The Open Public Health Journal

Content list available at: https://openpublichealthjournal.com

RESEARCH ARTICLE

Reasons for Avoiding their Local Clinics among Non-emergency Patients at Accident and Emergency Department, Pretoria, South Africa

Tebogo Thaba[1], Edith Madela-Mntla[1,2], Margaret Ramochele[1] and Doudou Nzaumvila[1,*]

[1]*Department of Family Medicine and Primary Health Care, Sefako Makgatho Health Sciences University, Ga-Rankuwa, South Africa*
[2]*Department of Family Medicine, University of Pretoria, Pretoria, South South Africa*

Abstract:

Background:

An accident and emergency department (AED) is designated for patients who need to be seen urgently. However, at Jubilee Hospital, a large number of patients regularly presented directly to the AED with minor ailments. This resulted in long queues in the already overcrowded waiting room.

Methods:

A cross-sectional study design with a sample of 289 participants.

Results:

Those aged 21-40 years accounted for 44.6% of the participants. Patients mainly arrived on Fridays (72%), and medical-related complaints (128; 44.3%) were the most prevalent. In addition, patients primarily relied on public transportation to get there (180; 62.1%). In most cases, patients had previously visited clinics more than twice (141; 58.8%). Majority of patients were aware of the community health centres' services. Only 33.6% of the clinics that were bypassed provided services 24 hours a day. Almost 80% of bypassed clinics were within 10 km of the District Hospital. Patients' main reasons were long queues (89.6%) and medication shortages (67.6%). In 51.2% of cases, patients were aware of the referral system, but 14.5% did not think it made sense, and 11% did not understand it well.

Conclusion:

Proper strict application of the triage system and education of patients will decrease emergency department overcrowding. This will improve patient safety, clinical outcomes and the efficiency of the health system. In addition, changing local clinics' operating hours will assist in reducing the high number of patients seen at Jubilee Hospital.

Keywords: Bypass, Clinic, Non-emergency, Minor ailment, Self-referral, Education.

Article History	Received: April 16, 2022	Revised: October 13, 2022	Accepted: October 20, 2022

1. INTRODUCTION

Non-urgent patients' visits to accident and emergency departments (AEDs) have posed a major concern globally, resulting in delays in waiting times unnecessary and excessive use of diagnostic tests and medical resources. The number of these patients and the related pressure their visits create is said to be on the rise [1, 2]. Some studies have revealed that most of those patients are young for a variety of reasons [3, 4]. These include patients' health problems, patients' need or expectations or investigations of their condition; convenience of the AED or feeling more comfortable at the AED; difficulty in accessing primary care; lack of confidence in GP/primary care; and financial considerations [1]. The majority of reasons provided were mainly due to patients' perception of their conditions as being urgent or severe, hence the seeking of medical attention in an AED setting [1 - 3, 5]. However, patient self-perceived and the clinician's assessment of urgency may differ and it is expected of patients to take actions based on their own perceptions of urgency. In most cases, patients are unable to make a good judgement about their condition's severity; hence they present to the AED non-referred and with non-urgent conditions [1]. Other reasons stated for presenting at the AED were the perception of health care services provided at the hospital as being adequate, quick, and of high quality [1, 3, 6 - 8]. Patients present with the expectation that investigations will be completed more efficiently than elsewhere and that they will

* Address correspondence to this author at the Department of Family Medicine and Primary Health Care, Sefako Makgatho Health Sciences University, Ga-Rankuwa, South Africa; E-mail: doug_nk@hotmail.com

