such situations in future.

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044 Apr.-June 2020

Perspective:

Hindsight: Where Did We Go Wrong During Polio Eradication Program?

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Received for publication: 29 May 2020 Peer review: 13 June 2020 Accepted for publication: 24 June 2020

Keywords: Wild polio viruses, Vaccine polio viruses, VAPP cases, Polio compatible cases

Abstract: Polio eradication program was launched in India in the year 1995, to be eradicated by year 2000. Last polio case by wild polio virus was reported on 13th January 2011 and VAPP cases are still occurring. Following could be the reasons for delay in elimination of wild polio viruses and occurrence of VAPP Cases:

1. Resistance to OPV administration by some parents during the early phase, 2. High incidence of vaccine failure, 3. Introduction of monovalent OPV in year 2006, 4. Administration of trivalent OPV until year 2015, 5. Administration of bivalent OPV till date and 6. Delayed reintroduction of IPV

Acute paralytic poliomyelitis, commonly called polio disease is caused by Polio virus. There are three types of polio viruses labeled as poliovirus type 1, polio virus type 2 and poliovirus type 3. Each virus needs different vaccine so there are three polio vaccines called polio vaccine type 1, polio vaccine type 2 and polio vaccine type 3. Polio vaccines are available in two forms, one is called Inactivated Polio Vaccine (IPV), is administered as injection; and the other is live vaccine called Oral Polio Vaccine(OPV) and is administered orally.

In 1988 the World Health Assembly, during its 41st meeting passed resolution 28, declaring that "World Health Organization (WHO) takes initiative for global eradication of polio exclusively by OPV". This resolution is known as WHA-41.28. The scientific information available at that point of time i.e. 1988 regarding OPV was as following:

1. It can cause paralysis in vaccine recipients. It is called Vaccine Associated Paralytic

- Poliomyelitis (VAPP), which in fact is polio disease caused by OPV.
- 2. Secondary spread of mutant neuro-virulent vaccine polio viruses can cause VAPP in close contacts called cVAPP.
- 3. Some children, specially from Tropical and developing countries show poor response to OPV.

India qualifies on both counts:

Immunization program is carried out by the Ministries of Health and Family Welfare, Govt. of India and State Governments. Under Universal Immunization Program vaccines are provided free and administered by trained vaccinators.

Polio eradication program was launched in India in year 1995, two drops of trivalent OPV were administered to every child up to five years of age every year. It is called Pulse Polio dose, it was in addition to routine OPV administered along with other vaccines being administered to all children up to five years of age. Later on additional rounds of Pulse Polio Immunization were added. National Polio Surveillance Project(NPSP) under auspices of WHO, headed by WHO representative called Project Manager and man powered by Indian doctors and other staff members carried out surveillance, examination of reported cases of acute flaccid paralysis, collected stool samples for detection of wild polio viruses and vaccine polio viruses, follow up done at or after 60 days of onset of paralysis to check for presence or absence of paralysis and classify children as non-polio, confirmed polio (stool culture positive for wild polio virus) VAPP (stool culture positive for vaccine polio virus), polio compatible, where paralysis persisted beyond 60 days, other causes of paralysis like Transverse Myelitis, Traumatic Neuritis and Guillain Barre

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were excluded; stool samples could not be collected or were negative for wild polio viruses and vaccine polio viruses. These cases were labeled as polio compatible as it could not be determined whether these cases were caused by wild polio virus or vaccine polio virus. Later another category called VDPVs was added where vaccine polio viruses detected in stool samples had undergone further changes.

Routine vaccines are administered by the medical personnel including vaccinators, but during Pulse Polio campaigns millions of volunteers also administered OPV.

Classification of AFP cases was done by NPSP and reported to the Ministries of Health and Family Welfare of respective states as well as to the Govt. of India. Deadline for polio eradication was year 2000, but, after many extensions of deadline, last polio case by wild polio virus was reported on 13th January 2011. Why did it take a decade longer for eradication?

Following are the main reasons for the delay: 1. Resistance to OPV administration by some parents, specially during early phase of the campaign. 2. Vaccine failure, where many children developed disease despite taking the vaccine. 3. Genetic factors because of which children from different regions showed different response to same vaccine being administered all over the country.

Resistance to OPV administration:

Some anti-vaccine groups and some religious leaders had made false and misleading propaganda that OPV is harmful and leads to infertility, because of this many people refused to administer OPV to their children. Government of India took help from many celebrities including Bharat Ratna Sachin Tendulkar and Padma Vibhushna Amitabh Bachchan to counter this false propaganda. People who had resisted the OPV administration earlier joined the main stream, though belatedly. But, poor vaccine coverage is being cited as the only reason for delay in polio eradication and large number of children developing polio disease during the campaign.

Exaggerated claim regarding decline in Polio incidence because of OPV:

It has been claimed that OPV had brought

down the number of polio cases per year which during 1980s were 13000- 38000 to 1126 cases in 1999. The year 1999 was projected as a bench mark in polio eradication.

Three different criteria had been used at different times, to label acute flaccid paralysis(AFP) cases as polio cases:

- A. Reported cases of flaccid paralysis up to 1996.
- B. Presence of one or more of the following:
 - (i) Wild polio virus detected in stool samples, (ii) residual paralysis, (iii) patient died, or (iv) patient lost to follow up for 1997 and 1998.
- C. Wild polio virus detected in stool samples, 1999 onwards.

Positive stool culture for wild polio virus provides proof that paralysis had been caused by polio virus, but because of some socio-cultural practices in our country many cases may be missed. It could be because of lack of medical facilities in some places or because of religious beliefs, an inflicted child may be taken to a faith healer or a place of worship for cure. Thus, two weeks period may be lost when polio virus could be detected in the stool.

There were 10408 AFP cases in 1990 and 9587 AFP cases in 1999. In 1990, all 10408 AFP cases were labeled as polio cases, but in 1999 only 1,126 cases were labelled as polio cases. In year 1999, there were 9587 AFP cases. In case criteria applied up to 1996 were applied in 1999, then there were 9587 polio cases, and in case criteria applied in year 1998 were used then there were 2987 polio cases. It would be interesting to look at the figures for year 2011 when only one confirmed case was reported. **Table I.**

There were 60540 AFP cases in year 2011. Thus if we apply criteria as in 1996, then there were 60540 polio cases, and if we apply criteria as of 1998, then there were 62+VAPP cases, for which no information was provided on NPSP website: www.npspindia.org. It is also worth noting that number of polio compatible case was higher than the number of virologically confirmed polio cases from 1998 to 2013, except for years 2002 and 2006.

The author had raised this issue in year 2003[1]. Thus it can be said that the claim that there was huge reduction in polio incidence because of OPV was not only highly exaggerated, but very

Table-I : Number of polio cases for year 1998-2014

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Virologically	1934	1126	265	269	1600	225	136	66	676	874	559	741	42	1	0	0	0
confirmed																	
Compatible	2286	1680	362	286	681	370	361	397	494	447	538	473	190	54	31	23	0
cases																	
VAPP	124	181	151	120	202	*	*	*	*	*	*	*	*	*	*	*	*
VDPVS												21	5	7	1	5	2

^{*}Figures not provided by NPSP

Presently no data regarding polio cases is being displayed on NPSP Website

Source: www.npspindia.org, assessed on 9th June 2014

Table-II: Number of OPV doses received by polio cases, 1998-2009

OPV Doses	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0 Dose	15%	14%	14%	9%	16%	14%	4%	0%	3%	1%	1%	1%
1 - 3 doses	47%	45%	28%	31%	41%	35%	11%	11%	10%	3%	3%	4%
4 - 7 doses	32%	34%	35%	41%	33%	34%	41%	44%	22%	12%	18%	18%
> 7 dose	7%	8%	23%	18%	11%	17%	44%	45%	65%	85%	78%	77%

Source: www.npspindia.org, assessed on 27th July 2009

Table-III: Most recent Wild Polio Virus case by State

State	Date of most recent
	polio case
West Bengal	13-jan-11
Jharkand	22-Oct-10
Maharashtra	16-Sep-10
Bihar	01-Sep-10
Uttar Pradesh	21-Apr-10
Jammu & Kashmir	07-Feb-10
Haryana	13-Jan-10
Rajasthan	27-Nov-09
Uttarakhand	06-Nov-09
Himachal Pradesh	17-Oct-09
Punjab	13-oct-09
Delhi	28-Jun-09
Madhya Pradesh	04-Aug-08
Orissa	22-Jul-08
Andhra Pradesh	16-Jul-08
Assam	09-Jun-08
Karnataka	03-Nov-07
Gujarat	15-Mar-07
Chandigarh	02-Aug-06
Tamil Nadu	18-Feb-04
Chhatisgarh	18-Jul-02
Kerala	29-Sep-00
Pondicherry	26-Nov-98
Goa	25-Oct-98
Daman & Diu	22-Oct-98
D& N Haveli	31-Jan-98

Nagaland	10-Dec-97
Meghalaya	15-Oct-97
Tripura	10-Oct-97
A & N Islands	Before 1997
Arunachal Pradesh	Before 1997
Lakshadweep	Before 1997
Manipur	Before 1997
Mizoram	Before 1997
Sikkim	Before 1997

Source: www.npspindia.org assessed on 4th December 2011

unscientific too.

