Infectio®
A quarterly Magazine
12th Edition, 1st Quarter 2021

COVID-19
CORONAVIRUS

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COVID-19 CORONAVIRUS

Current News

COVID-19 will eventually become seasonal, researchers predict

A new study argues that COVID-19 is likely to become a seasonal disease similar to influenza but not before a vaccine and greater herd immunity are achieved.

New research published in the international journal suggests that SARS-CoV-2 is likely to be affected by the changing seasons in a way similar to other human coronaviruses and influenza.

In temperate regions, this would mean reduced infections in the summer and peaks in the winter. However, this seasonality is only likely to occur once a vaccine is developed and greater herd immunity is achieved.

Source: https://www.medicalnewstoday.com/articles/covid-19-will-eventually-become-seasonal-researchers-predict

Two COVID Vaccines Compared

Vaccine Developer	*Pfizer*	*Moderna*
How it works	Messenger RNA	Messenger RNA
When it approved by FDA	Dec 11, 2020	Dec 18, 2020
What percentage of people did it protect from getting infected in clinical studies?	95%	94.1%
How many shots do you need?	Two doses, 3 weeks apart	Two doses, 4 weeks apart
What are the side effects?	Fatigue, headache, chills, muscle pain, especially after the second dose	Fever, muscle aches, headaches lasting a few days. Effects worse after second dose.
Who is it recommended for?	People 16 years and older	Not yet available
What about pregnant women and nursing moms?	There's not enough data yet for a recommendation. CDC suggests women talk to their doctor.	Not yet available
Is there anyone who shouldn't get the vaccine?	People with a history of serious allergic reactions. There is not enough data to make a recommendation for people with a compromised immune system	Not yet available

Source:
- The New York Times: "Moderna Applies for Emergency F.D.A. Approval for Its Coronavirus Vaccine."
- USA Today: "Are there side effects to a COVID-19 vaccine? What are the 'ingredients'? The cost? Answers to your vaccine questions," "Moderna becomes second company to request emergency FDA authorization for COVID-19 vaccine candidate," "Pfizer to seek approval from FDA 'within days' after further analysis finds COVID-19 vaccine 95% effective."
- Medscape: "CDC Panel Recommends Pfizer's COVID-19 Vaccine for People 16 and Over."

Message of the Chairman Infectio®

Infectio® COVID-19 CORONAVIRUS

Dear Readers,
We have successfully launched 1st Virtual Magazine on **COVID-19** in last quarter. Now we are issuing a new edition which focus on communicable infectious disease.

In this update, we have presentation on healthcare problems related to Impact of **COVID-19** infection on children and Rational use of Antibiotics in Family Practice. I am really thankful to **Prof. Waris Qidwai** & **Dr. Sadaf Asim**, for explaining the Impact of **COVID-19** infection on children and Promotion of rational use of antibiotics.

Moreover, we have incorporated guidelines and precautionary measures to be Advice on the use of masks for children in the community in the context of **COVID-19** by WHO, how to stay safe during reopening and also nutritional tips for healthy individuals.

Second wave of Corona is at its peak now and Mutant variant in UK is causing concern. The experts suggest two approved vaccines (Moderna & Pfizer/BioNTech) will also be effective against mutant variant.

We further acknowledge SAMI Pharmaceuticals for their support to medical community and also grateful to the countless efforts of our contributors and all editorial team members for this issue of Infectio magazine.

Prof. Dr. Ejaz Ahmed Vohra
Chairman Editorial Board
Dean Post graduate (Clinical)
Head, Department of Medicine
Dr. Ziauddin University - Karachi

Message from editorial board member

Child survival program team in collaboration with DG Sindh office with Dr. Ziauddin University pediatric team conducted three workshops in collaboration with WHO for capacity building for the management of **COVID** pediatric patients. Participants were from different facilities of Sindh health department.

We appreciate WHO for supporting this needful activity to improve the better care for pediatric **COVID** patients in Sindh.

