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ORIGINAL PAPER

## IMPORTANCE OF ENTREPRENEURSHIP AND INNOVATION IN THE HEALTHCARE INDUSTRY DURING THE COVID-19 PANDEMIC

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**Abstract.** National health care systems during the COVID-19 pandemic faced very serious functional problems in diagnosing the disease and providing patients with accessible and high-quality medical care, which directly affected the number and proportion of those who became ill, recovered and died from COVID-19. The suddenness, speed and scale of the spread of COVID-19 led to a collapse, to significant disruptions in the functioning of medical institutions in most countries, including Russia; their specific manifestations are described in the article. The new realities have required new management decisions. The purpose of the article is to study the contribution of entrepreneurship, including innovative entrepreneurship, in overcoming the crisis of the healthcare system caused by the COVID-19 pandemic and in adapting it to the new realities. The study was based on primary data (results of a survey of managers of several major medical institutions in Russia) and secondary data (results of a bibliographic review). Development and distribution of testing systems, medication and vaccines, oxygen supply, equipment of intensive care units, provision of personal protective equipment, disinfectants, supply of special beds and disposable tableware, gadgets and software, introduction of artificial intelligence technologies, telemedicine, innovative methods of personnel management, etc. – this is the list of the areas of entrepreneur-innovators' investment in the health care system, which are in demand by the public sector in the conditions of the COVID-19 pandemic, revealed in the article. The development of innovative entrepreneurship in the health care system will improve the quality of patient care, increase cost efficiency and reduce risks. Due to the development of entrepreneurship and innovative technologies in healthcare, each new wave of the COVID-19 pandemic is under control and develops according to an easier scenario.

**Keywords:** COVID-19 pandemic, entrepreneurship, healthcare facilities, healthcare system, innovative technologies, investments

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ОРИГИНАЛЬНАЯ СТАТЬЯ

## РОЛЬ ПРЕДПРИНИМАТЕЛЬСТВА И ИННОВАЦИЙ В ОБЕСПЕЧЕНИИ ФУНКЦИОНИРОВАНИЯ СИСТЕМЫ ЗДРАВООХРАНЕНИЯ В ПЕРИОД ПАНДЕМИИ COVID-19

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**Аннотация.** Национальные системы здравоохранения во время вспышек пандемии COVID-19 столкнулись с очень серьезными функциональными проблемами диагностирования заболевания и обеспечения пациентов доступной и качественной медицинской помощью, что напрямую повлияло на численность и соотношение заболевших, выздоровевших и умерших от COVID-19. Внезапность, скорость и масштабы распространения COVID-19 привели к коллапсу, к существенным сдвигам в функционировании медицинских учреждений большинства стран мира, в том числе и России; их конкретные проявления описаны в статье. Новые реалии потребовали принятия новых управленческих решений. Цель статьи состоит в изучении вклада предпринимательства, в том числе инновационного, в преодолении кризиса системы здравоохранения, вызванного пандемией COVID-19, и в ее адаптации к новым реалиям. Базой исследования послужили первичные данные (результаты опроса руководителей нескольких крупных медицинских учреждений России) и вторичные данные (результаты библиографического обзора). Разработка и распространение тестирующих систем, лекарственных препаратов и вакцин, снабжение кислородом, оснащение оборудованием отделений интенсивной терапии, предоставление средств индивидуальной защиты, средств дезинфекции, поставки специальных кроватей и одноразовой посуды, гаджетов и программного обеспечения, внедрение технологий искусственного интеллекта, телемедицины, инновационных методов управления персоналом и др. – вот перечень раскрываемых в статье направлений инвестирования предпринимателей-инноваторов в систему здраво-

охранения, востребованных общественным сектором в условиях пандемии COVID-19. Развитие инновационного предпринимательства в системе здравоохранения позволит улучшить качество обслуживания пациентов, повысить эффективность затрат, сократить риски. Благодаря развитию предпринимательства и инновационных технологий в сфере здравоохранения каждая новая волна пандемии COVID-19 находится под контролем и развивается по более легкому сценарию. **Ключевые слова:** пандемия COVID-19, предпринимательство, медицинские учреждения, система здравоохранения, инновационные технологии, инвестиции

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### Introduction

The healthcare industry is one of the biggest areas and gives greater opportunities for the entrepreneurs to invest in the field of healthcare sectors. The healthcare services are totally different from other markets and provide services to the people in very different ways with great concern for public health conditions. The new investors are getting the facilities to use the new technologies for any kind of solutions. Through entrepreneurship the entrepreneur helps by applying data and several data analytical tools to meet the needs and requirements of healthcare within a community. They ensure the healthcare system and health care service about the care and concern is necessary and adequate to meet the requirements. They sometimes also make statistical predictions about the changes in providing care and service that may be required soon.