High incidence of Vaccine failure:

Risk of vaccine associated paralytic poliomyelitis (VAPP) is highest with the first dose of OPV[2,3]. A study published in year 2002 in WHO Bulletin presented indisputable evidence that there was high incidence of vaccine failure in India[4]. In this study there were 60 recipient VAPP cases who had developed polio disease after taking OPV in year 1999. Out of these 60 children 9(15%) had developed paralysis following first dose of OPV, 4(6%) after 2nd dose, 15(25%) after 3rd dose and 32(53.3%) after 4th or higher doses. Why did few children in India develop VAPP following first dose of OPV? Plausible explanation would be that in India the first dose of OPV is administered soon after birth or by 6 weeks of age, and the persistent maternal antibodies prevent development of paralysis by wild polio viruses or mutant neuro-virulent vaccine polio viruses. Thirty two children out of 60 children had developed VAPP after 4th or higher dose of OPV proving that OPV administered earlier had failed to generate adequate levels of antibodies in these children.

In a study from Delhi for 1989-1994 period, it was reported that the number of children who developed paralytic poliomyelitis after being administered three or more doses of OPV was 14% in 1989, and increased to 22.9% in 1994[5]. **Table II** shows data for 1989-2009 period regarding the number of OPV doses received before onset of polio disease. This table strongly suggested that incidence of vaccine failure is not only high but on rise.

Role of Genetic Factors:

It was known that vaccine failure by OPV occurs in some children, incidence of vaccine failure varies in different populations. **Table III** shows that polio eradication occurred even before 1997 in six states, three states became polio free by end of 1997 and five states became polio free by year 2000. On the other hand six states became polio free in year 2010, West Bengal reported last polio case on 13th January 2011 as can be seen in **Table III**, same quality of vaccine was being administered all over the country, different response by different populations could be due to

some genetic factors. The author had presented this hypothesis on May 14, 2006 at 'National Consultative Meet on Hepatitis-B and The Polio Eradication Initiative' organized by Indian Medical Association and Plan International (India) held in Delhi.

The states and union territories where decline in polio incidence occurred rapidly have higher Mongoloid, Negrito populations or had been French or Portuguese colonies before becoming part of Independent India. Tibet, China, Nepal, Bangladesh and Myanmar situated in north and east of India have Mongoloid ethnic population as majority, polio eradication occurred quickly in these countries. Nagaland has Negrito as majority, other states in east have Mongoloid ethnic population as majority. Andaman and Nicobar have Mongoloid and Negrito population as majority, Kerala and Lakshwadeep have Negrito population[6].

Dr Jay Wenger, the then project manager, National Polio Surveillance Project also presented a study which showed vaccine efficacy in children from Uttar Pradesh and Bihar were different between these two states as well as for the rest of India[7]. Per dose vaccine efficacy of trivalent OPV for type 1 was 9%(6-13%) for Uttar Pradesh, 18% (9-26%) for Bihar and 21%(15-27%) for rest of India; for type 3 efficacy was 9%(3-15%) for Uttar Pradesh, 22% (4-36%) for Bihar and 21%(8-33%) for rest of India[7]. This study provided strength to the author's hypothesis.

Introduction of mOPV1 for Pulse Polio Campaign:

Wild polio virus type 2 had been eliminated worldwide by October 1999. In year 2005 there were only 66 confirmed polio cases. In year 2006 monovalent oral polio vaccine type 1 (mOPV1) replaced tOPV for pulse polio campaign with the claim that mOPV1 is 2-3 times more potent than tOPV in eradicating poliovirus type 1. In year 2006 there were 676 virologically confirmed cases. Explanation offered for ten times increase in number of polio cases in year 2006 was that it was due to four year cycle. It can be seen in Table I that number of confirmed polio cases were high in years 1998 and 2002; so this increase in year 2006 was expected. But in year 2007 number

of polio cases rose to 874, and high incidence of confirmed polio cases continued till year 2009. The decision to introduce monovalent OPV was taken in September 2004 by the Ad Hoc Advisory Committee for Polio Eradication.

This recommendation turned out to be a fiasco and proved very costly for India. Issue regarding monovalent OPV was discussed at the National Consultative Meeting on Hepatitis B and The Polio Eradication Initiative held on 14th May 2006. There was strong reservation regarding monovalent OPV. But no heed was paid by the agencies carrying out the program.

Administration of Trivalent OPV till year 2015:

Though polio virus type 2 had been eliminated in year 1999, tOPV containing vaccine against Poiliovirus type 2 was administered to children till year 2015 in India. It would be pertinent to state two facts. One- wild poliovirus type 2 was easiest to eradicate; two-polio vaccine type 2 causes very large number of VAPP cases compared to VAPP cases caused by OPV1 and OPV3 combined together. Though poliovirus type 2 had been eliminated, we continued to produce vaccine poliovirus type 2 for a very long time, thus caused many VAPP cases by vaccine virus type 2.

Delayed Re-introduction of IPV:

In 1999, the author had stated: "In our enthusiasm to eradicate poliomyelitis, perhaps we are over-looking the fact that Oral Polio Vaccine has some relative and some definite contra-indications. It should be avoided in patients with leukemia, lymphoma, malignancy and dysgammaglobinemia. It should not be administered to a child with immunodeficiency and also to a child who is in close contact of a person with immunodeficiency. IPV was available in India in mid—eighties. Why are we not re-introducing the improved type of the vaccine which is available?" [8] It is important to mention that at that point of time (1999) import of IPV was not permitted.

National Workshop on Polio Eradication and improvement of Routine Immunization was held in New Delhi on May20 & 21, 2000 by Indian Academy of Pediatrics which was supported by Department of Family Welfare, Ministry of Health & Family Welfare and UNICEF, India. The participants were invited to raise issues in writing to be discussed during the workshop.

The author had stated, "Risk of Vaccine Associated Paralytic Poliomyelitis is 2000 times higher in immuno-compromised children. Presently Inactivated Polio Vaccine (IPV) is not available in our country, if OPV is administered to these children many may develop VAPP, if not administered OPV may develop paralytic poliomyelitis by wild poliovirus. Would you consider introducing IPV on urgent basis for these children?" Later in a bulletin titled; 'together we make India Polio Free' reporting the proceedings of the work shop on page 7 it was stated, "The sole advantage of IPV is that it carries no risk of VAPP. The disadvantages are that it must be administered by medically trained personnel, it is much more expensive (Rs. 450 per dose)". The experts had overlooked the fact that administration of DPT vaccine under UIP program also needs medically trained personnel, and same persons could administer IPV. At that point of time cost of IPV was Rs 450 per dose, cost of varicella vaccine was about Rs 1500/per dose, even DaPT which was available at that time was costlier than IPV.

On 9th June 2000, the author had written to the Assistant Commissioner, Immunization, Ministry of Health and Family Welfare, New Delhi, " As we all are aware that for immunecompromised children the risk of VAPP with OPV is very high, so these children should be administered IPV to avoid VAPP. I had raised this issue in form of a question, which had been included in the 'Back ground Material 'for the workshop held on 20th &21st May 2000 at Hotel Kanishka in New Delhi. Presently IPV is not available in India. I would request you to take the initiative to make it available for these children on payment as is being done for other vaccines eg Hepatitis A vaccine, MMR vaccine, Varicella vaccine. This would certainly bring down the incidence of VAPP which is presently higher than the expected 60-75 cases per year" I did not receive any response. I had forwarded copy of the letter to the Hony. Secretary General, IAP. The Secretary

General IAP in his response dated June 20, 2000, Ref:L/1999/P-673/8561/60 had stated "I appreciate your efforts in protecting the interest of immune-compromised children".

As World Health Assembly had mandated that global eradication of polio be carried out exclusively by OPV, so the agencies carrying out the program could not consider introducing IPV even for selected cases. But the government of India could permit import of IPV to be made available on payment. Import of IPV by Sanofi Pasteur was permitted in October 2006.

Later other manufacturers also made IPV available in India. Had it been done earlier, many VAPP cases would have been prevented. Currently the government administers two doses of fractional IPV under national immunization program(UIP), at 6 and 14 weeks.

To conclude it can be said that there were five contributing factors for delay in polio eradication -

- 1- Resistance to OPV administration by some parents during early phase,
- 2- High incidence of vaccine failure in some children,
- 3- Introduction of monovalent OPV1 in year 2006,
- 4- Administration of trivalent OPV till year 2015 and
- 5-Delayed reintroduction of IPV. But, only poor vaccine coverage was projected as reason for delay in polio eradication.

There is an urgent need for deliberation on these issues by all stake holders. This exercise has been undertaken to minimize mistakes in the future. Competing interest: The author attended the First National Polio Surveillance Project Induction Training Workshop in 1997 held in Jamia Hamdard, New Delhi as IAP nominee. Actively participated in polio eradication program as IAP member. Was appointed Observer on two occasions during Pulse Polio Campaign by NPSP.

