

Review Article

Review article on the change in the hospital revenue and healthcare economy during COVID-19 pandemic.

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Abstract

The economy of the world has been shaken due to the COVID-19 pandemic situation. Nearly 8% of the world economy has shrunk during this time. Few countries have been identified as more vulnerable to be affected in comparison to others according to the Pandemic Vulnerable Index (PVI). Lot of universities of USA, Australia and UK have suffered from huge financial crisis due to lack of foreign students admission. Lockdown and travel restriction have affected the revenue generation of countries like China, USA, South Africa, India and sub-Saharan countries for which government subsidize were declared. Bangladesh has suffered mostly due to disruption in garment and textile business. Medical tourism also experienced severe financial trauma.

Keywords: Hospital revenue, healthcare economy, COVID-19.

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Introduction:

The pandemic has challenged health-care organizations on many fronts, such as training medical staff on new protocols, securing scarce PPE and ventilators, and creating additional intensive care unit (ICU) and COVID-19 recovery beds.¹

Global healthcare system is encountering a devastating financial crisis due to the COVID-19 pandemic situation.² According to the American Hospital Association (AHA) the country has lost \$202.6 billion in 2020 and the loss is currently continuing at the rate of \$50.7 billion per month. The low- and middle-income countries are costing USD 52 billion (USD 8.6 per person) in an average per month to face the pandemic. The World Bank estimated that the global economy growth will shrink by 8% and according to United Nation projection the world deficit amount will be 3 trillion dollars at the end of 1 year. The lack of preparedness was exposed to supply personal protect equipment (PPE), sanitizer, toilet paper, hospital equipment and new supplementation cost a huge fund. The world gross domestic growth (GDP) was reduced by 6%, whereas the GDP of USA, India and Brazil were decrease by more than 10%. The GDP of China, ASEAN-5 and developing countries reduced by 6% at least.

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Pandemic Vulnerability Index (PVI) report:

Vulnerability of getting affected due to COVID-19 of each country was assessed by Pandemic Vulnerability Index (PVI).³ According to PVI top ten vulnerable countries are Brazil, India, the USA, Russia, South Africa, Chile, Mexico, Iran, Peru and Pakistan. In Africa most vulnerable countries are South Africa and Egypt. In Europe Russia, Germany and Italy were in the top list. In Latin America Brazil, Chile, Peru and Colombia were detected as high PVI. India, Iran, Pakistan, Saudi Arabia, Turkey, Qatar, Iraq, and Oman had high PVI among the Asia Oceania countries. On the other hand, Honduras, Costa Rica, and Bolivia were in bottom of the list of PVI.

Like other industries, healthcare industry also had a negative impact due to coronavirus pandemic condition.⁴ Labor market has become very vulnerable and nearly 1.6 billion workers have been affected due to lockdown and travel restriction. Apart from the healthcare industry the other mostly affected sectors are accommodation, tourism, manufacturing, food services and retail. More than 54% of these sectors workers have been affected which cost 30% of average world GDP. Nearly 305 million full-time job time were declined which was 10.5% working hour of all workers. The central Asia, Europe and USA have suffered mostly with the loss of working hours. Other vulnerable countries are low and middle-income countries.

Affecting healthcare academic sector:

The academic sector of the healthcare system encountered a financial disaster due to COVID-19 pandemic condition.⁵ Survey reported that nearly 10% institutions did not have infrastructures of online classes. Students' enrollment was hugely affected. Most of the institutions started online-only courses. The USA institutions are expected to loss 1 billion

dollar due to lack of foreign student admission in 2020.⁶ This loss may be increased up to 3 billion in near future. Major universities of Australia may loss 5 million AUD by 2024 due to loss of international students. Out of this amount 8 universities will loss 3.3 billion for the same purpose. In UK, 13 universities are facing bankruptcy in the COVID-19 time.⁷ Foreign student recruitment has been decreased by 50% and local students by 10% in the UK institutions. An overall loss of 11 billion pound was estimated including non-academic venues including accommodation and services.

Influence on medical tourism:

The countries well known for medical tourism are Canada, Cuba, Costa Rica, Ecuador, India, Israel, Jordan, Malaysia, Mexico, Singapore, South Korea, Taiwan, Thailand, Turkey and United States. The healthcare sector of these countries hugely depends on the tourist patients from abroad, especially neighboring countries or territories. International hospital business is closely related to the tourism sector. Due to declining situation of global tourism hospital business suffered a lot. Usually, 27 million tourists visit Malaysia yearly and under the Visit Malaysia 2020 (VM20) program this number was planned to increase to 30 million.⁸ Because of the travel restriction due to COVID-19. Tourism industry accounts for nearly 57% revenue of Malaysian income.

Disrupting hospital revenue:

In the northern Italy the main causes of economic impact on hospitals were evaluated. It was found that cancellation of scheduled surgery, limiting visitors, shifting of manpower to other area, shortage of blood component, COVID-19 dedicated operation room (OR) and postoperative surgical care were the key causes.⁹ Few surgeries like laparoscopic and endoscopic surgeries were postponed or marked as more

vulnerable for COVID-19 as these are aerosol generating procedures. Funds were dedicated for researches and special training programs.

According to a tertiary hospital of USA statement, the average revenue generated from the elective surgery is nearly 48% of the total hospital revenue.¹⁰ Few sectors are routinely been subsidized from this elective surgery fees. During the pandemic time the number of surgeries has drastically reduced and eventually at the end of the year total hospital revenue has been decreased by 12.5%.