be seen by a doctor and have tests performed (*e.g.* blood tests or x-rays) all at once, in the same setting, and may even be referred for multidisciplinary team services if required [1, 2, 9]. Even in a primary care setting, AEDs are well-suited to provide emergency care. AEDs in hospitals are thought to be better equipped and have more resources [1]. Most patients see this as an opportunity to get a more thorough assessment through advanced investigations than they could get at their local clinic [9]. Furthermore, they constitute a waste of already scarce resources. When patients arrive at an overcrowded hospital AED, they are more likely to face longer waiting times, and delays in receiving medical treatment or being seen. Furthermore, overcrowding of patients may have a negative impact on universally accepted professional, ethical standards, most notably patient privacy [10]. The ethical standards provided may contribute to the patient's dissatisfaction with the hospital's level of care. Another study discovered that patients who were dissatisfied with their previous visit to a particular hospital are more likely to seek medical services elsewhere in future; the level of satisfaction is determined by the patients' expectations, and the higher the level of expectations, the lower the level of satisfaction. Furthermore, the higher the level of care setting, the higher the patients' expectations, resulting in lower levels of patient satisfaction [9]. Another reason why some patients self-refer to the emergency department on weekends, at night and in the evenings is the lack of access to another healthcare setting that provides medical services outside of office hours [4, 10]. Furthermore, the inability of a health care provider to be available on a regular basis in a primary health care facility is another reason for patients seeking care elsewhere [6].

The patients' choice of a facility when avoiding their local designed clinic has been the focus of attention in health research because bypassing the closest facility is associated with a financial burden, which may result in the closure of some hospitals, particularly in rural settings. Distance was cited as a reason by those who bypassed their local facilities in an African setting [11]. In general, the distance travelled, or proximity of a facility and geographical access are the primary concerns in facility selection, particularly for individuals with limited mobility, such as older patients and those living in rural areas [11]. In a study in Uganda, patients were seen bypassing their primary healthcare facility because of its poor quality of services, making them do so to go to settings with higher levels of care [12].

South Africa has a high burden of diseases such as human immunodeficiency virus (HIV) and AIDS as well as tuberculosis (TB), maternal and child mortality, non-communicable diseases such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses and chronic lung diseases like asthma, as well as injury and trauma [13]. These are collectively known as the quadruple burden of disease. In a primary healthcare setting, many patients present at AEDs, both those with emergency conditions and those with minor or non-urgent conditions, which places a huge burden on the system [2, 14]. In contrast to what has been studied in other countries, studies in SA have not only focused on the visits of non-urgent patients to an emergency department but also on patients bypassing clinics to present at departments at hospitals aside from the emergency department. Numerous reasons were explored in a study at Letaba Hospital in Limpopo. Most patients were found to have been bypassing their local clinics because they were specifically seeking help from a doctor for their conditions; in addition, others required dental treatment or the termination of pregnancy [15].

Most patients in SA who are on treatment for TB and HIV mentioned that some people in their communities treat them differently because of their disease. As a result, they opt to go to a primary healthcare facility far from where they live, where they are not known [17]. Moreover, a recent study on the topic found that patients who self-refer and bypass their nearest facility were influenced by facility factors such as the waiting time and availability of medications [17]. Patients who are assisted timeously in their local clinic facilities less likely bypass that healthcare setting. The availability of medication was also found to be an important factor for those who self-referred themselves [17].

There have not been any prior research at JDH to understand this issue. The authors aimed to know why non-emergency patients were not attending their designated local clinics and going straight to JDH. This entailed documenting patients' baseline characteristics, medical complaints, determining the factors associated with patients' choice of the hospital over local clinic, gathering information, and their understanding of the referral system, as well as their understanding of the use of primary healthcare.

2. RESEARCH METHODS AND DESIGN

This was a prospective cross-sectional study, with a study population made of non-urgent patients presenting themselves to the AED of JDH. They were green-coded patients after scoring on the triage scale [18]. The district hospital is located in Hammanskraal Township in Pretoria, in the northern Gauteng Province. The region includes urban and rural settlements. The hospital has 551 beds, with 388 currently usable [19], to serve a population of 355 905 from North West and 466 299 from Gauteng [20]. It offers a support base for 32 clinics, 11 in Gauteng and 21 in North West, of which only six are community health centres operating for 24-hour a day.