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050 Apr.-June 2020

Recommendations:

Guidance for use of Human Milk in India in the context of COVID-19 Pandemic

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Received for publication: 19 June 2020 Peer review: 24 June 2020 Accepted for publication: 3 July 2020

Keywords:

Breastfeeding, Rooming-in, Expressed breast milk, Donor human milk.

Breastfeeding and use of human milk (expressed breastmilk and donor human milk) are important for improved neonatal outcomes at all times and are of particular importance during emergencies and natural calamities.

The current COVID-19 coronavirus pandemic is an acute illness caused due to a novel (new) mutation in this virus, now called SARS CoV-2. Though data is limited, this respiratory virus shows characteristics of similar viruses such as SARS (Severe Acute Respiratory Syndrome) and MERS (Middle East Respiratory Syndrome) virus.

In a report of nine COVID-19 positive pregnant mothers from China in the current epidemic, the virus has not been demonstrated to show vertical transmission and was not detected in breastmilk or cord blood or amniotic fluid. Though a couple of anecdotal reports of potential in utero transfer have been reported, according to the Centre for Disease Control mother-to-child transmission of corona virus during pregnancy is unlikely, but after birth the newborn infant is susceptible to person-to-person spread [1,2,3]. In a recent report on evaluation of SARS-CoV-2 in 64 serial breastmilk samples of eighteen infected women, Chambers, Krogstad, et al detected SARS-CoV-2 RNA in one milk sample however the viral culture for that sample was negative, suggesting that demonstration of SARS-CoV-2 RNA does not represent virus replication and that breastmilk is unlikely source of infection for the baby [4].

Considering the pandemic of COVID-19, all international public health guidelines agree that breastfeeding should continue and should be supported in these difficult times, with due precautions taken [1,3-7].

For the purpose of use of human milk by healthcare facilities and the Comprehensive Lactation Management Centres (with Human Milk Banks), the following is the guidance.

A. Rooming-In and Breastfeeding:

For mothers who have no exposure to COVID-19, breastfeeding should continue as per standard infant feeding guidelines and health care providers should provide adequate breastfeeding support. Lactating mothers should be advised to increase their social distancing with others to reduce the risk of infection and practise hand and respiratory hygiene.

For mothers diagnosed to be COVID-19 positive or as a PUI (person under investigation), there is concern of postnatal transmission to her child by infected respiratory secretions. Vulnerability of neonates to severe complications of COVID-19 infection is uncertain due to lack of evidence. Hence, based on ICMR (Indian Council for Medical Research) & NIRRH (National Institute on Research in Reproductive Health) guidance, depending on mother's and baby's health status and hospital policy on facilities available, the following options are available:

a) Rooming-in with Breastfeeding: When isolation of suspected/infected mother with her neonate is possible, rooming-in with direct breastfeeding should be done. Almost all women need support for

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initiation of lactation, hence a healthy willing family member who is not positive for COVID-19, not in direct contact with suspected or confirmed COVID-19 case and asymptomatic may be allowed in the room to provide support for breastfeeding and taking care of neonate [8,9]. Elderly family member or member with co-morbidities like diabetes mellitus, hypertension, cardiac disease, etc should not be allowed. The accompanying person should be provided appropriate PPE. This is vital to success of breastfeeding. Appropriate precautions should be followed to prevent transmission of infection to the neonate. Mother should practice all precautions including a) respiratory hygiene, b) hand hygiene before and after contact with the baby, c) wearing a triple layer surgical mask while feeding her baby and d) frequent cleaning and disinfecting all the surfaces and objects she is touching / using [3]. When not feeding, she should keep a distance of >6 feet from the neonate or at least keep a mechanical barrier like curtain in between [8]. If she is alone taking care of the baby, then this distancing or social barrier becomes difficult and she may be allowed to take care of other needs of the baby observing all precautions.

b) Temporary Separation and feeding expressed breastmilk: If facilities do not have provision to keep mother and baby together, temporary separation of mother and baby needs to be done, till mother is confirmed negative. The neonate should be fed with expressed breast milk of the mother, with katori and spoon (bottle feeding to be discouraged) by a nurse or healthy family member who has not been in contact with the mother. Mother needs to be supported for frequent manual expression of her breastmilk to maintain her milk output. If expression is done by pump, a dedicated breast pump should be used and recommendations for proper pump cleaning should be followed meticulously. Depending on the available facility, a dedicated refrigerator should be used in the unit for storing expressed breastmilk or a dedicated shelf be provided in existing common facility to be used after proper sanitization of the storage containers. Strict hygienic procedures should to be followed while supporting expression, transportation and handling of milk. In case of temporary separation, expressed

breastmilk is the first choice followed by pasteurised donor milk and then appropriate (term or preterm) infant formula.

• During mother's sickness if she has been unable to breastfeed fully or express her milk, she should be supported for re-lactation on her recovery.

In these times, lactating mothers and their families need more psychosocial and technical support in confidence building and other aspects of breastfeeding especially in establishing and maintaining the milk supply. Counsellors need to offer extra support to the mothers and their family members with respect to counselling related to education regarding the COVID-19 infection and safety measures. Dedicated counsellor with PPE for mothers serves the purpose well.

B. Donor Human Milk:

·Rationale of safety: Donor Human milk is essential for the vulnerable group of very low weight babies who do not have access to their own mother's milk. Transmission of this respiratory virus through breast milk has not been demonstrated in the small study from China and is reported to be less likely by CDC. Previous studies have shown thermal inactivation (specifically heat treatment of 60°C for 30 minutes of donor human milk) of respiratory viruses particularly the MERS corona virus [7,10,11]. Recent study published in Lancet regarding heat stability of COVID19 suggests that it is killed at 56 degree centigrade within 30 minutes [12,13]. Chambers, Krogstad, et al in their study also demonstrated that when control breastmilk samples spiked with replication competent SARS-CoV-2 virus were treated by Holder pasteurization, no replication-competent virus or viral RNA was detectable [4]. Another recent study conducted on five different SARS-CoV-2 isolates from Germany, France and the Netherlands into five individual breast milk samples shown that human breast milk containing infectious SARS-CoV-2 can be efficiently inactivated using standard holder pasteurization [14]. Holder Pasteurization used in HMBs exposes the milk at 62.5 degree centigrade for 30 minutes. Thus, it is inferred that pasteurized donor human milk is safe. Hence, human milk donation continues to be supported in accordance with and as per the requirements stated in the National Guidelines for Lactation Management and

Indian Academy of Pediatrics Guidelines [15,16]. **Screening vigilance:** Greater vigilance must be exercised in donor screening procedures. In addition to routine donor screening criteria for milk banking, the donor screening history & examination findings should be modified to include a detailed history regarding the risk of being a suspected or probable case of COVID-19 and the details should be documented. Mothers are not eligible to donate milk if nasopharyngeal swab tests positive for SARS CoV-2.

- · All other asymptomatic potential donor mothers should be screened using the following criteria in additional to the standard criteria:
- i. No history of ILI (Influenza like illness with symptoms like fever, cough, sore throat) in last two weeks prior to donation.
- ii. No history of close contact with a laboratory confirmed or probable case of COVID-19 in previous 14 days.
- iii. No history of worked in or attended a health care facility without appropriate personal protective equipment where a case of COVID-19 infection has been confirmed.

Though there is no clear cut guidance regarding donor eligibility of a mother who recovers after testing positive, considering the revised guidelines for home isolation of very mild/pre-symptomatic COVID-19 cases by MOHFW, GOI, and the Clinical Management of COVID-19 guidance by WHO, it seems reasonable to consider a mother to be a potential donor three weeks after she has been diagnosed positive and is asymptomatic for atleast past 10 days and preferably tests negative for the virus (if repeat testing is permissible for her condition as per the ICMR guidelines) [17,18].

- **IPC** (Infection Prevention Control): Strict hygienic procedures should be observed during milk collection, pasteurization, storage and disbursal; and meticulous record keeping should be followed as per the routine guidelines [7,15].
- ◆ Thermal screening at entry to common area, hand hygiene, wearing mask while expressing and cleaning external surface of milk donation containers before accepting in the milk bank should be followed.
- Pumps: It is preferable for a mother to have a

dedicated personal milk expression pump. Alternatively, manual expression should be promoted. However, if hospital grade milk pumps are used, each time between use, the external surface of the pump should be cleaned with an alcohol swab. Separate sterilized lacta-set pair to be used for each mother as per milk bank routine and post collection the used parts (breast shield and valve set) to be immersed in warm soapy water. CDC recommendations for general cleaning of breast pumps should be followed [19].