Sincerely,

Dr. M. N. Lal, MD
Course Director,
Chief Pediatrician
Director Child Survival program in Sindh

OBITUARY

Prof. Dilshad Qureshi, Head of Pediatrics Bolan Medical College-Quetta passed away this year. She was affiliated with Infectio® and shared her expressive role for the development of magazine. She joined Infectio board in 2015 as Editorial member of Infectio, she worked on different intellectual ideas and highlight pediatric infectious disease. She was always interested in transfer of knowledge to primary care physician and junior doctors. On behalf of SAMI Pharmaceuticals (Pvt.) Ltd. Management, the editorial board members of Infectio and all the readers accept our deepest condolence for the loss, May! Allah rest the departed soul in eternal peace and enables us to continue her mission with the same confidence and passion.

Impact of COVID-19 infection on Children

Summerized by:
Dr. Sadaf Asim
Consultant Pediatric Nephrologist
NICH & Tabba Kidney Institute-Karachi

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According to United Nation, COVID-19 pandemic presents the greatest test the world has faced since the Second World War. People around the world are anxiously tracking the numbers of new cases and deaths due to COVID-19. But in doing so, we are distracted from the catastrophic effects of the pandemic on children. While children are not the face of SARS CoV 2 (severe acute respiratory syndrome corona virus 2) / COVID 19 (corona virus infection discovered 2019), its broader impacts on children's physical and mental health being catastrophic and lasting for societies as a whole.

The effects of the pandemic are not limited to health but extend to many dimensions of children's lives: their education, safety and poverty are few to name. These effects are largely attributable not to the virus but to the mitigation measures governments have taken.

Effect on Health and Diseases

Before this crisis, we lived in a world that failed to care adequately for children; where a child under age 15 dies every five seconds; where one in every five children is malnourished (stunted); over half (53%) of 10-year old children in low- and middle-income countries (as high as four in five children in poor countries) can't read and understand simple stories; and one child in four under the age of 5 does not have their birth registered.

LOSS OF VACINATION: The health effects of the pandemic extend far beyond the virus itself. Immunization campaigns globally are on hold. It also includes the suspension of all polio vaccination campaigns worldwide, setting back the decades-long effort to eliminate the wild virus from its last two vestiges, Afghanistan and Pakistan, and to tackle recent outbreaks of the vaccine-derived virus in Africa, East Asia and the Pacific. Pakistan soring with 51 new polio cases in 2020. In addition, measles immunization campaigns have been suspended in atleast 23 countries that had cumulatively targeted more than 78 million children up to the age of 9 years.

NON COVID ILLNESES: Delay in the diagnosis and management of non COVID illnesses, delay in the follow of children with known chronic illnesses lead to the development of complication leading to increased mortality.

INFANT MORTALITY RATE: According to UNICEF the global economic downturn could result in hundreds of thousands of additional child deaths in 2020, reversing the last 2 to 3 years of progress in reducing infant mortality within a single year. This is due to the reduced access to essential reproductive, maternal, newborn and child health interventions, such as antenatal care, skilled attendance at birth, and treatment for under five killers like pneumonia, Diarrhea and Malnutrition.

Effect on Sleep, Physical Activity and Eating Habits

Children's physical activity is interrupted and they cannot go to parks, gyms, sports arenas and lack of intake of imbalanced diet. It is leading to problems of sleep, headache and vision due to excess screen time and disturbance of sleep wake cycle leading to the hormonal imbalances and their consequences. We expect to have the increasing number of children with diabetes, hypertension and chronic kidney disease in the coming years.

COVID POSITIVE PARENTS: Children are away from the parents if one of them get infected with COVID. Stresses of living in isolation and quarantine, affect their cognitive, emotional and social development.

Falling into Poverty and Malnutrition

The impact of COVID-19 on children's poverty, survival and health, learning, and safety are far reaching.

According to a report from BBC the poorest will be hardest hit by all of these effects, lockdowns are expected to widen the existing inequalities across the globe, with repercussions for years to come. It's disadvantaged children who pay the greatest price here, as they will fall the furthest

behind, and have the fewest resources available to 'catch up' once the pandemic threat has passed the children in under resourced regions of the world will face the consequences of poor economic status of the family where parents losing jobs and country aggravating malnutrition, schooling, Communicable and non-communicable diseases and death.

