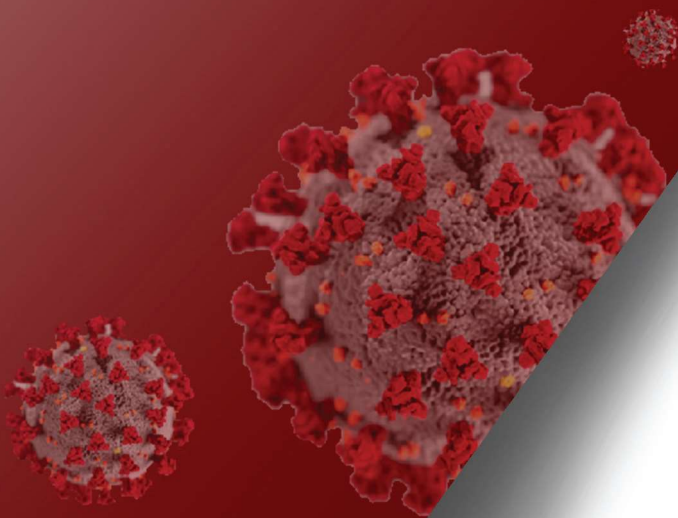


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BLOOD DONORS OF AMERICA IN COVID-19 PANDEMIC OUTBREAK

I have already explained a few scientific facts related to blood donation and opportunity of getting health benefit for the blood donors in general in my previous article, 'Blood Donation' in *Compassion* (1st Issue of November 2019) including my endeavor in the social obligation of individual and social organizations. Now I would like to focus on how blood donation is critical in the coronavirus pandemic situation. I emphasize that the regular blood donor can be safe to donate blood even during this outbreak and still can get additional benefit like testing of COVI –19 antibody free of cost. In addition, donation of convalescent plasma to save life in emergency is also essential.

COVID – 19 Outbreak and Scientific Efforts

Introduction

Severe Acute Respiratory Syndrome Corona Virus -2 (SARS-CoV-2) that causes COVID – 19, was first reported in Wuhan, China in December of 2019. COVID – 19 is basically a disease of respiratory system that causes pneumonia in patients to lose the life because of respiratory failure if left untreated. World Health Organization (<https://www.who.int/>) named the disease as Noble COVID – 19 in February 11, 2020.

As per the scientific facts, Corona virus was first identified in domestic fowls in 1930, later in 1940 found in rats. It was also reported in swine as gastrointestinal virus and in human in 1960. This is a single stranded RNA virus. For the present infection, it is assumed that the virus came to human from Pangolin, a mammal which is highly valued for a rare meat source in China and Vietnam, in a meat market of Wuhan city, Hube, China in the late 2019.

Epidemiology

According to the official website of Johns Hopkins University of Medicine (<https://coronavirus.jhu.edu/map.html>), COVID – 19 has been spread to almost all countries of the world, infected 27 million people with 0.9 million death toll all over the world. In USA alone the death is more than 0.18 million. The number is not stable yet, nor reached to peak and the data is changing every day. According to the United Nations forecast, the global economy is expected to lose nearly \$8.5 trillion in output over the next two years due to the COVID -19 pandemic (<https://www.un.org/development/desa/en/news/policy/wesp-mid-2020-report.html>).

COVID-19 became a devastating and mentally stressful disease of this era across the world and can infect 7.5 billion people. In the beginning,



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there was a confusion and suboptimal guidelines from the Centers for Disease Control and Prevention (<https://www.cdc.gov/>) to some extent to be opted by ordinary people in daily life. A shut down policy and other scientific measures are helping to slow down its spread.

Scientific Research

To combat the COVID - 19, the world-class research institutions and their leaders are actively engaging in finding its prevention to relieve the world by introducing drugs and vaccines against the disease. A search term “COVID - 19” in PubMed (<https://www.ncbi.nlm.nih.gov/pmc/?term=COVID-19>) as of today, Sep 7, 2020 hits 53, 918 peer reviewed scientific literatures. This is a huge number of scientific papers that suggests how much efforts from scientists have been invested in research to identify the remedy of this invisible culprit.

The range of research coverage extends from epidemiology, treatment strategy, psychological categories, effect of COVID - 19 in carrier conditions including hypertension, diabetes and cancer, usage of convalescence plasma as an emergency therapy, and vaccine development for the proper prevention.

The literatures also discuss the factors that may influence in susceptibility to the disease such as age, gender (studies show that male patients are dying from COVID-19 at a much higher rate than women despite similar rates of infection; <https://utswmed.org/whattoknow>), diet, life style (public transporter users), population density, cultural habits, and most importantly individual variability in immune system.

It has shown a high degree of contagious characteristic from one person to other and may pass from one to another even in asymptomatic situations. This characteristics impose a big hurdle to trace out the carriers getting infiltrated into the healthy population.

Therapeutics Approach

Usage of nonpharmacological interventions such as face mask in addition to frequent hand washing with soap and water, and maintaining a 6-feet physical distance etc. came into practice a bit later. Social distancing and use of mask are understood to significant impacts on reducing the spread of this disease (<https://utswmed.org/covid-19>).

