



HAS TELEMEDICINE REDUCED THE BURDEN ON STRAINED HEALTHCARE SYSTEM OF INDIA DURING COVID-19 PANDEMIC? APOLLO TELEHEALTH'S "DOC ON CALL" SERVICE - A DESCRIPTIVE REVIEW

General Medicine

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ABSTRACT

As a part of finding a solution to reduce the impact on the already overburdened healthcare system, Ministry of health and family welfare, Government of India and Medical council of India have officially released telemedicine practice guidelines in March 2020. Doc on Call audio Teleconsultation service by Apollo Telehealth (ATH) emerged out as a cornerstone to meet the sudden high demand during Covid-19. Doc on call provides immediate and round the clock telephone access to Apollo Telehealth's general physicians and specialist doctors. The aim of the study was to understand the impact of Doc on Call audio Teleconsultation services in reducing the burden on strained healthcare system of India, during Covid-19 pandemic. A descriptive analysis of audio teleconsultations done through Doc on call service, related to Covid 19 from March 2020 to August 2021 was conducted. Doc on Call services expedited healthcare reach to isolated Covid-19 patients, if not, would have visited overburdened hospital affected by this crisis. Telemedicine through Doc on Call has proven to be a very formidable technological tool to help patients recover from COVID 19 under expert medical care without getting hospitalised unnecessarily.

KEYWORDS

covid 19, telehealth, Apollo telehealth, telemedicine

INTRODUCTION

The covid 19 pandemic has created an unprecedented burden on the healthcare system in India. Even the efficient and advanced healthcare systems around the world including India are facing the brunt of it such as severe shortage of beds, oxygen, ventilators, and healthcare professionals due to unprecedented influx of covid 19 patients seeking hospitalisations. As a part of finding a solution to reduce the impact on the already overburdened healthcare system, Ministry of health and family welfare, Government of India and Medical council of India have officially released telemedicine practice guidelines in March 2020 (Ministry of Health and Family Welfare, Government of India, 2020), to help the clinicians efficiently manage the mild to moderate COVID 19 patients in home isolation.

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DISCUSSION

Due to this new severe acute respiratory syndrome coronavirus 2, the coronavirus disease 2019 (COVID-19) pandemic has caused a worldwide sudden and substantial increase in hospitalizations for pneumonia with multiorgan disease. (Wiersinga et al., 2020) SARS-CoV-2 is spread primarily through respiratory droplets during close face-to-face contact. Asymptomatic, presymptomatic, and symptomatic carriers can transfer infection. The mean duration between exposure to virus and start of symptoms is 4-5 days, with 96.9 percent of patients experiencing symptoms within 10.5 days. Temperature, dry cough, nasal congestion, sore throat and difficulty in

breathing are the most prevalent symptoms. Lymphopenia and increased ldh are common but nonspecific laboratory findings. The identification of the virus through polymerase chain reaction (rt-pcr) testing is used to make the diagnosis.

Patients testing positive but not having any symptoms compatible with COVID-19 are considered asymptomatic or presymptomatic. Individuals who experience any of the COVID-19 signs and symptoms (e.g., cough, nasal congestion, fever, muscular pain, nausea, vomiting, diarrhoea, loss of smell and taste) but no shortness of breath or dyspnea, or abnormal chest radiographs are considered to have mild illness. Adults with moderate covid 19 show spo2 levels > 94% but indicate lower respiratory tract involvement during clinical assessment. Severe illness patients demonstrate oxygen saturation less than 94% with RR of more than 30 cpm with significant radiological pulmonary findings. Patients with critical illness are those who have respiratory failure, septic shock, and/or multiple organ dysfunction. (National Institutes of Health, 2021).

Mildly ill patients often recover at home with symptomatic medical therapy and isolation. A pulse oximeter, which can be used to self-monitor oxygen saturation, may be beneficial for persons who are at greater risk for complications. Patients with moderate illness recuperate at home, although they should be continuously observed and very rarely require hospitalisation. (Board of Governors - Indian Medical Council, 2020).

Telemedicine has proven to be a very formidable technological tool to help patients recover from COVID 19 under expert medical care without getting hospitalised unnecessarily. (Galiero et al., 2020) It has provided a much-needed platform for doctors to guide and manage the mild and moderate COVID 19 in home isolation. Elder patients and patients with comorbidities or with severe symptoms need continuous monitoring of vital parameters. As part of this, continuous self-monitoring of crucial vital parameters such as temperature, respiratory rate, oxygen saturation (spo2) and pulse rate under medical expert's guidance through tele-medicine has helped immensely to reduce admissions and mortality. (Dash et al., 2021)

ATH's Doc on Call service allows employees of numerous multinational firms and corporations to obtain rapid answers to their health-related problems from doctors round the clock, instead of having to sit in a waiting room or pay a high consultation fee. (Telehealth, 2021) It is a 24-hour telephone service that facilitates in providing access to health information by skilled, qualified and recognized general physicians, as well as specialists and super specialists. The scope of this health care encompasses everything from

symptomatic treatment of any ailment to health care recommendations for a healthy lifestyle and chronic illness management. This platform may have been utilized to get answers to health-related questions. Patients who use Doc-on-Call receive high-quality, tailored health care in the privacy of their own homes. In the present COVID pandemic scenario, it avoids needless trips to physicians and hospitals in particular, while yet providing mental serenity to the client. Patients may access a broad and up-to-date selection of health care services using technology and information through this service, which is both simple and quick to use.