- ♦ Disinfection of external surface of containers: "Clean transfer" method should be used in collection and transfer. After ensuring hand hygiene and with a mask worn, the collected bottle should be placed in a clean storage bag being held open by a second "clean" nurse/person and transported to HMB immediately [20].
- ♦After the containers have been transferred to the milk bank, they should be shifted with due precautions directly to the laminar airflow and kept under UV light for 10 minutes for sterilizing the external surface. For extra safety the milk can be transferred to bank's sterile containers under aseptic precautions and laminar flow, prior to shifting containers to the deep freezer / refrigerator prior to further pooling or processing.
- ♦ The containers are not high touch surfaces. Hence, they should not be cleaned externally with hypochlorite or other hospital grade disinfectants used on medical equipments or high touch surfaces. Use of hypochlorite or hospital grade disinfectants can be toxic. Routinely used 0.5% Hypochlorite is 5000 ppm. Even 0.1% Hypochlorite (1000 ppm) used in low load situations is also far higher than maximum allowable levels of 200 ppm for any food contact items [21]. If there is visible dirt externally soap water swab followed by clean water swabbing should suffice. Food grade cleansers may be used.
- Further processing like pooling with aseptic transfer methods and pasteurization should follow routine guidelines.
- ♦ Maintain COVID-19 precautionary social distancing and disinfection procedures for all the areas of the CLMC like that of its high touch areas like doors, doorknobs, floor, furniture, computers, etc. Cleaning should be first in low risk and then in high risk area; from high to low heights and then

finally the floor should be cleaned last. Risk appropriate cleaning protocols should be written and strictly followed [22].

- ◆ Risk appropriate personal protection equipments and hygiene practices to be followed by all the staff within CLMC and outside as well as while visiting mothers or motivating donors or something similar.
- Group counselling and mass donation to be avoided till situation is declared safe.
- ♦ Use more of digital and individual modes of motivating and counselling donors. Loudspeakers, megaphone or public address system or alike could be used for counselling in a ward following social distancing [8].
- ♦ In the likelihood of shortage of pasteurized donor human milk (PDHM), the PDHM disbursal policy of the unit may require modification to be reserved for more vulnerable babies, such as for <30 weeks gestation / <1250 grams birth weight, instead of use for all needy VLBW babies (<1500 grams).
- ◆ Health care providers should create a plan to address the possibility of a decreased healthcare workforces, potential shortage of personal protective equipment, limited isolation rooms and should maximise the use of tele-health across as many aspects of postnatal care as possible [8].

Note: As information on the COVID-19 virus and its behaviour is evolving, the guidance is likely to undergo periodic modifications as more data becomes available. The guidelines in this document are based on evidence as available now. As new evidence accumulates, some of the recommendations may change. Users should use these guidelines in accordance with the latest government regulations and ICMR advisories.

[This article is revised Guidance advisory by HMBAI (Human Milk Banking Association India), Infant & Young Child Feeding Chapter of Indian Academy of Pediatrics & PATH]

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Perspective:

Covid 19 Challenges: Frequently Asked Questions

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Received for publication: 29 May 2020 Peer review: 8 June 2020 Accepted for publication: 20 June 2020

Keywords: Corona pandemic, Violence in healthcare, PPE Kits, Telemedicine, Legal obligations.

Unexpected COVID-19 has challenged most of the humanity. However during the present situation doctors have to face many challenges, both professionally as well as in their personal life in addition to the challenges faced by the general public. Covid -19 disease is very contagious and till now we do not have any concrete solution on how to manage it effectively. This is the primary challenge for doctors.

The threat of doctors catching the disease and infecting their own families also looms large over them. Lack of improved quarantine and treatment facilities once they get infected, abnormal behaviors of patients like spitting, arguments, vulgarity and violence are making the things worse. Reports of healthcare workers being attacked or asked to vacate their rented accommodations', refusal of cremation grounds for doctors continue to rise in the country.

For caring patients in challenging circumstances, we have to remodel our infrastructure to prevent the spread of disease. Changing infrastructures and treatment modalities for smaller hospitals and clinics is really challenging. Shortage of PPE kits creates fear of contracting the disease and their high cost puts extra burden on doctors as well as patients. Reduced OPDs as well as admissions will lead to financial crisis and stress. Though telemedicine has been approved by the Government, its pros and cons will be understood over a period of time.

It is our duty to provide safe working environment for the employees to protect them from acquiring the disease. We should also take care of their salary in spite of suffering from financial crisis. Fear of contracting infection, lack of indemnity /social security schemes discourage the employees working in hospitals and nursing homes.

Ethical issues are likely to arise when providing care and treatment during COVID-19 outbreak. Doctors will understandably be concerned about their ability to provide safe and ethical care. During the pandemic, it is possible that demand on health services may outstrip the ability of the doctors to deliver services to prepandemic standards. Although doctors would find such decisions difficult, if there is radically reduced capacity to meet all serious health needs, it is both lawful and ethical for a doctor, following appropriate prioritization policies (triaging), to refuse someone potentially life-saving treatment where someone else is expected to benefit more from the available resources.

Doctors are also sometimes forced to work for long hours and outside their usual fields. Rapid development and deployment of vaccines and antiviral medications and their use could result in numerous adverse events and liability issues. In such situations, they are concerned that their actions may attract criminal, civil or professional liability. So doctors should be reassured that they are extremely unlikely to be criticized for the care they provide during the pandemic where decisions are—reasonable in the circumstances—based on the

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best evidence available at the time – made in accordance with government– made as collaboratively as possible – designed to promote safe and effective patient care as far as possible in the circumstances. Should decisions be called into question at a later day, they should be judged by the facts available at the time of the decision, not with the benefit of hindsight.

We have tried to answer frequently asked medico-legal related questions by the doctors during this pandemic through currently available references. However these can get changed in coming days based on the enforcement of new laws and amendments.

What are physician's legal obligations during pandemics/epidemics?

Legal obligations of a physician during epidemics:

A doctor/ physician should not abandon his duty for fear of contracting the disease during an epidemic.

The physician should notify every case of communicable disease under his care to the constituted health authorities.

Physician especially those engaged in public health work should enlighten the public regarding quarantine regulations and measures for prevention of epidemic and communicable diseases.

No physician shall arbitrarily refuse treatment to patient though he has right to choose his patients. It is his obligation to the sick.

Physician has legal obligation to treat emergencies as per his capacity even if it is not within the range of his experience[1].

What are a physician's legal rights during pandemics/epidemics?

Legal rights of physician during epidemics:

World Medical Association declaration of Geneva talks about Doctors' health: "I WILL ATTEND TO MY OWN HEALTH, wellbeing and abilities in order to provide care of the highest standard." During epidemics/ pandemics when doctor is not having adequate personal protective equipment's (PPE) to protect himself he can refuse to see a patient. During the current Covid-19 pandemic, the Honourable Supreme Court has directed the Central Government to ensure that doctors and medical staff should have appropriate PPE and security. It is difficult to predict what stand the judge will take as there are no such precedents (similar cases with decision).

Doctor has right to choose his patient except during emergency. Doctor has right to refuse a patient, when a patient is suffering from an illness which is not within the range of his experience and refer the patient to another physician[1].

Can government invoke ESMA (Essential Services Maintenance Act) on doctors during epidemics?

Yes, Section 2 of Epidemic Diseases Act, 1897 (EDA)empowers state government to take suitable temporary measures to prevent an outbreak or spread of an epidemic. Once this act is invoked, the state government can give directions and take required steps to arrest the spread of an epidemic disease [2].

Health service is one of the essential services. If the doctors of both Government / private refuse to provide health services because of fear of disease or some other reasons, government can invoke Essential Services Maintenance Act for a limited period [3].

Any person suspected of having committed any offence under this act can be arrested by any police officer without warrant. Madhya Pradesh, Andhra Pradesh and Tripura States have already invoked ESMA in their states as a part of management of COVID pandemics.

In an epidemic situation, can a state government order mandatorily to close or not to close the clinics/hospitals?

The state government has power to take special measures and prescribe regulations to dangerous epidemic disease. Therefore, a private medical establishment, such as a clinics or hospitals can be asked to close or keep mandatorily open depending on the state government decision[2].

Are the officials liable for any unscientific/nonconstructive orders passed with respect to health care services during this pandemic?

No, EDA 1897 gives legal protection for any acts done in good faith by the government or its authorised representative.

Is it mandatory to follow the government order under the Epidemic Diseases Act, 1897 and what are consequences of violating the government order?

Yes, The Epidemic Diseases Act, 1897 provides punishment under Section 188 of the Indian Penal Code, 1860 which prescribes punishment of up to 6 months OR fine of up to Rupees one thousand OR with both for not following government orders.

What are the implications of the Epidemic Diseases (Amendment) Ordinance, 2020 to amend the Epidemic Diseases Act, 1897 in the light of the pandemic situation of COVID-19?

The Ordinance was passed to amend the Epidemic Diseases Act, 1897 to protect healthcare service personnel and property including their living/working premises against violence during epidemics, with more stringent provisions than in ordinary situations. Therefore it is applicable only during the period when the Epidemic Diseases Act, 1897 is invoked. It covers those healthcare service personnel who are involved in the management of the epidemic [4].

Whether a private practitioner can get benefit of Insurance Scheme for Health Workers Fighting COVID-19 under Pradhan Mantri Garib Kalyan Package?

If you are running a private clinic you and your staff are not covered under this scheme. Any outsourced staff requisitioned by States for COVID related responsibilities belonging to government or private are covered by the scheme [5].

Do I need to take separate consent for telemedicine consultation?