The researchers used a validated questionnaire [16]. The questionnaire was piloted, and recommendations were used to improve it in accordance with the study's aim. One of the authors recruited and trained all the nurses who worked in the AED's triage bay. They volunteered to help with data collection during days and nights shifts whenever the workload permitted it. Based on the South African Triage Scale score [18], our inclusion criteria was green coded patients, also classified as non-urgent patients, and we excluded those who were referred. After being triaged and reassured that their participation will not interfere with the service require green code patients and non-referred patients were given questionnaires. The questionnaire included demographic information, patients' reasons for going non-referred to hospital and patients' knowledge about the referral system. It consisted of 25 questions and had already been translated into local languages (si-Sesotho and si-Xitsonga) by a professional and independent translator. One of the authors, who worked in the hospital,

collected the filled forms on a daily basis if available. Data from the AED at JDH, indicated that 2200 to 2500 patients are seen on monthly basis, plus or minus 40% being non-urgent. Initially, a calculated sample size of 269 was planned, with a 95% confidence level and a 5% confidence interval. With the expectation that 10% of completed questionnaires could be rejected, the authors increased the sample size to 300, with a possible sample size of 270 for analysis. Data collection began on January 1, 2020, and 300 completed forms were filled by September 25, 2020. Following the audit, 11 completed questionnaires were rejected, resulting in a sample size of 289.

Data were captured in an excel spread sheet then ported to Instat® software for analysis. As a descriptive study, the researcher used means and standard deviations (SD) for parametric data and medians and confidence intervals (CI) for non-parametric data. Percentages, frequencies and ratios were used for categorical and non-categorical data.

Data collection began only after ethical approval had been obtained from SMUREC reference number:SMUREC/M/255/2019:PG and Tshwane research committee NHRD reference number GP_201911_018. Following an explanation of the study's aim, each participant signed a consent form.

3. RESULTS

Data were collected from 300 participants, but 11 questionnaires were rejected due to missing information, resulting in a sample size of 289 participants.

The mean age ± SD was 37.2 ± 18.9 years. Most participants were aged 21–40 years (129; 44.6%), female (151; 52.2%), unemployed (177; 61.2%) and lived within 10 km of the district hospital (178; 61.6%). Other information pertaining to the baseline characteristics of patients is presented in Table **1**.

Table **2** shows that patients mainly consulted on Fridays (72; 24.9%), and medical-related complaints were the most prevalent. They also mostly used public transport (180; 62.1%).

In the majority of cases (141; 58.8%), patients had visited their clinic more than twice, and reported that services were free (252; 87.2%). They were willing to return to their clinic (64.7%). They were aware of the services available, but only 33.6% of the bypassed clinics were reported to be open 24 hours a day and seven days a week. Patients who bypassed Temba community health centre (CHC) and Ramotse clinic made up 58.1% of our total sample size (Table **3**).

Table 1. Baseline characteristics.

Characteristics	Frequency (n)	Percentage (%)
Age (yrs)		
≤20	44	15.2
21–40	129	44.6
41–60	72	24.9
≥60	44	15.2
Gender		
Female	151	52.2
Male	138	47.8
Employment		
Employed	97	33.6
Unemployed	177	61.2
No record	15	5.2
Estimated clinic distance to the district hospital **(km)**		
≥10	178	61.6
11–20	61	21.1
21–30	19	6.6
31–40	9	3.1
≤40	22	7.6

Table 2. Patients' presenting complaints and day of consultation.

Variables	Frequency (n)	Percentage (%)
Complaints		
Gynaecological	21	7.3
Neurology	24	8.3
Medical	128	44.3
Surgical	36	12.5
Trauma	80	27.7
Day of consultation		
Monday	42	14.5
Tuesday	46	16
Wednesday	28	9.7
Thursday	44	15.2
Friday	72	24.9
Saturday	28	9.7
Sunday	29	10.0
Means of transport		
Ambulance	6	2
Own car	28	10
Public transport	180	62.1
Walk-in	44	15.2
No record	31	10.7

Table 3. Characteristics of avoided clinics.

Variables	Frequency	Percentage
Number of previous visits to clinics		
Visited only once	13	5.4
Visited twice	86	35.8
Visited more than twice	141	58.8
Free services at the clinics	252	87.2
Would return to your local clinic	187	64.7

(Table 3) contd.....