According to UNICEF, an estimated 42-66 million children could fall into extreme poverty as a result of the crisis this year, adding to the estimated 386 million children already in extreme poverty in 2019. For poor households around the world, a reduction in income means reductions in essential expenditures on health and food, whose effects are especially grave for children the breadwinners lose their jobs or be forced to sell productive assets in order to survive, with long running consequences for children living in poverty. We anticipate hundreds of thousands of additional child deaths this year. Progress towards the Sustainable Development Goals (SDG) for children were already off track and will further worsen.

Academic Excellence

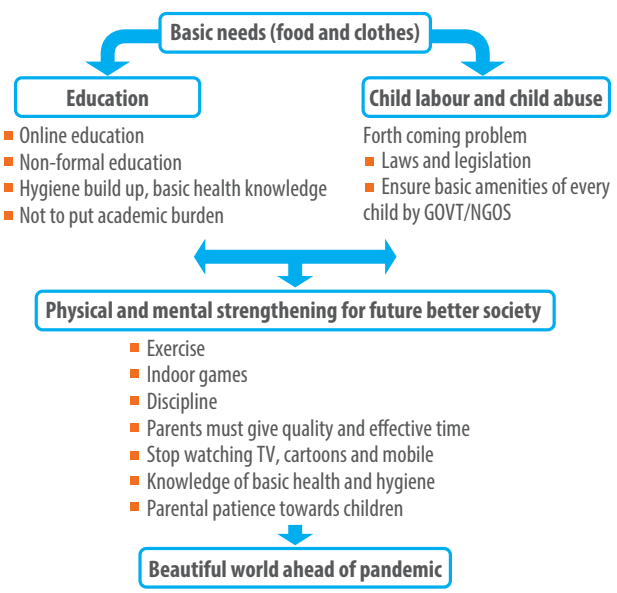
According to UNESCO, the education of nearly 1.6 billion pupils in 190 countries has so far been affected that's 90% of the world's school age children.

With School closures children no longer have that sense of structure and stimulation that is provided by that environment, and now they have less opportunity to be with their teachers and peers and get that social support that is essential for good mental well-being. School closures have been imposed pre-emptively in 27 countries closures were introduced before cases of the virus were recorded. With schools in many countries planning for extended lock downs, at least 58 countries and territories have postponed or rescheduled exams, while 11 countries have cancelled exams altogether.

According to UNESCO, while more than two-thirds of countries have introduced a national distance learning platform, only 30 percent of low income countries have done so. On line schooling is not considered a better option by children because although parents are helping but they are not focused at home and face lot of distraction effecting their academics. Parents themselves are working in many scenarios and cannot support children for online learning hours. Children's reliance on online platforms for distance learning has also increased their risk of exposure to inappropriate content and online predators increasing the issues of children security.

Conclusion & Suggestion for a Beautiful Tomorrow of our Children

We need to synergize to minimize the effects of this pandemic on our coming generation. Now is the time to step up international solidarity for children and humanity and to lay the foundations for a deeper transformation of the way we nurture and invest in our world's youngest generation.



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How to Stay Safe During Re-opening

As businesses, restaurants, and other public spaces re-open, there are things you can do to protect yourself and others from the novel coronavirus, the virus that causes COVID-19.

In any situation, there is always risk of infection, but it is important to:

- **wear a face covering in public**;
- **wash your hands often** for at least 20 seconds with soap and water, or use a hand sanitizer that contains at least 60% alcohol; and
- **practice social distancing** by staying 6 feet away from others.

IDSA
Infectious Diseases Society of America

In a restaurant

- Eating outside poses a lower risk of infection than eating indoors. If you are eating indoors, look for space between tables and open windows.
- Try dining at "off-peak" times.
- Avoid buffets and self-serve drinks.
- Restaurant staff should wear masks, and have proper sanitizing procedures in place.

At daycare

- Daycare is an essential service for many working parents. When considering your options, look for daycares that keep groups small and consistent day-to-day.
- All teachers and staff should wear personal protective equipment, such as masks. Careful cleaning and regular hand washing are also essential.
- All children and staff should be screened each day for infection symptoms.

In a hair salon

- Seek out salons that limit the number of clients allowed inside, encourage patrons and staff to wear masks, and enforce appropriate social distancing measures. If possible, salon windows should be opened to help with ventilation.
- Consider washing your own hair prior to arriving to limit the amount of time in the salon.