If, the patient initiates the telemedicine consultation, then the consent is implied. An Explicit consent can be recorded in any form. Patient can send an email, text or audio/video message. Patient can state his/her intent on

phone/video to the RMP (e.g. "Yes, I consent to avail consultation via telemedicine" or any such communication in simple words). The RMP must record this in his patient records. Telemedicine consultations should be treated the same way as inperson consultations from a fee perspective: RMP may charge an appropriate fee for the Telemedicine consultation provided[6].

A parent of a sick child is willing to travel and get him examined by me personally, can I insist him for Telemedicine consultation?

Medical practitioners insisting on Telemedicine, when the patient is willing to travel to a facility and/or requests an in-person consultation amounts to professional misconduct/negligence[6]. Whether any medicines can be prescribed by telemedicine consultation?

Drugs which are under Schedule X of Drug and Cosmetic Act and Rules or any Narcotic and Psychotropic substance listed in the Narcotic Drugs and Psychotropic Substances, Act, 1985 are prohibited under telemedicine[6].

Can it amounts to negligence of doctor if a person gets COVID infection from the doctor who used to run OPD during pandemics as per the state government's instructions under the Epidemic Diseases Act, 1897?

No, the section 4, of Epidemic Diseases Act 1897 states that no suit or other legal proceedings shall lie against any person for anything done or in good faith intended to be done under this Act. As the doctor is working in good faith as per the instructions of the government, it will not amount to negligence [2].

If a physician is treating COVID-9 patients has symptoms of the disease but continues to work knowing that this action can spread the disease then it amounts to negligence.

Can a private practitioner collect the PPE charges from the Patient? If they refuse to pay extra charges for PPE how to proceed?

Yes, a private practitioner can collect PPE charges from the patient, provided the amount is reasonable and announced before the services are provided. If the patient refuses to pay the extra charges, the physician is not in obligation to serve

him/her

What are the drawbacks of epidemic act?[2]

The various drawbacks include:

The Act was formulated about 123 years ago and thus has major limitations in this era of changing priorities in public health emergency management.

The definition or description of a "dangerous epidemic disease" is not provided in the Act.

The Act places too much emphasis on isolation or quarantine measures, but is silent on the other scientific methods of outbreak prevention and control, such as vaccination and surveillance.

The Act emphasizes mainly on the power of the government, but is silent on the rights of citizens. It has no provisions that take the people's interest into consideration.

The Act is also silent on the ethical aspects or human rights principles that come into play during the response to an epidemic.

The Act says that "the state may empower any person to take some measures". Today, we have a better structured public health system, with specific people in charge of delivering primary care services. The District Chief Medical Officer led the workforce for the control and prevention of outbreaks. When such a system is in place, going by the Act's prescription that "any" person may be empowered does not make sense[7].

Can a physician stop practicing if he wishes to do so from now on wards in COVID-19 pandemic scenario?

No, sudden cessation of services is not acceptable. Physicians have legal duty to perform during epidemics and especially in the context of the state government imposing duty on physicians to keep their clinics open. However, if one has high risk factor(s) or non-availability of PPE, he/she needs to make alternative arrangements for patient-care in the clinic or has to communicate to the government and take permission for not

practicing temporarily, as the case may be[8].

Can a doctor defy government orders published in popular newspapers because he has not received individual communications?

As long as the District Authorities have made reasonable announcements about the policies in common and popular media, individual communication to the doctor is not legally necessary. Therefore, the doctor's action is wrongful, if it differs from the orders of the District Authorities.

Does a doctor in private practice enjoy the legal rights of refusing the patients in this pandemic?

No, Indian Medical Council (IMC) regulations 2002 apply to all RMPs. Section 2, epidemic act 1897 empowers state governments to take suitable measures to prevent spread of epidemic.

Government can seek help of any person as per section 65 of DMA 2005. What are the legally acceptable grounds for refusing to treat a Covid-19 patient?

When doctor's life is at risk and when patient is beyond your qualification to treat except during emergency.

Can government force a doctor to work without PPE? What should a doctor of a private clinic do when PPE is not available?

No law can force a person to take risk of his/her life. It's violation of article 21 of constitution. Inform the concerned authority about non availability of PPE and document the reason for not opening the clinic. Put a notice in front of the clinic mentioning the reason

In some states government has ordered private doctors to work in COVID hospitals, if the doctor refuse to do that, can government direct MCI for the removal of his/her license to practice? Yes, the government can recommend removing license. Refusing to work amounts to professional misconduct and liable for disciplinary action. It amounts to violation of IMC regulations 2002 as per section 7.1 of the regulations.

In a busy hospital recognized for treating Covid-19 patients, due to lack of adequate personnel, if negligence in patient care happens, is the treating doctor liable?

If the treating doctor has communicated to the higher authorities of the inadequacies and there is no alternative adequate facility available to refer to, then he is not liable for medical negligence. However, if he/she has not communicated to the higher authorities or not referred the patient to an adequate facility if available, he is liable.

Further, according to mandatory declaration under Regulation 1.A of the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, the interests of the patient are of highest priority for the physician. Therefore, if there is anything adversely affecting the interests of the patient, the same must be communicated to the patient, too.

In a pandemic like this, for any of our grievances whom to approach for an immediate response?

As state government has got all the powers under the Epidemic Diseases Act 1897, you have to approach state government or the officer authorized by the state government on this behalf. **Acknowledgements:** We thank Dr Bakul Parekh, Dr G V Basavaraja ,Dr B B Sahni, Dr J K Gupta, Dr Sonia Kanitkar, Dr S G Matti and Dr Kishore Baindur for their support and encouragement.

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Medicolegal News

Compiled by Dr. Santosh Pande

Supreme Court Relief To Private Labs: Allows Them To Charge For COVID 19 Tests, But With Ridersall private laboratories running across the country to conduct COVID-19

New Delhi: Providing a clarification on its April 8th order which directed all private laboratories running across the country to conduct COVID-19 (coronavirus) tests for free, the Supreme Court has stated that this benefit will be available only to "economically weaker sections" who are covered under a government scheme such as the Ayushman Bharat.

The apex court maintained that it never intended to make testing free for those who can afford to pay, providing a much awaited relief to private laboratories which were running jittery after the previous order of the court

It is earlier that on April 8th, the SC had issued an interim order in the direction of bringing major respite to those who can't afford to pay Rs 4,500, as capped by the ICMR, for COVID-19 testing, and passed an order to the said effect.

Accordingly, the Central Government has been ordered to issue necessary directions in this regard. The PIL to this effect was preferred by petitioner in person out of growing concern of the unprecedented pandemic COVID-19 which is posing a grave threat of deadly infection among the population testing facility of COVID-19 to all the citizen of the country at all testing labs irrespective of private or government.

In his petition, the concerned stated that the government of our country is completely caught in a dilemma and is forced to take an irrational decision of arbitrary capping in respect of the testing facility for COVID-19 in private hospital/laboratories at a rate of Rs. 4500 as forwarded by the Indian Council of Medical Research (ICMR).

On 17th March 2020, the council had issued an advisory for testing and confirming

including screening of COVID-19 in private hospitals/labs. According to the advisory, the cost of the first step screening assay is Rs.1500/- and additional confirmatory assays is Rs. 3000. In response to the apex court's landmark order, petitions were filed by two persons, including an orthopaedic surgeon who pointed out that if the testing is made free for all, private labs will be overburdened financially and would slow down the tests for the novel coronavirus or COVID-19.

Submissions were also forwarded by Solicitor General Mehta and Senior advocate Rohatgi that according to the directive of National Health Authority (NHA) under the Ayushman Bharat Yojana, the COVID-19 tests were being conducted free of cost in all private laboratories even when the order was passed on April 8.

Rohatgi, appearing for some private labs, submitted that ICMR has fixed moderate charge of Rs 4,500 for COVID-19 tests to cover the expenses of labs and moreover, persons covered under the 'Ayushman Bharat Yojana' are tested for free of cost. In case the Labs are not to charge any fee for the tests, it will be impossible for them to carry on the test due to financial constraint, he argued . Law officer Mehta referred to the ICMR affidavit and submitted that the government is taking all necessary steps for conducting the COVID-19 test and as on date, 157 government labs and 67 private labs are conducting COVID-19 test. "All government hospitals and government labs are conducting COVID-19 test free of cost," Mehta said

After noting and perusing all the submissions, the bench of Honourable Justices Ashok Bhushan and S Ravindra Bhat modified its April 8th order and said, "Having heard, counsel for the parties, we are satisfied that sufficient cause has been made out to clarify and modify our order dated April 8, 2020," "We make it clear that the benefit of free testing by a person can be availed only when he

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or she is covered under any scheme like Ayushman Bharat Pradhan Mantri Jan AarogyaYojana....We are also of the view that looking to the plight of persons belonging to economically weaker sections of the society, the Government may consider as to whether any other categories of persons belonging to economically weaker sections of the society can be extended benefit of free testing of COVID-19," it said.

The court said it was conscious of the fact that framing of the scheme and its implementation were in the government's domain who are the best experts in such matters.