Variables	Frequency	Percentage
Yes these services are available at my local clinic		
Acute illness	253	87.5
Antenatal clinic	236	81.7
Chronic illness	245	84.8
Family planning	236	81.7
HIV/TB	240	83.0
Immunisation	236	81.7
What are the service hours at your local clinic?		
07h30–16h00	94	36.3
07h00–19h00	78	30.1
24 hours	87	33.6
Names of bypassed clinics		
Temba CHC	106	37.0
Ramotse clinic	61	21.1
Dilopye	31	10.7
Mathibestad clinic	21	7.3
Eersterus clinic	12	4.2
Ratjiepane	11	3.8
Lefatlheng	8	2.8
Mandisa Shiceka	6	2.1
Maubane	6	2.1
Suurman	6	2.1
Lebotlwane	4	1.4
Soshanguve BB	4	1.4
Boosplas	3	1.0
Ngobi	2	0.7
Kgomokgomo	2	0.7
Makapanstard	2	0.7
Other	4	1.4
Distance from local clinic to the district hospital Clinics located ≤ 10 km from JDH	106	37.0
Temba	61	21.1
Ramotse	31	10.7
Dilopye	21	7.3
Mathibestad	6	2.1
MandisaShiceka	6	2.1
Suurman	231	79.9
Total	8	2.8
Clinics located 11–20 km from JDH	6	2.1
Lefatlheng	2	0.7
Maubane	16	5.6
Bosplaas	11	3.8
Total	4	1.4
Clinics located 21–30 km from JDH	2	0.7
Ratjiepane	17	5.9
SoshanguvheBB	2	0.7
Makapanstard	4	1.4
Total	2	0.7
Clinics located 31–40 km from JDH	6	2.1
Kgomokgomo		
Clinics located >40 km from JDH		
Lebotlwane		
Ngobi		
Total		

Long queues (89; 29.6%) and medication shortages (67; 22.3%) at the clinics were the main reasons for patients bypassing their designated local clinic (Table **4**).

Table 4. Reasons for avoiding the local clinic.

Characteristics	Frequency (n=301*)	Percentage (%)
Long queues	89	29.6
No medication	67	22.3
Long waiting times	48	15.9
Rude staff	45	14.9
JDH is near	16	5.3
Patient known to JDH	15	5.0

(Table 4) contd.....

Characteristics	Frequency (n=301*)	Percentage (%)
No doctor at the clinic	8	2.6
Closed on weekends	6	2.0
I did not get help	2	0.7
It is not helping	2	0.7
Other reasons	3	1.0

Note: * There was the option of selecting more than one reason.

Friends and family members informed the majority of patients about the district hospital. Patients were aware of the referral system in 51.2% of cases, but 14.5% did not think it made sense, and 11.0% did not understand it Table **5**.

Table 5. Information and understanding of patients on the referral system.

Variables	Frequency	Percentage
How did patients know about the district hospital?		
From clinic/nurses	13	4.6
From friends/family	267	95.4
Patient's Awareness of Levels of the Health Care System		
No, I do not know	141	48.8
Yes, I do know	74	25.6
I know, but it does not make sense to me	42	14.5
I know, but I do not understand it	32	11.1

4. DISCUSSION

This study found that the majority of patients who came to the district hospital not referred, with non-urgent complaints, were in the age groups of 21-40 years (44.6%), followed by 41-60 years (24.9%). Similarly, another study found 43% in the age group 18-29 years, 27.50% in the 30-39 years, 15.9% in the 40-49 years, 3.10% in the 60-69 years and 1.10% in the over 70 years age brackets [4]. A different study found that non-urgent patients were mostly below the age of 45 years (67.71%) [3]. The reasons for more patients in the 18-29 age group bypassing their clinics could be due to their proclivity to move frequently (school, job availability) as they have not settled. In addition, their unemployment makes it easier for them to have the time to bypass clinics and go to the district hospital, because in most cases the hospital is within 10 km. The district hospital is also located close to the largest shopping complex within the community, with easily available transport.

There was a small difference in gender distribution between males and females. Male patients accounted for 47.8% and female patients for 52.2% of patients who presented to the district hospital without being referred and with non-urgent conditions. This is in line with previous research; according to the study by Toksöz *et al.* [4] females made up 54.9%, while males made up 45.1%.