While traveling and commuting

- Air travel carries risk, but some travel may be essential. Consider taking shorter flights with fewer passengers and wear a mask at all times.
- To stay safe while taking public transportation and ride-shares, try to ride at off-peak hours and limit travel to essential trips.
- At airports, train stations, or bus stops, always maintain a safe distance from other passengers when possible.

Promotion of Rational use of Antibiotics in Family Practice

Prof. Waris Qidwai
Department of Family Medicine
The Aga Khan University Hospital

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Antibiotic resistance is at an all-time high. It's time that we use this resource with care so that it stays effective for the treatment of infections that are still highly prevalent in our part of the world.

We need to adhere to certain evidence based principles for appropriate prescribing.

It is important to treat bacterial infection only. Using antibiotics for conditions such as acute bronchitis know to be caused mostly by viral infection, can result in antibiotic resistance and with little benefit to patient.

It is important to diagnose condition before starting antibiotic as well as its severity. Giving antibiotics without diagnosis can result its un necessary use that will increase resistance. It is important not to routinely treat infections on empiric basis and in the expectation of preventing secondary bacterial infection.

There are clinical situations in which it is not possible to completely eradicate infection such as advance chronic obstructive pulmonary disease with bronchiectasis. In such cases, aim should be to maximize bacterial eradication

It is important to be familiar with local antimicrobial resistance before prescribing. It limits unnecessary use of antibiotics in resistance situation that further promotes resistance. Local antibiotic resistance data is mostly available and such be used.

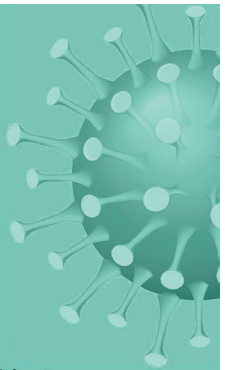
It is important to know the pharmacodynamics and pharmacokinetics of antibiotics including minimum inhibitory concentration. This provides us with the correct dose, its duration for use and intervals for dosing. It's very important to use antibiotics in correct dose, in appropriate dosing interval and for adequate duration. This practice will ensure effective use of antibiotics and will prevent resistance

Cost effectiveness of therapy is part of rational use of antibiotics. Its important to educate patients not to use antibiotics on their own. This promotes un necessary antibiotic resistance. Practicing physicians should be made aware of rational use of antibiotics so antibiotic effectiveness is maintained.

It's time that government legislature is made effective controlling free availability of antibiotics in the market. Only licensed medical practitioner prescribed antibiotic should be given to patients by drug outlets.

It is with combined efforts of all stake-holders that we can ensure safe and effective use of available antibiotics. Rational use of antibiotics is the only way to ensure prevention of antibiotic resistance.

Nutrition advice for adults during the COVID-19 outbreak



Proper nutrition and hydration are vital. People who eat a well-balanced diet tend to be healthier with stronger immune systems and lower risk of chronic illnesses and infectious diseases. So you should eat a variety of fresh and unprocessed foods every day to get the vitamins, minerals, dietary fibre, protein and antioxidants your body needs. Drink enough water. Avoid sugar, fat and salt to significantly lower your risk of overweight, obesity, heart disease, stroke, diabetes and certain types of cancer.

Eat **fresh** and **unprocessed** foods every day

- Eat fruits, vegetables, legumes (e.g. lentils, beans), nuts and whole grains (e.g. unprocessed maize, millet, oats, wheat, brown rice or starchy tubers or roots such as potato, yam, taro or cassava), and foods from animal sources (e.g. meat, fish, eggs and milk).
- Daily, eat: 2 cups of fruit (4 servings), 2.5 cups of vegetables (5 servings), 180 g of grains, and 160 g of meat and beans (red meat can be eaten 1–2 times per week, and poultry 2–3 times per week).
- For snacks, choose raw vegetables and fresh fruit rather than foods that are high in sugar, fat or salt.
- Do not overcook vegetables and fruit as this can lead to the loss of important vitamins.
- When using canned or dried vegetables and fruit, choose varieties without added salt or sugar.

