Original Article: Emerging Infectious Diseases: Strategies for Prevention and Control

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ABSTRACT

Coronaviruses are a large family of viruses that, according to evidence, can cause diseases ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) or even more severe diseases such as Severe Acute Respiratory Syndrome (SARS). Epidemiology A disease, whether contagious or non-contagious, may be more or less common in some areas and under some conditions among a large number of people. In other words, a disease can be more or less common. The science that studies how diseases spread and what causes them to spread is called epidemiology, which is a branch of medical science. Basically, epidemiology seeks to prevent the occurrence and spread of a disease or to control it if it does spread. Communicable diseases are a type of infectious disease that can be transmitted from person to person or to humans through insects and other animals. This disease can also be transmitted by organisms in contaminated water or food that has been exposed to the environment by an infected person. For example, a sick child's cough is one way to transmit a cold or flu to others, which must be well taken care of and prevented. In general, the factors that because infectious diseases include viruses, bacteria, and parasites. The signs and symptoms of infectious diseases will also vary depending on the agent causing the infection.

Introduction

Infectious diseases caused by microbes are a threat to health, but they can be controlled by observing hygiene and prevention [1]. Understanding and being aware of the methods of transmission of infectious diseases is of great importance in preventing infectious diseases. Infectious diseases are caused by organisms such as bacteria, viruses [2], fungi, and parasites and can be transmitted through direct contact, indirect contact, insect bites, or

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contaminated food. Symptoms of infectious diseases usually include fever, fatigue, and muscle aches, and some of them can be prevented with vaccines and good hygiene [3].

Ways to Prevent Infectious Diseases

Given that following the tips for preventing infectious diseases can significantly reduce the percentage of people getting infected, we will introduce the most important ways to prevent them:

1- Hand washing: One of the most common and simplest methods of prevention is regular hand washing. This method also prevents the occurrence of many infectious diseases in people. Typically, situations where hands need to be washed include:

- ✓ After sneezing or coughing.
- ✓ Touching animals.
- ✓ After contact with meat, eggshells, chicken.
- ✓ After using the toilet [4].

2- Proper diet: Using a proper diet strengthens the body's immune system against external factors, which in turn reduces the incidence of infectious diseases.

3- Water consumption: Another simple way to prevent infectious diseases is to drink enough water throughout the day [5].

4- Observing hygiene tips: Such as washing hands, having a proper diet, and drinking enough water can reduce the risk of infectious diseases [6].

5- Taking care of insect bites: Given that insect bites such as mosquitoes or ticks are the cause of infectious diseases such as malaria, it is essential for people to use mosquito nets or insect repellents.

6- Avoiding risky behaviors: In order to prevent infectious diseases, it is necessary for people to avoid behaviors such as consuming alcohol, drugs, psychotropic substances, or having unprotected sex. Also, using sharp and shared injection equipment is a common factor that causes the transmission of diseases such as hepatitis and syphilis. Therefore, it is essential for people not to use these devices [7].

7- Vaccination: Another reliable method of prevention is timely vaccination. This method has so far helped to minimize and prevent many infectious diseases such as smallpox, diphtheria, tetanus, polio, and shingles in the elderly [8].

8- Screening and isolation of patients: Isolation of people with infectious diseases prevents the transmission of the disease agent to other people. It is also necessary to teach children the methods of preventing infectious diseases through an appropriate program [9].

9- Observing personal hygiene: People should observe hygiene tips to prevent the transmission of infectious diseases. For example, in case of infectious diseases caused by respiratory diseases, it is necessary to cover their mouth and nose when sneezing or coughing. Also, avoid contact with others as much as possible and wear a mask if you are in a group of people [10].

10- Maintaining hygiene when in contact with animals: In addition to maintaining personal hygiene to prevent the transmission of infectious diseases, it is necessary for people to also maintain hygiene when in contact with animals. Because infectious diseases may also be transmitted to humans through animals, thereby increasing the number of infections. To prevent infectious diseases, it is necessary to maintain personal hygiene, use mosquito nets, avoid risky behaviors, get vaccinated, and isolate patients [11].

