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Telephone Consultations by Medical Scheme Patients Consulting General Medical Practitioners, South Africa

Michael Mncedisi Willie, Neo Nonyana and Sipho Kabane

Abstract

Background: The COVID-19 climate has seen a shift in the manner that patients seek care. 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 objective of this chapter was to conduct the descriptive analysis of telephonic consultations by members of medical schemes who consulted general medical practitioners. **Methods:** The study entailed a descriptive analysis of medical scheme claims data for the 2020 review period. The inclusion criteria were all National Pharmaceutical Product Interface (NAPPI) codes associated with a telephonic consultation consulting general medical practitioners. The ICD-10 code primary diagnosis was used to describe the diagnosis. The study mainly focused on outpatient patients with service dates between March and December 2020. **Results:** The analysis covered claims data from a total of 12 medical schemes. The schemes analysed accounted for 1,6 million lives. The total number of telephonic consultations was 17 237. The mean (SD) claimed amount for telephone consultation for a general medical practice consult was R282¹ (SD = 20). This was slightly lower than the scheme tariff of R287² (SD = 19). The study found that most telephonic consults were for Acute bronchitis, unspecified; Acute upper respiratory; Emergency use of U07.1 (Confirmed diagnosis); Emergency use of U07.2 (Suspected Diagnosis); Follow-up examination; Special screening. **Conclusion:** The study found evidence of patients utilising telephonic consultations for general medical practitioner services. The effect of COVID-19 in this respect was seen in the three main primary diagnoses that were associated with the consult, Acute upper respiratory, Emergency use of U07.1 (confirmed diagnosis) and Emergency use of U07.2 (suspected diagnosis). Even though the average telephonic consult was claimed at just under R300³, few general medical practitioners claimed between R400⁴ and R500⁵ which were higher than the industry average. There is a need to develop telephone consult guidelines at industry level, these should also address reimbursement rate differentials.

¹ 14.2 British Pound (GBP)

² 14 British Pound (GBP)

³ 15.1 GBP

⁴ 20.1 GBP

⁵ 25.2 GBP

Keywords: Telephonic consultation, general medical practitioners, medical schemes, South Africa

1. Introduction

The COVID-19 epidemic has adversely affected health systems globally. The utilisation of technology and other innovative channels to link up with patients has evolved drastically over the past 12 months. COVID-19 regulations and the fear of contracting the virus at a health care facility has also changed health seeing behaviour among patients. There has been a plateau in teleconsultations since the end of the lockdown in France (on May 11, 2020), but the amount remains higher than before, stabilising at 150,000 per week [1]. Temporary disruptions in routine and non-emergency medical care access and delivery have been observed in the US and worldwide during COVID-19 [2]. The authors estimated that 40.9% of adults had avoided the use of medical care services during the pandemic. The study further depicts that 12.0% of adults also avoided urgently or emergency care, and just under a third of adults (31.5%) avoided routine care. A study comparing health facility visits from March to May 2020 with in-person visits during the same period in 2019, the results showed a reduction of 52% and 47% of emergency department visits and hospital admissions was observed compared to in-person visits ($p < 0.01$) [3]. The study also found that, of 120 patients surveyed, 95% were satisfied/very satisfied with the telephone visits.

1.1 Virtual 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 [3–5]. A study by Bokolo found that telemedicine and virtual software as one of the contributing factors to the decrease in the number of visits to emergency rooms [6]. Accordingly, outpatient in-person visits can be converted to telephone visits [3].

1.2 Arguments against virtual consultations

Furthermore, there were challenges and obstacles cited in the use of virtual consultations. McGrail, Ahuja and Leaver, [7] conducted a systematic review on the view against the use of the telephone for virtual consultations [7]. The author concluded that patient consultations platforms such as telephones might allow minor problems to be dealt with without a face-to-face visit, In particular for acute illness. The author further depicts that even though these platforms may be cost savings, they may miss rare but serious conditions [7]. Another study by Car *et al.* showed that remote consultations were perceived as being less “information-rich” than face-to-face consultations, and technical issues were common [8]. Furthermore, there was no credible evidence to guide clinicians on when to use phone or video consultations.

2. Background

The utilisation of technology and other innovative channels used to link up with patients has evolved over the past ten (10) years. However, this has been accelerated eminently during COVID-19 [6, 9]. Lockdown restrictions and regulations, fear of contracting the virus at a health care facility has also changed health seeing behaviour among patients. 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 [9]. A survey conducted in 2020 of 120 patients surveyed showed that 95% were satisfied/very satisfied with the telephone visits [3]. The study also surveyed 26 physicians and found that 84.6% of them considered telephone visits were useful to prioritise patients.

2.1 Virtual consultation- general practitioners

Virtual consultations (also called telemedicine consultations) have been in place for decades, with many healthcare systems advocating a digital-first approach, even before the COVID-19 pandemic [7, 10]. This has, however, further accelerated the use of [11, 12]. At the beginning of the pandemic, many health professionals, including General Practitioners (GPs), specialists and others, resorted to the use of video consultations to reduce patient flow in their practices and facilities as a risk measure to limit infectious exposures [8].