Of the patients who bypassed their clinics, 61.2% were unemployed, similar to what was found in other studies [7]. It was found that unemployed patients outnumbered employed ones; no explanation nor a link between bypassing and unemployment was found, but in the context of SA it is likely that unemployed SA patients will seek treatment at a state hospital, where services are provided free of charge and only payment for a file is being made. A counter-argument maybe that the services in the clinics are also free and even less the payment for files in some cases though the fees are less for a file in a clinic service. However, our argument was based on the notion that, while both a hospital and a clinic provide free services, the services rendered differ or that a hospital provides more services. Financial constraints due to unemployment limiting the patient's ability to go to private would have motivated the patient's choice of a hospital over a clinic.

Medical conditions were most common among those who presented with non-urgent conditions, followed by surgical conditions. According to previous studies, there were no common rules for reporting minor ailments; however, we noticed a trend in the literature that participants had symptoms consistent with medical conditions, such as cough, fever, and sore throat [21]. The preponderance of patients in our study presenting with medical conditions may be due to the high prevalence of diseases such as HIV/AIDS, TB and other communicable diseases in SA, as well as COVID-19.

We discovered that non-urgent visits to the district hospital were mostly made on Fridays. Our opinion, this could be due to the unavailability of doctors in the clinics on Fridays or, if they are available, they knock off earlier on Fridays than on other days except for clinics operating 24 hours. However, we cannot draw any conclusions about doctors leaving early. Because the times of the patients' consultations were not asked in this study, neither was inquired the existence of any education on when and where to consult the ED. Patient education about which conditions require ED consultation and which non-urgent conditions can be treated at other healthcare facilities could help reduce the number of ED patients [22]. Also, because our study was quantitative and used a pre-existing validated questionnaire, bearing in mind that patients have their own reasons on how to use the health care system [23], one should consider that a qualitative study design, as recently published by Bahadori M. *et al.* [24], Matifary CR [22] yielded different results and allowed for the finding of trends in patients' ideas and perspectives, as well as a thorough look into the problem.

Most of the patients (240; 83.9%) had previously visited their nearest clinic, while the remaining 46 (16.1%) had not visited their nearest clinic before. Of those that had visited their clinic, 58.8% said they had visited more than twice, while 35.8% had visited twice and 5.4% had visited once only. The explanation for this might be that patients were either not satisfied with the services provided at the clinic or it was closed at the time they presented to the district hospital. Additionally, it has been documented in other studies that in choosing health care, patients may consider their previous experiences with regard to the service received. If they had a

bad experience, patients will be less likely to use the same or equivalent institution providing the same level of care and might have a higher expectation of emergency care – and exaggerate the severity of their illness in order to get such care.[3] While fees are not payable at their nearest clinic, it was surprising that we still had most patients presenting at the district hospital, where payment is required for a file to be opened and to be retrieved again on a follow-up visit.

Mode of transport to the hospital was investigated, with 62.3% of participants using public transport, while 15.2% walked to the hospital, showing that they stay closer to the hospital. Only 9.7% of patients came with their own cars, which can be linked to the finding of a smaller number of participants in our study who were employed. We did not expect ambulances to be used, since this study focused on patients with non-urgent conditions; however, 2% arrived by ambulance. This could be explained by the finding of previous studies that non-urgent patients are not well informed and lack knowledge about self-care and medical resource use; they also struggle to assess the urgency of their illness, and hence opted to use an ambulance [1, 3].

In the study, we found that 66.4% of the patients' nearest clinics were not open 24 hours: 36.3% were open from 07h30 to 16h00 and 30.1% were open from 07h00 to 19h00; only 33.6% reported that their nearest clinics were operating for 24 hours. Matifary [22] and Goodridge and Stempien [8] argue that the inability to access other PHC facilities after office hours was one of the reasons for patients' non-urgent visits to the emergency department. It is, however difficult to come to a conclusion on this effect in our research because we did not study patients' times of presentation.

The most common reason for bypassing the nearest clinic, as found in previous studies, was the perception that they received better service and advanced care at a hospital. Even when the hospital had better diagnostic resources, these were unnecessary or not useful in treating the medical condition which most patients needed care for [9]. Findings from our study show that 80% of patients who arrived with non-urgent conditions confirmed that their clinics offered services for their complaints. Most of the patients' local clinics had the following services available: acute illness (87.5%), antenatal (81.7%), chronic illness (84.8%), family planning (81.7%), HIV/TB (83.0%) and immunisation (81.7%). Interestingly, in our study, we had many patients presenting with an acute illness, even when they were aware that their local clinics offered services for this.