There are several roles of entrepreneurs in the healthcare service system which includes: allocation of the duties of each employee, making business changes when it is needed, creating new kinds of jobs by applying innovative ideas. Improving the standard of living while reducing the business risk. It was the time of global pandemic due to the COVID-19 which affected the whole health care system and made a huge breakdown and seeks for the help of entrepreneurs to bring the system upward and make changes to deal with the huge health crisis. It was challenging for the entrepreneurs to keep the system going without any interruption meeting the needs of the people. In that case the entrepreneurs tried to make changes and provide the data adequately and tried to provide information about any future risk.

The health care service runs totally in a different way from the other marketing services as this is related to the public health concern [1]. Mainly during the COVID-19 pandemic which was caused by the very contagious coronavirus brought the whole health care system in front of various increasing challenges in many first world countries worldwide.

In this case physical distancing was the most effective prevention method but the entrepreneur could not find any solutions for the healthcare professional to manage the challenge of keeping physical distancing who require the direct contact with the patient every day [2]. The government was also unable to meet the requirements of oxygen supply

and ICU facilities in the healthcare services to provide for the patients who need it.

The frontline healthcare workers become very vulnerable during the pandemic due to direct contact with the patient. Due to having a huge number of COVID-19 patients it was impossible for the investor to provide adequate amount of self-protection utensils to the healthcare professional in the health services [3]. They faced lack of adequate medicines, acute storage of masks, gloves, and personal protective equipment (PPE) to protect themselves but the business development authority has been helpless due to sudden increase in the requirements.

The health care professionals who had to be in direct contact with the COVID-19 patient had to keep physical distance with their family members too and thus they faced huge mental stress and faced anxiety due to the fear of losing their close ones [4]. Therefore, the mental health of the health care professionals who have been in the front-line face huge challenges about their own conditions.

The government should have been concerned before the COVID-19 spread dramatically among the population [5]. The government should have provided guidelines to the management of the healthcare services so that they could be prepared previously and provide the equipment and all-important utensils to the health care professionals.

The entrepreneurs who invest in healthcare should have been informed before the urgency of asking for beds, oxygen and medicines become a huge challenge in the healthcare system, so that they would have been prepared to provide a proper structure and technology to the healthcare system.

The entrepreneurship in the healthcare services can even improve the quality of service, lower cost effectiveness and streamline accesses, giving ideas about future risk to the healthcare sectors. The entrepreneurs who are interested in healthcare services, mainly in the healthcare market, the entrepreneurial minded professionals make the healthcare system easily accessible and provide better solutions to keep on providing services [6]. The healthcare service suddenly faced the new COVID-19 pandemic, there was very little data available about the new pandemic crisis to the healthcare management and the healthcare services. The sudden outbreak thus brought the whole health care service and management in front of huge challenges. There was a lack of information about the

new guidelines at the very first period of the outbreak, the physical distancing was the most effective way to avoid getting the disease but there were no adequate number of utensils to maintain the *biosafety level 3* that is (*BSL 3*) [7]. The management was helpless to provide the healthcare professionals who were the front-line workers the adequate amount of self-protection equipment and, they had to face challenges regarding the amount of medicine and providing proper guidelines.

Gradually the condition improved after a better understanding of the disease and its spreading. The technological help by the entrepreneur was very useful through which it became easy to measure the mortality and the morbidity rate [1]. Using technology, it was also possible to make a guideline to manage the disease with medications and get an idea about the efficacy of the different groups of antibiotics and antivirals [8]. According to the result the guidelines were made from the highest authority of the healthcare system such as the “*World Health Organization*” so that a proper medication and disease management can be provided to the patient to get recovery from the disease and improve the amount of survivability.