The order dated 08.04.2020 is clarified and modified in the following manner by the Supreme Court:

- (i) Free testing for COVID-19 shall be available to persons eligible under Pradhan Mantri Jan Aarogya Yojana as already implemented by the Government of India, and any other category of economically weaker sections of the society as notified by the Government for free testing for COVID-19, hereinafter
- (ii) The Government of India, Ministry of Health and Family Welfare may consider as to whether any other categories of the weaker sections of the society e.g. workers belonging to low-income groups in the informal sectors, beneficiaries of Direct Benefit Transfer, etc. apart from those covered under Ayushman Bharat Pradhan Mantri Jan Aarogya Yojana are also eligible for the benefit of free testing and issue appropriate guidelines in the above regard also within a period of one week.
- (iii) The private Labs can continue to charge the payment for testing of COVID-19 from persons who are able to make payment of testing fee as fixed by ICMR.
- (iv) The Government of India, Ministry of Health and Family Welfare may issue necessary guidelines for reimbursement of cost of free testing of COVID-19 undertaken by private Labs and necessary mechanism to defray expenses and reimbursement to the private Labs.
- (v) Central Government to give appropriate publicity to the above, and its guidelines to

ensure coverage to all those eligible.

Ref.: https://newsletter.medicaldialogues.in/click.html?x=a62e&lc=byJ&mc=P&s=Ckf&u=r&z=GRR4rqh&Accessed on 15/4/2020

Goa Medical College: SR Radiology Gets Suspension Orders, HOD Show-Cause Notice For Alleged Negligence In Congress Leader Death

Panaji - The radiology department of Goa Medical College is now facing heat after the Goa Congress party alleged serious medical lapses that preceded the death of its senior leader Jitendra Deshprabhu. While the Head of the department has been now served a show-cause notice, a senior resident of the same department has been handed over suspension orders.

It is reported that the senior Congress leader and former MLA, Deshprabhu had died last month here, succumbing to pneumonia. However, alleging a COVID-19 coverup and lapses in the medical care provided to the leader, Congress party demanded an inquiry into the matter "The Congress demands an impartial inquiry by a retired high court judge on [the] mysterious death of our leader," Chodankar said.

Following the allegations a senior doctor of the Goa Medical College and Hospital was on Friday issued a show-cause notice for alleged negligence in connection with the death of former Congress MLA Jitendra Deshprabhu on April 21, an official said.

The order, signed by Under Secretary (Health) Trupti Manerkar, has asked Dr Jeevan Vernekar, Head of Radiology department of GMCH, why action should not be initiated against him for negligence on the part of his department. "It is informed that when CMO who accompanied late Deshprabhu to the Radiology Department of GMCH, neither junior doctor nor senior resident doctor were present there do to the CT (computed tomography) scan, and the patient had to wait for 35 minutes," Manerkar has said in the order.

Vernekar has been asked to put forth his side within seven days. Besides this, a senior resident doctor from the radiology department has also been handed over suspension orders.

The move has met with stern opposition

from the resident doctors with the Goa Association of Resident Doctors (GARD), calling the order severly "demoralizing and demotivating to the serving residents of the institution who are already overburdened and overstressed working as frontline warriors in the ongoing pandemic."

"Citizens beef up this establishment in combating this pandemic, however, the suspension order meted in opposition to one in all our senior citizens is demoralizing," the association further added.

Ref: https://newsletter.medicaldialogues.in/click.html?x=a62e&lc=Mu5&mc=i&s=Ckf&u=r&z=Gzs7i9d&Accessed on 10/5/2020

CPS Scam: HC Denies Relief To Anaesthetist, Refuses To Set Aside MMC Suspension

Mumbai: In a strict order passed recently by the Bombay High Court, a doctor, who was temporarily suspended by the Maharashtra Medical Council (MMC) in connection with the scam of fake degrees from College of Physicians and Surgeons (CPS); has been denied relief.

The doctor had moved the court after the MMC removed his name from its register for a year, thus barring him from practising medicine for the period. He had completed his MBBS in 1998, after which he cleared Diploma in Anaesthesia and in January 2014, he received the Additional Medical Qualification Certificate from CPS for Fellowship of Anaesthesia.

Over the last couple of years, MMC has been constantly taking action against doctors with fake certificates. Till now, they have taken action against as many as 150 such doctors. The council is still looking into records of CPS from 2014.

It was a shock for the council's officials to hear that the fraudulent activities were reportedly taking place inside the premises of CPS.

The whole case of fake certificates was linked to a larger scam and is alleged to have been involving more medical practitioners, who were assisting these doctors to get their "Pass certificates." Doctors allegedly paid between Rs 3 lakh and Rs 6 lakh for the certificates after failing the CPS examination.

The paediatrician, Dr Snehal Nyati's name figured as the kingpin of the scam.

After a confirmed identification that he was the one allegedly helping doctors procure fake certificates, the MMC permanently revoked Dr Nyati's registration to practice. The Bhoiwada police filed a charge sheet against Dr Nyati, but he got out on bail.

Some doctors did not even fill in examination forms and were declared 'failed', yet they managed to obtain fake certificates. According to MMC sources, some have confessed to having paid for fake certificates.

The name of the doctor involved in the present case had come up after which the state medical council passed an order in March this year against him while holding him guilty of procuring forged certificates. Challenging the MMC order, the doctor approached the court seeking relief so that he can render his services as medical professional amid COVID-19 pandemic.

The doctor claimed that the enquiry after which the MMC passed the order against him was "not in accordance with the rules" and that he was not given a chance to be heard. His petition also says that the MMC order is against the right guaranteed by the Constitution of India under Article 19 (1)(g) -right to profession.

The counsel appearing on behalf of the petitioner doctor submitted before the court that in January last year, the MMC issued show-cause notice on the doctor and in July that year held a meeting with CPS where it was allegedly revealed that the doctor had indulged in fraud. Though my client was present for the meeting, an arbitrary order was passed by the MMC, he said and sought that it to be set aside by the high court.

In response during the video-conference hearing, MMC's Advocate told the bench that a personal hearing was given to the doctor before the enquiry committee and that the certificate submitted by him for the course conducted by CPS was forged, which was accepted by the court.

Taking all the submissions into account, the bench refused to grant relief to the doctor seeking a stay on Maharashtra Medical Council's action against him, as well as the removal of a particular course conducted by the CPS institute.

The bench observed that as the allegations

against the doctor were of serious nature and it cannot grant interim reliefs but directed the state to respond on the plea within four weeks. Mirror quotes, in the order, passed on May 4, "After going through this order (passed by the MMC), prima facie, the charge made against the petitioner is a very serious one viz. of forgery and fabrication. The impugned order is a detailed order setting out all the facts and the steps taken before the impugned order was passed."

Ref: https://newsletter.medicaldialogues.in/click.html?x=a62e&lc=Mgl&mc=i&s=Ckf&u=r&z=GGiqzzc& Accessed on 9/5/2020

SRL Lab Asked To Pay Rs 99 Lakh Compensation for allegedly wrongly diagnosing lawyer with COVID

Mumbai: Blaming the private laboratory for providing an incorrect COVID positive report, a city-based lawyer has sent a legal notice to SRL Diagnostics, seeking compensation to the tune of Rs 99 lakh for sending her the "wrong report" that caused mental trauma.

The case relates to a matrimonial lawyer in the city, who went to the drive-in testing center set up by SRL at Lower Parel to get a COVID test done before going for minor surgery. Her samples were taken, however, allegedly no invoice or receipt of payment was issued to her.

A couple of days later, she was informed over the phone that her results were positive. Immediately her house was marked as containment zone and her Bandra-based bungalow was sealed by the Brihanmumbai Municipal Corporation (BMC).

On May 16, she was informed that her report had been emailed to her doctor, but it allegedly turned out to be a wrong report since it mentioned the date of sample collection as of May 14, instead of May 13. Apart from this further discrepancies were marked in the other details provided in the result.

Thereafter, she decided to go for a second test at a different laboratory. On the contrary, her reports came negative here within six days of the first test. Following this, the lawyer has now sent a legal notice to the Path lab seeking an apology and a compensation of Rs 99 lakh for going through the horrors of being categorized as COVID positive.

"I am concerned about the wrong report being given out maliciously by your laboratories to your trusting patients. The patients are paying for wrong reports and are also being taken for a ride. The matter can be dealt in the consumer court and the high court. It is a clear case of medical negligence and adequate compensation must be provided," the notice read.

Narrating her ordeal to a local daily, the lawyer stated that she suffered mental agony because of the 'wrong report' sent by SRL Diagnostics. She further stated that she was asked to go for the COVID test before going for an emergency surgery she was supposed to undergo; otherwise, her condition could have become "life-threatening".

Giving the laboratory seven days' time to respond, the notice further reads as quoted by Mumbai Mirror, "A compensation to the tune of Rs 99 lakh for the mental and physical trauma and harassment caused to me. Imagine having wrongly tested positive. The horrors! Besides, even our neighbors started avoiding us as if we were lepers, so we faced discrimination and humiliation. The house was sealed wrongly as you didn't do your job properly." Responding to the same, the lab issued a statement and told India Today, "It is critical to understand that

multiple factors can influence a Covid-19 test result such as the history of exposure, viral load at the time of collection and specimen collection steps. As per the testee, she got the first Covid-19 test done on May 14, which came out positive; she did a second test at a much later date which was negative." "During the initial phase of infection, the viral load is generally high and if tested in this phase the result will be positive; subsequently due to fluctuation in viral load or intermittent viral shedding, there is a high probability that the second test can come negative. Rest, we are investigating the matter concerning the issues raised by her to understand the situation better," a representative from the lab added.