Table 1: Infectious diseases are classified based on their mode of transmission, which we will mention

Types of infectious diseases based on transmission methods	Transmission method	Examples
Through the air	These infectious diseases are spread through the air through coughing or sneezing and thus spread to other people.	Tuberculosis, bronchitis in the elderly, diphtheria.
Through sex	In this method, an infected person may transmit the infectious agent to his or her partner. In addition, this type of transmission will cause the infectious disease to be transmitted from mother to baby.	AIDS, hepatitis.
Through feces	These infectious diseases cause the infectious agent to be transmitted to other people through contaminated water or food. Also, this method of transmission, when the infectious agent and contamination occur on a large scale, may cause epidemics.	Diarrhea, cholera, some types of vomiting.
Through insects	A large number of infectious diseases are caused by vector insects that live in a particular area.	Malaria, meningitis, plague, typhus, tetanus, yellow fever.

Are infectious diseases transmitted from animals to humans?

Yes. It is possible that the infectious agent related to the infectious disease can also be transmitted from an animal to a human and cause the disease in him [12].

Is an infectious disease only for adults?

No. This type of disease may occur at any age and in any gender and may cause risks and problems such as fever, headache and even death [13].

Are infectious diseases dangerous?

Given that the agents of infectious diseases are infectious, if they are not taken seriously or not treated, they may cause irreparable harm to people [14].

How are infectious diseases caused?

The agents that cause this disease are various, the most common of which are viruses, bacteria and parasites [15].

What measures are necessary to prevent infectious diseases?

One of the most important and effective methods available for prevention is constant hand washing and personal hygiene [16].

What are the types of communicable diseases?

Communicable diseases are caused by viruses, bacteria, fungi and parasites and include diseases such as influenza, tuberculosis, measles, AIDS, malaria and fungal and parasitic infections. These diseases are transmitted

through direct contact, air, water, food, insect bites and blood transfusions [17].

Understanding infectious diseases

These diseases, which are caused by pathogenic microorganisms such as bacteria, viruses, fungi and parasites, threaten public health worldwide. Understanding the nature of these diseases is crucial for their prevention, diagnosis and treatment. They can be transmitted through various routes including direct contact, indirect contact, airborne transmission and vector (carrier) transmission [18]. So far, preventive measures such as vaccination, sanitation measures, vector control and quarantine have played a vital role in controlling the spread of infectious diseases. Diagnosis involves laboratory tests, imaging studies, and clinical evaluations, most often involving antimicrobial drugs [19].

Role of Health Professionals

In the fight against infectious diseases, health care professionals play a critical role in diagnosing and treating patients and educating the public about preventive measures. Researchers help develop new treatments and vaccines, while policymakers implement strategies to control disease outbreaks and allocate resources for public health interventions [20]. The pharmaceutical industry also plays a vital role in the development and production of antimicrobial drugs.

Challenges of Infectious Diseases

One of the major challenges in infectious diseases is currently the emergence of antimicrobial resistance, which is reducing the effectiveness of existing treatments. Addressing this challenge requires a multidisciplinary approach involving health care professionals, researchers, policymakers, and the pharmaceutical industry [21]. Developing new antimicrobial agents, promoting antimicrobial surveillance, and improving infection control practices are essential to combat the agents that cause resistance [22].

A) Reliable sources: In addition to the World Health Organization (WHO), there are several other reliable sources that update treatment protocols and warnings regarding this category of diseases. Some of these include:

1- Centers for Disease Control and Prevention (CDC): The CDC is a national public health institute in the United States that provides valuable information on infectious diseases, especially on outbreaks, prevention guidelines to the public [23].

2- National Institute of Allergy and Infectious Diseases (NIAID): NIAID, part of the US National Institutes of Health (NIH), conducts and supports research to better understand, treat, and prevent infectious diseases. The center provides in-depth information on various infectious diseases and emerging research in this field [24].

3- European Center for Disease Prevention and Control (ECDC): The ECDC is an agency of the European Union that works to strengthen European health against infectious diseases. They provide comprehensive information on disease surveillance, risk assessment, and public health guidance.