Several data from the recent publication says that the present scenario of the pandemic situation is better than the very first situation of COVID-19 outbreak as there is now more information about the nature of the virus and the knowledge about medication. At the present condition the vaccines are also approved and are in the applications on the human population which have already reduced the chances of getting the disease [7]. The main thing that helps the situation to improve is by tracking the number of people who are affected by the viruses and by tracking the places containing more of the corona affected patients, this was possible due to the developed technology.

The sudden outbreak of the COVID-19 was the greatest challenge that is faced by the human population throughout the world. Now the condition of COVID-19 outbreak is under control and the restrictions of the lockdown have become the part of “*new normal*”. The present scenario of the pandemic is better than the previous condition and it was possible due to the development of new technologies that helped the healthcare service to measure the number of COVID-19 patient and track the places where the effect of the virus is more and where is less and thus the health care management could get an idea of the type of medications also which are more useful depending on the type of the patient’s co-morbidity [9]. Therefore, the goal of this study is increasing entrepreneurship and development of new technologies to meet the requirement of the patients and the healthcare professional.

**Results and Discussion**

Qualitative data can be defined as the non-numeric form of information that can be collected

from various sources like transcripts, audio recordings, text documents, interviews, notes, images etc. Entrepreneurial-oriented healthcare professionals are applying some innovative methods to make the infrastructure of the healthcare system more and more strong. With the emergence of different natural hazards and epidemic situations like the COVID-19 pandemic that the whole world recently battled with, the health care system should be up to date so that the doctors can be able to take good care of their patients [10]. For this purpose, three managers of the healthcare industry have been interviewed. The healthcare industries that are involved in the interview process are Cyber Clinic Institute of Medicine Moscow, St. Petersburg General Hospital, and International Medical Center Moscow respectively.

The results and responses to the interview guidelines were as follows.

*1. What is the current condition of the healthcare industry after the emergence of the COVID-19 pandemic?*

Managers	Response
Cyber Clinic Institute of Medicine Moscow	The current situation of my healthcare system mostly includes modern mechanics but needs a bit more innovation [11]
St. Petersburg General Hospital	The pandemic situation has caused a havoc breakdown of infrastructure in this hospital [12]
International Medical Center Moscow	The emergence of COVID-19 has made the doctors and the administration think more deeply about upgrading the healthcare system more systematically [13]

*2. How the entrepreneurs are helping the healthcare industry before and after the emergence of the COVID-19 pandemic?*

Managers	Response
Cyber Clinic Institute of Medicine Moscow	The entrepreneurs are getting more adhered to making the health care system stronger than it was before the occurrence of the pandemic [14]
St. Petersburg General Hospital	The entrepreneurs are giving their full time and energy to make the infrastructure of the hospital more and more adaptable to the patients and the doctors [15]
International Medical Center Moscow	Before the occurrence of the COVID-19 pandemic, there was the unavailability of ventilators, special ICU beds and other special equipment. After the COVID-19 pandemic, the entrepreneur is making sure that these needs are met [16]

*3. What are the new and innovative methods that are being applied to the healthcare system and how the healthcare system can be benefitted from them?*

Managers	Response
Cyber Clinic Institute of Medicine Moscow	The entrepreneurs are introducing more and more technological factors like the Its, Remote care, 3D Printing tools etc. so that it can facilitate the doctors and the patients [17]
St. Petersburg General Hospital	The opening of Retail clinics, Precision Medicine, and Virtual Care systems are the new innovations that the entrepreneurs are making available for the benefit of the hospital [18]
International Medical Center Moscow	The more advanced medical facilities like special beds for the COVID-19 patients, ICU units, and more oxygen plants ate the new thinking methods of the entrepreneurs that are taken for the betterment of the medical centre [19]

The data collected from the different managers of three different healthcare systems in Russia shows that the healthcare system has changed from top to bottom before and after the occurrence of the COVID-19 pandemic. The previously followed trends and norms are not at all going to work for managing the pandemic situation. The interviews that are being taken show that the infrastructure of the hospitals is not up to date. The situation created by the COVID-19 has made the administration of the hospitals think about the present condition of the hospitals more and more [20].

