PROGRESS IN MEDICAL SCIENCES, 2021
VOL 5, NO. 1, PAGE 1 – 5
DOI: doi.org/10.47363/PMS/2021(5)143

RESEARCH ARTICLE

Open Access

Telephone Consultations by Medical Scheme Patients for Covid-19 Related Diagnosis-2020, South Africa

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ABSTRACT

Background: The COVID-19 epidemic has adversely affected health systems globally. The utilisation of technology and other innovative channels link up with patients has evolved drastically in the COVID-19 climate. Lockdown measures and COVID-19 regulations and the fear of contracting the virus at a health care facility has also changed health seeing behaviour among patients. The COVID-19 climate has seen a significant increase in the utilisation of virtual platforms to consult with providers.

Objectives: The primary objective of this study was to conduct the descriptive analysis of telephonic consultations by members of medical schemes.

Methods: The study entailed a descriptive comparative analysis of medical schemes' claims data. This was mainly outpatient claims information with the service date between March – December 2020. The inclusion criteria were all NAPPI codes associated with a telephonic consultation. The study included only COVID-19 related ICD-10 code primary diagnosis.

Results: The analysis covered claims data from a total of 12 medical schemes. The schemes analysed accounted for 1,6 million lives, on 2019 beneficiaries. The total number of COVID-19 confirmed diagnosis-related telephonic consultations was 8 939 and those related to suspected diagnosis accounted for 12 608, (41% vs. 59%, p<0.001). The median claims amount for a COVID-19 confirmed diagnosis and that of a suspected diagnosis was IQR: R293 (R283-R400) and R288 (R283-R390), respectively.

Conclusion: The study found evidence of patients utilising digital platforms to consult the respective practitioners during the COVID-19 pandemic. Greater utilisation patterns were seen in disciplines such as general medical practice, specialists' family medicine, independent practice specialist medicine and group practices. The main finding of the study was disparities between the scheme tariff amount and the claimed amount. The findings of this study depicted multidisciplinary management of COVID-19, particularly at a primary health care level, where patients could consult with a practitioner virtually. However, we warn of ethical considerations and risk-related issues such as fraudulent activities that could arise when consulting medical practitioners virtually.

ARTICLE HISTORY

Received Apr 16, 2021
Accepted Apr 23, 2021
Published Apr 30, 2021

KEYWORDS

COVID-19, Telephonic Consultation, Medical Schemes, South Africa

Introduction

The COVID-19 epidemic has adversely affected health systems globally. Utilisation of technology and other innovative channels' link up with patients has evolved drastically over the past 12 months. Lockdown regulations and the fear of contracting the virus at a health care facility has also changed health seeing behaviour among patients. Temporary disruptions in routine and non-emergency medical care access and delivery have been observed in the US and worldwide during COVID-19 [1]. The authors estimated that 40.9% of US adults have avoided medical care during the pandemic because of concerns about COVID-19, including 12.0% who avoided urgent or emergency care and 31.5% who avoided routine care.

According to Zhang et al, the pandemic had a significantly negative effect on healthcare utilisation in China, evidenced by a dramatic decline in healthcare expenditure [2]. A study by Moynihan showed that healthcare utilisation decreased by about a third during the pandemic, with considerable variation, and with greater reductions among people with less severe illness [3]. The decline in the utilisation of health services has been seen in both primary and secondary care. Several studies also show the decline by geographical area and a split between rural settings and urban settings. A study by Burger shows that across almost all districts in the country there was a reduction in primary healthcare utilisation, especially in HIV testing and health visits by children under 5 years of age, irrespective of the actual district-level incidence risk of COVID-19 at the time [4]. The authors attribute these changes in utilisation as unintended consequences of the COVID-19 pandemic on public sector health facility visits

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[4]. Another study in the rural Kwa-Zulu Natal province in South Africa found a significant, although temporary reduction in child healthcare visitation but a general resistance to adult ambulatory care provision because of the lockdown [5]. There are numerous possible reasons for the decline in the utilisation of healthcare services because of COVID-19. One of these main attributes is the fear of getting COVID-19 in health facilities. A survey conducted by Spaull et al, revealed fear of getting COVID-19 as the main attribute and this accounted for 37%. The other attributes were prolonged waiting times for services and transport problems, comprising 16% and 6% respectively [6]. Other reasons are depicted in Figure 1 below.