4- Infectious Diseases Society of America (IDSA): IDSA is a professional organization that provides guidelines, educational resources, and advocacy related to infectious diseases [25].

5- Johns Hopkins Center for Health Security: This center provides resources on global health security, including infectious disease outbreaks and biosecurity issues. Johns Hopkins publishes reports, articles, and expert insights on current infectious disease challenges [26].

Lupus and Autoimmune Disease

An autoimmune disease is a condition in which the body's immune system is responsible for inflammation and destruction of its own cells. Many people with lupus experience a mild form, but without proper treatment, it can become severe. Currently, there is no known cure for lupus. Therefore, treatment focuses on reducing symptoms and reducing inflammation [27].

A) Lupus Symptoms: The symptoms of lupus can depend on the parts of the body that are affected. The inflammation seen in lupus can affect various organs and tissues in the body.

B) Photosensitivity in Lupus: While too much sunlight can be harmful to anyone, many people with lupus also have photosensitivity. Photosensitivity means that you are sensitive to ultraviolet rays. Some people with lupus may find that exposure to sunlight causes specific symptoms, including:

1- Rash: primarily a noticeable rash when the SSA (Ro) antibody is present.

2- Fatigue:

3- Joint pain:

4- Internal swelling:

Emerging infectious diseases

The third pandemic caused by the coronavirus, which began in China in 2019, has spread to large areas in more than 160 countries around the world. This pandemic emphasizes the importance of paying attention to emerging infectious diseases more than ever before [28]. The most important ways to combat emerging diseases are:

- ✓ Strengthening the active surveillance system for infectious diseases.
- ✓ Improving diagnostic capabilities to identify pathogens.
- ✓ Strengthening communication and active cooperation with national and international institutions.
- ✓ Promoting routine antimicrobial susceptibility testing.
- ✓ Promoting the principled use of antimicrobial drugs by the medical community [29].
- ✓ Increasing the number of skilled personnel.
- ✓ Promoting applied research.
- ✓ Promote accurate and timely reporting of disease cases at national and international levels [30].

Surveillance, early detection and rapid response to emerging and re-emerging infectious disease outbreaks require responsible policy, planning, education, support and action by countries and health systems. This in turn depends on having a resilient, flexible and smart health system that can respond to any public health event [31].

Influenza

Influenza viruses cause influenza. There are four types of influenza viruses: influenza A, B, C and D. Types A and B are usually the main cause of winter outbreaks in most countries of the world. Influenza A viruses are the only influenza viruses that cause influenza pandemics. Influenza C virus infections generally cause mild illness and are not thought to cause human epidemics. Influenza D viruses mainly affect cattle and are transmitted to other animals. There have been no confirmed cases of human infection with this type of influenza virus. Unlike influenza A virus, influenza B is found only in humans and does not usually cause pandemics [32].

Comparison of types of influenza and their treatment methods

1- Monkey flu: One of the most dangerous types of influenza is monkey flu or Mpox, which, as its name suggests, is transmitted by monkeys. Mpox is an infectious disease caused by the monkey pox virus. This infection can be

severe, especially in children and pregnant women [33]. The causative agent of this infection is not related to influenza viruses and is part of the same family of viruses that caused severe smallpox in the past and were eradicated in the 1980s. Symptoms of the disease also vary and include high fever, skin rash, sore throat, and severe itching and body aches [34].

2- Bird flu in humans: Bird flu is caused by a type A influenza virus in birds and is then transmitted from birds to humans through contact with humans. However, human disease from these viruses is very rare, and the severity of illness caused by bird flu virus infection in human's ranges from asymptomatic or mild illness to severe illness that can lead to death.

3- Gastrointestinal flu (stomach flu): Another type of flu is called gastroenteritis. Viral gastroenteritis is an intestinal infection that includes signs and symptoms such as watery diarrhea, stomach cramps, nausea or vomiting, and sometimes fever [35]. The most common way to get viral gastroenteritis, often called the stomach flu, is through contact with an infected person or by consuming contaminated food or water. A variety of viruses can cause this type of gastrointestinal infection, the most common of which include noroviruses and rotaviruses [36].