Ref: https://medicaldialogues.in/news/health/hospital-diagnostics/srl-lab-asked-to-pay-rs-99-lakh-compensation-for-allegedly-wrongly-diagnosing-lawyer-with-covid-66631 Accessed on 13/06/2020

No Removal Of Criminal Charges On Doctors Accused Of Leaking RGUHS PG Medical Exam:

Karnataka HC

Bengaluru: In a strict decision, the Karnataka High Court has refused to quash a criminal case registered against two doctors, who were accused of allegedly conspiring and leaking questions papers of PG medical examinations to some students in the year 2011.

The accused doctors had moved the court seeking relief after a charge sheet was filed against them. The accused are charged under sections 417, 418, 420, 465, 468, 409, 109, 114, 161 of Indian Penal Code and sections 117, 118, 119, 120, 121 and 138 of Karnataka Education Act 1983 and under Section 13(1)©, 13(1)(d) r/w 13(2) of Prevention of Corruption Act, 1988.

Every year Rajiv Gandhi University of Health Sciences (RGUHS) conducts entrance exam for Post Graduation studies in different disciplines of medical and dental sciences, this examination is held at different centres, one such centre in the year 2011 was designated to be that of Vijayanagar Institute of Medical Sciences (VIMS).

It was the case of the prosecution that accused No1, who was serving in the teaching line in VIMS had allegedly conspired with others to adopt malpractices to help certain candidates to get better results. On the date of examination, i.e. 30.01.2011 accused No.1 illegally opened the question paper in his custody, took photographs of the question paper using his digital camera, sent the digital camera through accused No.1 to accused No.17, accused No.27 who was allegedly a computer operator took a print out of the question paper from the digital camera by connecting it to the computer present in the residence of accused No.17.

On that basis, accused Nos.6 to 15 prepared answers to the questions, entered the said answers in the same computer and copy chits in the form of print outs were prepared in respect of the question paper. Accused No.7, in turn, handed the chits back to accused no. 1 who circulated them to selected students who copied the answers from the chits and managed to get high rank in the examination.

When the matter came into light, FIR was

registered on March 15, 2011, Bengaluru. However, the after investigation police had filed a B-report.

Subsequently, the RGUHS annulled the results of the students, accused Nos.16 to 26. The annulment was challenged before the high court. The court in May 2011, directed a further in-depth investigation to be done by the Central Investigation Department. Accordingly, the CID filed its charge sheet against the accused in the matter.

The CID conducted a detailed investigation and submitted a charge sheet which was taken cognizance of. The statements of innumerable witnesses were recorded, various material objects and properties were also recovered, all of which had to be examined during the course of the trial.

Seeking nullification of the Charge sheet against them, accused 12 and 14 later filed a petition with the HC. During a hearing held recently on their plea, the Counsel appearing for the petitioners stated as regards the veracity of the Hard Disk which was seized containing the answers prepared by Accused Nos.6 to 15 on which basis the copy chits were prepared. According to him, in the absence of the said hard disk no case can be said to be made out as against the Petitioners.

It was submitted that Hard Disk and the file which formed the very basis of the prosecution case was not in existence at the time the crime was alleged to have been committed. The counsel contended that the entire story of the prosecution is manufactured; concocted and on that basis he would contend that the petitioners are being harassed, maliciously prosecuted and therefore, the proceedings against the petitioners are to be quashed.

In response, the advocate appearing on behalf of CID contended that it is not only the Hard Disk which the prosecution is relying upon, but there are various other statements of witnesses and a huge number of pieces of evidence collected by the CID which forms the basis for the prosecution of the accused. The offences which have been committed by the accused are very serious in

nature. The accused have indulged themselves in malpractices obtained favourable admission in medical and dental colleges even though that the Hard Disk is stated to be manufactured subsequently ought not to be a ground to quash the charge sheet, she, however, submits that even this ground is not available to the petitioners at the stage of consideration of petition under section 482 of the Cr.P.C., the same is to be established during the course of the trial," the counsel submitted before the court.

The advocates from both sides relied on several judgments passed by the court over the few years which were related to the matters of the present case.

Reaching its conclusion on the case, the bench of Honourable Justice Suraj Govindaraj found force in the submission made by advocate contending on behalf of the respondents, the state and Dr. Premkumar that the arguments advanced and submissions made are required to be established during the course of the trial.

The judge noted, "Whether the mirror image furnished was proper, whether the correct tools were used to create the mirror image? Why

are the dates of the files different? How is the MFT of the concerned file showing the date of creation to be much earlier than the date of the offence? are not matters which could be decided upon by this court in a summary manner in 482 proceedings. All the submissions made on behalf of the petitioners are required to be established during the course of trial. The matter being technical in nature, the concerned experts would have to be examined and cross-examined. At this stage, it cannot on the basis of the submissions made be said that no offences have been committed by the petitioners.

The HC concluded that it is not a fit and proper case to exercise powers under Section 482 of Cr.P.C to quash the above proceedings initiated against the petitioners.

The bench then directed the trial court to expeditiously dispose of the matter.

Ref: https://medicaldialogues.in/state-news/karnataka/no-removal-of-criminal-charges-on-doctors-accused-of-leaking-rguhs-pg-medical-exam-karnata... Accessed on 17/06/2020

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The Members of Professional Assistance Scheme