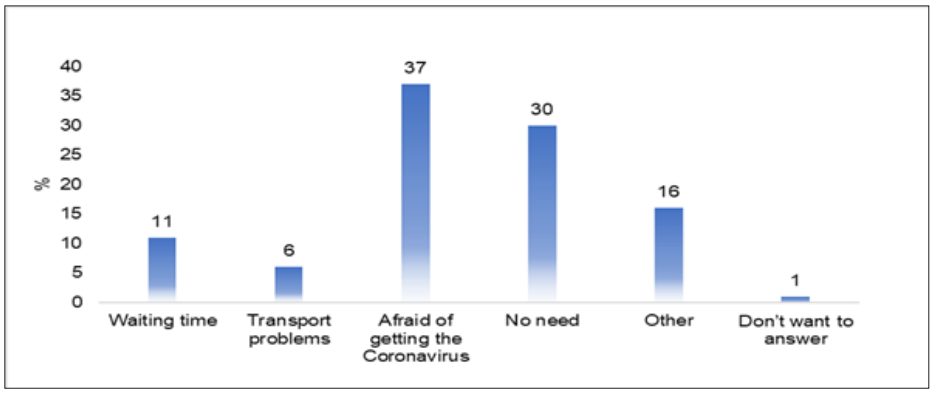

Figure 1: Reasons for not visiting health facility in 2020.

Other studies show contrasting views and findings. A study by Siedner et al., found no change in total clinic visits/clinic/day, both before and during the lockdown (−6.9 visits/clinic/day, 95%CI −17.4, 3.7) nor of any trends in clinic visitation levels over time during the lockdown period (−0.2, 95%CI −3.4, 3.1) [6, 7]. The authors did however detect a reduction in child healthcare visits at the lockdown (−7.2 visits/clinic/day, 95%CI −9.2, −5.3), which was seen in both children <1 and children 1–5 [7]. Furthermore, the study found a significant increase in HIV visits immediately after the lockdown (8.4 visits/clinic/day, 95%CI −2.4, 14.4) [7].

Background

The COVID-19 epidemic has adversely affected health systems globally. Utilisation of technology and other innovative channels used to link-up with patients has evolved dramatically over the past 12 months. Lockdown regulations and the fear of contracting the virus at a health care facility has also changed health seeing behaviour amongst patients. The COVID-19 climate has a seen significant increase in the utilisation of virtual platforms to consult providers [8].

Virtual Consultation

The COVID-19 pandemic saw a rapid rise in the use of remote consultations by telephone and video link [9, 10]. At the start of the pandemic, many health professionals including General Practitioners (GPs), specialists and others turned to video consultations to reduce patient flow in their practices and facilities as a risk measure to limit infectious exposures [11]. There are however studies that reveal that virtual consultations (also called telemedicine consultations) were on the rise, with many healthcare systems advocating a digital-first approach, even before the COVID-19 pandemic [12, 23]. Furthermore, there were challenges and obstacles cited at the use of virtual consultations. McGrail, Ahuja and Leaver (2017), conducted a systematic review on the view against the use of the telephone for virtual consultations. The author concluded that, while telephone contact for acute illness may allow minor problems to be dealt with without a face-to-face visit (and sometimes with apparent cost savings), it may miss rare but serious conditions and/or may lead to higher rates of face-to-face visits on subsequent days—perhaps because even when patients have been adequately assessed, they may be inadequately reassured [12].

There are legislative restrictions on the use of virtual consultations. Some of these have made the implementation of virtual consultation, in low-income countries difficult. Some of these present challenges to pertinent data security and privacy requirements [11]. However, there are a growing number of countries that have developed protocols and guidelines for adopting video consultations. These developments and improvements have taken a leapfrog jump in countries like the UK and the US. Clinicians in many developed countries are now permitted by regulators to use non-medical, popular video call applications (apps) such as Skype, WhatsApp, and FaceTime in addition to medical ones [11].