4- Influenza A: Influenza A viruses are classified into subtypes based on the composition of proteins on the surface of the virus, each of which can cause a different type of influenza disease in humans. These viruses can become epidemics in different subtypes and through different hosts. Influenza A, or influenza A virus, can infect animals, although it usually infects many people around the world. Wild birds usually serve as hosts for this influenza virus [37]. Influenza A viruses are constantly changing and are generally responsible for major influenza epidemics.

5- Spanish Flu: One of the most dangerous and deadly influenza epidemics was the Spanish Flu. The Spanish flu pandemic of 1918 affected about 33% of the world's population. The Spanish flu was a pandemic, a new influenza A virus that spread easily and infected people all over the world [38].

Symptoms of flu

The symptoms of flu can vary and range from asymptomatic illness to mild, moderate and severe symptoms. Influenza is an acute infectious disease caused by the influenza virus and is usually accompanied by sudden and severe symptoms. It can be transmitted from person to person and in some cases, especially in people with weakened immune systems, it can cause serious complications [39].

1- Infection Control at APOLLO - Excellence at Every Step: Apollo Hospitals has had a strong infection control program for many years. Because we know that controlling and preventing infections in our patients and the staff who care for them is an absolute moral obligation and responsibility. Therefore, every hospital in the Apollo Group has a comprehensive infection prevention and control program [40]. The infection control program covers policies related to hand hygiene, occupational hygiene, isolation, infectious disease reporting, clinical specimen collection, environmental hygiene, antibiotic use, and infection prevention in practice and visitor areas.

It also focuses on the prevention of nosocomial infections, especially ventilator-associated infections, surgical site infections, urinary tract infections, and intravascular infections, as well as the control of communicable diseases with policies related to patient care activities. The policies and guidelines provided are evidence-based on scientific knowledge and recommendations from national and international societies and organizations. The

infection control program is supported by information management regarding microbial surveillance and notifiable diseases. Guidelines are also provided for periodic audits, to assess and control quality [41]. The overall goal of the program is to guide physicians and healthcare workers to minimize the risk of patient infection and ensure safety.

Salient features of the program include

1- Standard or Universal Precautions to ensure the safety of healthcare workers: Universal and standard precautions are strictly followed. Orientation and training programs are conducted at the time of induction and regularly for all staff based on standard precautions as well as on key infection control norms such as hand hygiene practices. Our employee health policy ensures that all staff are vaccinated or immune to Hepatitis B and Varicella. Appropriate screening and vaccination of food handlers is also done [42].

2- Use of clinical practice guidelines and protocols: Guidelines are followed for the use and care of intravascular devices, catheters and in the use of other such invasive devices. Equipment care, linen disinfection, ventilation of operating rooms and CCU as well as management of blood spills and needle stick injuries are done as per international protocols. We also have a waste management policy and laboratory safety program [43].

3- Management of Antibiotic Resistance in Microorganisms (Antibiotic Surveillance Program): With the advent of newer antibiotics, the incidence of antibiotic resistance has increased. While antibiotic resistance is a global phenomenon, the nature of antibiotic resistance varies from country to country. Although this is an undesirable and inevitable trend [44].

Infection Control Data Tracking

Each Apollo Group hospital tracks infection control parameters month-on-month and these are thoroughly analysed with standards and changes and values. Periodic clinical studies are also conducted on infection control, pathogens and other relevant areas. All infection control parameters are tracked as part of Apollo Hospitals' ACE 25 CLINICAL Excellence initiative, where key quality parameters of each Apollo Group hospital are entered into a single online dashboard, which is scored and reviewed by the top leadership of the group every month [45]. The responsibility for infection control at Apollo Hospitals lies with the Hospital Infection Control Committee (HICC), whose primary function is to formulate and implement policies for the effective management of infection control issues and the spread of infection. The HICC comprises senior leaders, physicians and managers of the organization, thereby underscoring the highest importance that the organization attaches to infection control [46].