As explained above, scientists of the world are working hard to bring out the vaccines against this diseases as soon as possible. According to the clinical trial research (<https://clinicaltrials.gov/>), more than 3000 trial research are proposed up to now. However, more than 1600 trials have been in active phase of recruiting at the moment, whereas 100 trials are enrolling for trial. We do anticipate that the vaccine will be available soon in the market.

Until the vaccines become available in the market, several drugs such as Favipiravir, Chloroquine and hydroxyl chloroquine, non-steroid anti-inflammatory drugs etc. have been tried with big controversy. Convalescence plasma is also in practice under emergency use authorization policy.

Efforts of BDA to Save Human Life and Mental Health

Blood Donors of America (BDA) established in 2009 basically works creating awareness in blood donation and healthy life style. Saving human life with the help of blood donation is its primary arena of contribution and sole field of activities. However, its objective is not limited merely to blood donation but also it works and supports health education.

BDA organized distant educational talk programs about COVID - 19 in the early days of its outbreak to pass scientific information to its members and communities through series of ZOOM programs. In the several episodes of interactive programs, many subject matter specialists tried to pass scientific facts to the community in non-technical language to boost the understanding.

Our official records show that BDA contributed more than 100 pints of blood during this COVID-19 pandemic outbreak period from March to August, 2020 through 11 blood donation events organized across the USA. This data excludes individual volunteer's donation count who donated blood in the blood bank in times other than event date. Blood banks are open and regulated as per the guidelines of CDC and local governments. We did donation in several states of the USA in this pandemic to boost mental health of individuals.

The purpose of keeping blood donation continue is to supply the blood to hospitals during this harsh situation. Because of COVID - 19, people are not able to get out from their shelter of primary residence and have to be locked at home. Donating

blood makes them feel better and happy at these difficult circumstances. Thus, it is not only being a means of life saving event but also a means of mental health support therapy.

Meantime we also looked for an alternative way to help people in this hard time and found a way to extend relationship with several other organizations. We discussed and completed memorandum of understanding with Nepalese Association in Southeast America (NASeA) in the USA during this period. The aim of this plan is to motivate as many people to bring in as possible in blood donation. We anticipate that this plan will enhance the blood donation activities in larger area and will help saving many human lives.

Everyone understands that the viral disease COVID - 19 will not be controlled unless the vaccines are available. However, vaccines are on the way but not yet available. Medical scientists are in favor of convalescent plasma, although not fully approved by FDA, but it is approved in a condition called Emergency Use Authorization (EUA).

Future Action Plan of BDA

BDA is closely working together with its health division advisers to go for convalescent plasma donation. Convalescent plasma is the plasma that is received from donors who react positive for COVID – 19 test. Both patients of COVID – 19

who noticed their infection or who do not but react positive for the test can donate plasma. This plasma has been used in critical COVID – 19 patients to save life.

In this effort, BDA has invited and requested all previously COVID - 19 infected or tested positive volunteers to donate their plasma that could be very valuable to treat COVID - 19 patients, especially the elderly with medical conditions when the other means of treatment are ineffective.

Since COVID - 19 may be closely associated with flu in the cold season which can aggravate the disease condition and can face challenges. Thus, BDA is willing to work with Texas Nepalese Medical Association (TNMA) to spread the message of Flu vaccination importance and encourage people to get the Flu vaccine on time.

Those donors who donated blood after June 22, 2020, their blood is likely to be tested for COVID-19 exposure by antibody test. This policy is still active and those who donate blood will be tested if they got any exposure in the past. This information will help them and their family and friends.

I would like to invite all blood donors to join Blood Donors of America (<http://blooddonorsofamerica.org/>) and social organizations to organize blood donation events in support of community.

ABOUT THE WRITER

Dr. Nanda Regmi, a Senior Research Scientist in the University of Texas Southwestern (UTSW) Medical Center at Dallas, TX, a world class university of this age. A first veterinary graduate of Nepal, Dr. Regmi received his Ph.D. from Tokyo University of Agriculture and Technology, Tokyo, Japan in pharmacology and completed his postdoctoral training in UTSW with internationally recognized scientists. Dr. Regmi also served Nepal government in multiple capacities such as assistant professor of Tribhuvan University and Veterinary Officer of Livestock Services. Dr. Regmi has been recognized with numerous awards, honors and memberships of different professional organizations.

In addition, Dr. Regmi is also known for his philanthropic contributions, as being the first

elected president of Blood Donors of America (BDA), a charitable organization. BDA, highly prestigious organization holds members like the Guinness book record holder in whole blood donation, Mr. John Sheppard. Dr. Regmi is also a life member of International Nepali Literary Society a founder member of Nepalese Cultural and Spiritual Center; and a founding member and a member of board of trustees of Indreni Cultural Association of Dallas, TX. Dr. Regmi is listed as one of the outstanding biomedical scientists and philanthropists in the USA by a book "Nepali WHO IS WHO IN THE USA, 2019".

Dr. Regmi bags versatile experiences of research, teaching, and highly integrated community services. He lives with his family of four in Coppell, Dallas, TX and can be reached at nandaregmi@yahoo.com