Telephone Consultations during Emergencies

According to authors such as Martos-Pérez et al., and Downes et al, telephone consultations could ease up the overburdened healthcare system [14, 15]. A study by Bokolo found that telemedicine and virtual software were capable of decreasing emergency room visits, safeguarding healthcare resources, and lessening the spread of COVID-19 by remotely treating patients during and after the COVID-19 pandemic [8]. Accordingly, outpatient in-person visits can be converted to telephone visits [15]. The authors further depict the following value add of telephone consultations during the COVID-19 pandemic:

- reducing absenteeism,
- increasing the rate of discharges,
- reducing ancillary tests,
- referrals without increasing the rate of hospital admissions or emergency department visits.

The use of virtual platforms such as telephones for consultations has also been well received by physicians, who have used them widely and they have been highly rated by patients. The funding industry has also embraced the use of the telephone to consult

with practitioners.

Funding of Telephone Consultations and Ethics

Not all medical schemes fund telephone consultations related to COVID-19. Medscheme affiliated or contracted schemes provide some evidence of schemes that do fund telephone consultation with effect in 2020. According to their newsletter publication, the administrator, in partnership with their affiliate solution providers has developed a digital platform to facilitate virtual consultations [16]. Some evidence in the private sector depicts that the average cost for a virtual consultation of R320 is no different to face-to-face consultations. See Table 1 below.

Table 1: Consultation Fees - DR. Wendy Dicks based in Cape Town - South Africa

Types of Consultations	Rate
General Telephone Consultation (Book Here)	R320
COVID-19 Telephone Consultation (Book Here)	R320
Home Consultation (More Info)	R628.30
GP Consultation (Medical Aid patients contracted to Discovery, GEMS & Momentum only)	-
GP Consultation (Cash Rate)	R580
Allergy Consultation	R800
Request A Script (Request Here)	R160
Skin Pricks (only at UCT Lung Institute)	R45 per prick
Botox Injection	R70 per unit

According to Heathridge which is one of the switching companies in South Africa, the average cost of a General Practitioners (GP) varies between R360 and R380, except for the Gauteng province which had an average of R427. These observations are further supported by Willie who found that more affluent provinces such as Gauteng and the Western Cape attracted higher GP expenditure per event or consultation or visit, compared to other provinces [17]. In another study Willie found that the median expenditure for GP visits in 2018 was four hundred and forty-five-rand (R445) IQR (R391-R475) [18].

According to the Council for Medical Schemes (CMS) annual report, medical schemes on average incurred R408 per visit to a general practitioner [19]. According to ER Consulting, the fee differs between medical aids, between R270 – R330 depending on your plan. These figures are however not significantly different from normal GP consultations. Cash patients are charged R310 per virtual consultation. Other schemes provide this service for free. According to Momentum, beneficiaries enrolled with the scheme can talk to their doctor on their phones, anytime, anywhere, 24/7. The Discovery Health Medical Scheme (DHMS) which is the biggest scheme with more than 2 million lives covered partnered with a mobile company Vodacom to deliver a simple but powerful online healthcare platform for the benefit of all South Africans during the COVID-19 pandemic. From a funding perspective, there exists potential fraud opportunities between practitioners and patients, where a provider may claim for a telephonic consultation that did not take place or is shorter than expected. The literature depicts that a telephone consultation is shorter than a face-face one. This potentially creates an opportunity for more consultations and a more lucrative revenue stream. Hobbs et al. found that telephone consultations are usually shorter than face-to-face consultations (mean duration 5.4 minutes compared with 9.22 minutes [20]. A study by Hewitt, Gafaranga and McKinstry found no underlying contrasts between the communicative practices used in face-to-face and telephone consultations [21].

Other potential risks associated with telephone consultations could be instances where a provider is unable to justify a diagnosis or a management plan, following a diagnosis which might also have funding implications [22]. Mills, Coffey, Draper et al. stated that telephone consultations are an essential part of general practice and a convenient way to communicate with patients [22]. The authors further warned about the pitfalls and stated that good, safe telephone consulting requires skills that can be learnt and developed through technology. The Health Professions Council of South Africa (HPCSA) published ethical guidelines for providers. They covered core ethical values and standards for good practice [23]. Furthermore, in 2020, HPCSA published a communication to provide guidelines on telehealth [24].

Objectives

The primary objective of this study was to conduct a descriptive analysis of telephonic consultations by members of medical schemes with a COVID-19 diagnosis. The secondary objective was to conduct a comparative analysis of the claims associated with telephonic consultations, relative to the claimed amount at practitioner level.