Each Apollo location also has an infection control team headed by a Senior Consultant, Infectious Diseases. This team consists of infection control nurses and other key staff from various departments who play a pivotal role in implementing all aspects of the hospital infection control program, leading all infection control initiatives, motivating and creating awareness among hospital staff through special campaigns and programs [47], and maintaining compliance. Infection control is a key initiative in every Apollo Hospital and not only helps us adhere to international norms in infection control, but also ensures world-class clinical outcomes and exceptional patient safety and satisfaction.

Symptoms of the novel coronavirus

Some people who get infected with the novel coronavirus experience symptoms similar to

seasonal allergies or a cold. The most common symptoms of the novel coronavirus are sore throat, cough, stuffy nose, and runny nose. In some people, the disease is accompanied by severe headache, fever, and chills [48].

According to the Centers for Disease Control and Prevention (CDC), the J.N.1 coronavirus strain is derived from the BA.2.86 (Pirola) virus type. So you should expect symptoms similar to those of a mild cold. In fact, it can be said that the new coronavirus strain in 1403, although it is more spreadable, does not have worrying symptoms [49].

The J.N.1 coronavirus strain is highly contagious, but its symptoms appear mild. Experts consider the most common symptoms of the new coronavirus strain in Iran to include the following:

- ✓ Fever.
- ✓ Weakness.
- ✓ Dry cough.
- ✓ Runny nose.
- ✓ Headache.
- ✓ Sore throat.
- ✓ Loss of sense of smell and taste.
- ✓ Diarrhea.
- ✓ Stomach spasms.
- ✓ Extreme fatigue.
- ✓ Vomiting.
- ✓ Loss of appetite.

If the above symptoms become more severe after seven days and other symptoms such as shortness of breath, fever above 38 degrees, blue lips and face, chest pain and confusion appear, be sure to see a doctor specializing in infectious diseases. It should be noted that children experience very mild symptoms of the J.N.1 strain of coronavirus and in most cases recover with home remedies. However, if the severity of the symptoms of the disease increases in your young child, seek help from a pediatrician [50].

The new coronavirus with the J.N.1 strain was first seen in the United States. It then spread to 41 other countries, including India, China, France, Iceland, Portugal, Spain, the Netherlands, Canada, Singapore, England, Sweden, and Japan. The CDC reported that this Covid strain was able to increase the number of cases of coronavirus in the United States from 3.5% to 21% four months after its first appearance in the United States. Interestingly, this rate of cases of the latest strain of coronavirus reached more than 85% in the United States by the end of 2023. Currently, the new strain of coronavirus has been observed in Iran and, as we said before, its transmission speed is very high. Therefore, the mild symptoms of the Covid-19 strain JN1 should not be underestimated [51].

Comparison of the new coronavirus with previous strains

The symptoms of the new coronavirus (JN1 strain) are very similar to the BA.2.86 strain, nicknamed Pirola, of the Amicron type. For easier diagnosis, we compare the symptoms of the J.N.1 strain with other Covid-19 strains in the table below:

Table 2. Comparison table of the latest corona strain with previous strains

Symptoms	J.N.1 strain	Perilla strain	Delta strain	Cold
Headache	Common	Common	Common	Rare

Cough	Common (dry cough)	Common (dry cough)	Common (persistent cough)	Common (cough with phlegm)
Fatigue	Common	Common	Common	Sometimes
Sneezing	Occasional	Occasional	Rarely	Usually
Sore throat	Common	Common	Common	Common
Runny nose	Common	Common	Common	Common
Fever	Common	Common	Common	Common
Diarrhea	Occasional	Occasional	Occasional	Rarely
Reduced sense of smell and taste	Common	Common	Common	Never

How to prevent the new corona strain?

The transmission method of the J.N.1 corona strain is no different from other strains of Covid-19 and is easily transmitted through coughing, sneezing and exhaled air. With the increase in the spread of the new corona in the winter season, experts were concerned about the severity of the respiratory infection burden. For this reason, they prioritized compliance with health protocols above all else [52].

Wearing a mask is the best way to prevent the transmission of the J.N.1 corona strain. The Centers for Disease Control and Prevention (CDC) considers the best way to prevent the new corona strain, which has a high ability to spread and spread, to use a mask and maintain distance from others. In fact, you can protect yourself from contracting the new corona virus by using a mask in crowded places, maintaining distance from others, washing your hands frequently, and covering your face when coughing and sneezing [53].