Of the 289 participants in the study, only 240 (83%) had visited the clinics before, and of those, 169 gave reasons as to why they would not return to the clinic. Almost one-third of the patients gave long queues as their reason for bypassing their local clinic and presenting directly to the AED. Our findings were similar to those of a study done in Iran, which showed that 36% of patients presenting in their AED did so with the aim of receiving faster care [7]. Furthermore, 22.3% of the participants reported that their clinics do not have adequate medication supplies on some days, which makes them bypass their clinics and go directly to the AED. The above two reasons accounted for more than 50% of those given for bypassing their clinics. Another study [9] found that a significant number of patients who bypassed the nearest clinics were not satisfied with the respect and kindness shown to them by the staff (doctors in particular); although not high in our study, 20.1% of participants reported that staff members were rude. This could be due to staff members confronting patients who are often lost to follow-up due to bypassing, with poor adherence. Patients also dislike the differentiation of clinic rooms for patients with HIV/AIDS, TB, *etc*., which might be seen as discriminatory and makes them vulnerable to stigma, besides lacking privacy and confidentiality.

Healthcare systems vary between countries, with the greatest difference lying in how primary health care is organised and the payments patients are supposed to make for consultations [1]. Knowledge of the referral system among patients is not widely investigated in the literature. The significance of this lies in the fact that the more patients are aware of the referral system, the more satisfied they will be when seen at the appropriate level of care. It has been documented that knowledge of the triage system is linked with higher patient satisfaction [6].

Our findings showed that 48.8% of patients said that they did not know about the levels of the healthcare system, while 25.6% said that they did know about them. Furthermore, others said that they knew about them but felt that they did not make sense (14.5%), and 11.1% knew about the healthcare system but did not understand it. This shows that the majority of patients do not know about the system, which might be why they come directly to the AED, non-referred and with non-urgent conditions, bypassing their designated clinics. Contrary to our findings, in a study on knowledge of the triage system, it was found that 83.6% of participants understood what triage means, and 61.0% understood why some patients are seen before others [6]. Many preconceived notions about how the health-care system should work and how it can be improved emerge, mostly without substantiation. For instance, patient or community education is still not demonstrated to lower non-urgent A&E utilization as a standalone intervention, but it is offered as a solution [25].

5. LIMITATIONS

The first limitation of this research is intrinsic in the type of design used. Indeed, it was a cross-sectional design, which is unable to determine the causal relationships and only covers participants who presented at a given period. The study was carried out in one hospital, which limits the opportunity for generalisability. Further research needs to be conducted in different hospital settings nationwide in order to give more comprehensive results. The second limitation has to do with the time of consultation. It was not included in our study, and that could have helped in understanding why some patients were presenting to the AED while their nearest clinics were open. The third limitation is that the number of patients who had visited their clinic more than twice in the past was of particular interest. Our study did not include when they last visited their clinics, such as if it was recently or at any time in the past, as this would reduce relevance if the previous visits were years ago and could have been for unrelated reasons such as

immunizations or medication collection for a family member. The fourth limitation was that nurses collected data on why patients sought health at that facility, which could lead to skewed results because patients may be concerned that their care will be jeopardized – they may answer whatever they believe is the most "safe" or "suitable" answer even though they were reassured about the safety.