Eat moderate amounts of **fat and oil**

- Consume unsaturated fats (e.g. found in fish, avocado, nuts, olive oil, soy, canola, sunflower and corn oils) rather than saturated fats (e.g. found in fatty meat, butter, palm and coconut oils, cream, cheese, ghee and lard).
- Choose white meat (e.g. poultry) and fish, which are generally low in fat, rather than red meat.
- Avoid processed meats because they are high in fat and salt.
- Where possible, opt for low-fat or reduced-fat versions of milk and dairy products.
- Avoid industrially produced trans fats. These are often found in processed food, fast food, snack food, fried food, frozen pizza, pies, cookies, margarines and spreads.

Counselling and psychosocial **support**

While proper nutrition and hydration improve health and immunity, they are not magic bullets. People living with chronic illnesses who have suspected or confirmed COVID-19 may need support with their mental health and diet to ensure they keep in good health. Seek counselling and psychosocial support from appropriately trained health care professionals and also community-based lay and peer counsellors.

Drink enough **water** every day

- Water is essential for life. It transports nutrients and compounds in blood, regulates your body temperature, gets rid of waste, and lubricates and cushions joints.
- Drink 8–10 cups of water every day.
- Water is the best choice, but you can also consume other drinks, fruits and vegetables that contain water, for example lemon juice (diluted in water and unsweetened), tea and coffee. But be careful not to consume too much caffeine, and avoid sweetened fruit juices, syrups, fruit juice concentrates, fizzy and still drinks as they all contain sugar.

Eat less **salt** and **sugar**

- When cooking and preparing food, limit the amount of salt and high-sodium condiments (e.g. soy sauce and fish sauce).
- Limit your daily salt intake to less than 5 g (approximately 1 teaspoon), and use iodized salt.
- Avoid foods (e.g. snacks) that are high in salt and sugar.
- Limit your intake of soft drinks or sodas and other drinks that are high in sugar (e.g. fruit juices, fruit juice concentrates and syrups, flavoured milks and yogurt drinks).
- Choose fresh fruits instead of sweet snacks such as cookies, cakes and chocolate.

Avoid eating out

Eat at home to reduce your rate of contact with other people and lower your chance of being exposed to COVID-19. We recommend maintaining a distance of at least 1 metre between yourself and anyone who is coughing or sneezing. That is not always possible in crowded social settings like restaurants and cafes. Droplets from infected people may land on surfaces and people's hands (e.g. customers and staff), and with lots of people coming and going, you cannot tell if hands are being washed regularly enough, and surfaces are being cleaned and disinfected fast enough.

World Health Organization

#COVID19 #CORONAVIRUS
www.emro.who.int/nutrition

Advice on the use of masks for children in the community in the context of COVID-19

Summerized by:
Editorial Board Members

Infectio® COVID-19 CORONAVIRUS

Purpose of the document

This document provides guidance to decision makers, public and child health professionals to inform policy on the use of masks for children in the context of the COVID-19 pandemic. It does not address the use of masks for adults working with children or parents/guardians or the use of masks for children in health-care settings. This interim guidance will be revised and updated as new evidence emerges greatest price here, as they will fall the furthest

Background

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) advise the use of masks according to a risk-based approach, as part of a comprehensive package of public health interventions that can prevent and control the transmission of certain viral respiratory diseases, including COVID-19. Compliance with other measures including physical distancing, hand hygiene, respiratory etiquette and adequate ventilation in indoor settings is essential for reducing the spread of SARS-CoV-2, the virus that causes COVID-19.

This guidance provides specific considerations for the use of non-medical masks, also known as fabric masks, by children as a means for source control in the context of the current COVID-19 pandemic. The document is an annex to the WHO's Advice on the use of masks in the context of COVID-19[1] in which further details on fabric masks can be found. This annex also advises the use of medical masks for children under certain conditions. For the purposes of this guidance, children are defined as anyone below the age of 18 years[2].

Transmission of COVID-19 in children

Currently, the extent to which children contribute to transmission of SARS-CoV-2 is not completely understood.

According to the WHO global surveillance database of laboratory confirmed cases developed from case report forms provided to WHO by Member States[3] and other studies, 1-7% of COVID-19 cases are reported to be among children, with relatively few deaths compared to other age groups[4-8].