Mild covid 19 patients are usually be treated at home. During teleconsultation, a thorough clinical history is gathered, including any co-morbidities. The patient's temperature, vitals, and oxygen saturation (spo2) are checked every day (Al-Tawfiq et al., 2021). People with mild COVID-19 are informed about the clinical symptoms of sequelae that require immediate attention. Given the possibility of worsening, patients with risk factors for serious illnesses are constantly watched during teleconsultations and follow up consults. They are advised hospitalization as soon as their symptoms deteriorate (for example, light-headedness, trouble breathing, chest discomfort, dehydration, etc.). COVID-19 instances with mild symptoms may be treated symptomatically.

Through Doc on Call teleconsultations, patients with moderate covid will have a thorough clinical history taken, including co-morbid conditions, vital sign measurements, oxygen saturation (SpO₂), and radiographic examinations, complete blood count, and other tests as needed (Al-Tawfiq et al., 2021). Antibiotics are not provided on a regular basis during teleconsultations unless a bacterial infection is suspected clinically. People with moderate COVID-19 are closely monitored for indications or manifestations of disease worsening.

Doc on call not just focuses on the observation, management, and recovery of mild and moderate covid patients, but also provides a special emphasis on the total holistic well-being of the patients (Kouroubali et al., 2020). Patients with chronic diseases and comorbidities are provided speciality and super speciality teleconsultations on priority basis, providing quality 360-degree healthcare, helping them recover at homes, avoiding unnecessary hospitalizations. The recovery process of these patients through telemedicine also involves preventing early and late post covid complications which are sometimes serious. Teleconsultations with Dietician and Psychologist are provided as part of the management plan to these mild and moderate patients to assist them in making appropriate diet and nutrition choices that promote wellbeing. Learning about adequate diet and maintaining a positive mental health state may go a long way toward improving tiredness, mood, and general medical concerns. (Inchausti et al., 2020) (Xiong et al., 2020).

RESULTS

Between March 2020 and august 2021, a staggering 17645 covid related teleconsultations were done by GP as well as specialist doctors, out of which 17,405 were clinically and laboratory confirmed covid 19 disease consultations and 124 were clinically suspected covid 19 TC'S. Mild and moderate patients are treated through telemedicine with emphasis on remote monitoring of self-monitored vital parameters such as Spo₂, PR, Temp. A patient would avail teleconsultation with symptoms such as fever, nasal congestion, cough, sore throat, generalised body pains, fatigue, shortness of breath. Specialist consultants evaluated in detail, triaged the patients depending on factors such as age, severity and duration of symptoms along with self-monitored parameters, who are then classified into mild, moderate and severe. Confirmed mild and moderate covid positive patients are home isolated with all the necessary investigations, medications, instructions and regular follow ups are done in order to act promptly if any deterioration is exhibited.

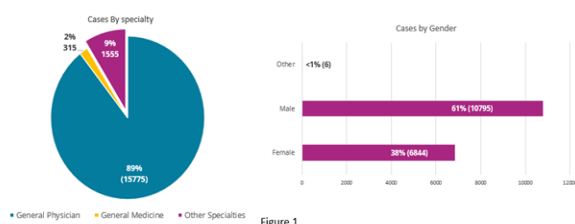


Figure 1

Figure 1 demonstrates the teleconsultations for 15775 patients constituting 89% were done by general physicians, whereas specialities and super specialties such as pediatrics, gynaecology, orthopedics, cardiology and neurology etc. had consulted 1555 patients through telemedicine, constituting 9% and teleconsultations by general medicine speciality were done for 315 patients constituting 2%.

CONCLUSION

Doc on Call services expedited healthcare reach to isolated Covid-19 patients, if not, would have visited overburdened hospital affected by this crisis. 98.6% patients were treated for COVID 19 at their homes with all the necessary follow ups. It has been successful in providing timely and cost-effective healthcare, by remote triaging and sensing early deterioration. Further, it also benefitted the recovering Covid-19 patients discharged from hospitalization. Telemedicine has conveniently become a completely unique tool for health care providers to reach out to patients to enhance the standard of health care during this pandemic (Iqbal, 2021). It has been successful in proving its effectiveness and in overcoming the main barriers in managing Covid-19. Recognizing the necessity of Telemedicine, considering the current crisis both to address increased treatment needs and to prevent unnecessary in-person contact, doc on call at ATH has adopted an innovative way of Telemedicine in managing patients and helping them recover from covid thus realizing the full potential of advancements in technology for high quality health care delivery. Telemedicine platform can be used effectively for managing Covid-19 and health education on its various risk factors (Monaghesh & Hajizadeh, 2020). Burden on healthcare in India is eased by an integrated effort of the government and other private sector initiatives such as ATH by expanding use of telemedicine in the face of Covid-19 pandemic.

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Conflicts Of Interest

There are no conflicts of interest.

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