Methods

The study entailed a descriptive comparative analysis of medical schemes claims data. This was mainly an outpatient claims information analysis where the service date was between March – December 2020. The inclusion criteria were all NAPPI codes associated with a telephonic consultation. The study included COVID-19 related ICD-10 codes using the primary diagnosis as the identifier, as per the World Health Organization (WHO) guidelines. The first two groups were COVID-19 confirmed and the suspected diagnosis was as follows: A laboratory-confirmed (RT – PCR assay) COVID-19 was used to identify the COVID-19 case as per the World Health Organization (WHO, 2020a; WHO, 2020b) guidelines and definition. Inclusion criteria for COVID-19 admissions were patients that had a laboratory-confirmed (RT – PCR assay) COVID-19. The WHO defines ICD-10 codes 'U07.1' and 'U07.2' as follows [25, 26].

An emergency ICD-10 code of'U07.1 COVID-19, virus identified is assigned to a diagnosis of COVID-19, confirmed by laboratory testing. An emergency ICD-10 code of'U07.2 COVID-19, virus not identified is assigned to a clinical or epidemiological diagnosis of COVID-19, where laboratory confirmation is inconclusive or not available. Both U07.1 and U07.2 may be used for mortality coding (cause of death).

Results

The analysis covered claims data from a total of 12 medical schemes. The schemes analysis accounted for 1,6 million lives on the 2019 beneficiaries. The total number of COVID-19 confirmed diagnosis-related telephonic consultations was 8 939 and those related to suspected diagnosis accounted for 12 608, (41% vs. 59%, p<0.001). The median claims amount for a COVID-19 confirmed diagnosis and that of a suspected diagnosis was IQR: R293 (R283-R400) and R288 (R283-R390), respectively. Figure 2 below depicts the proportion of consultations per month. The results depicted a peak in the proportion of consultations in July and December. This phenomenon was similar to that observed at the national level in respect of COVID-19 infection rates. There were more COVID-19 suspected diagnosis telephonic consultations relative to a confirmed diagnosis from March to June. This was however reversed from July to September, when July 2020 COVID-19 confirmed diagnosis telephonic consultations accounted for 36%, compared to 31% of COVID-19 suspected diagnoses.

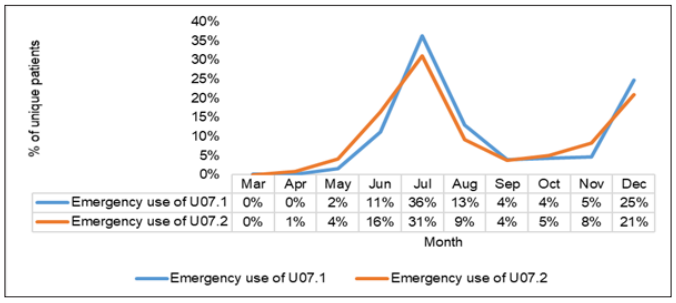

Figure 2: Proportion of unique telephonic consultations by month-2020

Figure 3 below depicts a Box and Whisker plot of telephonic average claim per consultation ("event"). The findings depicted instances where the claimed amount was frequently higher than the scheme tariff amount for telephonic consultations. These dissimilarities potentially present evidence that other providers currently charge more than the scheme tariff amounts.

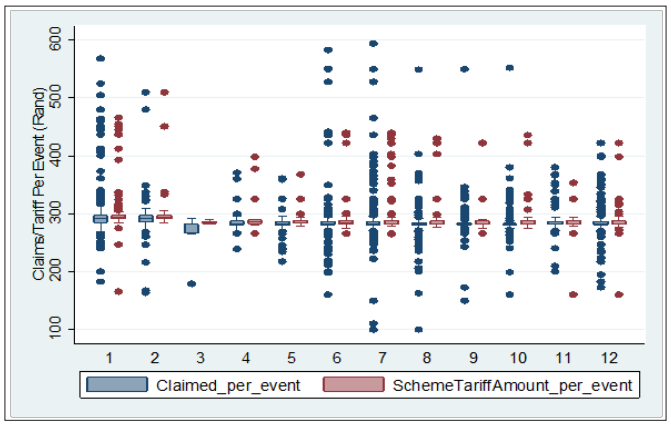

Figure 3: Box and Whisker plot - telephonic consultations (Claimed vs Scheme Tariff amount) by month: 1 = January … 12 = December