To date, the available evidence suggests that most reported cases among children have resulted from transmission within households, although this observation may have been influenced by school closures and other stay at home measures implemented by some countries[7,9]. Although culture competent virus has been isolated from symptomatic children with viral load levels found to be similar to that in adults[10], evidence from available studies of contacts of COVID-19 cases and cluster investigations suggests that children are unlikely to be the main drivers of COVID-19 transmission[7,9 11-14]. To date, documented transmission among children and staff within educational settings is limited[15-20]. Evidence is also limited regarding the prevalence of SARS-CoV-2 infection among children, as measured by sero epidemiology studies. However, available evidence suggests that sero prevalence appears to be lower for younger children compared to older children and adults[17,21-25].

Studies of viral load and the duration of viral shedding of infectious virus in children compared to adults, are also limited. One published study suggests that viral load in infected patients may differ by age, and that symptomatic children have a longer duration of viral shedding than asymptomatic children[25]. Some studies have reported that children below five years are reported to have lower

Use of masks in children for COVID-19 and other respiratory diseases

Evidence on the benefits and harms of children wearing masks to mitigate transmission of COVID-19 and other coronaviruses is limited. However, some studies have evaluated the effectiveness of mask use in children for influenza and other respiratory viruses[30-34]. A study of mask wearing during seasonal influenza outbreaks in Japan noted that the use of masks was more effective in higher school grades (9-12 year old children in grades 4-6) than lower grades (6-9 year old children, in grades 1-3)[34].

Advice to decision makers on the use of masks for children in the community

Overarching guiding principles

Given the limited evidence on the use of masks in children for COVID-19 or other respiratory diseases, including limited evidence about transmission of SARS-CoV-2 in children at specific ages, the formulation of policies by national authorities should be guided by the following overarching public health and social principles:

- Do not harm: the best interest, health and well-being of the child should be prioritized.
- The guidance should not negatively impact development and learning outcomes.
- The guidance should consider the feasibility of implementing recommendations in different social, cultural and geographic contexts, including settings with limited resources, humanitarian settings and among children with disabilities or specific health conditions.

Advice on the use of masks in children

WHO and UNICEF advise decision makers to apply the following criteria for use of masks in children when developing national policies, in countries or areas where there is known or suspected community transmission of SARS-CoV-2 and in settings where physical distancing cannot be achieved.

1. Based on the expert opinion gathered through online meetings and consultative processes, children aged up to five years should not wear masks for source control. This advice is motivated by a "do no harm" approach and considers:

2. For children between six and 11 years of age, a risk-based approach should be applied to the decision to use of a mask. This approach should take into consideration:

   Intensity of transmission in the area where the child is and updated data/available evidence on the risk of infection and transmission in this age group;

   Social and cultural environment such as beliefs, customs, behavior or social norms that influence the community and

population's social interactions, especially with and among children;

The child's capacity to comply with the appropriate use of masks and availability of appropriate adult supervision; Potential impact of mask wearing on learning and psychosocial development.

Additional specific considerations and adaptions for specific settings such as households with elderly relatives, schools, during sport activities or for children with disabilities or with underlying diseases.

3. Advice on mask use in children and adolescents 12 years or older should follow the WHO guidance for mask use in adults[1] and/or the national mask guidelines for adults. Even where national guidelines apply, additional specific considerations and adaptions for special settings such as schools, during sport, or for children with disabilities or with underlying diseases will need to be specified.
4. The use of a medical mask for immune compromised children or for pediatric patients with cystic fibrosis or certain other Diseases (e.g. Cancer) is usually recommended but should be assessed in consultation with the child's medical provider.

Implementation considerations

Local epidemiology and contextual issues, such as intensity of transmission, ability to physically distance or implement appropriate ventilation measures in indoor settings, age mixing and contact with other vulnerable individuals should be considered when adopting advice for wearing masks among different age groups, in addition to potential harms and adverse effects of mask wearing.