There is a lack of modern gadgets and tools that can be used to get the patients treated as soon as possible. The Cyber Clinic Institute of Medicine (Moscow) mentioned that they need expert advice on installing and maintaining the newly developed software and gadgets. On the other hand, the St. Petersburg General Hospital and International Medical Center (Moscow) both mentioned that they need a plan and method to get themselves introduced to the concept of Artificial Intelligence and automation techniques. The above-mentioned problems can be solved through the planning and progression of the different entrepreneurs that are associated with the healthcare facilities [21].

The entrepreneurs are conducting more and more surveys and experiments so that they can understand how the COVID-19 pandemic situation has affected the medical centers of Russia. The managers of the three healthcare sectors are giving much emphasis on the introduction of medical innovation, artificial intelligence, and other modern-day technological gadgets and tools that will help to make the infrastructure of the medical system stronger [22]. The data collected also mentions that the healthcare systems need to give more attention to the new entrepreneurial ideas and new innovative techniques that are used for generalizing and scaling the healthcare sector to extreme heights of progress. The turmoil that was created by the COVID-19

in the health care industry can be solved through the strategic mind and planning of the different entrepreneurs [23].

The data collected from the research work of other researchers or from other sources like books, journals, directories, and government and non-government statistical data are considered secondary data. The secondary data is readily available and these data can be collected from the above-mentioned sources. The data here was collected from other sources are the different research papers that are based on the research done on that hospital before. The old entrepreneurs who have worked with the hospitals [24]. This data is collected in the form of numerical data and statistics. This can be defined as the systematic data that can be collected by investigating quantifiable data and by performing statistical, logistical, mathematical and computational techniques. The secondary quantitative data can be said to be accurate and more reliable. This data can be collected in a more systematic way. This can be collected in a very short time. It also creates a wider scope for the researcher to analyze the data in a proper way [25].

During the outbreak of the COVID-19, the World Health Organization provides very well-developed guidelines for the healthcare facilitators as well as for the local people. From the start of the pandemic situation, that is from the year 2020, about 2751310 more total positive cases have been reported in Russia out of which about 2557511 recoveries have been reported. Out of these fatalities, more than 372766 deaths have been reported till now. The data was collected from the different sources that were provided by the world health organization. It was collected from the year from February 2020 – April 14, 2022. The recent times ache seen a downfall in the number of positive cases [26].

Entrepreneurs have again proved to be the life-line for this country as the number that is going down in recent times has been possible due to the innovative minds of the entrepreneurs. The innovation of new testing kits that are being used to get the patients tested has proved to be a very effective method to trace the number of positive cases. The daily test conducted was about 287543270 as of April 2022. The entrepreneurs have developed rapid antigen test kits that have proved to be very effective in testing the number of positive cases very quickly. It is also the output of the entrepreneurs and their innovation theories that have given the Russian health sector to cope with the disease. The innovative mind has worked for the betterment of the healthcare industry [26].

Entrepreneurship has proved to be a very potent tool in terms of the crisis that was created due to the occurrence of COVID-19. The development of different policies includes the interpretation of different artificial intelligence tools for dealing with social and economic barriers. The innovation criteria can also be used to develop the vaccines throughout

the country and also in different countries. The entrepreneurs are conducting more and more surveys and experiments so that they can understand how the pandemic situation has affected the medical centers of Russia [25]. The managers of the three healthcare sectors are giving much emphasis on the introduction of medical innovation, artificial intelligence, and other modern-day technological gadgets and tools that will help to make the infrastructure of the medical system stronger. The development of the COVID-19 vaccines needs a very well-designed machinery. Russia has developed of about more than 9 million vaccines. The first vaccine course was administered to 89698600 citizens of the country. The full dosage, that is the combination of two doses of vaccines has been administered to about 89951906 citizens of the country [26].

Entrepreneurship and innovation can be said to be same to same. An entrepreneur can be able to succeed in life then he or she must be innovative in their own way. The world is trying to recover from the current pandemic situation. This needs critical thinking based on innovation and entrepreneurship. The availability of special beds, isolated wards, and perfect sanitization processes are some of the techniques that are being made available by the entrepreneurs which are a result of their innovative minds [9]. The present scenario of the pandemic is better than the previous condition and it was possible due to the development of new technologies that helped the healthcare service to measure the number of COVID-19 patient and track the places where the effect of the virus is more and where is less and thus the health care management could get an idea of the type of medications also which are more useful depending on the type of the patient's co-morbidity.