Figure 4 below depicts claims per consultation for a COVID-19 related diagnosis (COVID-19 confirmed diagnosis and suspected diagnosis combined). The results depicted that independent practice specialist medical practitioners on average, claimed in the region of R360 to R528 per consultation. This was higher compared to general medical practices, and specialist family medicine and group practices. The respective claimed amount per consultation ranged from R270 to R294; R274 to R317 (excluding the December data point due to possible data quality issues) and R282 to R283, respectively.

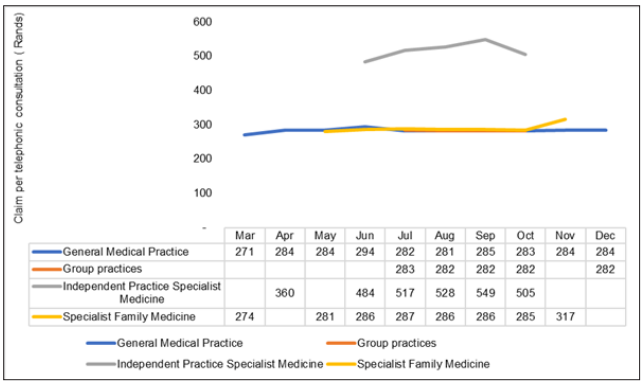

Figure 4: Claim amount per telephone consultation by discipline and month

Discussion

The objective of this paper was to explore and assess telephone consultations among members of medical schemes in South Africa. The study showed that the health seeking behaviour of medical scheme members who utilised telephone platforms during the review period followed the national pandemic phenomenon pattern where respective utilisation rate and infection rates peaked in July and December 2020. This study found that telephone consultations mainly utilised general medical practice services with an average claimed amount of less than R300 per telephone consultation. The claim estimate for a virtual consultation in this study was within a similar range as ER Consulting, which estimates between R270 and R330 [27]. There were varying rates between respective medical practitioners. The average telephone consultation for independent practice doctors was found to be higher than R300.

The average claim per telephone consultation for a COVID-19 diagnosis was found to be lower than the normal face-to-face general practitioner consultation rate [17, 18, 28,]. This might be attributed to varying consultation times between the two types of consultations. A shorter consultation is likely to attract a lower reimbursement rate. A study by Hobbs et al, found that telephone consultations were usually shorter than face-to-face consultations (mean duration 5.4 minutes compared with 9.22 minutes [20]. A study by Hewitt, Gafaranga and McKinstry found no underlying contrasts between the communicative practices used in face-to-face and telephone consultations [21]. This study found a handful of schemes linked to one administrator that incurred claims for telephone consultations for a COVID-19 related diagnosis. There is also a body of evidence that reports that COVID-19 telephone consultation being offered at no fee.

CMS Prescribes Minimum Benefit (PMB) definition guidelines on COVID-19 and screening of COVID-19 using a questionnaire, irrespective of whether it's a virtual or a face-to-face consultation, which shows the PMB level of care [19]. Future research should focus on the variance between the scheme tariff rate and what is claimed by the providers. Further research is projected to further investigate the varying reimbursement rates

between medical schemes for COVID-19 telephone consultations, relative to a face-to-face consultation.

Conclusion

The study found evidence of patients utilising digital platforms to consult the respective practitioners during the COVID-19 pandemic. Greater utilisation patterns were seen in disciplines such as general medical practice, specialist family medicine, independent practice specialists medicine and group practices. The study also found that claimed amounts between COVID-19 suspected diagnoses and confirmed COVID-19 diagnoses were not significantly different. The main finding of the study was disparities between the scheme tariff amount and the claimed amount. One of the main limitations challenges, when the gap between the two amounts widens, is the potential co-payment for a PMB level of care condition. The findings of this study depict multidisciplinary management of COVID-19, particularly at a primary health care level, where patients could consult with a practitioner virtually. However, we warn of ethical considerations and risk-related issues when consulting medical practitioners virtually.

Acknowledgement

The author is grateful to Mr. Neo Nonyana for providing valuable support in concluding this research.

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