Treatment for the Novel Coronavirus (J.N.1)

The Centers for Disease Control and Prevention (CDC) considers the same diagnostic and treatment regimens used for other COVID-19 strains to be effective for the J.N.1 strain. In fact, it does not appear to cause more infections, and the evidence suggests that the disease is milder [54].

How do vaccines affect the newest coronavirus strain?

Getting all doses of the vaccine according to your country's vaccination schedule will protect you against the new coronavirus. Recent research on the J.N.1 strain of COVID-19 shows that the latest vaccines for the disease produce antibodies that can protect you against J.N.1. You can prevent the new coronavirus by getting the latest vaccine available to protect you from the new coronavirus [55]. The coronavirus vaccine is essential for people in high-risk groups, such as those with weakened immune systems and people over 60 years of age, according to the national coronavirus vaccination guidelines.

Complications of the new coronavirus strain

The Centers for Disease Control and Prevention (CDC) has identified the J.N.1 coronavirus strain as one of the strains with the highest potential for spread and spread. This has caused many people to worry about its complications, such as a devastating wave and increased mortality among high-risk groups. After research into the latest coronavirus strain (J.N.1 strain), experts concluded that despite its many mutations compared to the coronavirus, J.N.1 strain is unlikely to cause fatal complications due to vaccination and increased immunity after previous infections [56].

Can the symptoms of the new coronavirus strain (COVID J.N.1) come and go?

Some people who test positive for COVID-19 feel better for the first few days after contracting the new coronavirus and testing positive for COVID-19 may experience new symptoms. Research suggests that symptoms of COVID-19 may increase or decrease during the recovery period. Some people with the new coronavirus have reported that their symptoms suddenly go from good to bad overnight after feeling better [57].

It is important to note that these phases are part of the natural course of the disease, and most people feel completely better within 2 weeks of the onset of symptoms [58].

What is Hantavirus?

Hantaviruses are a family of viruses that are mainly spread by rodents and can cause a variety of illnesses in people around the world. Hantaviruses are known as New World viruses in the Americas and can cause hantavirus pulmonary syndrome (HPS). Other hantaviruses, known as Old World hantaviruses, are found mostly in Europe and Asia and can cause hemorrhagic fever with renal syndrome (HFRS) [59]. Each hantavirus subtype has a specific rodent host species and is transmitted to humans mostly through virus shed in urine, feces, and saliva, and less commonly by bites from an infected host animal. The most important hantavirus in the United States that can cause HPS is the Sin Nombre virus, which is spread by white-footed mice or deer mice [60].

Hantavirus Pulmonary Syndrome (HPS)

Hantavirus pulmonary syndrome (HPS) is a severe and sometimes fatal respiratory illness in humans caused by infection with hantaviruses. Anyone who comes into contact with rodents carrying hantaviruses is at risk of developing HPS. Rodent infestation in and around the home is the main risk of exposure to hantavirus. Even healthy people are at risk of HPS infection if exposed to the virus [61].

Reported Cases of Hantavirus Disease in the United States

1- Hantavirus Infection in the United States: Surveillance for hantavirus disease in the United States began in 1993 with an outbreak of severe respiratory illness in the Four Corners region (an area between the states of Colorado, Utah, Arizona, and New Mexico). Hantavirus pulmonary syndrome (HPS) became a nationally significant disease in 1995 and is now reported through the National Notable Disease Surveillance System (NNDSS) when a patient present with fever and has laboratory-confirmed evidence of hantavirus infection. In 2014, the State Board and local epidemiologists approved the National Report of Laboratory Hantavirus Infections, which includes HPS and no pulmonary hantavirus infection [62].

2- Tracking a Mysterious Case of a Deadly Disease in the United States: In May 1993, an outbreak of an unexplained lung disease occurred in the southwestern United States in

the region of Arizona, New Mexico, Colorado, and Utah known as the Four Corners. A young man who was physically unwell, developed shortness of breath, was taken to a hospital in New Mexico, and died very quickly [63].