With the occurrence of COVID-19, the healthcare workers along with the entrepreneurs are seriously thinking more and more about how the healthcare system can be made more effective [21].

#### *1: Impact of the COVID-19 pandemic on the Russian Healthcare system*

The COVID-19 pandemic has shown the world about the vulnerable situations that the healthcare systems must face. The pandemic situation has given intense implications for health, economic progress, trust within the government and some social cohesions. Mitigating the issues that have arisen due to the transmission of the virus became the most vital pointed to think for the Russian healthcare systems. The health care facilities were very much concerned about how they will control the overall transmission rate and the infection rate. They were going through a very difficult phase as the rate of mortality and the rate of transmission were increasing at a lightning speed. The beds were getting filled day by day as the number of positive cases was increasing day by day [16].

#### *2: Meeting up with the challenges that were created by the impact of the COVID-19 pandemic on the*

#### *healthcare system*

The COVID-19 disease was affecting the lives of every people around the globe. Isolates lives, social distancing, restrictions on contact, and lockdowns were the different aspects that were maintained by the whole world so that the ill effects of this disease can be controlled to a higher extent. The hospitals of Russia have faced many medical crises during the outbreak of the deadly disease. The hospitals of Russia were flooded with the COVID-19 patients.

Maintaining total hygiene based on sanitation methods, isolated beds for the COVID-19 patients, arranging more and more oxygen cylinders for the patients, and helping them to get the right medicines on time are some of the measures taken by the Russian healthcare systems to meet up with the challenges. The measures proved to be very effective in mitigating the challenges at that time [20].

#### *3: Importance of Entrepreneurship in the Healthcare industry during the COVID-19 pandemic*

Every nook and corner of the world's healthcare industry is currently forced by the pandemic situation created by the COVID-19, particularly based on entrepreneurial thinking. The crisis that was created by the COVID-19 needs serious attention from the entrepreneurs so that they can help the Russian healthcare system to meet up with the challenges and the crisis [16]. Governments and different policymakers are trying to use the full potential of the entrepreneurs as they have the capability to introduce new and innovative methods to the healthcare industries of Russia.

Entrepreneurship provided a very potential tool in terms of crisis that was created due to the occurrence of COVID-19. The entrepreneurs can turn the ill and fragile conditions of the healthcare system into a more productive and quickly responding healthcare system [14].

#### *4: Linkage between Entrepreneurship and Innovation with Healthcare System*

Entrepreneurship and innovation can be said to be the two faces of the same coin. An entrepreneur can be able to succeed in life then he or she must be innovative in their own way. With the occurrence of COVID-19, the healthcare workers along with the entrepreneurs are seriously thinking more and more about how the healthcare system can be made more effective [18]. The recent scenario of the healthcare system is highly competitive, complex and very unstable. The innovations should be made in such a way that the healthcare system can be furnished to a very good extent without being under any pressure.

The healthcare industry is using the concept of entrepreneurship as their appropriate and most important approach by which they can help their patients as much as possible [24].

#### *5: Significance of entrepreneurship and innovation in healthcare industries of Russia during the COVID-19 pandemic*

The world is trying to recover from the current



pandemic situation. This needs critical thinking based on innovation and entrepreneurship. The availability of special beds, isolated wards, and perfect sanitization processes are some of the techniques that are being made available by the entrepreneurs which are a result of their innovative minds.

The healthcare systems of Russia need more innovation in terms of dealing with the critical situation like the COVID-19 pandemic has created. On this basis, the development of newly formed techniques like artificial intelligence, virtual ICUs, well-equipped room televisions, availability of tele medicines and cloud technologies are some of the ways through which entrepreneurs can bring about the concept of innovation in healthcare industries [25].