	THE	viciniber s	, 01 1 1 010	2210	nai Assistanc	c Schem	
S.N	Name	Place	Speciality	69	Dr. Ravi Shankar Akhare	Chandrapur	Pediatrician
1	Dr. Dinesh B Thakare	Amravati	Pathologist	70	Dr. Lalit Meshram	Chandrapur	Pediatrician
2	Dr. Neelima M Ardak	Amravati	Ob.&Gyn.	71	Dr. Vivek Shivhare	Nagpur	Pediatrician
3	Dr. Rajendra W. Baitule	Amravati	Orthopedic	72	Dr. Ravishankara M	Banglore	Pediatrician
4	Dr. Yogesh R Zanwar	Amravati	Dermatologist	73 74	Dr. Bhooshan Holey	Nagpur	Pediatrician
5	Dr. Ramawatar R. Soni	Amravati	Pathologist		Dr. Amol Rajguru	Akot	Ob & Gyn
6 7	Dr. Rajendra R. Borkar	Wardha	Pediatrician	75 76	Dr. Rujuda Rajguru Dr. Sireesh V	Akot	Ob & Gyn Pediatrician
8	Dr. Satish K Tiwari Dr. Usha S Tiwari	Amravati Amravati	Pediatrician Hospi/ N Home	76 77	Dr. Ashish Batham	Banglore Indore	Pediatrician
9	Dr. Vinita B Yadav	Gurgaon	Ob.&Gyn.	77 78	Dr. Abinash Singh	Kushinagar	Pediatrcian
10	Dr. Balraj Yadav	Gurgaon	Pediatrician	79	Dr. Brajesh Gupta	Deoghar	Pediatrician
11	Dr. Dinakara P	Bengaluru	Pediatrician	80	Dr. Ramesh Kumar	Deoghar	Pediatrician
12	Dr. Shriniket Tidke	Amravati	Pediatrician	81	Dr. V P Goswami	Indore	Pediatrician
13	Dr. Gajanan Patil	Morshi	Pediatrician	82	Dr. Sudhir Mishra	Jamshedpur	Pediatrician
14	Dr. Madhuri Patil	Morshi	Obs & Gyn	83	Dr. Shoumyodhriti Ghosh	Jamshedpur	Pediatric Surgeon
15	Dr. Vijay M Kuthe	Amravati	Orthopedic	84	Dr. Banashree Majumdar	Jamshedpur	Dermatologist
16	Dr. Alka V. Kuthe	Amravati	Ob.&Ġyn.	85	Dr. Lalchand Charan	Udaipur	Pediatrician
17	Dr. Anita Chandna	Secunderabad	Pediatrician	86	Dr. Manoj Yadav	Gurgaon	Pediatrician
18	Dr. Sanket Pandey	Amravati	Pediatrician	87	Dr. Sandeep Dawange	Nandura	Pediatrician
19	Dr. Ashwani Sharma	Ludhiana	Pediatrician	88	Dr. Surekha Dawange	Nandura	Ob & Gyn
20	Dr. Jagdish Sahoo	Bhubneshwar	Pediatrician	89	Dr. Sunil Sakarkar	Amravati	Dermatologist
21	Dr. Menka Jha (Sahoo)	Bhubneshwar	Neurology	90	Dr. Mrutunjay Dash	Bhubaneshwar	Pediatrician
22	Dr. B. B Sahani	Bhubneshwar	Pediatrician	91	Dr. J Bikrant K Prusty	Bhubaneshwar	Pediatrician
23	Dr. Poonam Belokar(Kherde)	Amravati	Obs & Gyn	92	Dr. Jitendra Tiwari	Mumbai	Surgeon
24	Dr. Rakesh Tripathi	Satna	Pediatrician	93	Dr. Bhakti Tiwari	Mumbai	Ob & Gyn
25	Dr. Sandeep Dankhade	Amravati	Pediatrician	94	Dr. Saurabh Tiwari	Mumbai	Pediatric Surgeon
26	Dr. Ashish Dagwar	Amravati	Surgeon	95 96	Dr. Kritika Tiwari	Mumbai Amritsar	Pediatrician
27	Dr. Ashish Narwade	Mehkar	Pediatrician	96 97	Dr. Gursharan Singh	Hubali	Pediatrician
28 29	Dr. Mallikarjun H B Dr. Hemant Chandravanshi	Bengaluru	Pediatrician Obs & Gyn	98	Dr. Rajshekhar Patil Dr. Sibabratta Patnaik	Bhubneshwar	Pediatrician Pediatrician
30	Dr. Premchand Jain	Raipur Karjat	Pediatrician	99	Dr. Nirmala Joshi	Lucknow	Pediatrician
31	Dr. Radheshyam Roda	Dhule	Opthalmologist	100	Dr. Kishore Chandki	Indore	Pediatrician
32	Dr. Virendra Roda	Dhule	Opthalmologist	101	Dr. Ashish Satav	Dharni	Physician
33	Dr. Shabeer Ahmed	Hyderabad	Pediatrician	102	Dr. Kavita Satav	Dharni	Opthalmologist
34	Dr. Sandhya Mandal	Medinipur(W.B)	Pediatrician	103	Dr. D P Gosavi	Amravati	Pediatrician
35	Dr. Sunita Wadhwani	Ratlam	Ob & Gyn	104	Dr. Narendra Gandhi	Rajnandgaon	Pediatrician
36	Dr. Sagar Idhol	Akola	Physician	105	Dr. Chetak K B	Mysore	Pediatrician
37	Dr. Ashish Varma	Wardha	Pediatrician	106	Dr. Shashikiran Patil	Mysore	Pediatrician
38	Dr. Anuj Varma	Wardha	Physician	107	Dr. Bharat Shah	Amravati	Plastic Surgeon
39	Dr. Neha Varma	Wardha	Ob & Gyn	108	Dr. Jagruti Shah	Amravati	Ob & Gyn
40	Dr. Ramesh Varma	Wardha	Gen Practitioner	109	Dr. Jyoti Varma	Wardha	Dentistry
41	Dr. Ravindra Dighe	Navi Mumbai	Pediatrician	110	Dr. C P Ravikumar	Banglore	Ped Neurologist
42	Dr. Jyoti Dighe	Navi Mumbai	Ob & Gyn	111	Dr. Nitin Seth	Amravati	Pediatrician
43	Dr. Madan Mohan Rao	Hyderabad	Pediatrician	112	Dr. Abhijit Deshmukh	Amravati	Surgeon
44	Dr. Pramod Gulati	Jhansi	Pediatrician	113	Dr. Anjali Deshmukh	Amravati	Ob & Gyn
45	Dr. Sanjay Wazir	Gurgaon	Pediatrician	114	Dr. Deepak Kukreja	Indore	Pediatrician
46	Dr. Anurag Pangrikar	Beed	Pediatrician	115	Dr. Bharat Asati	Indore	Pediatrician
47	Dr. Shubhada Pangrikar	Beed	Pathologist	116	Dr. Apurva Kale	Amravati	Pediatrician
48	Dr. Abhijit Thete	Beed	Pediatrician	117		Amravati	Pathologist
49	Dr. Kiran Borkar	Wardha	Ob & Gyn	118	Dr. Asit Guin	Jabalpur	Physician
50	Dr. Prabhat Goel Dr. Sunil Mahajan	Gurgaon	Physician Pathologist	119	Dr. Sanjeev Borade Dr. Usha Gajbhiye	Amravati Amravati	Ob & Gyn Pediatric Surgeon
51 52	Dr. Ashish Jain	Wardha	Pathologist Pediatrician	120 121	Dr. Kush Jhunjhunwala	Nagpur	Pediatrician
53	Dr. Neetu Jain	Gurgaon Gurgaon	Pulmonologist	122	Dr. Anil Nandedkar	Nanded	Pediatrician
54	Dr. Bhupesh Bhond	Amravati	Pediatrician	123	Dr. Animesh Gandhi	Rajnandgaon	Pediatrician
55	Dr. R K Maheshwari	Barmer	Pediatrician	124	Dr. Ravi Barde	Nanded	Pediatrician
56	Dr. Jayant Shah	Nandurbar	Pediatrician	125	Dr. Pranita Barde	Nanded	Pathologist
57	Dr. Kesavulu	Hindupur AP	Pediatrician	126	Dr. Pankaj Barabde	Amravati	Pediatrician
58	Dr. Ashim Kr Ghosh	Burdwan WB	Pediatrician	127	Dr. Aditi Katkar Barabde	Amravati	Ob & Gyn
59	Dr. Archana Tiwari	Gwalior	Ob & Gyn	128	Dr. Shreyas Borkar	Wardha	Pediatrician
60	Dr. Mukul Tiwari	Gwalior	Pediatrician	129	Dr. Vivek Morey	Buldhana	Ortho. Surgeon
61	Dr. Chandravanti Hariyani	Nagpur	Pediatrician	130	Dr. Arti Murkey	Amravati	Ob & Gyn
62	Dr. Gorava Ujjinaiah	Kurnool(A.P)	Pediatrician	131	Dr. Nitin Bardiya	Amravati	Pediatrician
63	Dr. Pankaj Agrawal	Barmer	Pediatrician	132	Dr. Swapnil Sontakke	Akot, Akola	Radiologist
64	Dr. Prashant Bhutada	Nagpur	Pediatrician	133	Dr. Pallavi Pimpale	Mumbai	Pediatrician
65	Dr. Sharad Lakhotiya	Mehkar	Pediatrician	134	Dr. Susruta Das	Bhubneshwar	Pediatrician
66	Dr. Kamalakanta Swain	Bhadrak(Orissa)	Pediatrician	135	Dr. Sudheer K A	Banglore	Pediatrician
67	Dr. Manjit Singh	Patiala	Pediatrician	136	Dr. Bhusahn Murkey	Amravati	Ob & Gyn
68	Dr. Mrinmoy Sinha	Nadia (W.B)	Pediatrician	137	Dr. Jagruti Murkey	Amravati	Ob & Gyn

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139	Dr. Vijay Thote	Amravati	Opthalmologist	198	Dr. Umesh Khanapı	ırkar	Bhusawal	Pediatrician
140	Dr. Satish Agrawal	Amravati	Pediatrician	199	Dr. Sushma Khanap	ourkar	Bhusawal	Gen Practitioner
141	Dr. Ravi Motwani	Gadchiroli	Pediatrician	200	Dr. Sameer Khanap	urkar	Bhusawal	Pediatrician
142	Dr. Ashwin Deshmukh	Amravati	Ob & Gyn	201	Dr. Samir Bhide		Nashik	Pediatrician
143	Dr. Anupama Deshmukh	Amravati	Ob & Gyn	202	Dr. Veerendra Meha	ır	Indore	Pediatrician
144	Dr. Aanand Kakani	Amravati	Neurosurgeon	203	Dr. Rajendra Vitalka	r	Warud	Gen Practitioner
145	Dr. Anuradha Kakani	Amravati	Ob & Gyn	204	Dr. Kalpana Vitalkar		Warud	Ob & Gyn
146	Dr. Sikandar Adwani	Amravati	Neurophysician	205	Dr. Shweta Bhide		Nashik	Opthalmologist
147	Dr. Seema Gupta	Amravati	Pathologist	206	Dr. Pramod Wankhe	ede	Raigad	Pediatrician
148	Dr. Pawan Agrawal	Amravati	Cardiologist	207	Dr. Shrikant Dahake)	Raigad	Gen Practitioner
149	Dr. Madhuri Ägrawal	Amravati	Pediatrician	208	Dr. Nilesh Gattani		Mehkar	Orthopedic Surgeon
150	Dr. Subhash Borakhade	Akot	Pediatrician	209	Dr. Aishwarya Gatta	ni	Mehkar	Pathologist
151	Dr. Unmesh Luktuke	Jamshedpur	Pediatrician	210	Dr. Barkha Manwan	i	Mumbai	Pediatrician
152	Dr. Arunima Luktuke	Jamshedpur	Opthalmologist	211	Dr. Piyush Pande		Amravati	Pediatrician
153	Dr. Rupesh Kulwal	Pune	Pediatrician	212	Dr. Bhushan Katta		Amravati	Pediatrician
154	Dr. Prashanth S N	Davanagere	Pediatrician	213	Dr. Mahesh Sambha	are	Mumbai	Pediatrician
155	Dr. Jyoti Agrawal	Amravati	Pediatrician	214	Dr. Rahul Salve		Chandrapur	Pediatrician
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