The General Practitioner (GP) data for England shows a rapid increase in telephone consultations relative to face-to-face consultations [12]. The authors found that the number of telephone consultations increased from more than 850 thousand to more than 2 million per week between March 2 and May 18 2020, while the number of video consultations was higher in March than in April or May when it was around 10,000 per week [12]. Richardson *et al.*, a large proportion of teleconsultations (96 percent) in France found) were billed by private practitioners, with GPs billing 80 percent of all teleconsultations, followed by psychologists (6 percent), paediatricians (2 percent), gynaecologists (1.3 percent), dermatologists (1.1 percent), and endocrinologists (1.1 percent) (1.1 percent). In the Netherlands, teleconsultations are expanding, with 72 percent of GPs surveyed said they had begun using video consultations with patients in 2020.

2.2 Funding of telephone consultations – Medical schemes

Update and use of technology have also been evident in medical schemes, where some medical schemes continue to fund these. However, not all medical schemes⁶ fund telephone consultations related to COVID-19 [5, 9]. 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 [13]. The **Table 1** below depicts various rates for various schemes. The fees range between R281 and R437.

2.3 Legislative requirements

There are legislative restrictions on the use of virtual consultations [9]. Some of these have made the implementation of virtual consultation in low-income countries difficult. Some present challenges are related to data security and privacy requirements [8]. A number of countries have also evolved and 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 working closely with regulators in terms of compliance to standards on the use of non-medical, electronic platforms and applications such as Skype, WhatsApp, and FaceTime in addition to medical ones [8].

⁶ A **medical scheme** is a non-profit organisation, governed by a board of trustees, and must be registered with the Council for **Medical Schemes**.

Scheme name	2020 tariff rates
AECI	R287.00
Barloworld	R283.40
Bonitas	R281.60
Fedhealth	R281.50
Horizon	R293.70
Hosmed	R325.40
MBMed	R282.70
Medshield	R436.60
Nedgroup	R287.00
Parmed	R279.80
Polmed	R268.80
SABC	R282.00
Sasolmed	R281.60

Source: [13].

Table 1.
Telephone consultation fees – Medscheme affiliated schemes tariff rates.

3. Objectives

The primary objective of this study was to conduct a descriptive analysis of general medical practitioner telephonic consultations by members of medical schemes.

4. Methods

4.1 Study design

The study entailed a descriptive analysis of medical schemes claims data for the 2020 review period.

4.2 Setting

Medical schemes, which are also called health insurance companies operating in the private health sector in South Africa, are non-profit organisations governed by a board of trustees and must be registered with the Council for Medical Schemes (CMS). The CMS is a statutory body which is a section 3A entity that regulates medical schemes in South Africa. There are two types of medical schemes, which are open and restricted medical schemes. Open membership schemes must accept anyone who wants to become a member [14]. Restricted membership schemes can restrict who may become a member, and they are typically employer or union based [14]. The schemes that were included in the analysis were those that submitted data as per circular 29 of 2020: Claims information for beneficiaries treated for COVID-19 of the CMS [15]. Theschemes covered in the analysis represented approximately

1,6 million lives, and this counted for 18% of all lives covered by medical schemes in 2019. The CMS annual reports were used to source the data [16].

4.3 Unit of measures

The unit of measurement for the amount of the claim was measured in rand terms (R: ZAR). As of May 2020, the equivalent value was:

- 1 ZAR to GBP = 0.0502
- 1 ZAR = 0.07077 USD

4.4 Inclusion criteria

The inclusion criteria were all National Pharmaceutical Product Interface (NAPPI) codes. These are unique product identifier for a given surgical product, medical appliance, consumable product, pharmaceutical product or other medicinal product. The inclusion criteria were all NAPPI codes associated with a telephonic consultation consulting general medical practitioners. The ICD-10 code primary diagnosis was used to describe the diagnosis. The study mainly focused on outpatient patients with service dates between March and December 2020. A laboratory-confirmed (RT – PCR assay) COVID-19 was used to identify the COVID-19 case as per the World Health Organisation [17, 18] guidelines and definition. Inclusion criteria for COVID-19 admissions were patients that had a laboratory-confirmed (RT – PCR assay) COVID-19. 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).

5. Results

The analysis covered claims data from a total of 12 medical schemes. The schemes analysed accounted for 1,6 million lives. The total number of telephonic consultations was 17 237. The mean (SD) claimed amount for telephone consultation for a general medical practice consult was R282⁷ (SD = 20). This was slightly lower than the scheme tariff of R287⁸ (SD = 19) (Table 2).

Figure 1 below depicts the proportion of consultations per month. The results depicted a peak in the proportion of consultations in July and December, with July accounting for 33 percent and 22 percent of consultations in July and December, respectively. This phenomenon was consistent with COVID-19 infection rates at a national level in South Africa.