CONCLUSION

Our study showed that many of the participants were in their twenties, female, unemployed, and living within 10 km of the district hospital. Patients mainly consulted on Fridays and medical-related complaints outnumbered others. Participants stated that they had previously visited their nearest clinic, with most having made more than two visits, and that services were provided free. They expressed an interest in returning to their clinic in the future. The majority of patients were aware of the services available at their nearby clinics, one-third of which were open 24 hours a day, seven days a week. This study contributes to an increased understanding of the reasons for non-urgent patients bypassing their local clinic to utilise the AED at the district hospital. The majority (more than half) of the patients were supposed to go to Temba CHC and Ramotse clinic. The most popular way of getting to the district hospital was public transportation. Almost 80% of patients who consulted the district hospital for non-emergency conditions had a designated clinic within 10 km of the district hospital. The main reasons for patients bypassing their designated local clinic were long queues and medication shortages. Most patients learned about the district hospital from friends or family members. Most patients were not aware of the referral system, and the few who were aware of it either did not believe it made sense or did not understand it. From this finding, we concluded that patients still lack knowledge on levels of care and entry into the levels of care; therefore, the community at large will need to be educated and furthermore, strict application of triage system will need to be implemented in order to reduce the emergency department overcrowding which will in return increase patients safety and improve clinical outcome. Furthermore, the relative vicinity and patients' perceptions of the JDH service may have aided the current phenomenon under investigation. This must be addressed as the population grows. In line with the above findings, the authors would like to recommend the following:

1. Prospective studies and quality improvement projects on how to design and implement sustainable policies that will result in shortening long queues at clinics.

2. A policy should be developed for the clinics' booking system to rationalise business hours as well as accommodate no-shows and late arrivals.

3. Adequate and efficient options of treatment modalities at clinics at all times should be ensured.

LIST OF ABBREVIATIONS

AED	=	Accident and Emergency Department
HIV	=	Human Immunodeficiency Virus
TB	=	Tuberculosis

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval had been obtained from SMUREC reference number: SMUREC/M/255/2019:PG and Tshwane research committee NHRD reference number GP_201911_018.

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All the humans were used in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2013 (http://ethics.iit.edu/ecodes/node/3931).

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants of this study.

STANDARD OF REPORTING

STROBE guideline were followed.

AVAILABILITY OF DATA AND MATERIALS

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflicts of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

[1] Kraaijvanger N, van Leeuwen H, Rijpsma D, Edwards M. Motives for self-referral to the emergency department: a systematic review of the literature. BMC Health Serv Res 2016; 16(1): 685. [http://dx.doi.org/10.1186/s12913-016-1935-z] [PMID: 27938366]

[2] Butun A, Linden M, Lynn F, McGaughey J. Exploring parents' reasons for attending the emergency department for children with minor illnesses: a mixed methods systematic review. Emerg Med J 2019; 36(1): 39-46. [PMID: 30389792]

[3] Jiang L, Ye L, Dai M, Zhou J, Li Q. Use Andersen's behavior model to explain non-urgent visits in emergency department: A single center study in southwest China. Int Emerg Nurs 2020; 52: 100845. [http://dx.doi.org/10.1016/j.ienj.2020.100845] [PMID: 32205107]

[4] Toksöz C, Ikizceli I, Koyuncu M, Biberoğlu S, Cakmak F, Öztürk D. Family practice awareness in patients applying to the emergency department and receiving a green triage code. Ankara Medical Journal 2020; 20(2): 416-25. [http://dx.doi.org/10.5505/amj.2020.75768]

[5] Choon Oh H, Chow WL, Gao Y, Tiah L, Hiong S, Mohan T. Factors associated with inappropriate attendances at the emergency department of a tertiary hospital in Singapore. Singapore Med J 2020; 61(2): 75-80.

[6] Alhabdan N, Alhusain F, Alharbi A, Alsadhan M, Hakami M, Masuadi E. Exploring emergency department visits: factors influencing individuals' decisions, knowledge of triage systems and waiting times, and experiences during visits to a tertiary hospital in Saudi Arabia. Int J Emerg Med 2019; 12(1): 35. [http://dx.doi.org/10.1186/s12245-019-0254-7] [PMID: 31752662]

[7] Bahadori M, Mousavi SM, Teymourzadeh E, Ravangard R. Emergency department visits for non-urgent conditions in Iran: a cross-sectional study. BMJ Open 2019; 9(10): e030927. [http://dx.doi.org/10.1136/bmjopen-2019-030927] [PMID: 31601591]

[8] Goodridge D, Stempien J. Understanding why older adults choose to seek non-urgent care in the emergency department: the patient's perspective. CJEM 2019; 21(2): 243-8. [http://dx.doi.org/10.1017/cem.2018.378] [PMID: 29843840]

[9] Perera SK, Weerasinghe MC. Bypassing primary care in Sri Lanka:a comparative study on reasons and satisfaction. Y te Công Cong 2015; 3: 60-76.