All components of society, including employers, workers and employees, must be fully prepared to combat the coronavirus, even if the coronavirus epidemic has not yet reached that country or region. This measure has a significant impact on reducing lost work days, employee absenteeism and slowing the spread of the virus if the epidemic reaches the region. The World Health Organization report was written based on a joint mission of 25 expert scientists from China, Germany, Japan, Korea, Nigeria, Russia, Singapore, the United States of America and the World Health Organization. The group was present in China from February 16 to 24 and, while reviewing China's comprehensive activities in different regions of the country, published their report on February 28 [64].

According to the report, the Chinese government has succeeded in preventing the excessive spread of the disease to other parts of China and also to other parts of the world by acting quickly and decisively. It seems that the increasing growth of the disease in all parts of the world casts doubt on the conclusion of this report for the whole world [65]. It seems that countries around the world can learn constructive lessons from this strategy. According to the WHO report, immediately after the official announcement of the outbreak at the national level, nine working groups were formed under the titles of coordination, epidemic prevention and control, drug treatment, research, mass communication, foreign affairs, medical supplies support, life-saving equipment and social stability, and by January 29, 2020, all provinces in China had initiated the highest level of response for public health emergencies.

Each of these working groups was responsible for a minister. The necessary rules and regulations for responding to emergencies, preventing and controlling infectious diseases were also developed or revised. Viral colds usually have a high fever and severe cough. Other symptoms include a sore throat and a feeling of weakness [66].

This type of cold will affect many people in a short period of time. If you have a high fever and severe body aches, it is better to see a doctor. Because you may have the flu. If the flu is correctly diagnosed in the first 2 days, the disease can be controlled and treated with antiviral drugs [67].

Otherwise, the doctor will recommend the need for more rest, fluid intake and the use of painkillers. Viruses such as the influenza virus usually remain in the patient's body for up to 14 days. If children and the elderly develop viral infections in the respiratory tract, they may be at greater risk and be involved in the viral disease for a longer period of time.

Conclusion

The results of a study conducted in Japan in 2020 showed that the most important factor in motivating healthcare workers to work in critical situations such as epidemics is having a sense of security from the country, government, and hospital management, and the existence of trust between employees and the organization.

According to the results of this study, the best ways to increase trust between the organization and healthcare workers during an epidemic are to provide frequent information to employees, to communicate with and encourage employees, to pay compensation if employees become infected, and to provide them with appropriate protective equipment. Another study conducted in February 2020 identified migrant workers as another group at risk of infection with the novel coronavirus.

The study noted that these people face more barriers to accessing health services in the host country. In addition, they have more mental disorders and a lower quality of life, which is exacerbated during the quarantine period due to the novel coronavirus epidemic and job loss. They may also not realize the seriousness of the epidemic and how to protect themselves from the epidemic due to the lack of reliable information in their language. Therefore, it is recommended that migrant workers have greater access to health services during epidemics and that public health campaigns in different languages be made available to them as soon as possible through various communication networks. In the face of infectious diseases, paying attention to people's jobs is very important to prevent the spread of the disease at the community level, Webster and colleagues stated in a review study. To prevent the spread of disease and its health consequences in the workplace, organizations should pay attention to developing policies for the absence of sick employees while promoting a work culture. More research is needed to identify risk factors for the spread of viral infections in workplaces, educational centers, and industries, which can be used to plan preventive interventions at the organizational and individual levels. In any biological disaster, fear, anxiety, and uncertainty are common and can be considered as an obstacle to appropriate medical and psychological interventions. Based on the experiences gained from previous epidemics of viral diseases and their psychosocial complications, the use and provision of support services and psychological and psychiatric treatments are essential to achieve health goals in the new coronavirus pandemic. In the absence of appropriate therapeutic measures for this virus, the best way to deal with it is to prevent the spread of infection and control the sources of infection. The main strategies recommended by the World Health Organization are timely diagnosis and reporting of the disease, continuous monitoring of the epidemiological pattern of the disease, timely isolation and treatment of patients, and implementation of control measures such as social distancing at the community level.

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