Entrepreneurship in a healthcare service mainly helps to create ventures from existing concepts or from new ideas. There are several roles of the entrepreneurial response in changing the healthcare service delivery to the population in the scientific way and in the social underpinning and understanding of healthcare services [3]. In the healthcare services the entrepreneurship education helps in creating and innovating new enterprises to develop new jobs in and provide more facilities to the public, satisfying the need and the ever-growing requirement of the healthcare services.

In case of the outbreak due to COVID-19 the situation became worse in the healthcare services as the outbreak was very sudden and there was a very little area of research available on the virus. The healthcare service faced the greatest threat of the 20th century and at the very first time of the outbreak the situation was very unexpected due to lack of proper knowledge on the virus and medication against the virus even though there was a lack of utensils and the proper structures for the patient as well as the healthcare professional and front-line worker. Therefore, new guidelines and new ideas were needed to control the situation which could be met by the increased engagement of entrepreneurship in the health care system.

The research information in this study is collected from the primary source of data. Some questionnaires are set and analyzed based on the qualitative method. Some data which are collected from the secondary sources of data such as pre-existing data from relevant research, were analyzed through the quantitative method [5]. From both the primary qualitative and secondary quantitative data it has been shown that due to lack of concern and not being informed about the outbreak previously the sudden outbreak has changed the healthcare system dramatically. The data showed that there were many factors which affected the healthcare system and led to a condition of increasing mortality and morbidity rate.

There is a lack of self-protection utensils for the health care professional, due to which many deaths of doctor or nurses have been reported. The lack of

proper health care structure such as the availability of oxygen, medicines, and ICU facilities were the reason for the huge death rate. Later with the help of the government when the nature of the virus was understood more than before the management of the healthcare service through the entrepreneurs managed to provide proper utensils and it was possible to meet the need of the healthcare services [1]. The solution for the lack of technology and lack of knowledge on the technical management of the health care issues were met as soon as possible to recover the situations.

The pandemic situation that was created by the COVID-19 has affected many people in many ways. Many people have got infected and many millions of people have died due to the transmission of this deadly disease. It has mutated in various forms which have created havoc in the healthcare systems. Among the other countries, Russia was very much more affected than the other countries of the world. The Russian government is now giving a second thought to getting the healthcare system to be renewed in a most effective way [21].

The entrepreneurs play a major role in getting the healthcare system to be revamped in a more progressive way. The fragile infrastructure of the healthcare system in Russia was going through a tormenting situation during the outbreak of the COVID-19. The entrepreneurs then prove the lifeline on getting access to different kinds of specially designed equipment like PPE, clinical procedures, and pharmaceutical treatments are the different innovative methods that the entrepreneurs have implemented in the healthcare system of Russia [17].

The first thing that the entrepreneurs introduced in the markets during the outbreak of the COVID-19 was developing perfect testing kits that will be effective in testing the appearance of the virus in the body. The entrepreneurs have developed a specific testing kit like the rapid antigen test as the first innovative method. The other innovative methods include the development of specific surveillance techniques and specially designed Artificial Intelligence techniques that are basically used for detecting effective carriers. These techniques can also be used to get a good track record of the active cases and for tracing positive cases [23].

The development of different policies includes the interventions for dealing with the social and economic barriers. The innovation criteria can also be used to develop the vaccines throughout the country and in different countries. The development of the COVID-19 vaccines needs a very well-designed machinery. It can be done by innovating and introducing different systematic machinery. Here the entrepreneurs again proved to be the major source of getting the newly designed models ready for the development of the vaccines. After the development came the question of distribution of the vaccines. This problem was also solved by modern-day entrepreneurs. They mitigated the challenge of

distributing the vaccines in a proper way by using their different artificial techniques [18].