Inequity observed among sufferers:

It was found that COVID-19 has disproportionately affected poor, financially vulnerable and minor people in most of the countries.¹¹ Limited access to healthcare system, unhealthy living condition, chronic diseases could be the reasons behind to affect these group of people. It was also concluded that due to global pandemic situation limited movement, social isolation and economic lockdown have harm low-income people mostly. To address this inequity, government approach to the society of 13 countries was evaluated.

In China, nearly all people are covered by health insurances namely the employee urban medical insurance scheme, the urban and rural resident medical insurance scheme or the rural cooperative medical scheme.¹² In Wuhan, in both urban and rural areas the COVID-19 treatment cost was covered by government subsidies and insurance coverage which accounted more than 65% of the individual treatment cost. Due to the insurance support hospitals never refused any patients including which needed ICU support. Non-insurance parts, mainly special pharmaceutical coverage and special equipment support received huge government reimbursement and subsidies to reduce the burden of admitted patients. Management of COVID-19 in China was

remarkable and showed a bright light in future for managing global pandemics.

Brazil has been facing the one of the biggest challenges in facing the COVID-19 since the beginning of the pandemic. The public health system of Brazil is huge and known as Sistema Único de Saúde (SUS).¹³ SUS was underfunded for last 20 years. The facilities regarding fighting against COVID-19 showed an inequity in Brazil too. SUS had 1.3 ICU beds for 10 thousand people on the other hand private hospitals had 4.45 ICU beds for people. The difference was significant across the geographical location also. The southeast region of the country is relatively rich area where people have 2.58 ICU beds for 10 thousand inhabitants in contrary to 1.23 of the northern regions. More than 30 million Brazilians devoid of basic sanitary facilities where 11.4 million of them are living in slums. Most of these people were vulnerable due to excessive crowding and lack of sanitizers.

The chronic diseases like Tuberculosis, Malaria and AIDS are the biggest burden for the healthcare system of the sub-Saharan Africa (SSA). Most of the SSA countries have poor healthcare system in comparison the western world. Most of the poor people live in crowded area with poor sanitation and eventually suffer from the chronic diseases which make them more prone get affected with COVID-19. Moreover, fund for fighting against pandemic compelled them to cut down the budget for the chronic diseases and lead to highest death rate among poor citizens.

India had the highest number of populations under lockdown. According to the Center for Monitoring the Indian Economy (CMIE) the unemployment reached 24% in the month of mid-May.¹¹ The National Council for Applied Economic Research (NCAER) carried out a telephonic survey in Delhi and found 86% people had loss of income and 30% people faces

shortage of food and fuel. Due the closure of schools, children deprived of school-feeding program and suffered from malnutrition. In the mid-May the Indian government announced a 260 billion USD rescue package program. Government also provided subsidized loan to the small farmers. One time cash transfer was announced for 30 million senior citizens and 200 million poor women.

USA had observed the highest death and cases of COVID-19 in the world. Probably this disaster was due to lack of early preparation. Ensuring safety of vulnerable group including uninsured, refugees, disabled and impoverished was a big challenge.¹⁵ Due to higher rate of chronic diseases these vulnerable people were a soft target of COVID-19. These group of people were not entitled of paid sick leave most of the times and became jobless during the pandemic period. Moreover, the pandemic attack showed a race specific pattern. The infection rate was found three times more in the African American counties in comparison to the white counties. In Chicago more than 50% affected were African American. As the prisons are ill-staffed and understaffed, so the 2.3 million prisoner's health was in serious threat during this COVID attack.¹⁶ Major health insurance companies have waived copays for testing and treatment for the insured patients. For the uninsured patients, federal government has agreed to pay doctors and hospitals at Medicare reimbursement rate for the management of COVID-19 patients. An 8.3 billion USD fund was provided to the federal agencies by the Coronavirus Preparedness and Response Supplemental Appropriation Act.

In the World Health Report 2013 concern was expressed about the inadequate staffing of South African healthcare system.¹⁷ The poor remuneration and working conditions were the reasons behind the insufficient recruitment of doctors and nurses in South Africa. The remote health stations were very much underdeveloped for a long time. Despite the significant progress

of health system since 1994, still it lacked behind due to insufficient budget, poor leadership and unequal distribution of facilities. In order to disruption of the global supply chain South African front liner health workers observed a shortage of personal protective equipment (PPE) especially N95 respirator, apron and gloves.

Bangladesh has 3 nurses and 5.3 doctors for 10,000 people. This statistic also shows there is 0.87 hospital bed per 1,000 people, 0.72 ICU bed per 100,000 people. According to IEDCR report the age of 68% of COVID-19 affected people of Bangladesh was between 21-to-50-year age group.¹⁸ This age group is the most potent working group people. Major challenges for Bangladesh in tackling the pandemic was limited number of tests, lack of public awareness and large number of Rohingya refugees. The economy of Bangladesh was in serious threat due to sudden disruption in garments and textile manufacturing as well as agricultural production. The government declared some stimulus packages for the industrial sector to provide financial support and to boost up the threatened economy and eventually was successfully able to stabilize the GDP in comparison to other south Asian countries.

Conclusion: The pandemic of COVID-19 has shaken the economy of the world. Healthcare sector is also severely affected. Revenue of hospitals, health academic, medical education and medical research were the areas to suffer. Most of the countries observed financial constrain due to lockdown and travel restriction, which was reflected in the healthcare sector also.

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