Age-appropriate communication aimed at improving understanding of the purpose of mask wearing, safe and appropriate mask wearing and maintenance of masks, should be provided by parents/guardians, teachers, educators, and trusted community members through role-modelling. Materials, messages and mechanisms for communication on masks for children should remain flexible and adaptive and be systematically reviewed and updated based on changes in evidence and community needs and questions[48,49]

Monitoring and evaluation of the impact of the use of masks in children

If authorities decide to recommend mask-wearing for children, key information should be collected on a regular basis to accompany and monitor the intervention. Monitoring and evaluation should be established at the onset and should include indicators that measure the impact on the child's health, including mental health; reduction in transmission of SARS-CoV-2; motivators and barriers to mask wearing; and secondary impacts on a child's development learning, attendance in school, ability to express him/herself or access school; and impact on children with developmental delays, health conditions, disabilities or other vulnerabilities. Data should be used to inform strategies on communication; training and support to teachers, educators, and parents; engagement activities for children; and distribution of materials that empower children to use masks appropriately. Analysis should include sex, age, physical, social and economic stratification to ensure that the policy implementation contributes to reducing health and social inequities.

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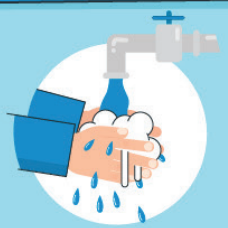
HOW TO WEAR A MEDICAL MASK SAFELY

who.int

Do's



Wash your hands before touching the mask

Inspect the mask for tears or holes

Find the top side, where the metal piece or stiff edge is

Ensure the colored-side faces outwards

Place the metal piece or stiff edge over your nose

Cover your mouth, nose, and chin

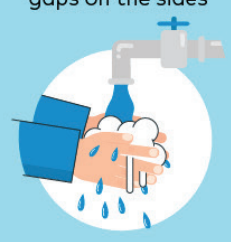
Adjust the mask to your face without leaving gaps on the sides

Avoid touching the mask

Remove the mask from behind the ears or head

Keep the mask away from you and surfaces while removing it

Discard the mask immediately after use preferably into a closed bin



Wash your hands after discarding the mask

Don'ts

Do not Use a ripped or damp mask

Do not wear the mask only over mouth or nose

Do not wear a loose mask

Do not touch the front of the mask

Do not remove the mask to talk to someone or do other things that would require touching the mask

Do not leave your used mask within the reach of others

Do not re-use the mask

Remember that masks alone cannot protect you from COVID-19. Maintain at least 1 metre distance from others and wash your hands frequently and thoroughly, even while wearing a mask.

World Health Organization

Winners of Lucky Draw

Reported by: Dr. Shuja Ajaz

Infectio® COVID-19 CORONAVIRUS

Winners of Lucky Draw

The editorial board of Infectio® magazine is pleased to announce the names of winners for quiz from the 11th edition. The lucky draw was held in a meeting at Dr. Ziauddin University Hospital, Karachi. Following are the names of Lucky winners drawn randomly by **Prof. Ejaz Ahmed Vohra** and his team.

We congratulate the winners and once again thanks all contestants for their participation in quiz

1	Dr. Samiullah Wazir	Peshawar
2	Dr. Syed M. Tariq	Mardan
3	Dr. Shabir Hussain	Kohat
4	Dr. Yasir Khurshid	Swat
5	Dr. Naeemullah Shah	Swat
6	Dr. Jawad Yousuf Dar	Gujranwala
7	Dr. Moinuddin Mir	Sialkot
8	Dr. Farooq Iqbal Khan	Narowal
9	Dr. Saadullah Khalid	Lahore
10	Dr. Asmara Gul	Lahore
11	Dr. Sadaf Asim	Karachi
12	Dr. Khalid Shafi	Karachi
13	Dr. Waseem Jamalvi	Karachi
14	Dr. Sagheer Ahmed	Karachi
15	Prof. Ali Akber Siyal	Nawabshah
16	Dr. Chandi Ram	Hyderabad
17	Dr. Fayyaz Jadoon	Abbottabad
18	Dr. Raza Muhammad	Battagram
19	Dr. Ejaz Khan	Mansehra
20	Dr. Younus Bhatti	Sukkur
21	Dr. Mudassir Sharif	Rawalpindi
22	Dr. Nisar Khan Sajid	Faisalabad
23	Dr. Kashan Arshad	Faisalabad
24	Dr. Sadia Khan	Multan
25	Dr. Rabia Saleem	Multan

Quiz & Answer

Choose the correct answer

Which of these antibiotics have activity against AmpC β-lactamases producing organisms?

1. Ceftriaxone
2. Cefepime
3. Cefuroxime
4. Cefalexin
5. Cefradine

Scan this QR code to submit your response