The study found that most telephonic consults were for Acute bronchitis, unspecified; Acute upper respiratory; Emergency use of U07.1 (Confirmed diagnosis); Emergency use of U07.2 (suspected diagnosis); Follow-up examination; Special screening. Table 3 below further depicts that average consults for an acute respiratory

⁷ 14.2 GBP

⁸ 14.4 GBP

	Mean (SD)	Median (IQR)
Claimed amount per telephone consultation	R282.7 (20.9)	R282 (R279 - R285)
Scheme Tariff Amount	R286.7 (19.2)	R283 (R282 - R289)

Table 2.
Summary statistics: Claimed amount vs. scheme tariff amount- general medical practice telephone consultations. (1 R: 1 ZAR = 0.0503 GBP).

Figure 1.
Total number of telephone consultations per month to general medical practitioners.

consult were higher at R298 (SD = 103). However, there was variability in this regard. The average claim amount for a COVID-19 confirmed diagnosis was lower than the suspected diagnosis at R284 (SD = 27) and R288 (SD = 83), respectively.

Figure 2 below depicts a Box and Whisker plot of the average claim amount for the general medical practitioner telephonic consultations. The findings depict that the most prevalent telephone consults were mainly for general medical practice, specialist family medicine depicting outliers. The average claim amount per telephonic consults for other specialist telephonic consults for Independent Practice Specialist Obstetrics and Gynaecology was higher than R400. Their results also showed some evidence of telephone consultation for non-consulting specialists such as Urologists and Paediatrics Independent Practice Specialist though the volumes were not as significantly high.

ICD-10 primary ICD-10 code description	N	Mean	Std Dev
Acute bronchitis, unspecified	28	R284	R11
Acute upper respiratory	75	R298	R103
Emergency use of U07.1 (confirmed diagnosis)	968	R284	R27
Emergency use of U07.2 (suspected diagnosis)	1,192	R288	R83
Follow-up examination	30	R280	R16
Special screening exam	40	R283	R9

Table 3.
Summary statistics: Claimed amount per ICD-10 primary ICD-10 code description- general medical practice telephone consultations. (1 R: 1 ZAR = 0.0503 GBP).

Figure 2.
Box and whisker plot - telephonic consultations (claimed amount) by discipline. (14 = general medical practice; 15 = specialist family medicine; 16 = independent practice specialist obstetrics and Gynaecology; 18 = independent practice specialist medicine; 30 = otorhinolaryngology; 32 = Paediatrics independent practice specialist; 42 = surgery independent practice specialist; 44 = cardio thoracic surgery; 46 = urology; 50 = group practices).

6. Discussion

The objective of this paper was to explore and assess telephone consultations among members of medical schemes in South Africa. This study found that telephone consultations were mainly for general medical practice services with an average claimed amount of less than R300 per telephone consultation. The average claimed amounts in this study were within the ER Consulting estimates of between R270 and R330 (ER Consulting, 2020). The amount claimed for virtual consultations ranged between R281 and R437, and these were similar to rates depicted earlier in this study [13]. The study also found telephone consults among specialist services, and these had an average claimed amount higher than R400, reflecting the specialist level of care by these specialists which attract higher reimbursement rates. A study conducted in France found that a large proportion of teleconsultations (96 percent) were billed by private practitioners [12]. This study also explored the average claim amount per general medical practice telephone consultation on six different diagnoses. The study found similarities among these average claims per telephone consultation, which also included follow-up examination and special screening exam. A notable feature of the findings was that the average claim amount for an acute upper respiratory telephone consult was higher than COVID-19 confirmed diagnosis or COVID-19 suspected primary diagnosis consultation. There are currently no pricing guidelines across various specialists and practitioner telephone consultations in South Africa, at least at the time of writing this Chapter. According to Hammersley *et al.*, remote consultations are perceived to be less “information-rich” than face-to-face consultations, and technical issues were common [19]. 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]. Further research is projected to further investigate the varying reimbursement rates for various specialist groups and other disciplines relative to a face-to-face consultation. Future research should also seek to develop guidelines on telephonic consultations and assess value add to patients.

7. Conclusion

The study found evidence of patients utilising telephonic consultations for general medical practitioner services. The effect of COVID-19 in this respect was seen in the primary diagnoses associated with the consult, Acute upper respiratory, Emergency use of U07.1 (confirmed diagnosis) and Emergency use of U07.2 (suspected diagnosis). The average claim amount for a telephonic consultation was lower than R300, and few general medical practitioners claimed between R400 and R500 which was higher than the industry average. There is a need to develop telephone consult guidelines at industry level, these should also address reimbursement rates differentials. Furthermore, the guidelines should potentially cover both provider and patient conduct. There is a need to also develop guidelines on how these are adjudicated, validated, and funded at the scheme level.

8. Limitations

This study mainly used secondary data collected from the CMS, which was transactional data; as a result, essential information on telephone consultation characteristics were not considered. Information such as frequency of calls to the provider, average call time, and mode or type of device used to contact the provider was not available and thus not included in the study. Future research should consider telephone consultation characteristic and patient perspective.

Conflict of interests

The authors have declared that no competing interest exists.

Authors contributions

The authors drafted and proofread the article.

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Author details

Michael Mncedisi Willie*, Neo Nonyana and Sipho Kabane
Policy Research and Monitoring, Council for Medical Schemes, South Africa

*Address all correspondence to: m.willie@medicalschemes.co.za

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