[10] Gorodetzer R, Alpert EA, Orr Z, Unger S, Zalut T. Lessons learned from an evaluation of referrals to the emergency department. Isr J Health Policy Res 2020; 9(1): 18. [http://dx.doi.org/10.1186/s13584-020-00377-2] [PMID: 32340624]

[11] Yao J, Agadjanian V. Bypassing health facilities in rural Mozambique: spatial, institutional, and individual determinants. BMC Health Serv Res 2018; 18(1): 1006. [http://dx.doi.org/10.1186/s12913-018-3834-y] [PMID: 30594198]

[12] Okari S, Besigye I, Namatovu JF. Reasons why patients bypass lower level public facilities: A cross sectional study from Uganda. Preprint 2019. [http://dx.doi.org/10.21203/rs.2.12795/v1]

[13] World Health Organization. 2017. Available from: https://apps.who.int/iris/bitstream/handle/10665/136874/ccsbrief_zaf_en.pdf;jsessionid

[14] Adeniji AA, Mash B. Patients' perceptions of the triage system in a primary healthcare facility, Cape Town, South Africa. Afr J Prim Health Care Fam Med 2016; 8(1): e1-9. [http://dx.doi.org/10.4102/phcfm.v8i1.1148] [PMID: 27380788]

[15] Visser CA, Marincowitz GJO, Govender I, Ogunbanjo GAO. Reasons for and perceptions of patients with minor ailments bypassing local primary health care facilities. S Afr Fam Pract 2015; 57(6): 333-6. [http://dx.doi.org/10.1080/20786190.2015.1102538]

[16] Masango-Makgobela AT, Govender I, Ndimande JV. Reasons patients leave their nearest healthcare service to attend Karen Park Clinic, Pretoria North. Afr J Prm Health Care Fam Med 2013; 5(1): 5.

[17] Pillay I, Mahomed OH. Prevalence and determinants of self referrals to a District-Regional Hospital in KwaZulu Natal, South Africa: a cross-sectional study. Pan Afr Med J 2019; 33: 4. [http://dx.doi.org/10.11604/pamj.2019.33.4.16963] [PMID: 31303949]

[18] Western Cape government health. The South African triage scale training manual. 2012. Available from: https://emssa.org.za/wp-content/uploads/2011/04/SATS-Manual-A5-LR-spreads.pdf

[19] Jubilee district Hospital data available from Jubilee information centre (Accessed on 10/08/2019)

[20] Statistics department of Republic of South Africa , midyear population estimates. 2020. Available from: http//www.statssa.gov.za

[21] Welle-Nilsen LK, Morken T, Hunskaar S, Granas AG. Minor ailments in out-of-hours primary care: An observational study. Scand J Prim Health Care 2011; 29(1): 39-44. [http://dx.doi.org/10.3109/02813432.2010.545209] [PMID: 21189104]

[22] Matifary CR, Wachira B, Nyanja N, Kathomi C. Reasons for patients with non-urgent conditions attending the emergency department in Kenya: A qualitative study. Afr J Emerg Med 2021; 11(1): 113-7. [http://dx.doi.org/10.1016/j.afjem.2020.09.004] [PMID: 33680731]

[23] Rosenstock IM. Why People Use Health Services. The Milbank Quarterly 2005; 83(4) [http://dx.doi.org/10.1111/j.1468-0009.2005.00425.x]

[24] Bahadori M, Mousavi SM, Teymourzadeh E, Ravangard R. Non-urgent visits to emergency departments: a qualitative study in Iran exploring causes, consequences and solutions. BMJ Open 2020; 10(2): e028257. [http://dx.doi.org/10.1136/bmjopen-2018-028257] [PMID: 32051293]

[25] Van den Heede K, Van de Voorde C. Interventions to reduce emergency department utilisation: A review of reviews. Health Policy 2016; 120(12): 1337-49. [http://dx.doi.org/10.1016/j.healthpol.2016.10.002]