### Conclusion

Entrepreneurship is a very important part of healthcare services. It is nowadays considered increasingly to be a very demanding area of business management of healthcare services. It helps from the nursing care to the overall healthcare service by providing the social changes that gives spaces for new engagement of the entrepreneurs in the service system of healthcare. Entrepreneurship helps in all management issues such as the salary related, promotion related and delivering the new ideas and managing any problem by innovation of ideas for the health care and nursing practices. Therefore, the entrepreneurship of the healthcare services should be very strong. The health care services run differently from the other marketing services and the healthcare services are closely related to the public's demand and the public's requirements. The outbreak of COVID-19 throughout the world has affected the structure of the whole healthcare system in the developing country as well as in the first world country. In the case of Russia, healthcare services face several challenges during the pandemic situation due to lack of knowledge about the new virus and its highly contagious character. The entrepreneurship of the healthcare services in Russia was not that knowledgeable about the outbreak situation and could not previously provide the information to the healthcare and the nursing care, as they were not prepared for such the biggest outbreak, they could not manage a systematic practice of providing the utensils for the protection of the front-line worker and the healthcare professionals. The time they managed to give proper service to the healthcare professional the virus had already been spread among a large population of Russia and started affecting the staff of the health care professionals.

The primary data sources included in this study is through the interview of three managers of the healthcare system and who were interviewed based on the set of questions and then data information that were collected from the interviews were further analyzed through the structural and descriptive analysis of qualitative methods. Some data were collected from the secondary sources such as most relevant journals, research papers, online articles, government reports and then the collected information was analyzed through the quantitative method which included some numerical and statistical data. In this study many themes are developed regarding the impact of COVID-19 pandemic in the health care system of the country Russia, regarding the effectiveness of lack of structure and medical facilities, the importance of developing technologies in the healthcare system and its management. Thus, the themes that were developed helped to understand the overall conditions and the situation that

occurred due to the sudden outbreak of COVID-19. The more effective way of controlling the bedspread of coronavirus among the population was applying the physical distancing or the social distancing and use of masks while going out. The use of sanitizer was another important method to reduce the viral load while traveling or outside the home. More research was going on to find out the nature and the proper treatment strategy for the disease.

There were many stages or waves of the outbreak. Data showed that there were more deaths due to getting infected by the COVID-19 in the very first wave of the outbreak as there were no proper method of treatment available and due to lack of proper technologies and improved structure to meet every patient's crisis individually. Later it was shown that gradually the number of deaths started to reduce and again the country faces a second wave of outbreak that also were associated with a huge number of deaths reducing the chances of getting the infection for those who were previously infected. During the third wave of the outbreak the healthcare system faced a smaller number of deaths and the restriction of lockdown were reduced and normalized regarding the outbreak of COVID-19.

At present, new research have already given much information about the nature of the virus and the mode of the transmission of the virus; also some researchers have shown the importance of normalizing the use of masks and sanitizers. According to the data and available information the entrepreneurship has made the condition favorable for the healthcare professional and the staff and the front-line worker to keep on their job while maintaining proper safety measurement. The structure of the healthcare system also was developed according to the requirements of the situation. More ICU facilities and availability of oxygen were increased. Through this study it can be concluded that entrepreneurship of the healthcare system needs technological improvement and more collection of data and information to improve the situation regarding the pandemic conditions in the healthcare sectors. They become concerned about improving and developing new technologies so that they can track the number of people affected by the virus.

The challenges that were faced by the entrepreneurship for the health care services and the whole health care services due to the outbreak of COVID-19 followed by the lockdown in the country of Russia were something unexpected and very threatening to the public health. From this experience the entrepreneurship of healthcare system must be concerned about the infrastructure of the healthcare system and must bring new nursing and health care practices which can help make the situation easier to handle. By the development of new technology in future, the healthcare sector could successfully monitor the morbidity and the mortality rate due to any kind of outbreak over all the country and according can involve the guidelines and other

requirements to serve the people with better services. The challenges they faced were lesson for them for the future. Therefore, developing new ideas and new guidelines about the health care practice and increasing the availability of medicines along with the development in the technical equipment required in the medical ward such as oxygen facilities, a greater number of ICU, new technological processes in the health care system may make it possible to take any health crisis related situation under control. Now the entrepreneurship will be more concerned about the innovation of new technology and involve more research institute or research organization for carry out research on those topics which are very much related to the public health concern, therefore they must measure if there are any chances of any other outbreak so that they can be prepared previously to provide better service. They will be concerned about the protection of the health care staff and their families too in case of any sudden outbreak or emergency health crisis.

#### Authors' Contribution

The authors have made an equal contribution to the research: collection and analysis of the material; definition of goals and objectives, research methods; formulation and scientific substantiation of conclusions, registration of key research results in the form of an article.

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